

Geohistory / Subsidence Analysis Lab, Part 1

Sedimentary Basin Analysis

GEO528 – Spring, 2011

Due: Wednesday March 30, 2011

In this lab, you will become familiar with the concepts of geohistory and subsidence analysis by conducting a geohistory analysis by hand.

Backstripping a stratigraphic section by hand:

Below is a stratigraphic section from a hypothetical sedimentary basin. Using the methods we discussed in class, backstrip this section by hand to produce a geohistory curve and plot your results. Your backstrip analysis should consist of three curves: 1) a paleobathymetric curve; 2) a total subsidence curve, which is uncorrected for sediment compaction and 3) a total corrected subsidence curve, which is corrected for sediment compaction but not corrected for the isostatic effects of the sediment column. You will need to refer to some of the pages on the powerpoint presentation we went over in class for the compaction adjustments. Note that you are not required to produce a tectonic subsidence curve that corrected both for compaction and for the isostatic load of the sediment column itself.

