

OUTCROP MAP-PATTERN ANALYSIS OF A DIPPING BED

PART I: TEACH YOURSELF HOW TO DO THIS LAB!

In this lab you will teach yourself a valuable method of map interpretation and 3D geologic reasoning. To do so, use the appropriate parts of the Structural Methods DVD.

Work through the first three sections of Chapter 2 (Frames 53 to 182).

These are:

- Understanding Map Patterns
- Determining Strike and Dip from Map Relations
- Structure Contours

PART II: MAP ANALYSIS

To demonstrate to yourself that you have successfully learned this method of map interpretation and that you really understand the 3D geologic relationships that maps represent, complete the following exercise:

Use the attached topographic map.

Points A, B, and C on that map are outcrops containing the upper contact of a sandstone unit. Determine the strike and dip of the sandstone unit. Draw in the complete outcrop trace of the upper contact of the unit from point A to point C on the map. (A note of caution. Where you extrapolate between measured points, be sure to do it carefully, using the knowledge you gained in Part I.)

Point Z is an outcrop that exposes the basal contact of the same sandstone unit. Draw in the outcrop trace of the lower contact of the sandstone.

