

A rotated-block model is fit to the cross section of the South Hewett fault zone in Fig. 11.73A. The most important assumption is that the original seismic line was displayed with approximately zero vertical exaggeration. A change in the vertical scale would change the numbers but should not change the form of the interpretation. The result depends on the correct choice of the regional and the resulting width of the structure. It is interpreted here that the structure ends just before the uplift at the trailing edge, which fixes these parameters. The inferred fault displacement is larger than the offset of marker 3 at the fault tip, indicating that the fault had a normal separation prior to shortening. Thus the rotated block is an inversion structure. The only other inverted faults are at the trailing edge of the rotated block, in the location where shortening might be expected due to the predicted excess area (Eq. 11.47). The measured excess area ( $3.01 \text{ km}^2$ ) is in reasonable agreement with that predicted from the fault geometry and amount of rotation ( $3.23 \text{ km}^2$ ).

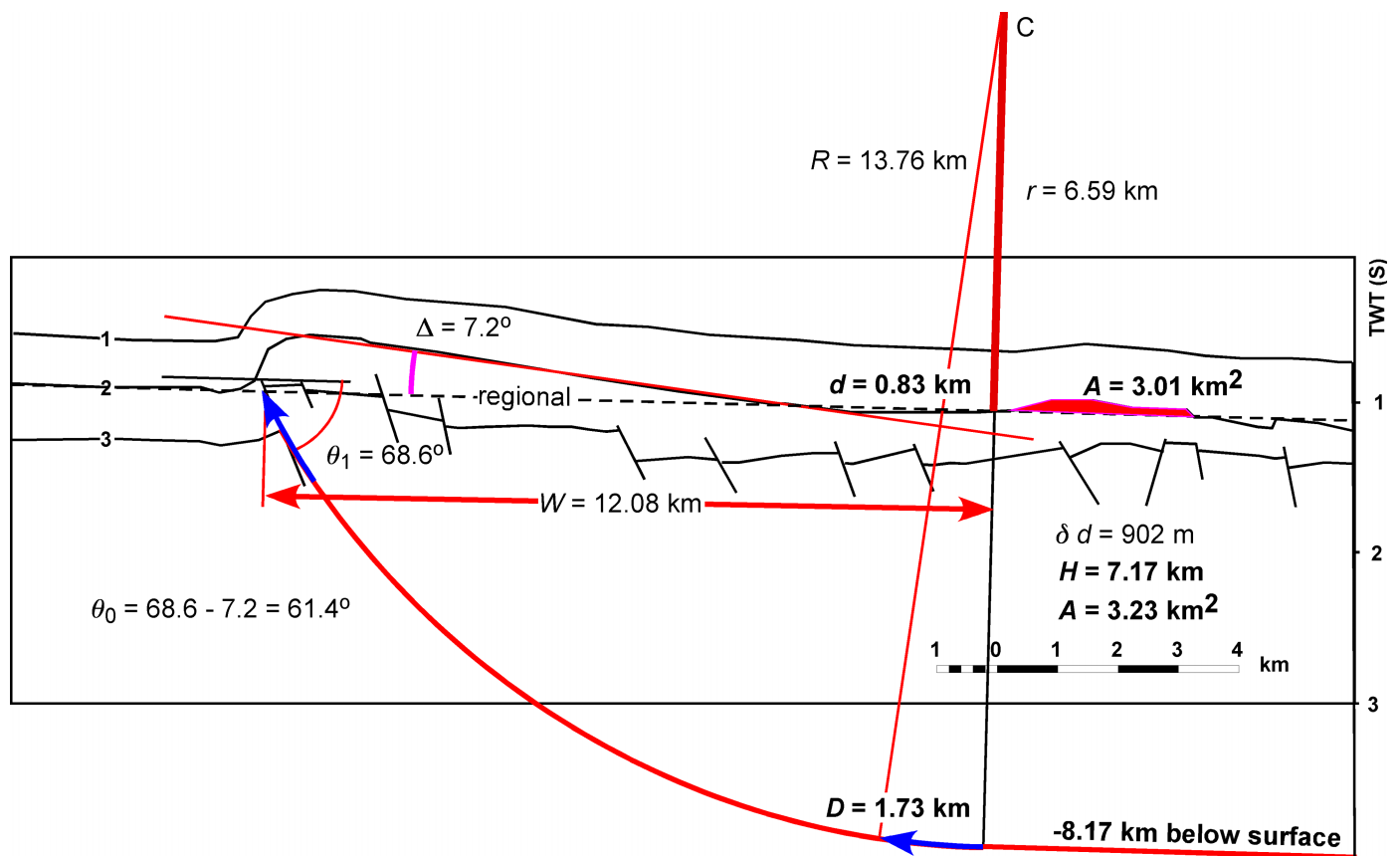


Fig. 11.73A. Rigid-block interpretation of South Hewett fault zone. Interpreted geometry in *red*, interpreted displacement on fault in *blue*