



FIGURE 4.19. Black-smoker chimneys built around mid-ocean-ridge hydrothermal springs. From Hannington *et al.* (1995). (A) A sketch of a chimney ~45 m tall, with the outline of submersible Alvin shown for scale. (B) A schematic diagram of the mineralogy of the chimney. Arrows indicate fluid-flow paths. From Hannington *et al.* (1995).