

Volcanoes



Three (Main) Types of Volcanoes

- Shield
- Cinder Cone
- Composite

Shield volcano

- Broad, gentle slopes
- Built by fluid basalt lava
- Flows across the ground easily
- Enables lava to flow tens of km
- Builds enormous, low-angle cones
- Largest volcanoes on Earth

Shield volcano



Shield volcano



Mount Terror in Antarctica



Kilauea

Most active volcano on Earth





SPEED
LIMIT
30

Cinder Cone Volcano

- Most common type of volcano
- Built from lava fragments (called cinders)
- Steep hill forms above a vent
- Are not famous for their eruptions and usually don't cause any loss of life
- Grow rapidly and soon approach their maximum size
- Rarely exceed 250m in height and 500m in diameter.

Cinder Cone Volcano



Cinder Cone Volcano



Paricutin Volcano



Composite Volcanos

- Composite volcanoes, also called strato-volcanoes
- Formed by alternating layers of lava and rock fragments.
- Strato-volcanoes often form impressive, snow-capped peaks which are often exceeding 2500m in height
- Between eruptions they are often so quiet they seem extinct



- Composite volcanoes usually erupt in an explosive way.
- When magma rises to the surface, it usually clogs the crater pipe and gas gets locked up.
- Pressure will increase resulting in an explosive eruption



Mount Fuji



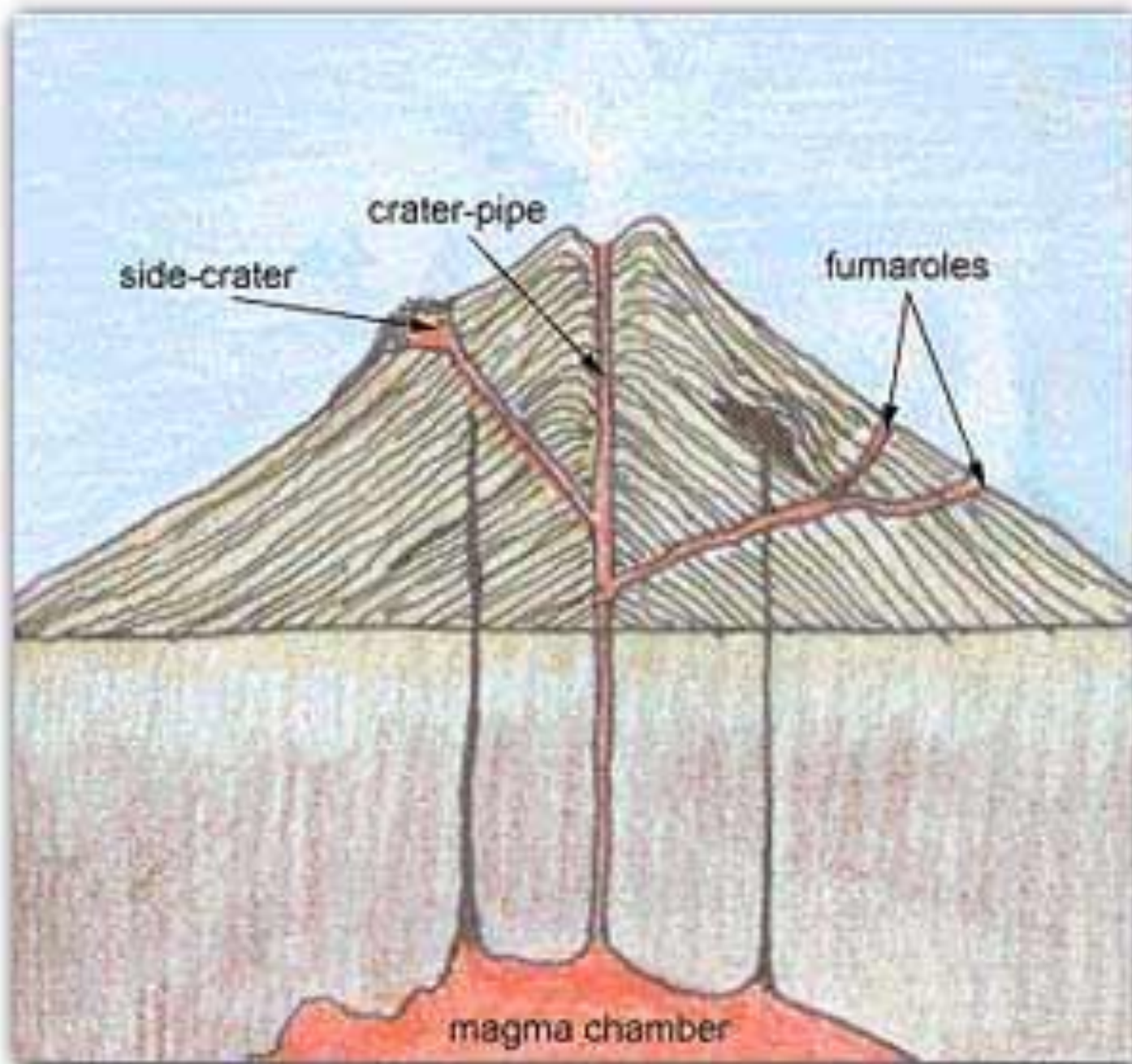
Composite Volcano



Composite Volcano



USGS Photo by M.P. Doukas, July 22, 1980





 **USGS**

USGS Photo by Lynn Topinka, 1975

Special Types

Lava Dome Volcano

- Has very steep sides
- Formed from pasty lava "squeezed" out of a central vent
- Relatively small volcanoes
- Usually "plug" themselves after a short time

Plug Dome Volcano

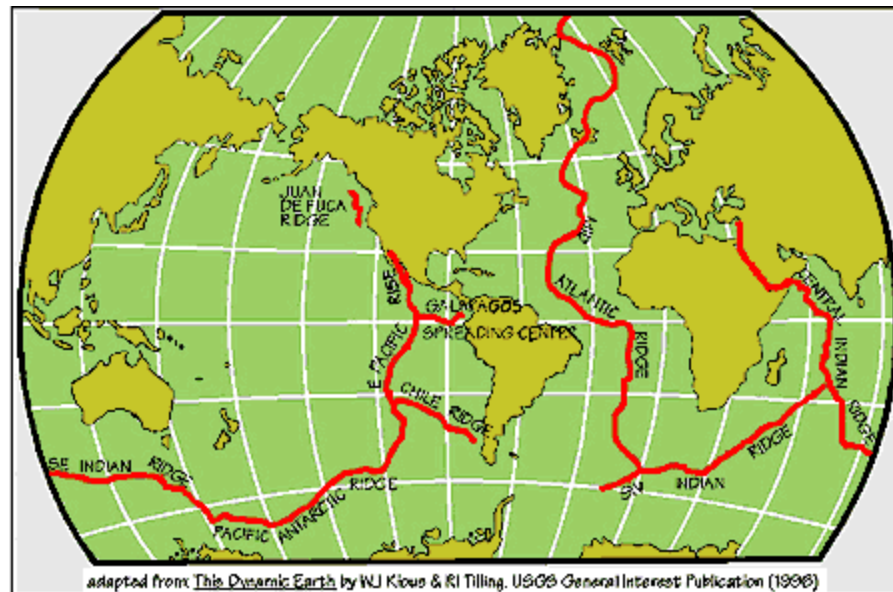


Black Butte – California



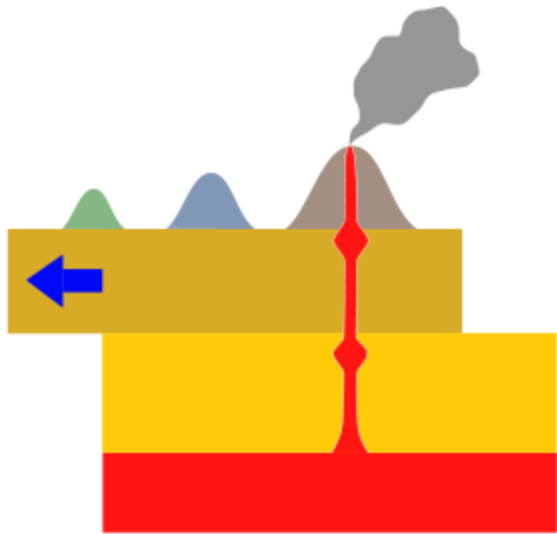
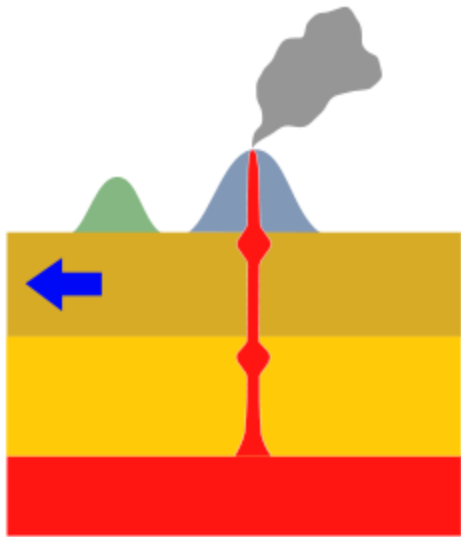
Mid Ocean Ridges

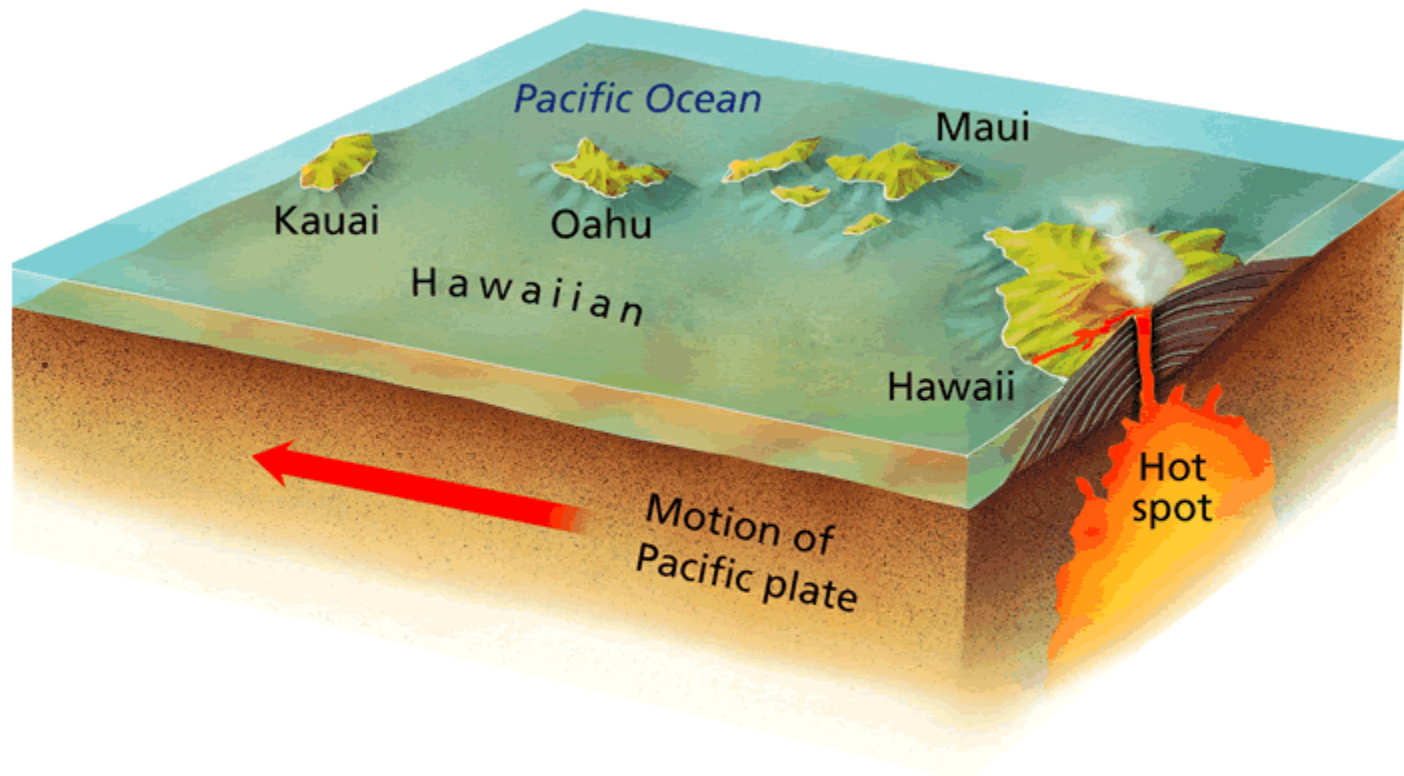
- Volcanoes on the ocean floor
- Plate diverge from each other and magma rises



Hot Spots

- One chamber pipe creates multiple volcanoes over time
- The chamber pipe stays in the same spot
- Since the plates move, the pipe creates a new volcano in a new spot
- This is what created the Hawaiian Islands





What type
of volcanoes
are these?



