Contouring IVb: solutions

Parts I to III of this series explained how to contour data. This page, on contrast, presents some things that should not happen in contouring.

To review, a contour line should serve two functions: 1) It should represent the best estimate of where field values equal the value of the contour.

2) It should divide data greater than the contour's value from data less than the contour's value. It thereby predicts where unknown/unsampled/unmeasured values should be values between the values of the contours.

One implicit message from the examples below is that a straight line is not necessarily the best solution, and thus that one should not be reluctant to make curved contours.

Contours should not cross.
Crossing contours would indicate that the field of data has two values at the same place. In this case, the crossing would imply values of 4100 and 4200 at the same place.

Two data points with values on each side of a contour value must have a contour between them.

The polarity of a contour should not change.
The side with values greater than and the side with values less than the contour's value should not change.