Events

Island Arc Accretion
The island arc is thrust up onto the continental margin, and over the Havallah Basin. Asian fossils were found west of the island arc in the accretionary wedge. This seems to have happened in the early Permian, late Triassic.

Ancestral Rockies Formed
Meantime, west of the continental margin the Ancestral Rockies were being thrust upwards (although some believe this upthrust of pre-Cambrian rock began in the pre-Cambrian). We see evidence for sediment deposition around the Mississippian, but it isn't well-exposed.

Havallah Basin Overthrust
Happened late Permian, early Paleozoic. It is interesting to note that although the Havallah Basin was thrust up on top of the continent, it didn't create a foredeep, while the Antler's did.

Antler Mountain Belt Erodes
By the Pennsylvanian, the Antler mountains had completely eroded. Foredeep was filled with sediment (shallow marine) from continental margin, so when the Antler mountains eroded, they created a scoured layer of clastic, deep-water marine sediments on top of the shallow-water marine sediments. Antler mountains appeared to have eroded in the span of about 15 million years... relatively quick in terms of the geologic timescale.

Humped middle to late Pennsylvanian.

Antler Orogeny / Foredeep

Cross-Sections

- Ophiolite
- Deep water sediment
- Pillow basalt
- Sheeted dikes
- Magma chambers
- Metamorphized rock

Accretionary wedge

Island Arc Accretion / Formation of Ancestral Rockies ~250-300 ma

Havallah Basin Overthrust ~ 290 ma

Antler Mountains Erode ~ 310-320 ma