Continental Margins

Oceanography

- Oceanography is the study of all aspects of the ocean
  - draws on geology, chemistry, physics and biology

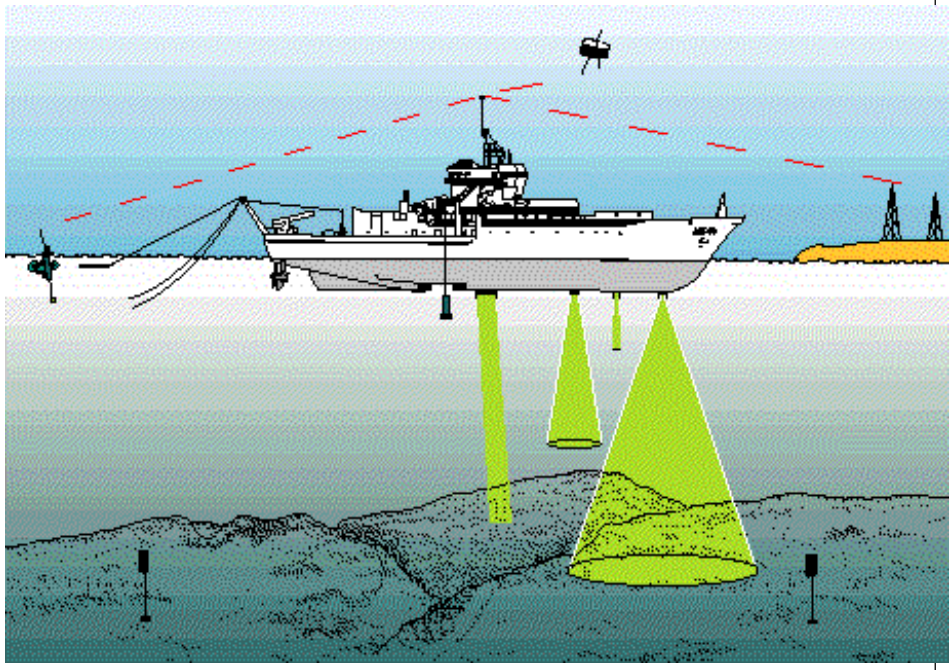
Sonar - Sound Navigation and Ranging

1. Works by transmitting sound waves toward the bottom of the ocean; sensitive receiver intercepts the echo reflected by the bottom

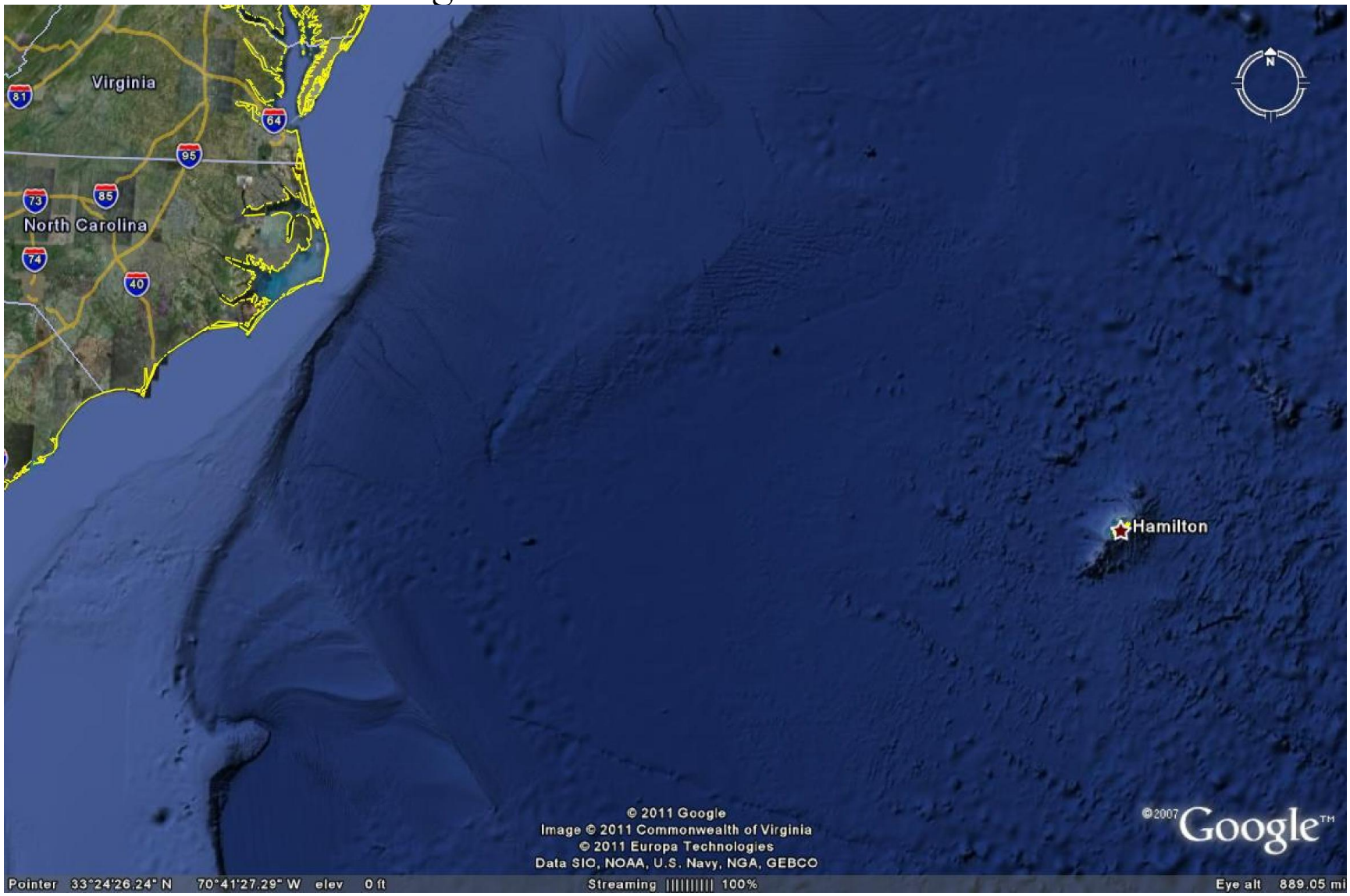
2. Speed of sound is 1500 m/s in water.

3. The depths determined from monitoring the echoes

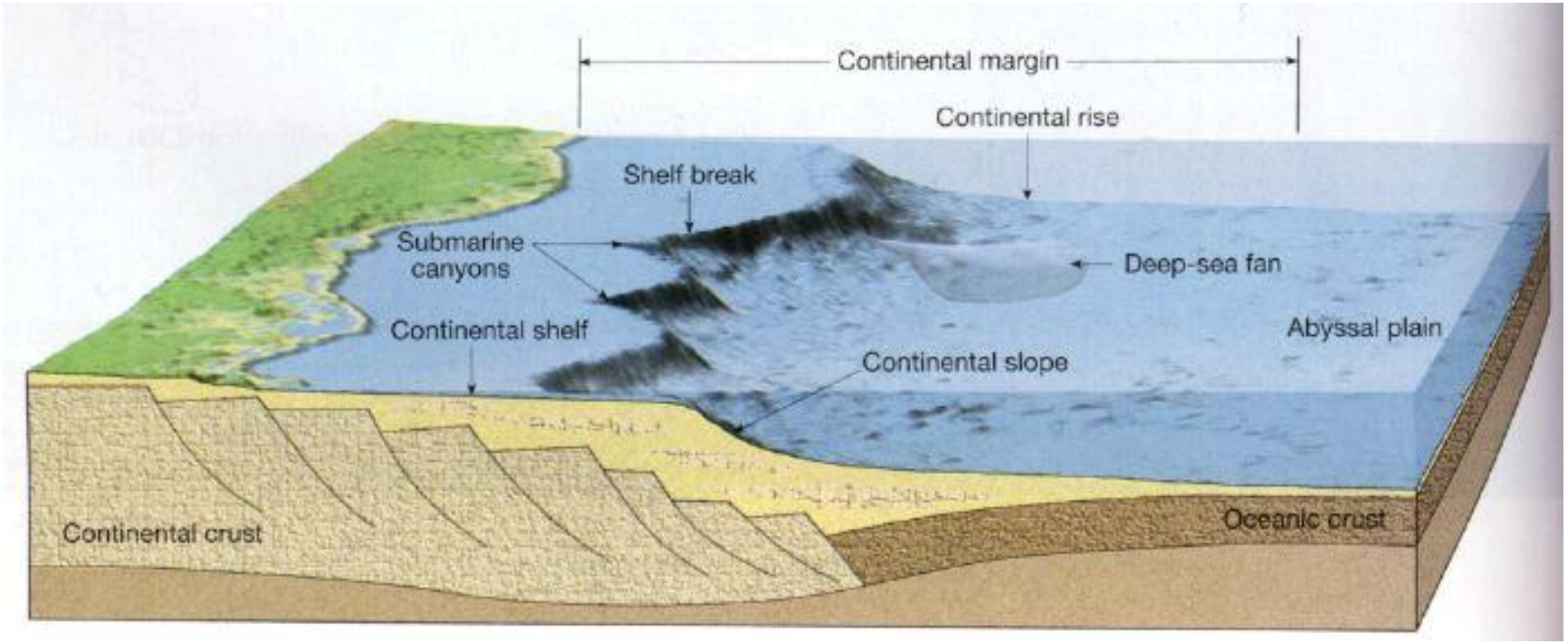
4. Used for topographic maps Of ocean floor



- The ocean floor is divided into 2 areas:
  - Continental Margin and Ocean Basin

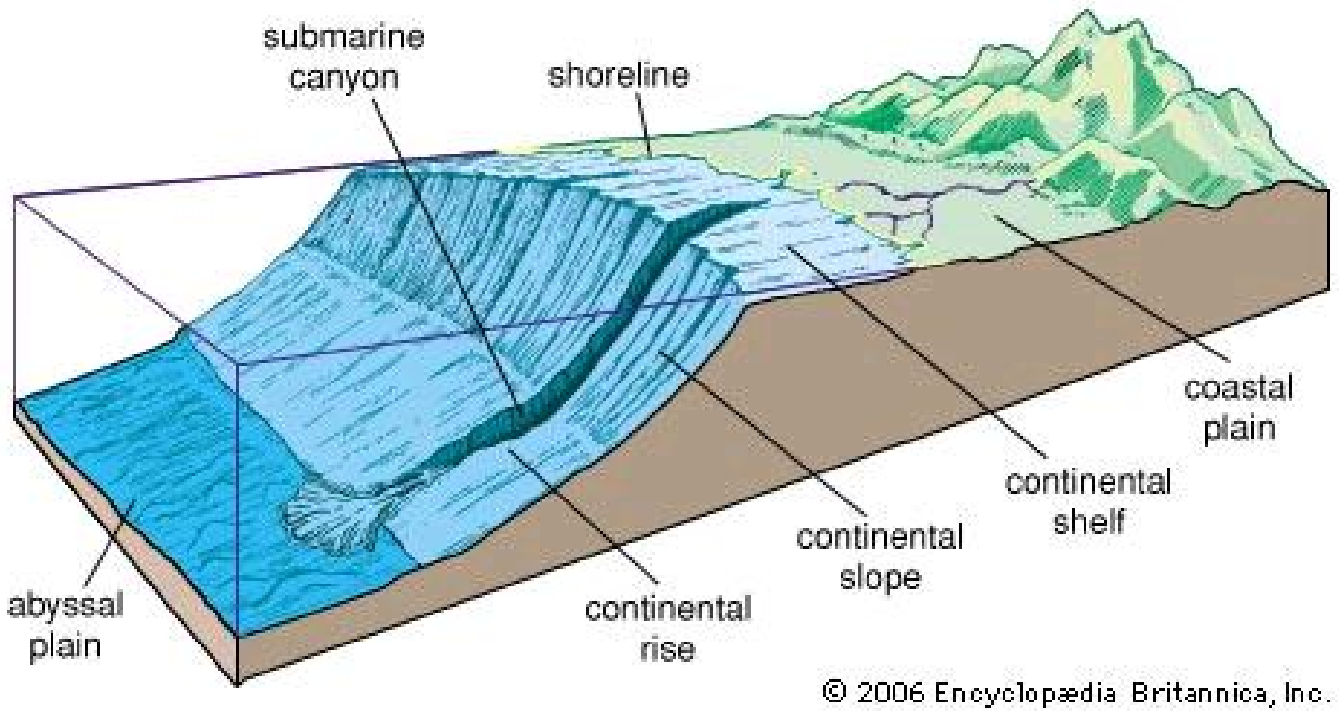


- Continental Margin:
  - Shallow parts of ocean made of continental crust
  - It is not always obvious; it's not the shoreline
  - It is the dividing line between continental and oceanic curst.



3 Features of the Continental Margin

- Continental Shelf: first area of ocean floor
- Continental Slope: marks the area between continental and oceanic crust; very steep
- Continental Rise: (Where trenches do not exist) the steep slope merges into a more gradual incline

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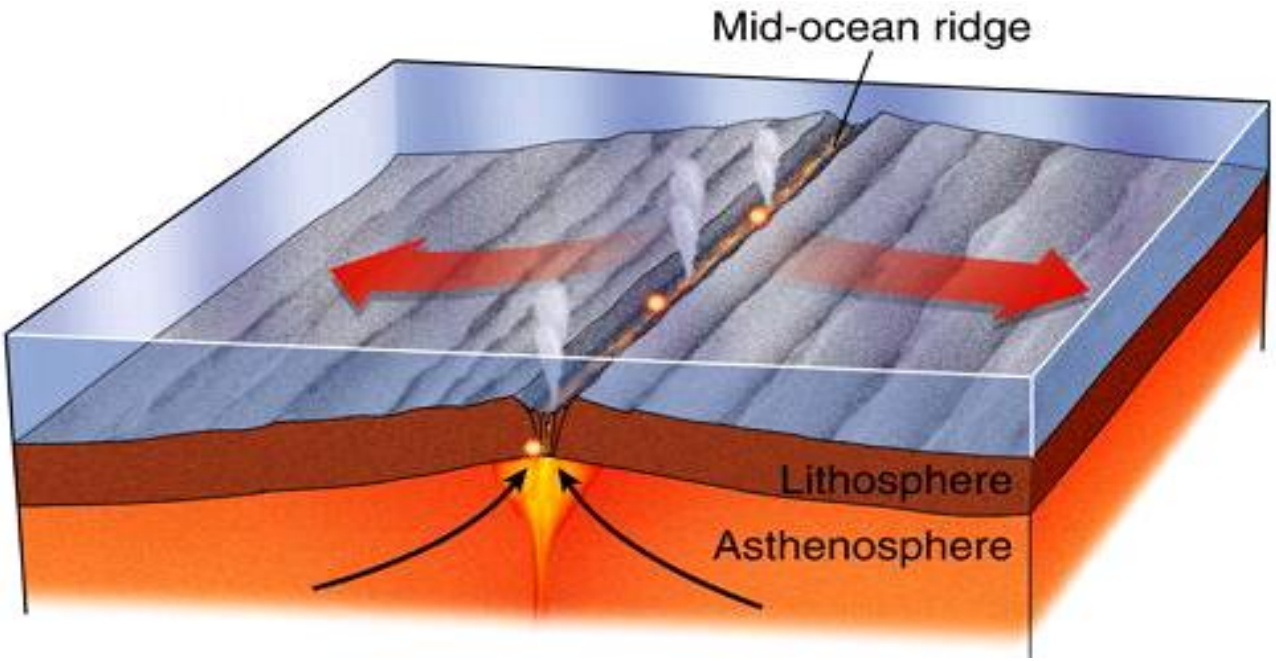
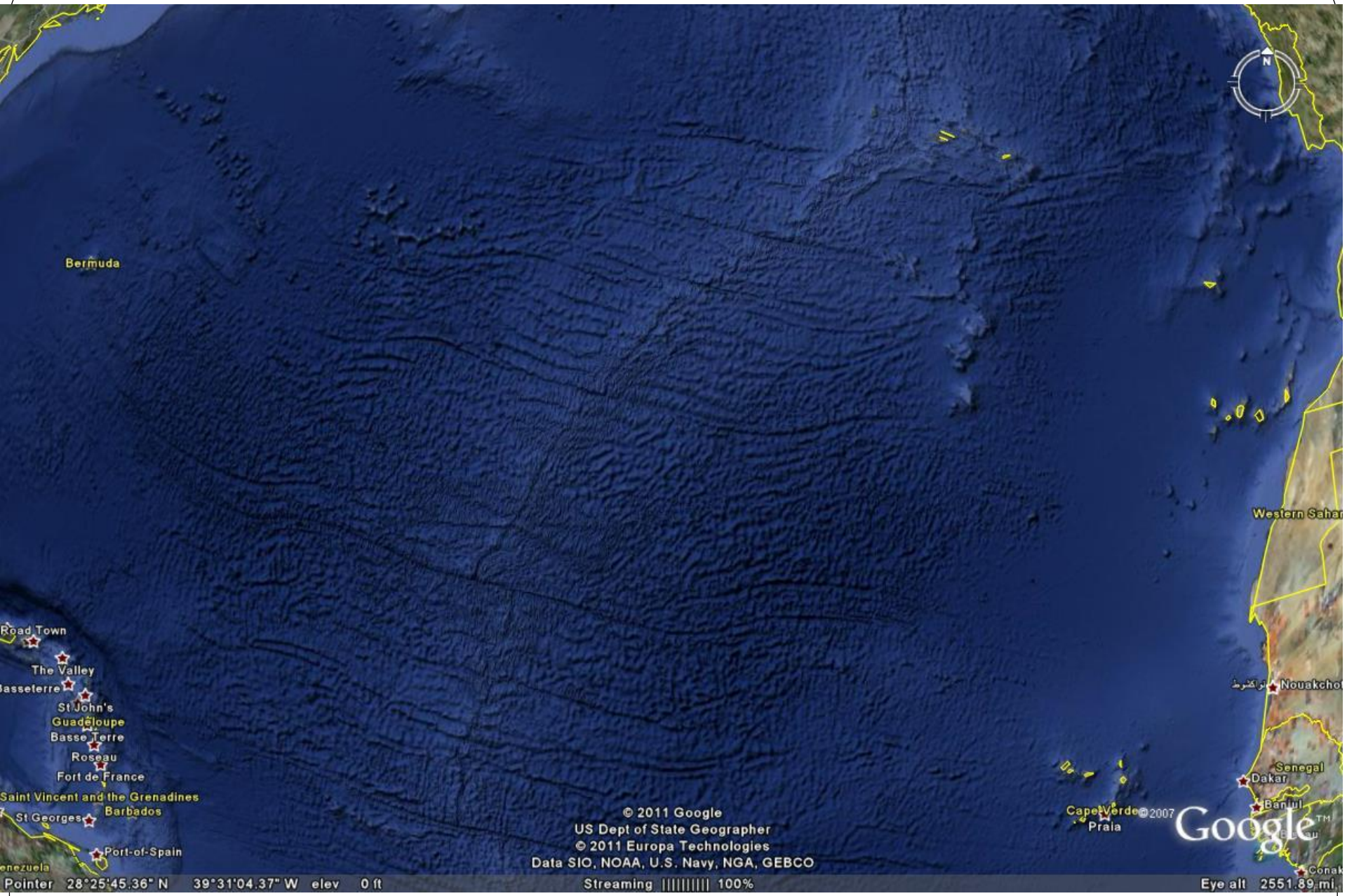
ter 37°58'31.10" N 96°52'14.13" W elev 1295 ft
Streaming 100%
Eye alt 2639.35 mi

Ocean Basin

- Made of oceanic crust. It's the area beyond the continental rise.
- 3 features of the Ocean Basin:
  1. Mid-Ocean Ridges: found near the center of most ocean basins; underwater mountains that have developed on newly formed ocean crust




Bermuda
Western Sahara
Road Town
The Valley
Basseterre
St John's
Guadeloupe
Basse Terre
Roseau
Fort de France
Saint Vincent and the Grenadines
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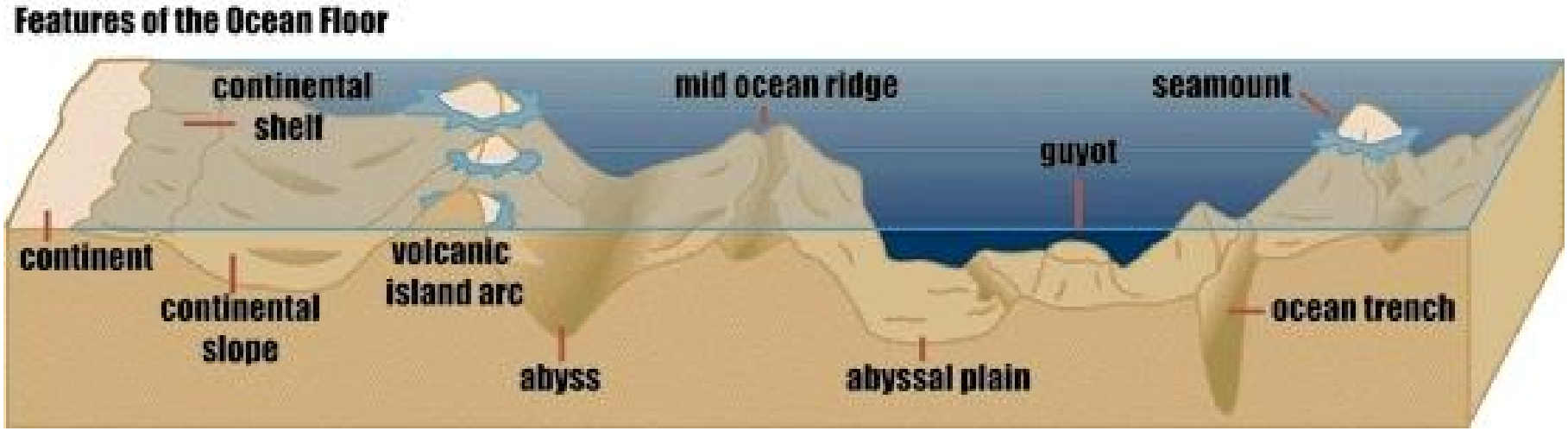
Pointer 28°25'45.36" N 39°31'04.37" W elev 0 ft
Streaming 100%
Eye alt 2551.89 mi

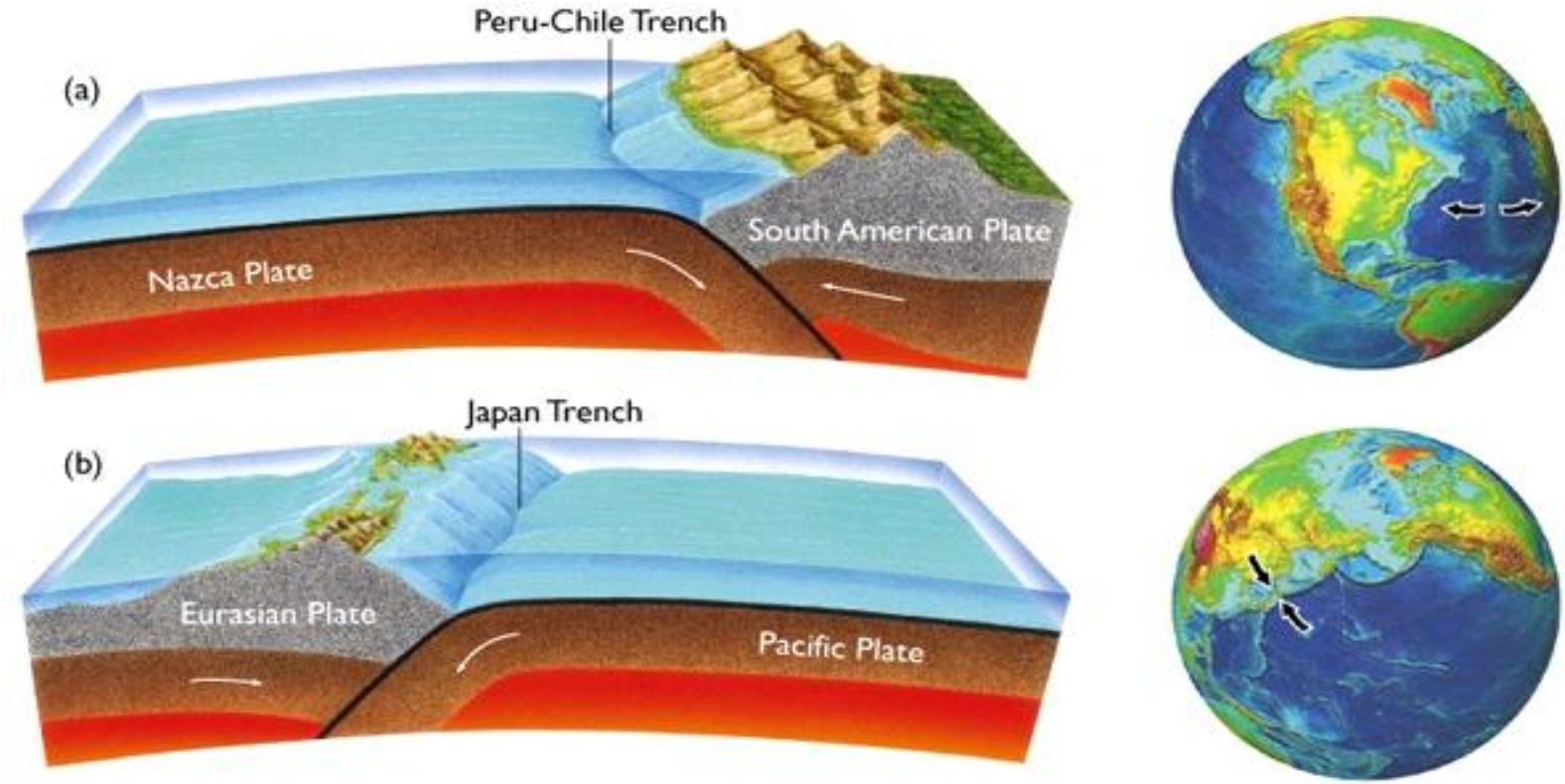
Ocean Basin:

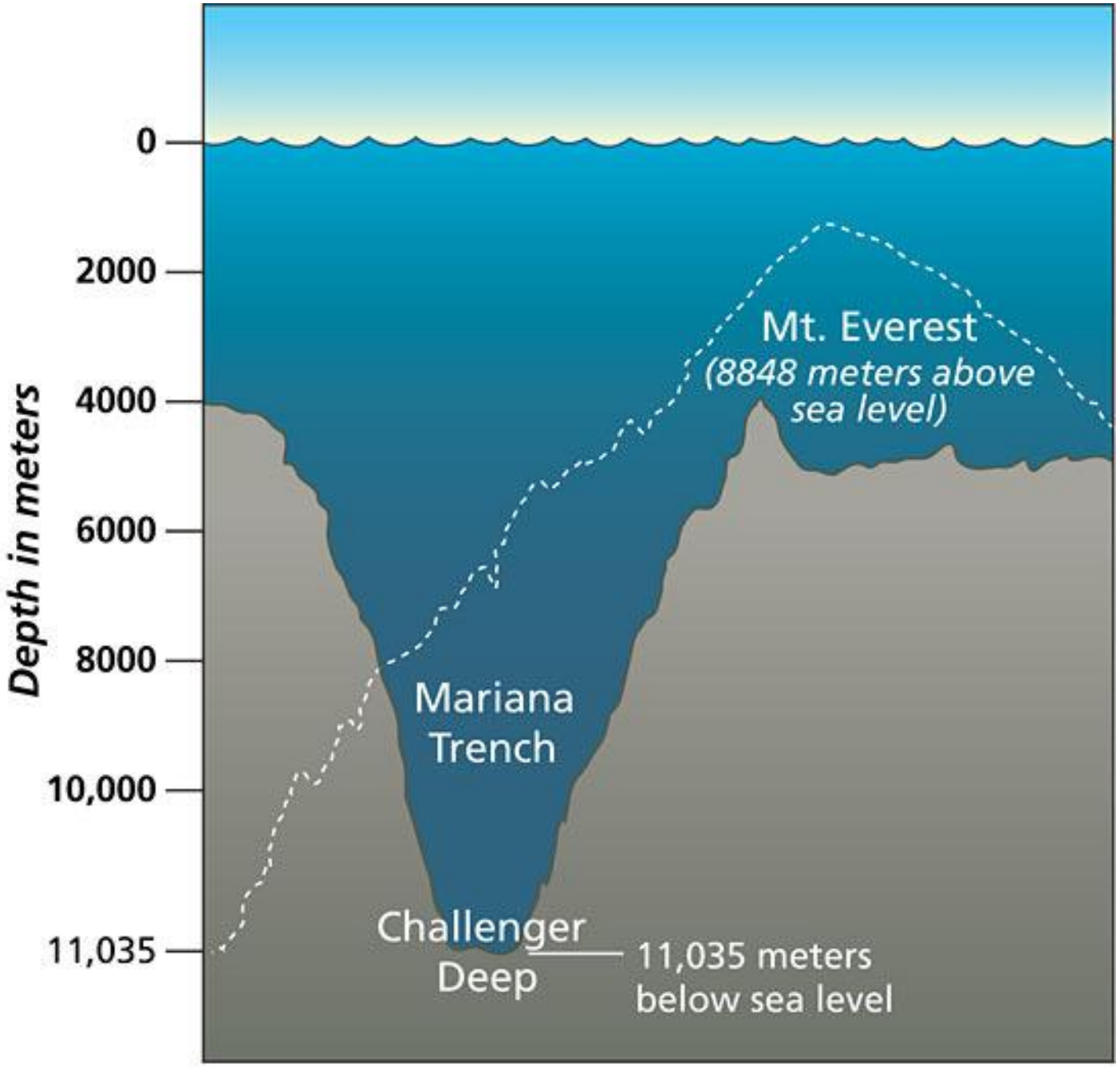
2. Abyssal Plains: deep, extremely flat features; thick accumulation of fine sediment



Ocean Basin:

3. Trenches: form at sites of plate convergence where one moving plate descends beneath another and plunges back into the mantle.





Mt. Everest would be 2187 meters underwater.

- 7173 feet
- 1.36 miles