

## A Mid-Ocean Ridge Vent or "Black Smoker", Part I

At the mid-ocean ridges, hot magma rises from Earth's interior as the two tectonic plates on each side of the ridge move apart. This rising magma ascends through planar ridge-parallel fractures. Most of it cools in those fractures to form sub-parallel criss-crossing dikes (hence "sheeted dikes"). However, some of it rises through those fractures to the sea floor, where it cools in blobs when it hits the cold seawater to form "pillow basalts". The heat of the magma also drives a hydrothermal circulation system discussed in Part II of this pair.

