

Chapter 5

Volcanoes

Figure 5.4



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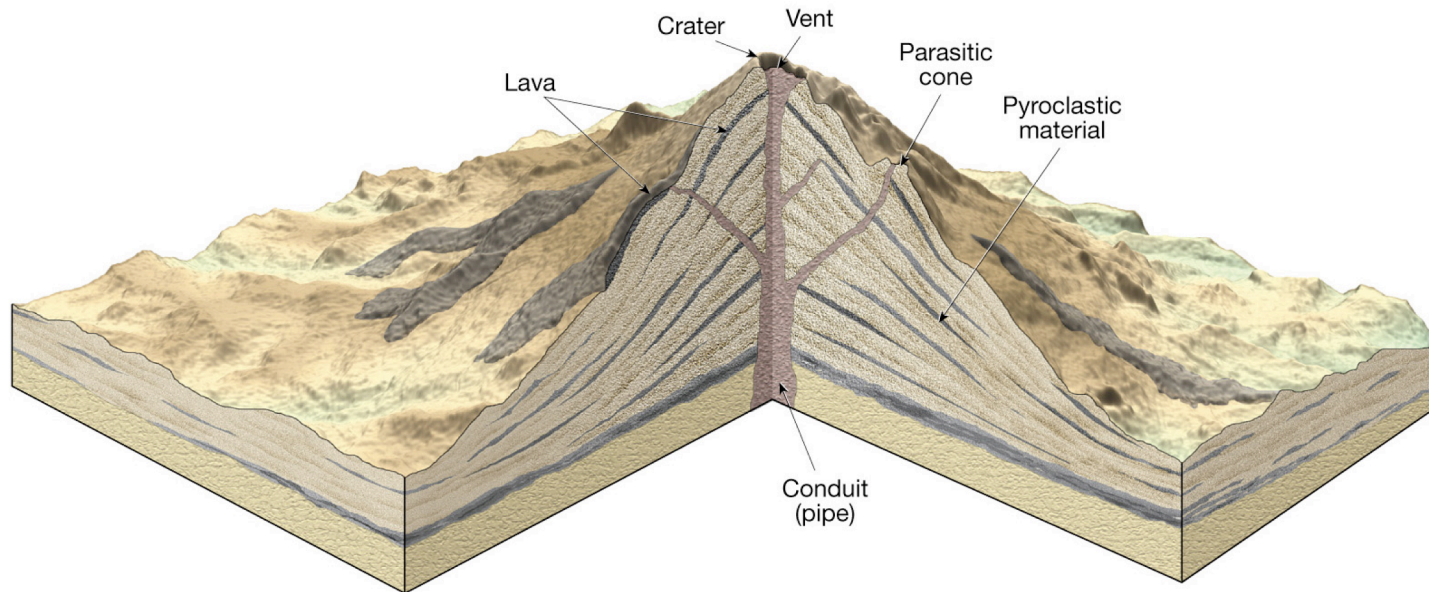
Global Distribution



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Volcanic Eruptions

Figure 5.9



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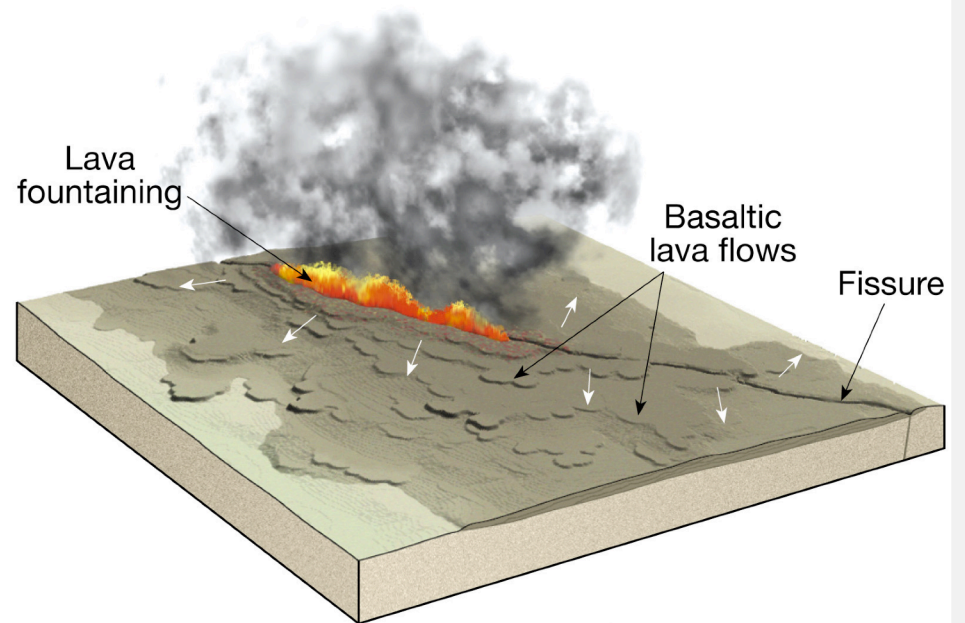
Pyroclastic Features

Figure 5.6A



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Figure 5.25A



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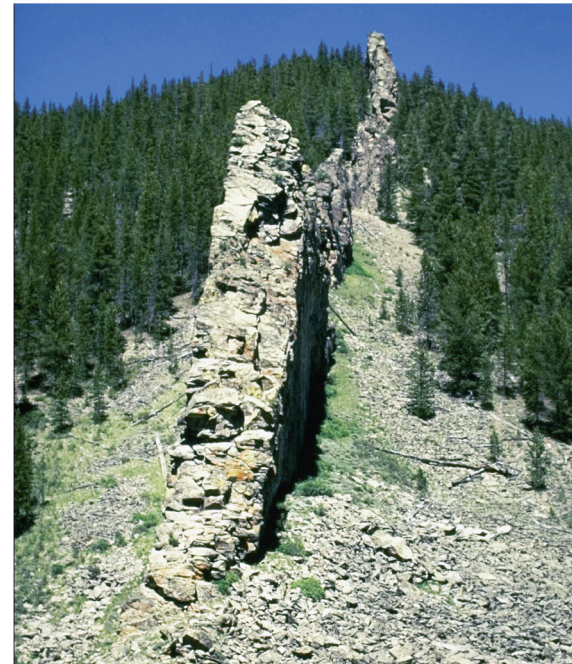
Figure 5.30



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Dikes & Sills

Figure 5.29

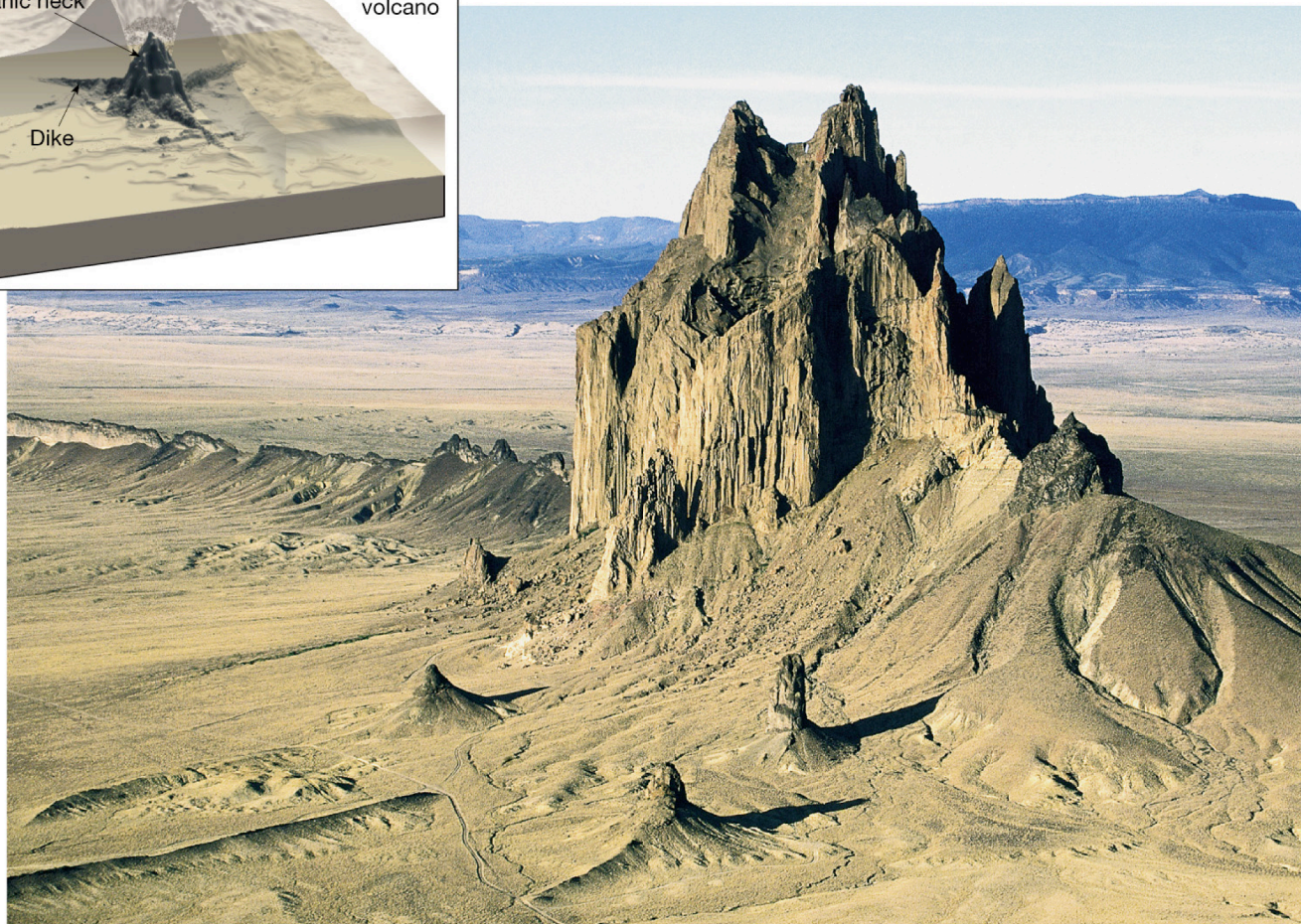
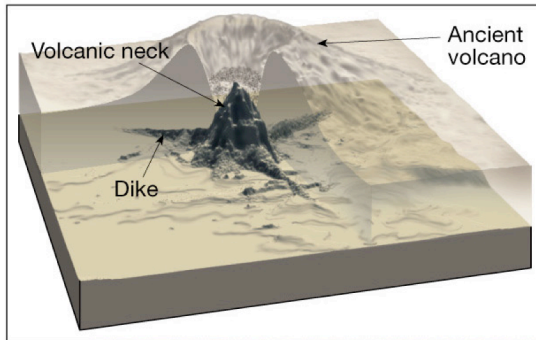


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Shiprock, New Mexico



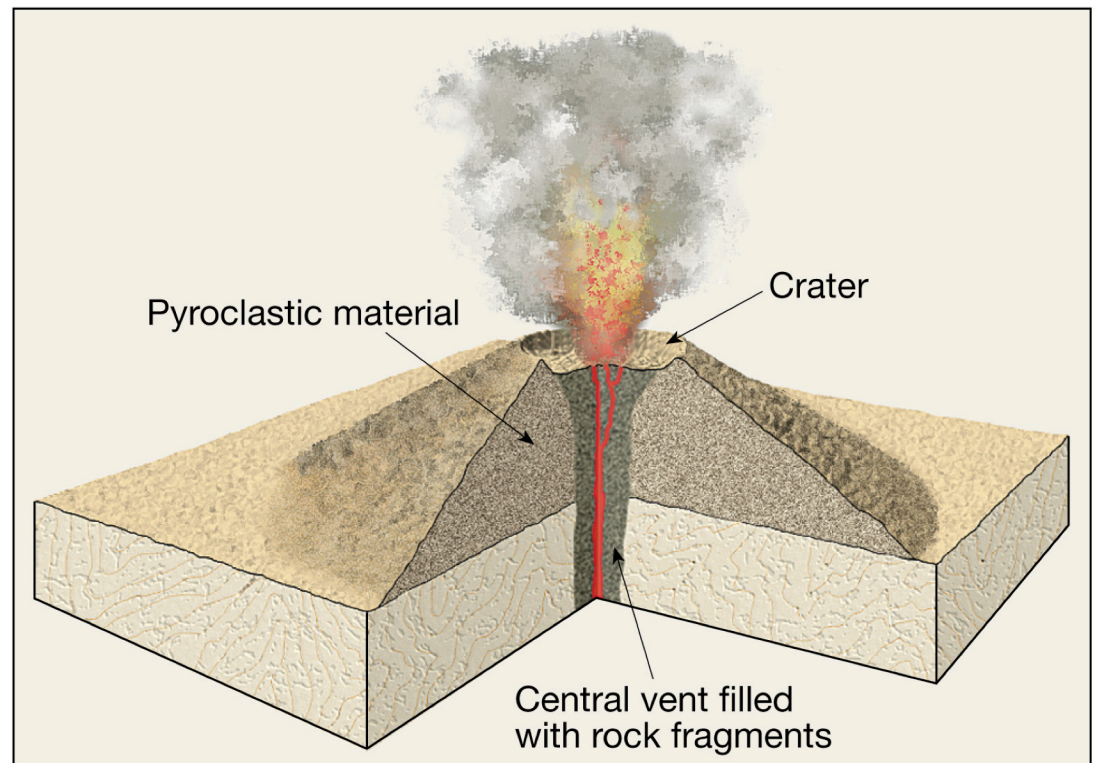
Figure 5.27



Types of Volcanoes

- Cinder
- Composite
- Shield

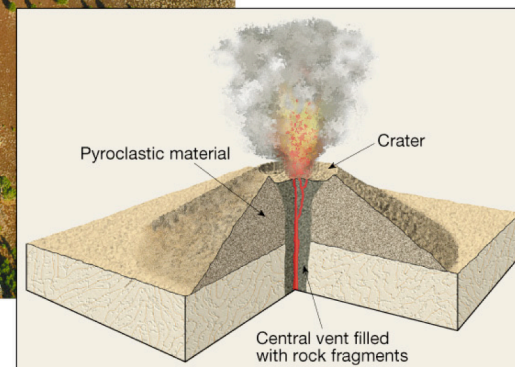
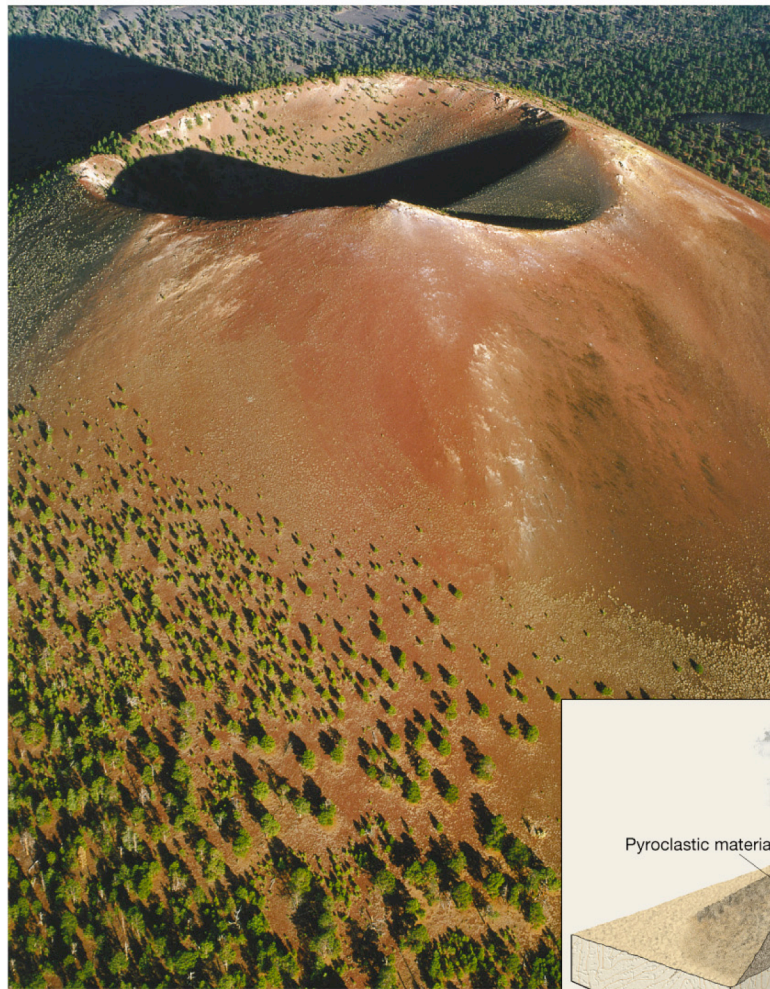
Figure 5.14B



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Cinder Cones

Figure 5.14



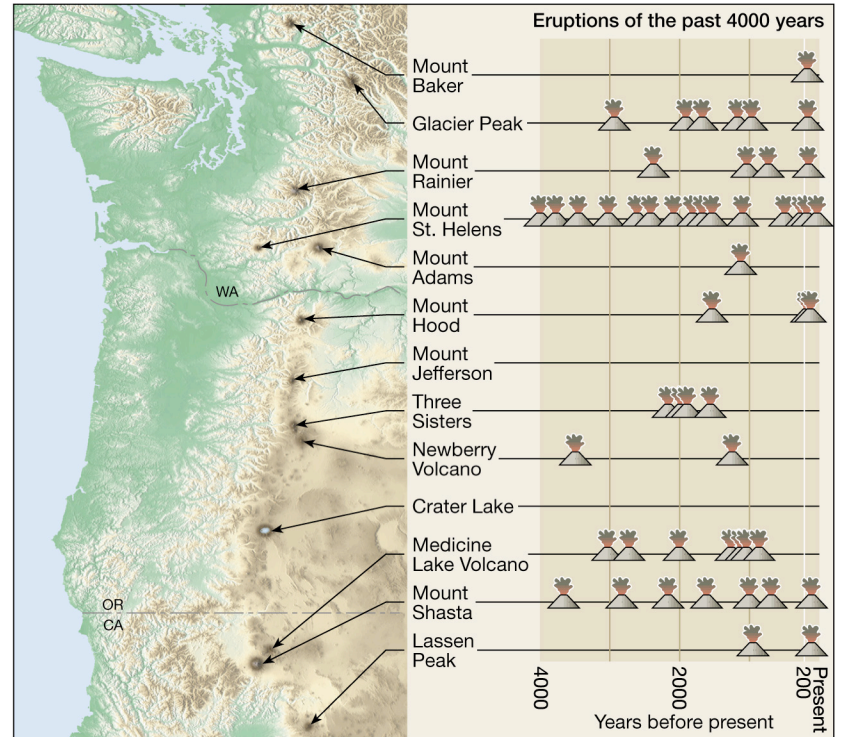
Composite Volcanoes

Figure 5.16



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Figure 5.17

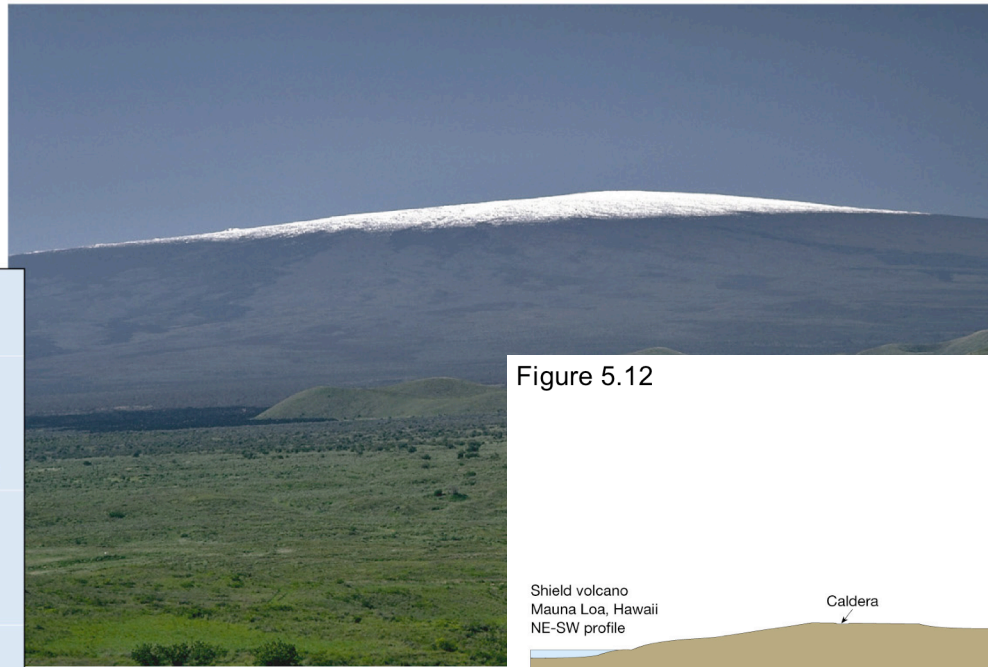


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Mt. Shasta, California

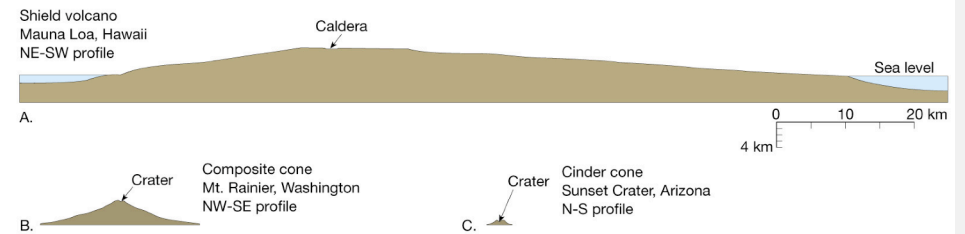
Shield Volcanoes

Figure 5.11



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Figure 5.12



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Examples

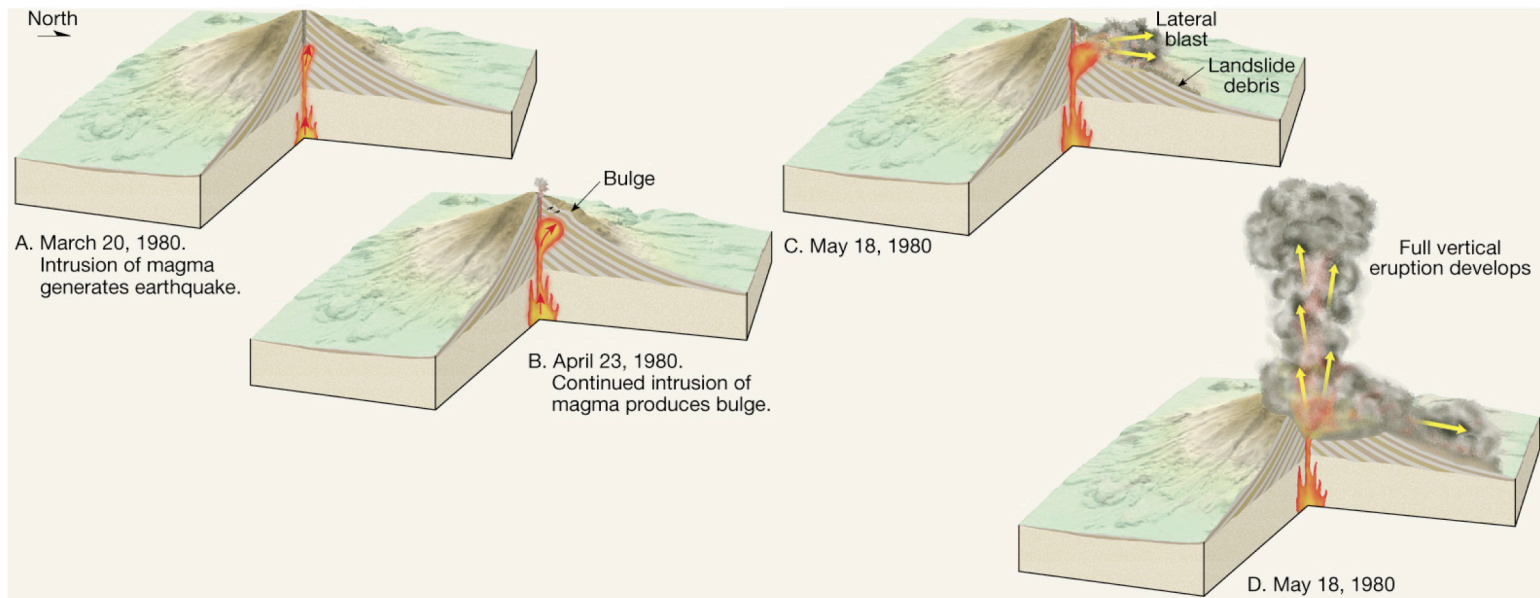
- Vesuvius, 79 AD...Pompeii
- Krakatoa, 1883...36,000 drowned
- Mt. Pelee, 1902... 30,000
- Mt. Saint Helens...1980

Figure 5.19



Mt. St. Helens, 1980

Figure 5.A



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Before & After

Figure 5.1Left



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Figure 5.4



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Figure 5.1Right



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Extreme Volcanoes

Figure 5.38

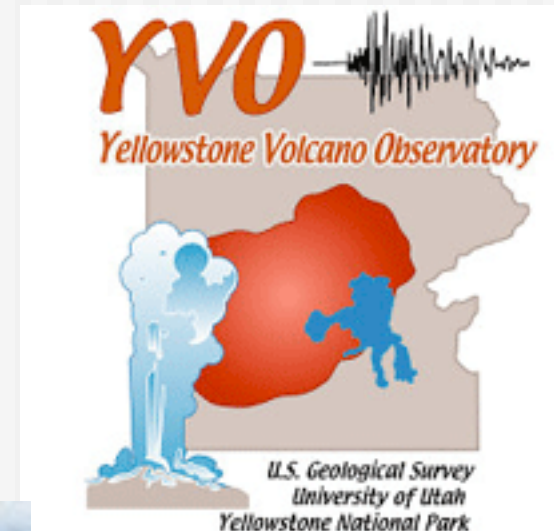


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Yellowstone Volcano Observatory-YVO



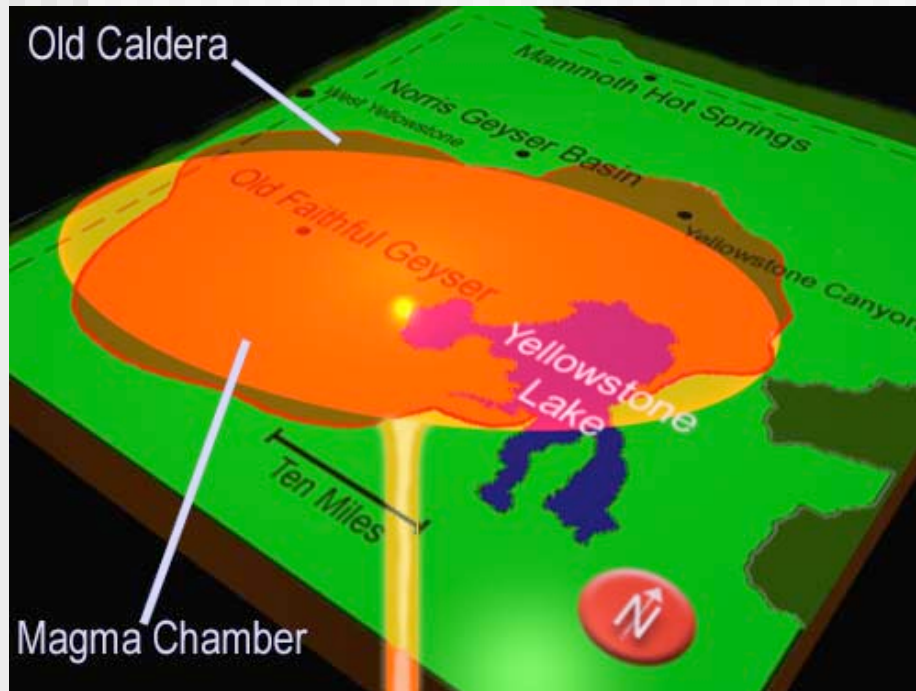
- 83 small quakes in August 2006
- Magma < 5 mi down
- > 1,000 geysers
- Rising at ~ 1 inch/yr



Next Eruption??

- Yellowstone is 74cm higher than in was in 1923 - indicating a massive swelling underneath the park.
- The reservoir is filling with magma
- The volcano erupts about every 600,000 years.
- The last eruption was more than 640,000 years ago.

Potential Effects?



Igneous Rock Chart

- Granite
- Rhyolite

Diorite
Andesite

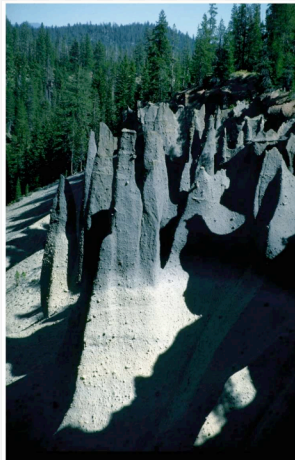
Gabbro
Basalt

Felsic
Quartz

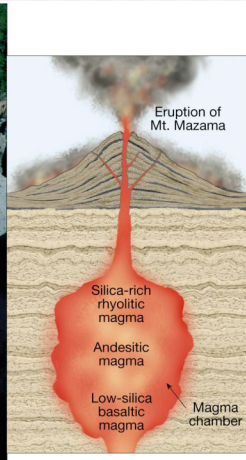
Intermediate
No Quartz

Mafic

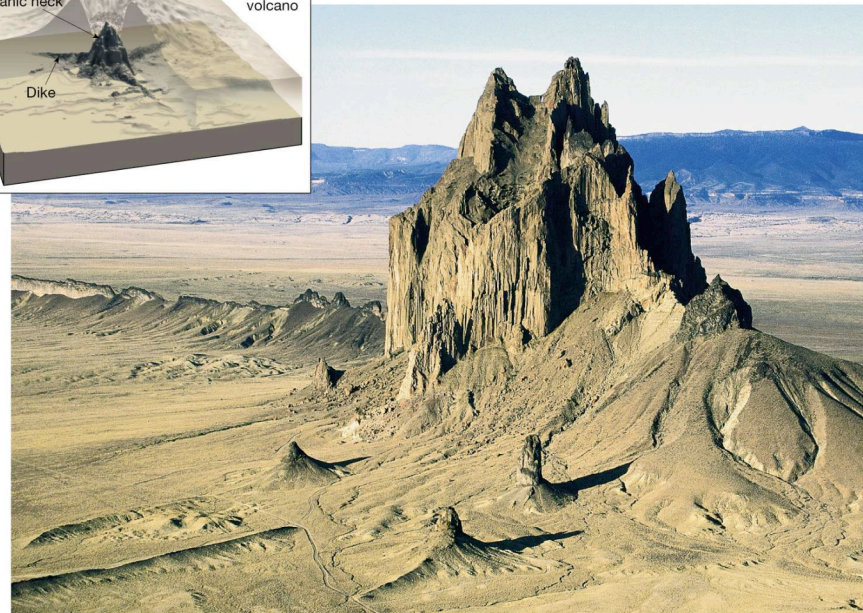
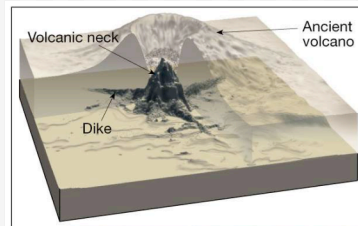
Importance of Igneous Rocks



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