Construct illustrative cross section A–A' from the map in Fig. 3.29 using the structure contour map constructed in Exercise 3.7.4. Use the dip-domain technique to construct the same cross section using only the surface geology along the profile. Use the circular arc technique to construct the same cross section using only the surface geology along the profile. What is the plunge of the central portion of the structure from a stereogram or tangent diagram? Project the northern part of the structure onto section B–B' using the method of along-plunge projection. Compare and contrast the cross sections. The wells to the Fairholme were drilled to find a hydrocarbon trap but were not successful. Use the map and cross sections to determine a structural reason for drilling the wells and a structural reason that they were unsuccessful.

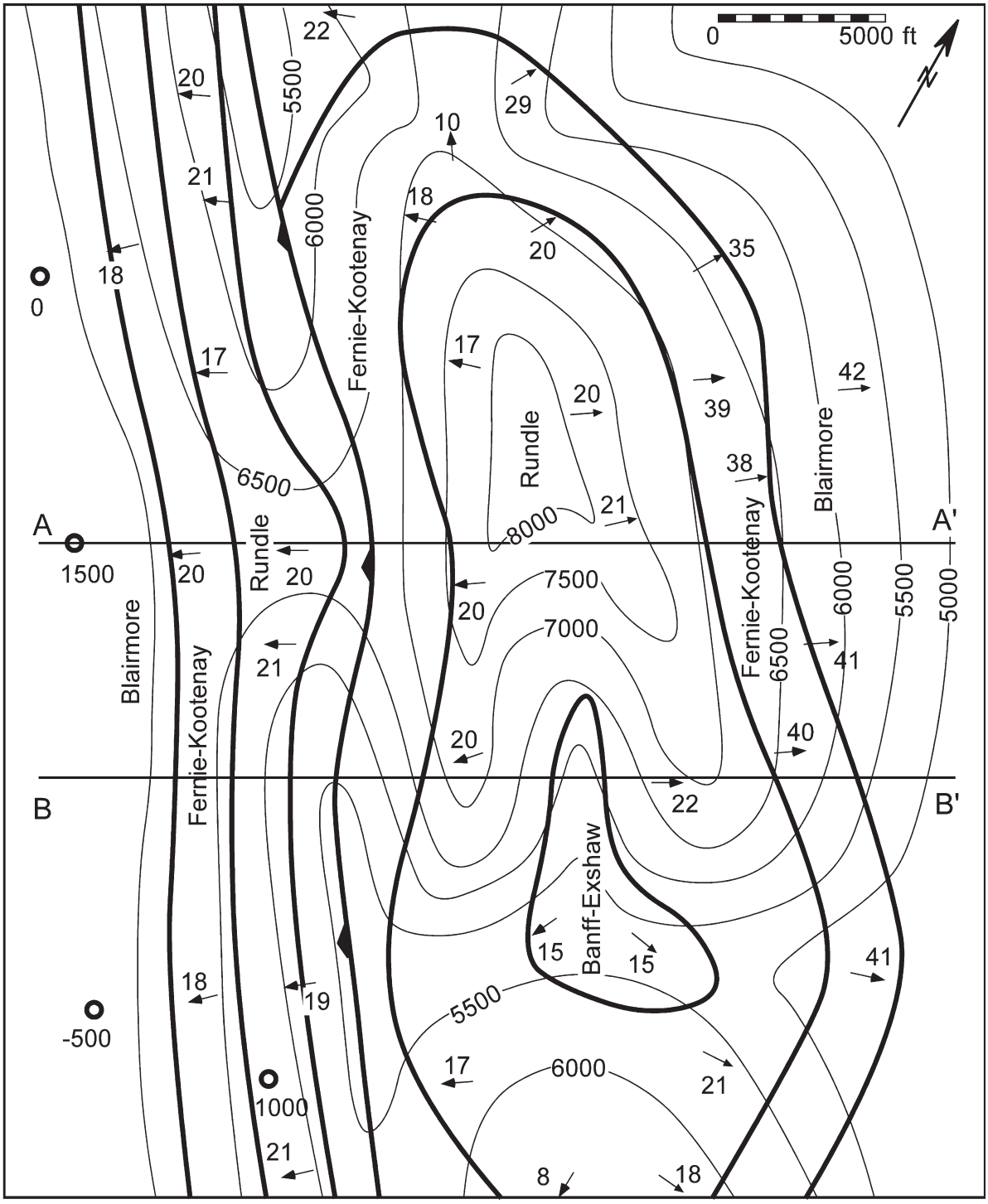

Fig. 3.29. Geologic map from the Canadian Rocky Mountains. All dimensions are in feet. The stratigraphic column (with thickness) from top to base is: Blairmore (2400), Fernie-Kootenay (700), Rundle (900), Banff-Exshaw (900), Palliser (800), Fairholme (1200). (After Badgley 1959)