Restore the cross section of the Deer Park anticline (Fig. 11.72) by flexural slip or area balance, as appropriate. Construct an area-depth diagram for the entire anticline. What displacement caused the structure and what displacement is present on the upper detachment, if any? Based on the results, is the structure locally balanced or regionally balanced? Compute the layer parallel strains for each layer. Is the cross section valid?

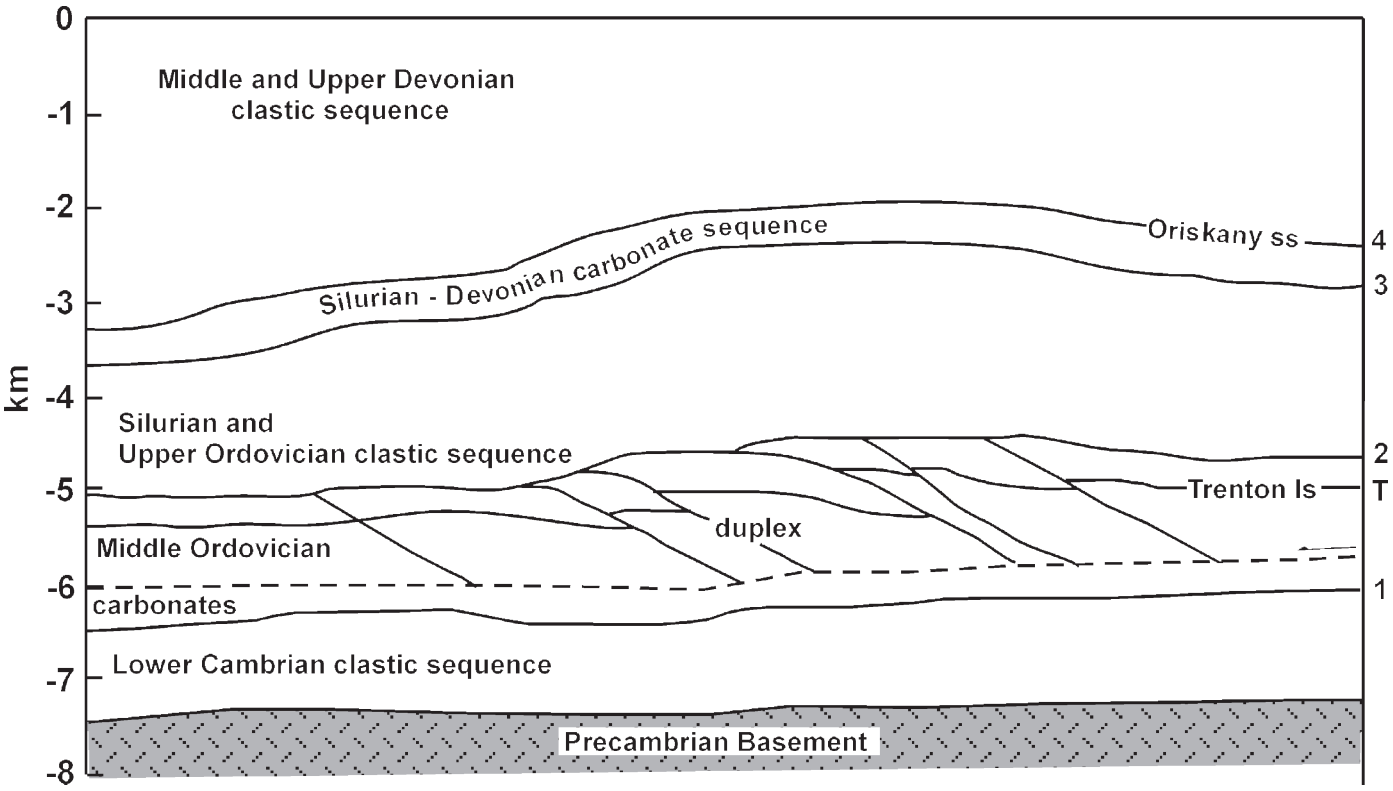

Fig. 11.72. Geological cross section across the Deer Park anticline, Appalachian Plateau fold-thrust belt, eastern U.S. The section is depth converted from Mitra (1986) using a velocity of 5 km s^{-1}. The inferred lower detachment is the *dotted line*. Epard and Groshong (1995) discuss the interpretation