

Use the map of the Blount Springs area (Fig. 2.27) to answer the following questions. What is the thickness of the Mpm between the structure contours using the map-angle equations and the pole-thickness equation? Are the results the same? If they are different, discuss which answer is better. What is the difference between the true thickness and the vertical thickness of the Mpm? What is the thickness of the Mpm in its northeastern outcrop belt, assuming that the dip is 28° at its northwestern contact and the value determined above occurs at its southeastern contact? Use the concentric fold model and the dip-domain model. Discuss the effect of changing the location of the axial surface on the thickness computed with the dip-domain model. Measure the thickness of the Mpm at 5–10 locations evenly distributed across the map. Measure thicknesses between structure contours where possible. Construct an isopach map from your thickness measurements. Is the unit constant in thickness? What would be the apparent thickness of the Mpm in a north-south, vertical-sided roadcut through the northwestern limb of the anticline?

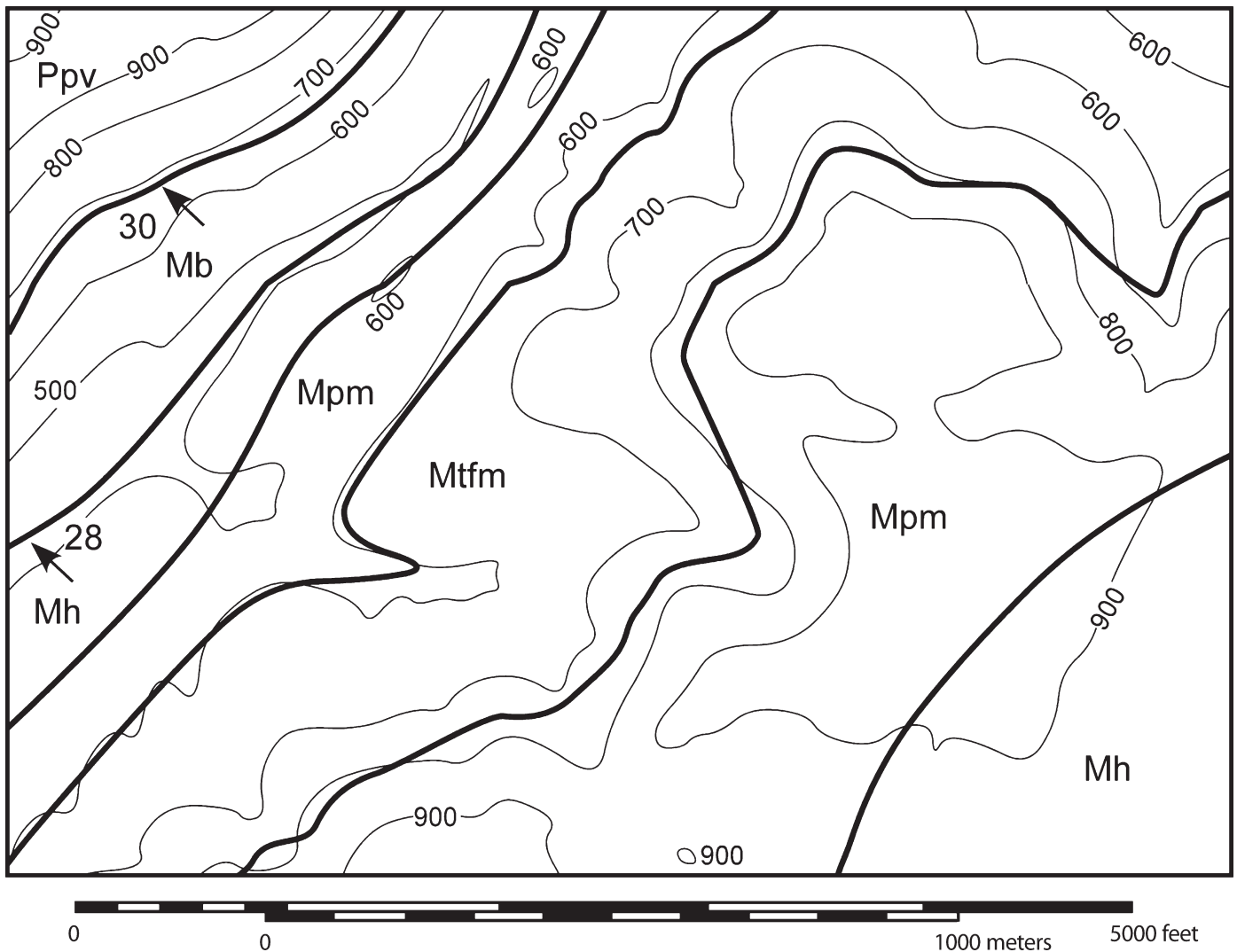


Fig. 2.27. Geological map of the northeast corner of the Blount Springs area, southern Appalachian fold-thrust belt. *Thin lines* are topographic contours (elevations in feet). *Thick lines* are geologic contacts. *Arrows* are dip directions. *Numbers* give the amount of dip