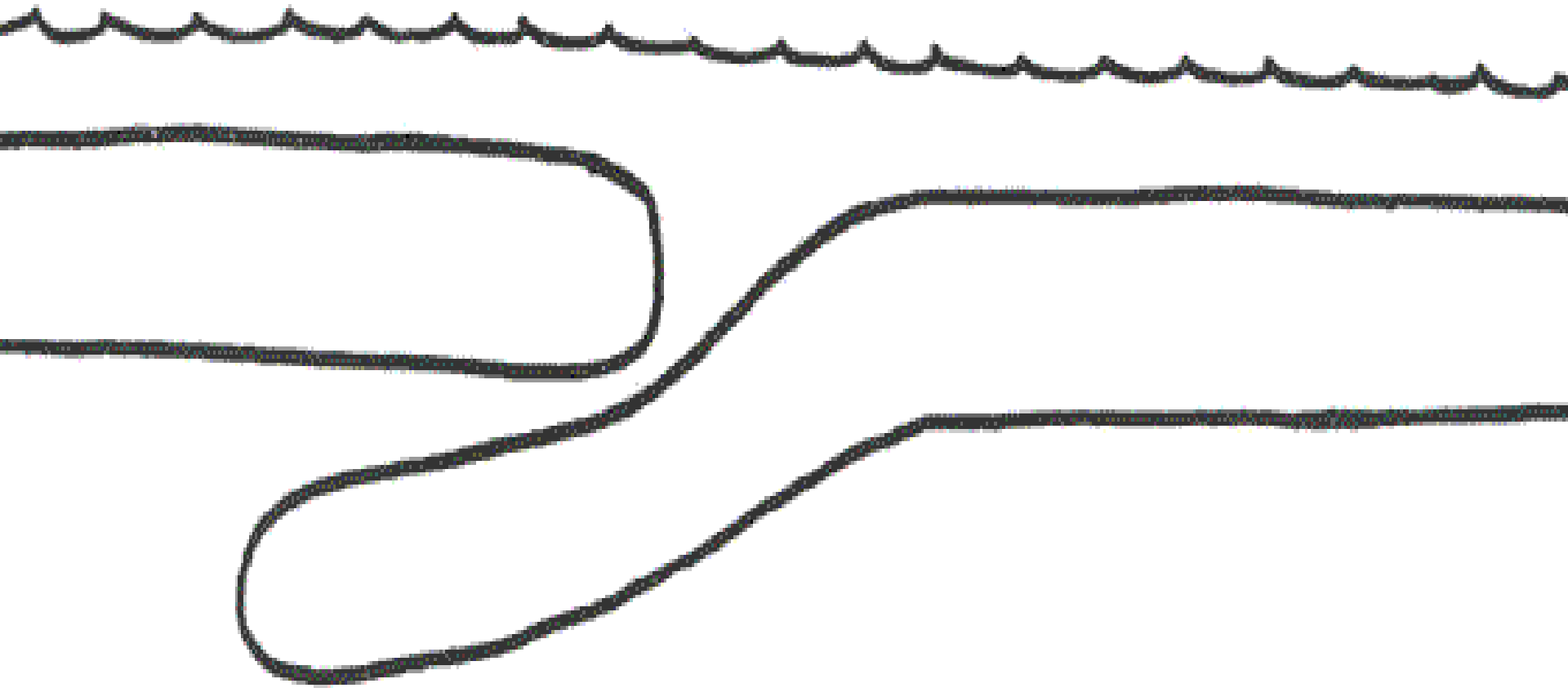


VOLCANIC ACTIVITY

Unit 2 - Ch 10

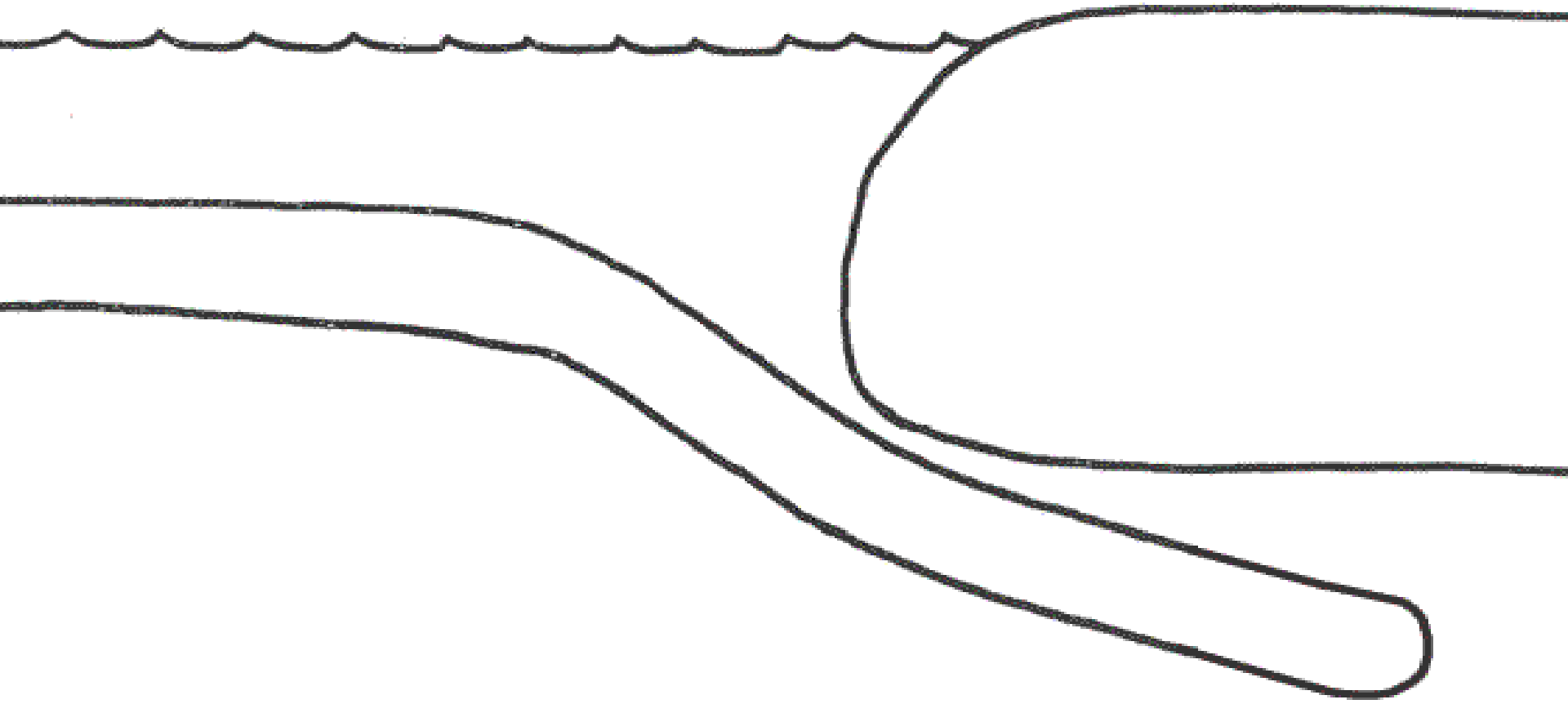
A stylized, dark teal silhouette of a mountain range is positioned in the bottom right corner of the slide, partially overlapping the white text.

Convergent *Oceanic-Oceanic*



Volcanic Island Arcs

Convergent *Oceanic-Continental*




Subduction Zone; Trench; **Continental Volcano**

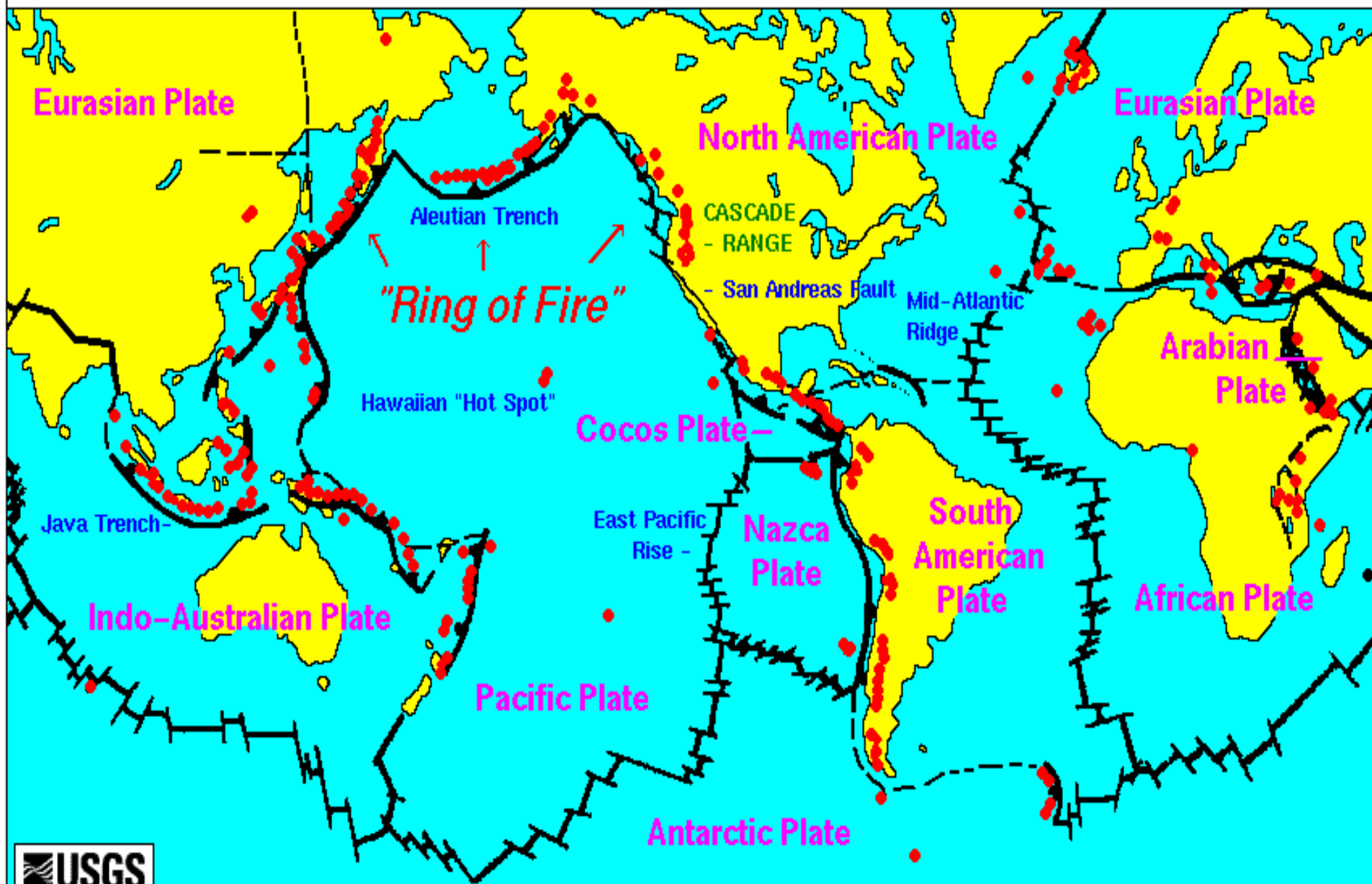
Volcanic Activity

- ◆ **80%** - **Convergent** boundaries
- ◆ **15%** - **Divergent** boundaries
- ◆ **5%** - **Intraplate** activity: **hot spots**
 - Hot **mantle plumes** rising **within** plate
 - Ex: Hawaiian Islands

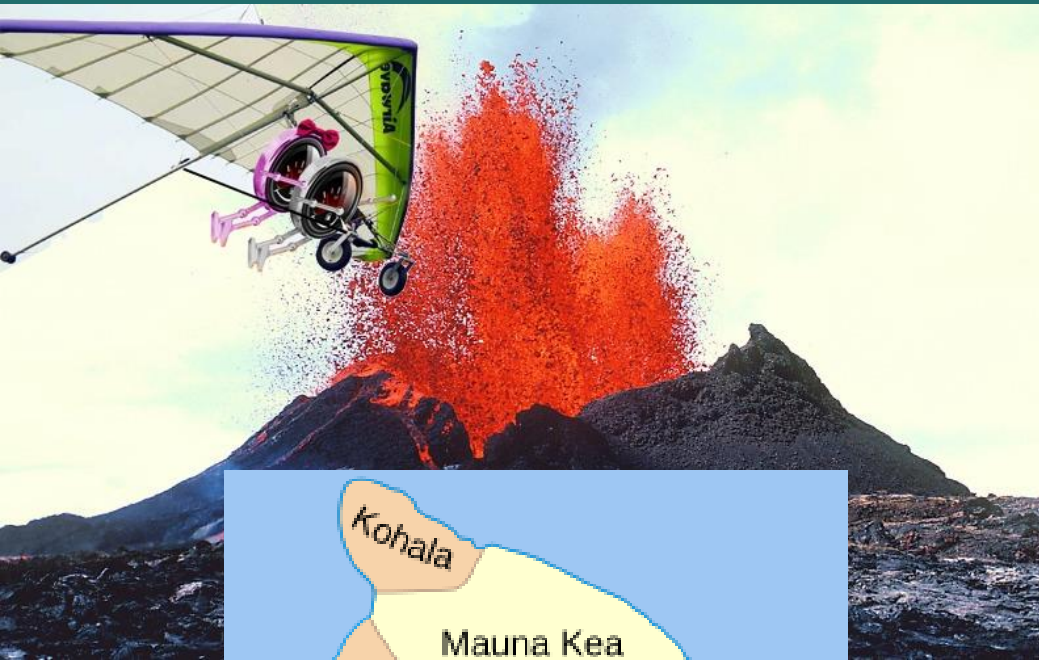
“Ring of Fire”

- ◆ Horseshoe-shaped **belt of volcanoes** circling ***Pacific Ocean***
 - ◆ Formed from ***subduction*** (convergent) of **Pacific Plate** on all sides
 - ◆ Home to **452** volcanoes (***350 active***)
 - ◆ **90%** of world's earthquakes occur here (89% of largest EQ)
- 
- A stylized, dark teal silhouette of a mountain range is positioned in the bottom right corner of the slide, partially overlapping the text of the last bullet point.

Active Volcanoes, Plate Tectonics, and the "Ring of Fire"



Shield Volcanoes



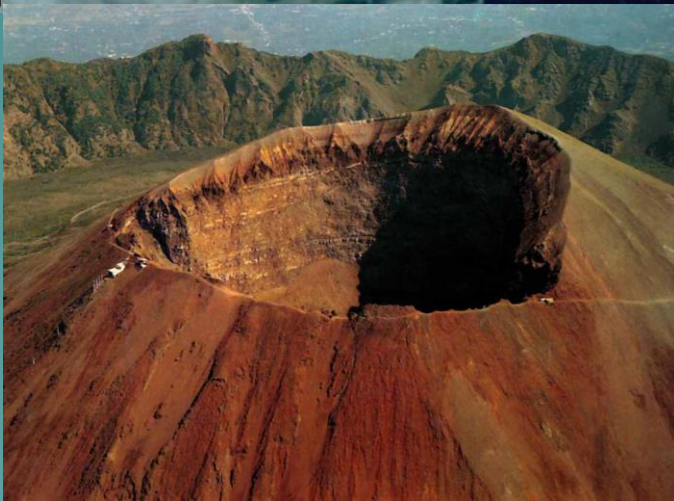
- ◆ Broad, *gently* sloping
- ◆ *Nonexplosive*
- ◆ Ex: **Hawaiian Islands**

Cinder-Cone Volcanoes

- ◆ ***Small*** and ***steep*** (cone) sides
- ◆ ***Explosive*** cinders
- ◆ **Ex: Izalco – El Salvador**




Composite Volcanoes



- ◆ Also known as **stratovolcanoes**
- ◆ **Large** ; cone-shaped; very **steep** slopes
- ◆ **Violently** explosive with **alternating lava & ash** layer
- ◆ **Ex: Mount St Helens – WA, USA**

Eruptive Power Factors

- ◆ **Temperature** of magma
 - ◆ **Composition** of magma
 - ◆ Amount of **dissolved gas** in magma
- 
- A stylized, dark teal silhouette of a mountain range is located in the bottom right corner of the slide, partially overlapping the background.

Pyroclastic Material

- ◆ Pyroclastic – Cloud of ash and lava/rock fragments EJECTED from crater during eruption
 - Lahar Flow – Mudflow of molten rock, debris, and water down side of volcano; NOT pyroclastic
 - 1) Ash – *Dissolved gases* in magma that expand and *eject* violently
 - 2) Cinders – Extrusive *igneous rocks* with many *cavities* and very low-density *ejected*
 - 3) Lapilli – *Molten* lava rock fragments *ejected*
 - 4) Lava/Volcanic Bombs – *Large* lava rocks *ejected*

