FIG. 1. Schematic cross section of the epithermal model in volcanic host rocks. This portion of the epithermal model includes the following segments: sinter, silica cap, bonanza zone, base metal zone, and clastic cemented ore. Precious metal ore can occur in the silica cap (e.g., Round Mountain, Divide, and Borealis, Nevada); in the bonanza zone (e.g., Cripple Creek, Colorado; Comstock, Red Mountain (Esmeralda Co.) and Tonopah, Nevada; and Pachuca, Mexico); and in the base metal zone (e.g., Silverton, Colorado). Flat veins can occur with any of these zones. Clastic cemented ore, the geothermal reservoir of some modern hot spring systems, is common in many districts (e.g., Creede, Colorado; Talapoosa, Nevada; and Trench, Arizona). Whereas simple sulfides like stibnite, realgar, or argentite can be found with oxide minerals and native gold and silver in the silica cap, silver sulfosalts characterize most bonanza ores. Electrum, native silver, and silver sulfide can occur with the sulfosalts in the bonanza zone.

FIGURE: 396-88-7

SCHEMATIC CROSS SECTION OF THE EPITHERMAL MODEL IN VOLCANIC ROCKS

(After Hollister, 1985)