Contouring II

We often have isolated data about what we think is a field of continuous values. In meteorology, the data maybe isolated temperature measurements across a region, and we assume that temperature exists everywhere across that region as a continuous function. In geology, the data may be elevations of the top of a stratum, and we at first assume that the top of the stratum exists everywhere as a continuous body. The "at first" acknowledges that the stratum may be faulted and thus discontinuous, but we will worry about that later.

One way to understand these kinds of data is with contours. Contours are lines that we generate to estimate the form of the surface about which we have isolated data.

A contour line should serve two functions.

1) It should represent the best estimate of where field values equal the value of the contour (in the example below, the best estimate of where values in the field of data are 1400).

2) **It should divide data *greater* than the contour's value from data *less* than the contour's value** (in our example below, the 1400 contour should have values less than 1400 on on side and values greater than 1400 on the other side.

The example below uses the 1400 contour and progresses from easier at left to a little harder at right. The 1350 and 1450 contours are more-or-less left as exercises for the reader. Part III follows up to summarize the result.