

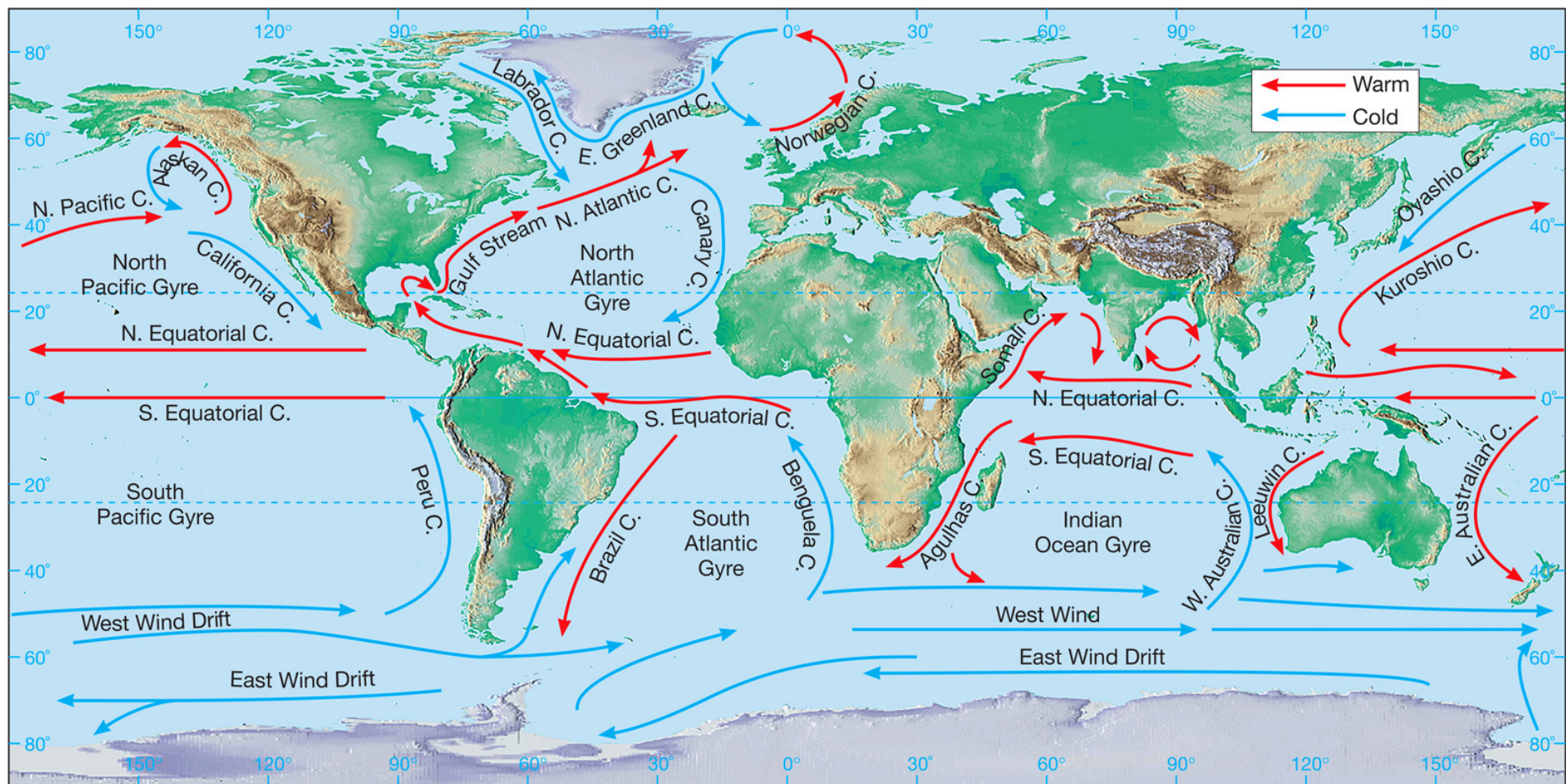
Dynamic Ocean

Circulation

Coastal Processes

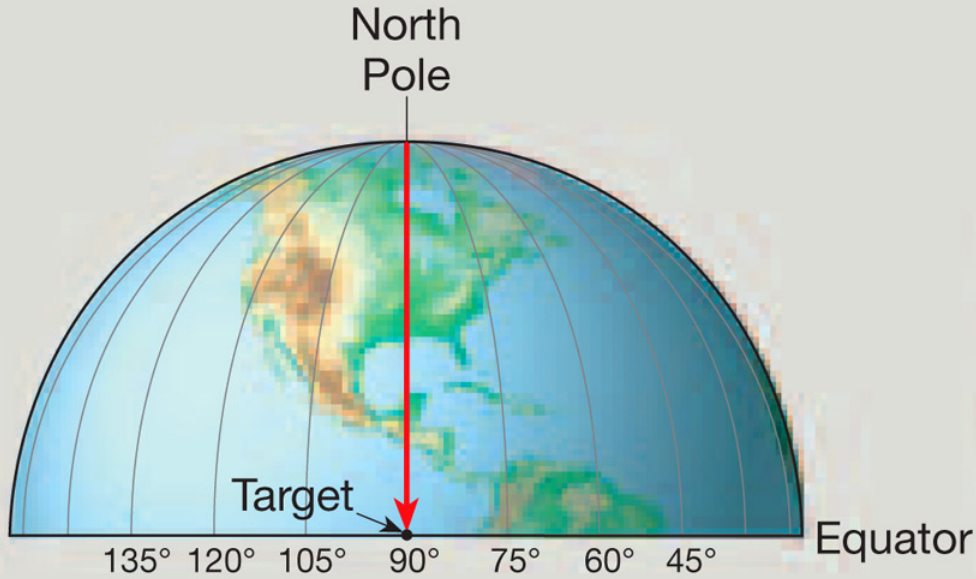


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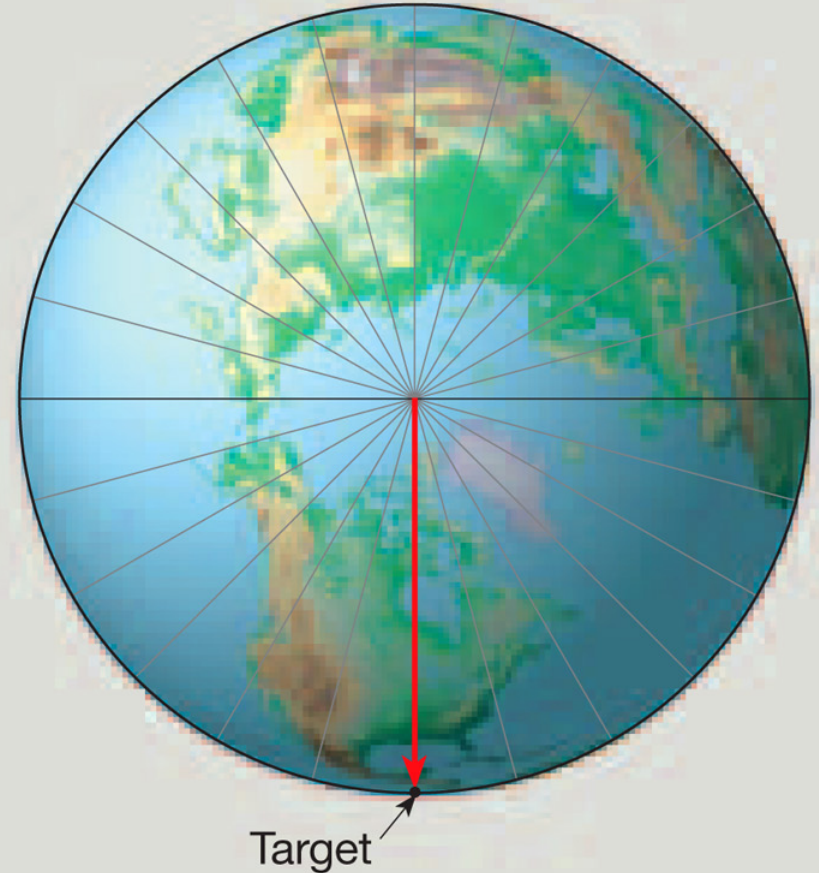


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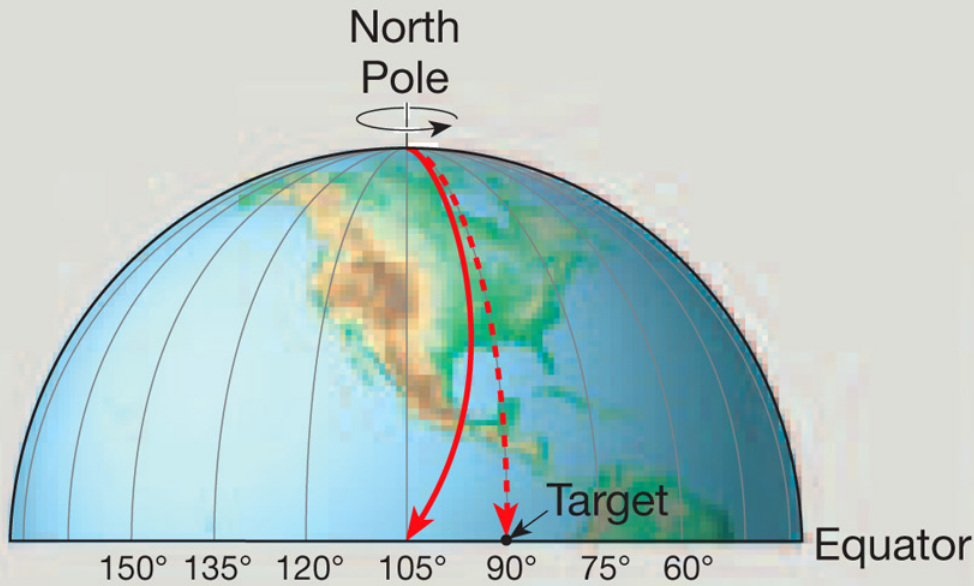
No Coriolis Effect



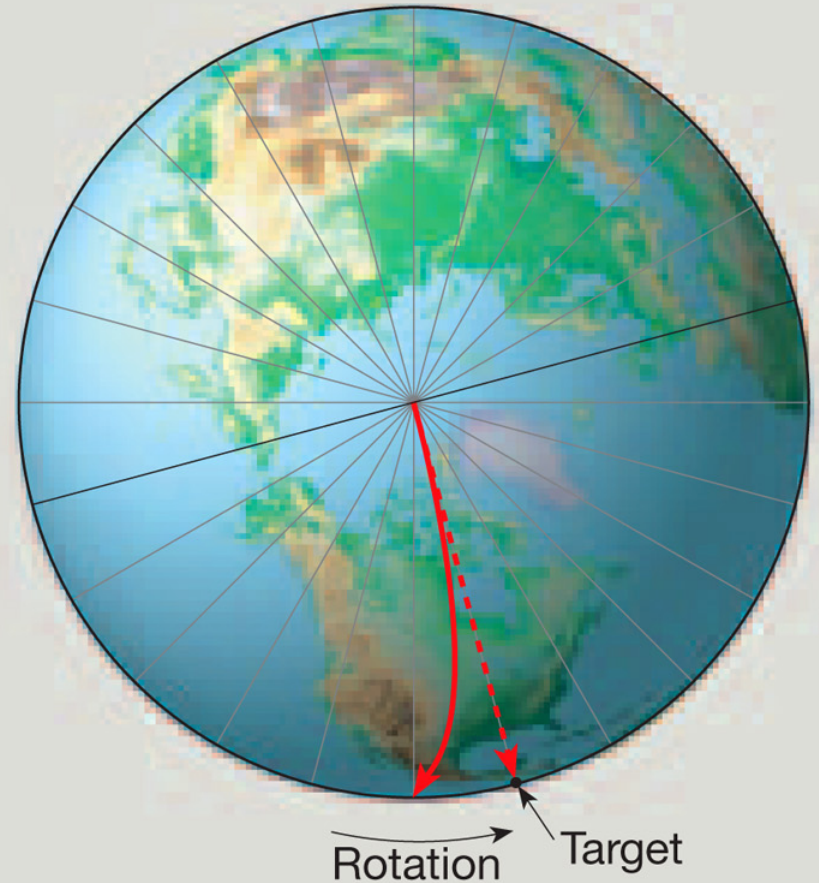
A. Non-rotating Earth



Coriolis Effect



B. Rotating Earth

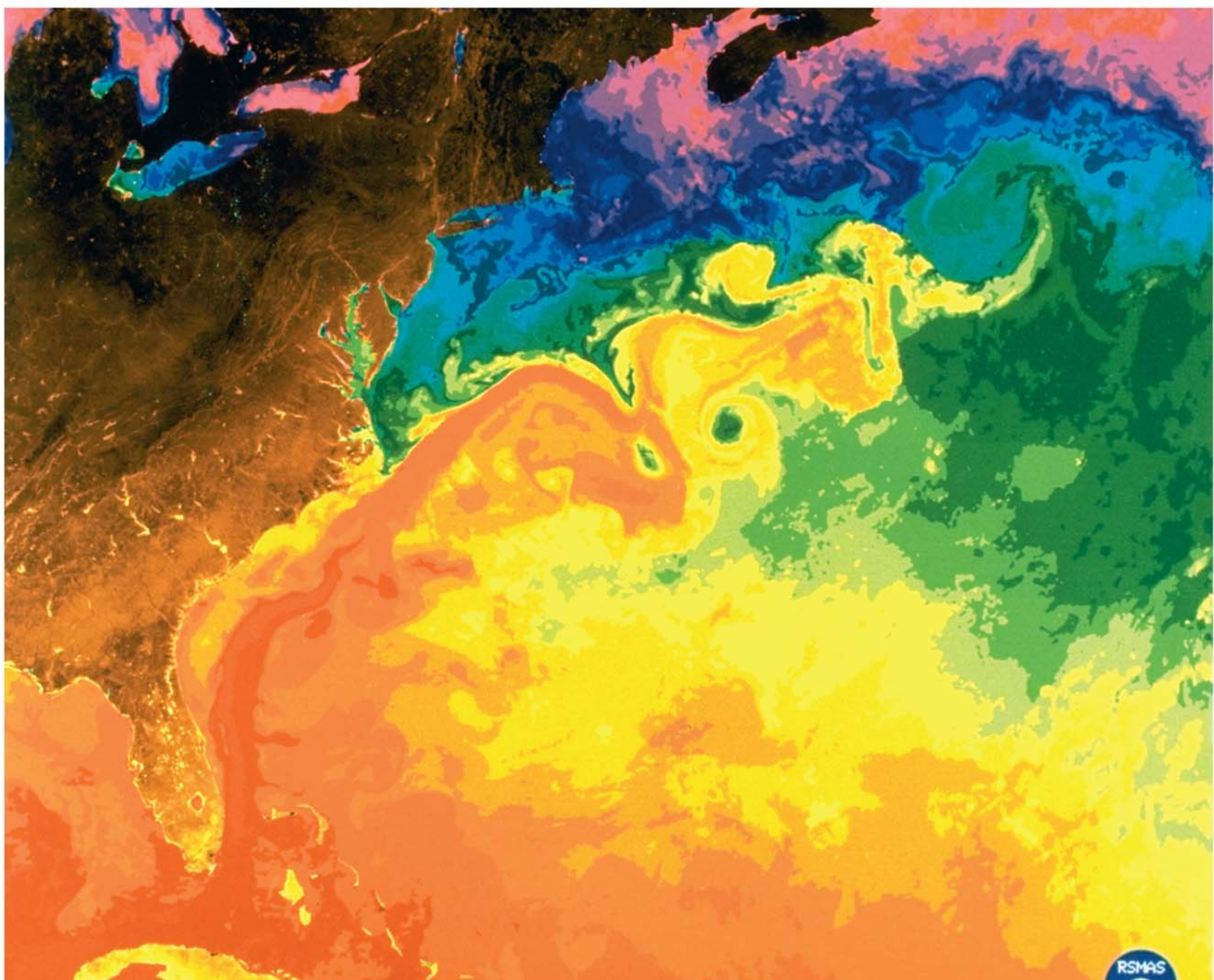


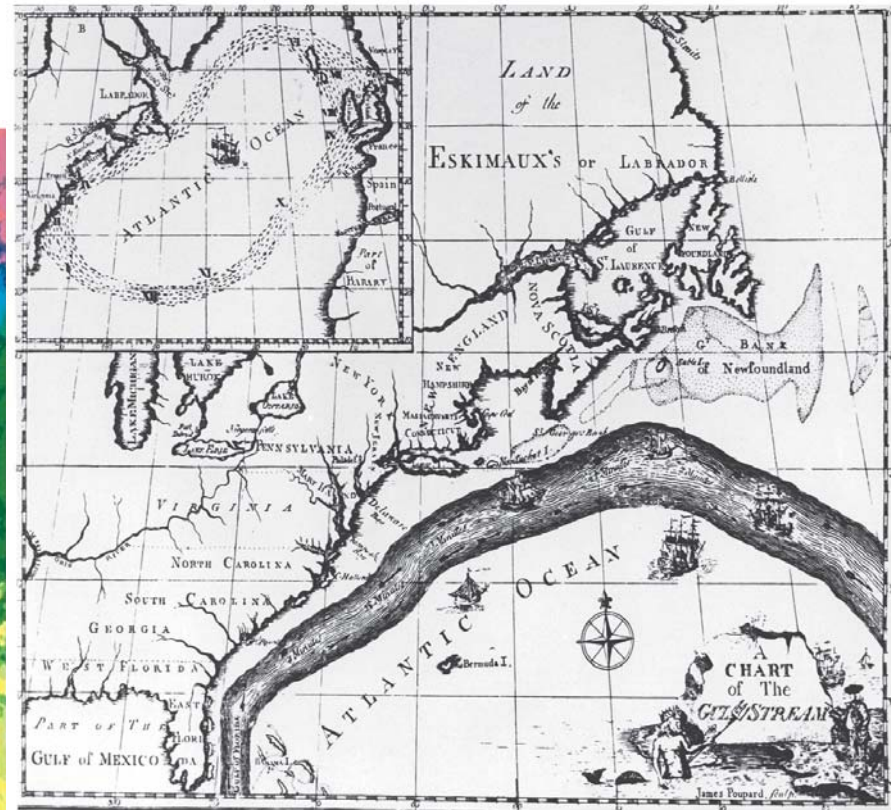
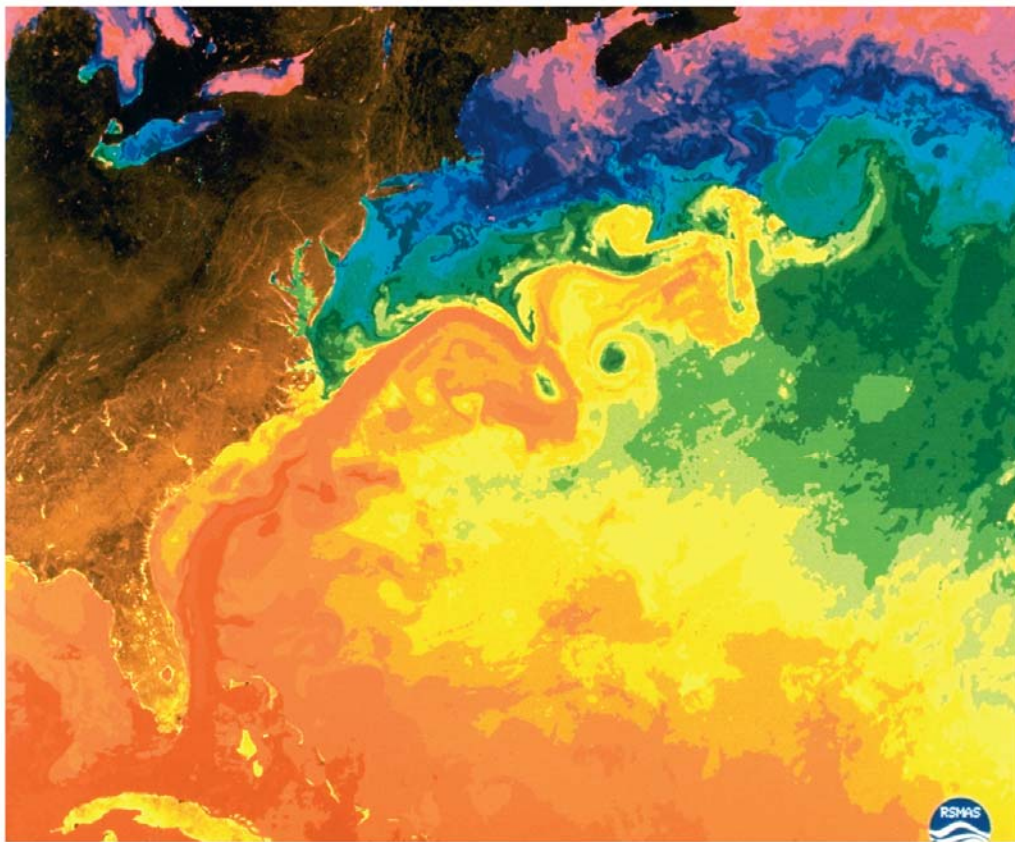


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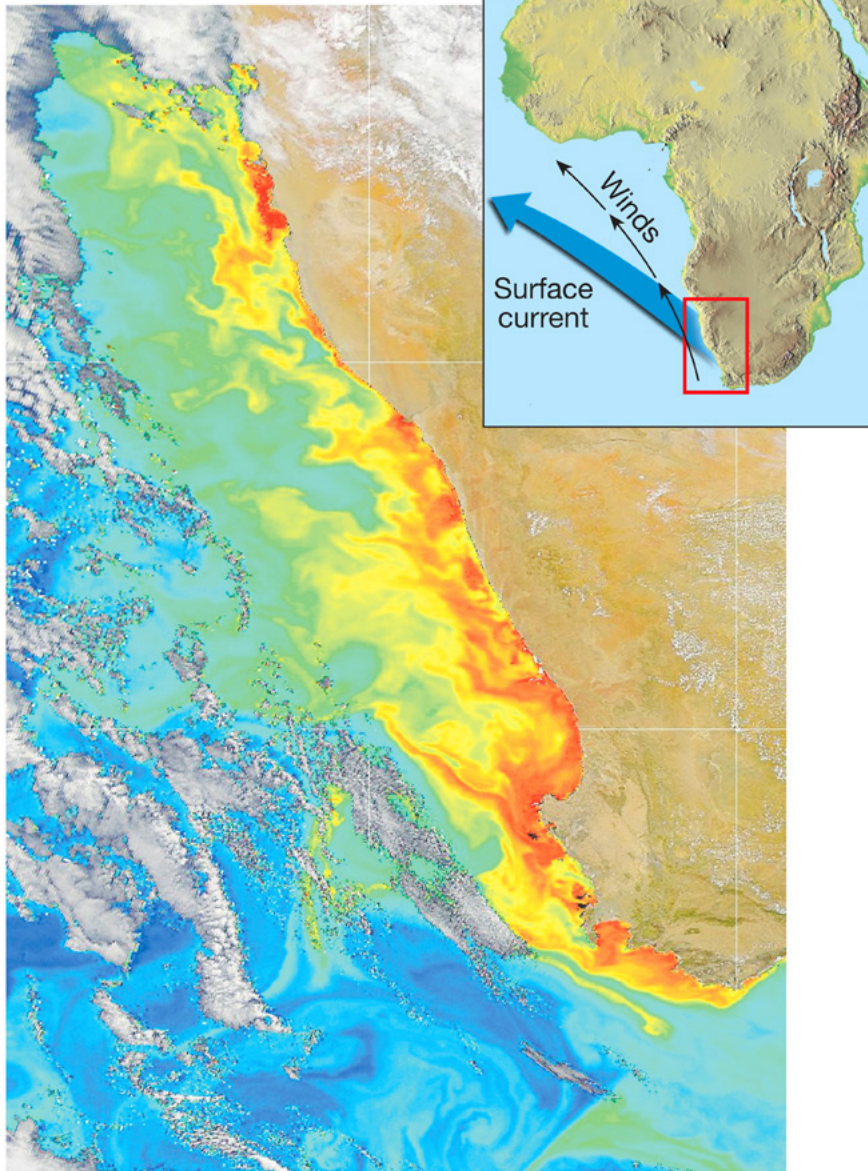
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B.

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Currents to remember:

- **Gulf Stream**
 - Warm northward flow along west side of N. Atlantic
- **Kuroshio**
 - Warm northward flow along west side of N. Pacific
- **California**
 - Cool southward flow along east side of N. Pacific
- **West Wind Drift**
 - West to east “around the world” flow in southern hemisphere
- **Equatorial currents**
 - East to west flow that run into land masses at west side of ocean basins



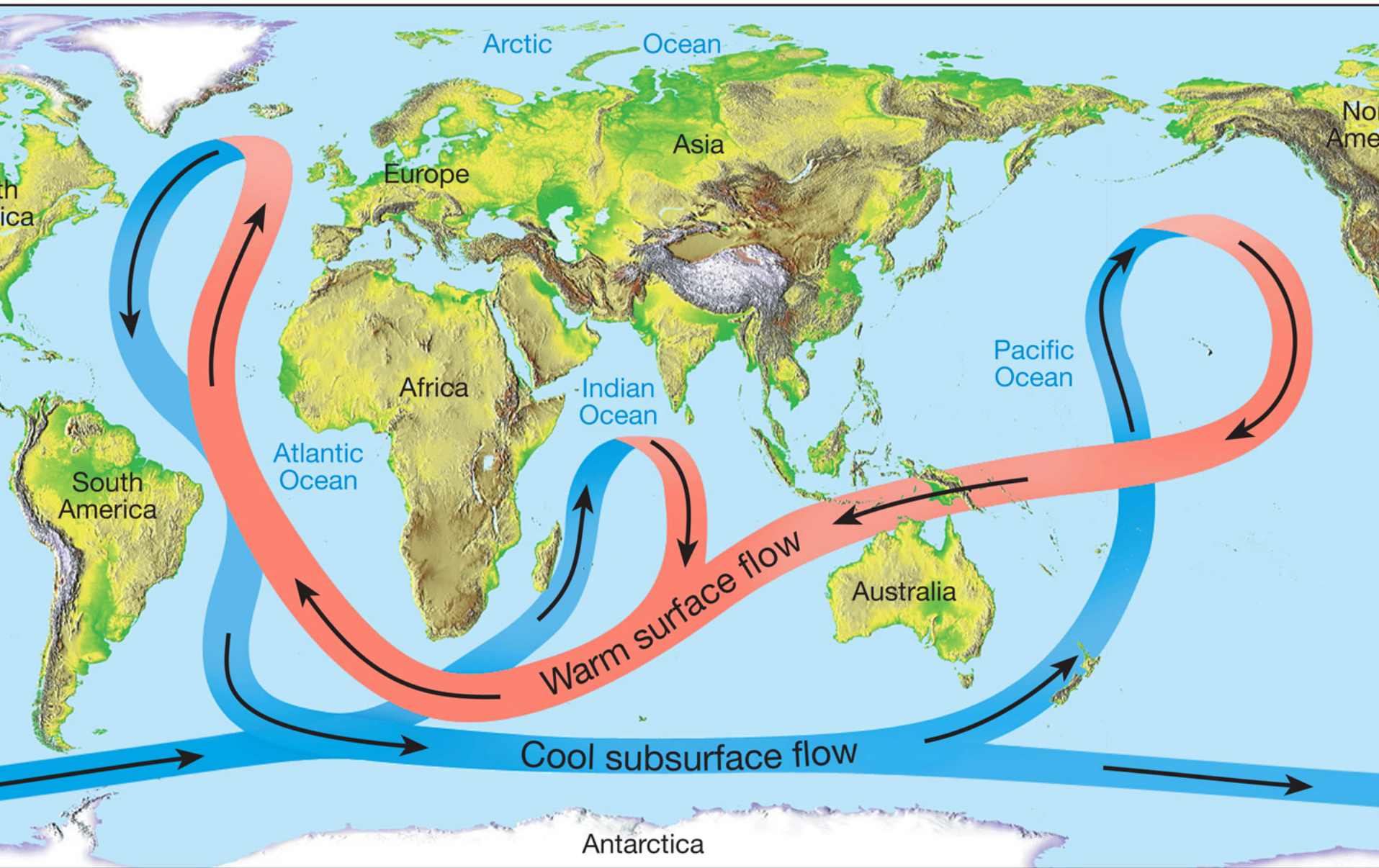
Coastal Upwelling
shown by
chlorophyll content
of water



Chlorophyll a Concentration
mg/m³



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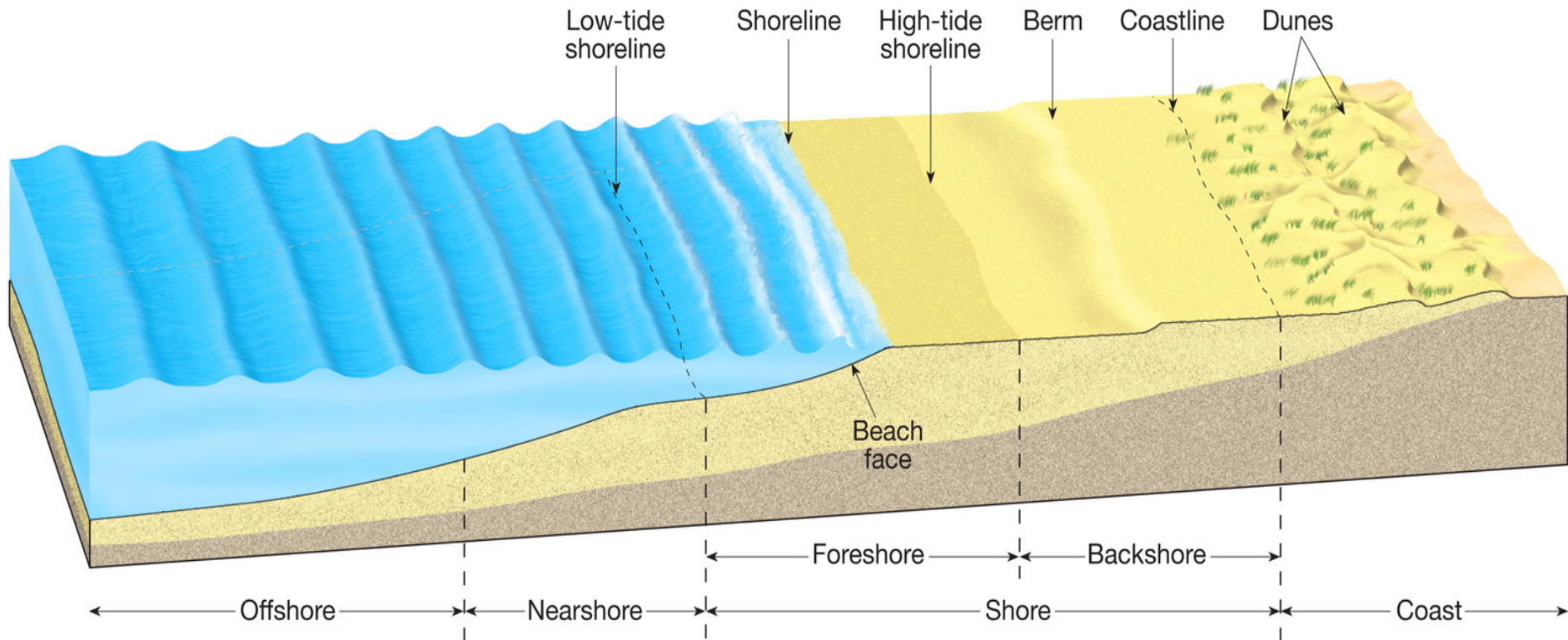




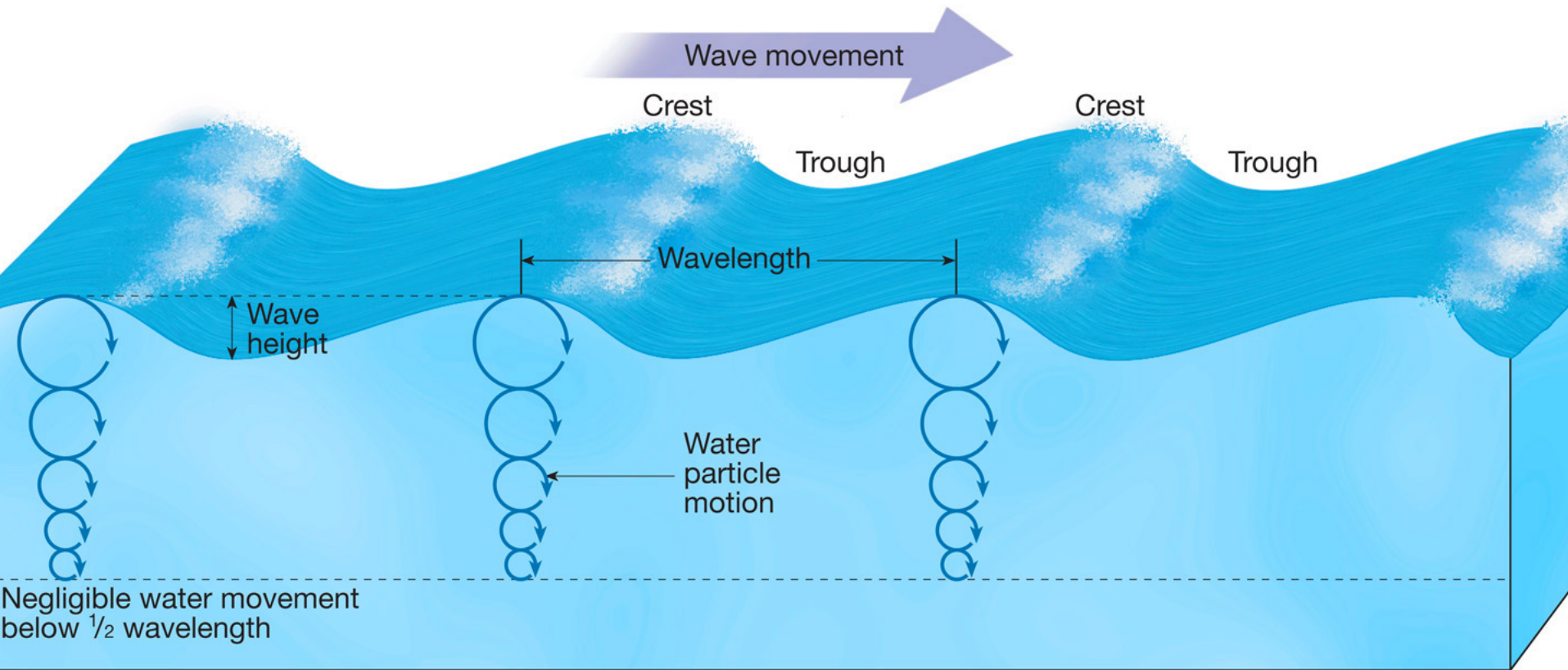
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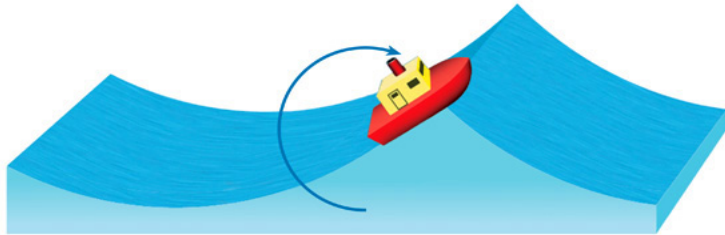
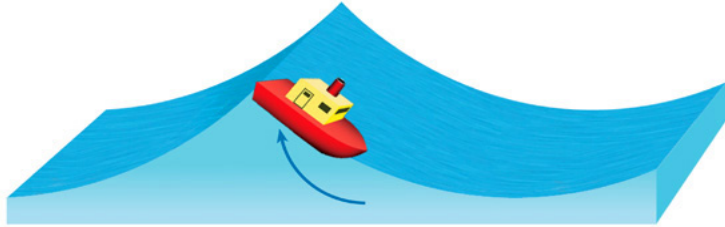
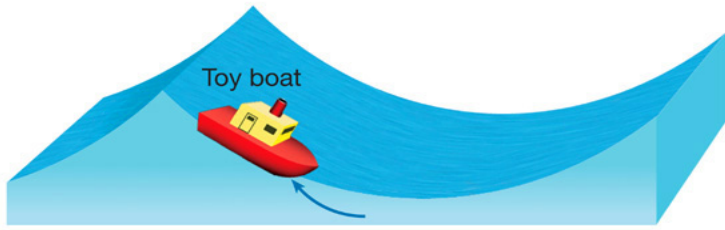
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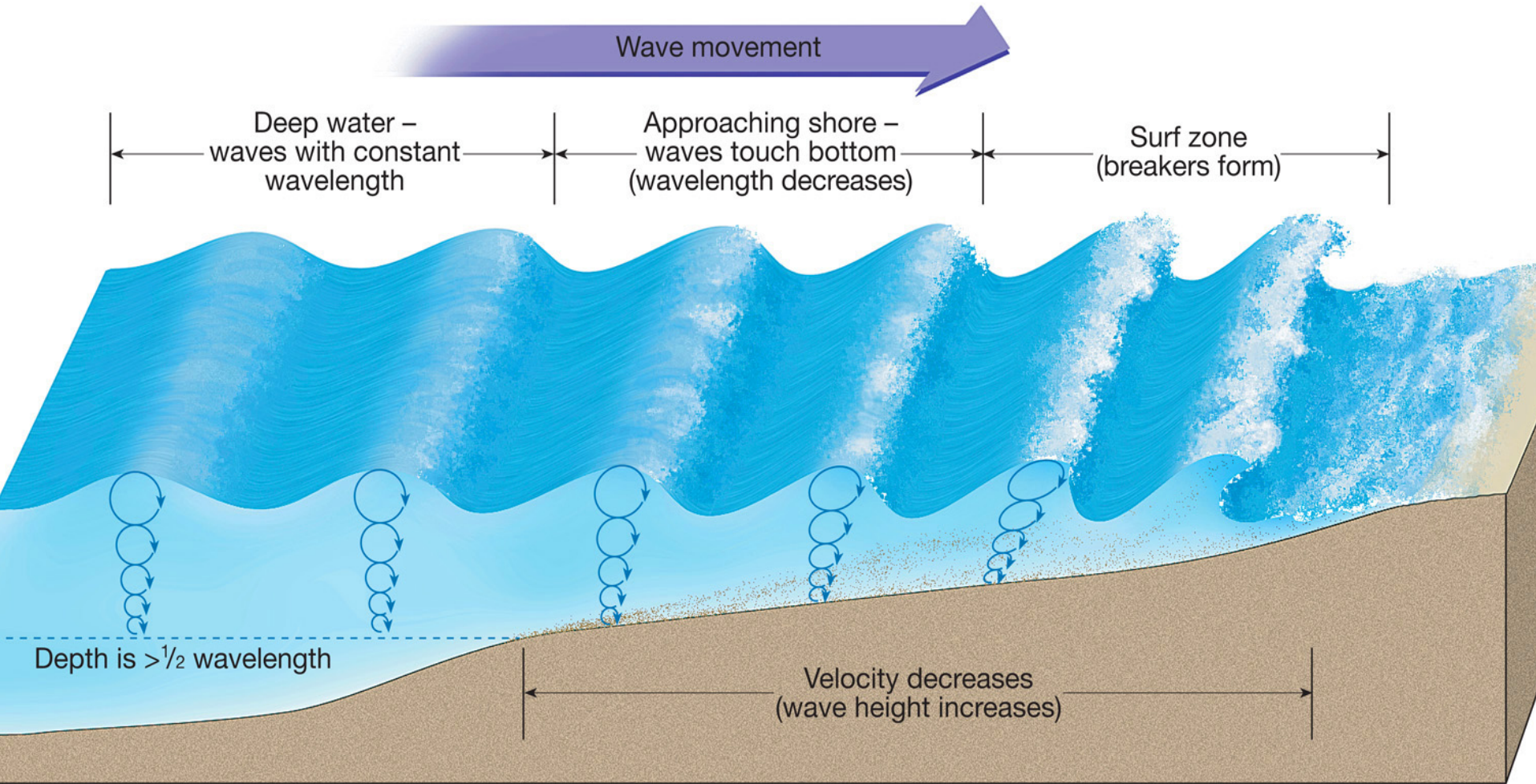
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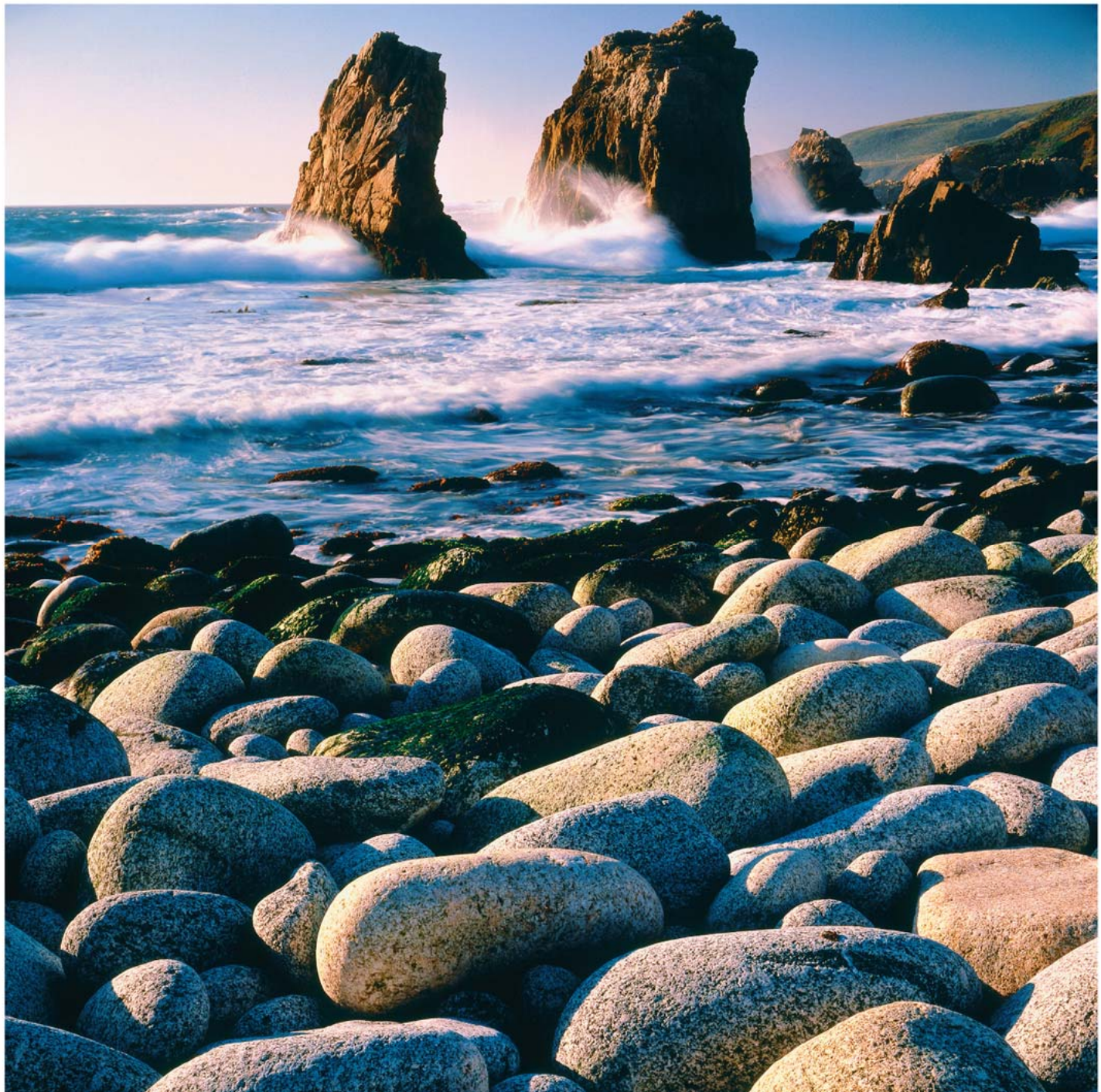
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Orbital movement of toy boat



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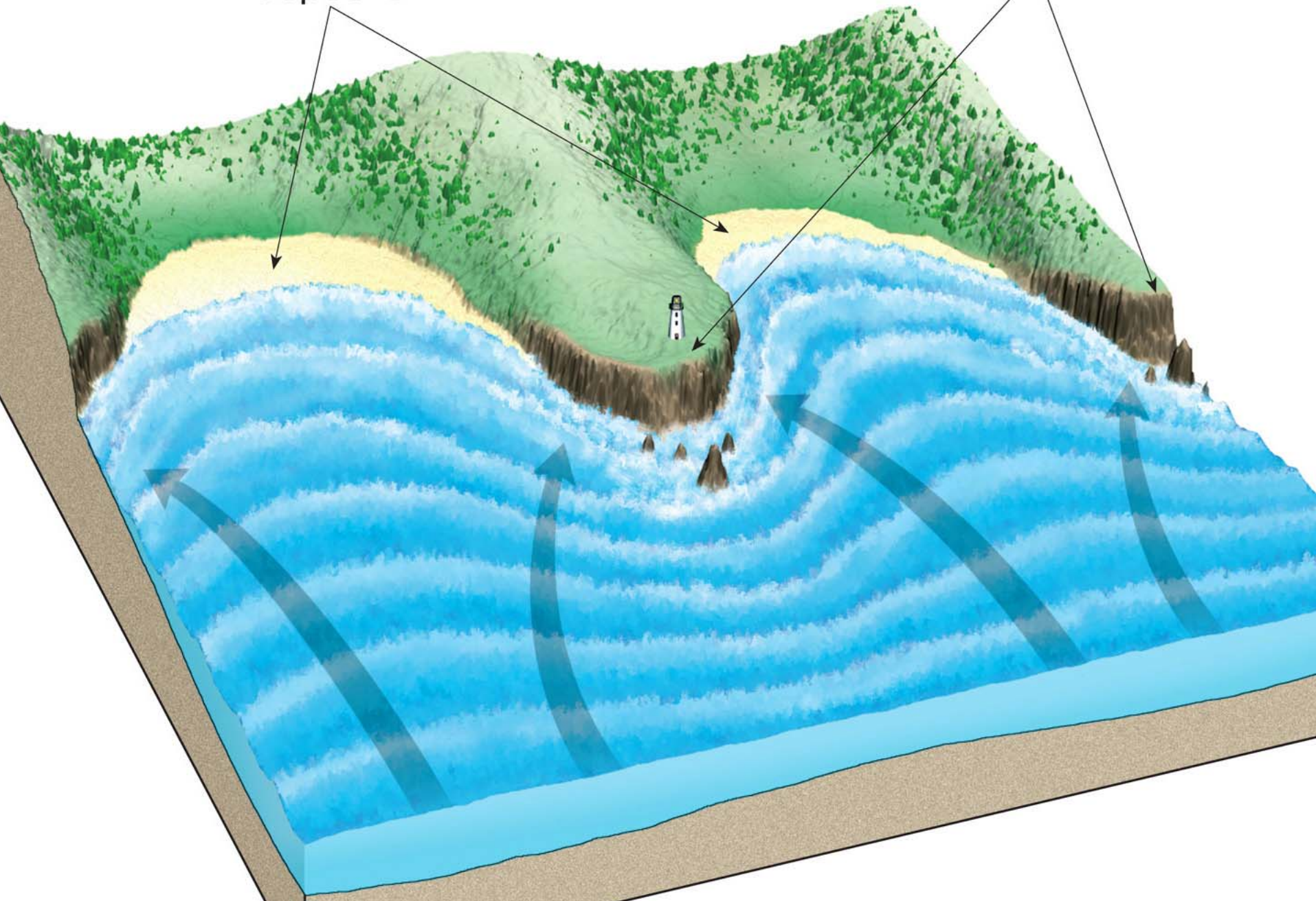


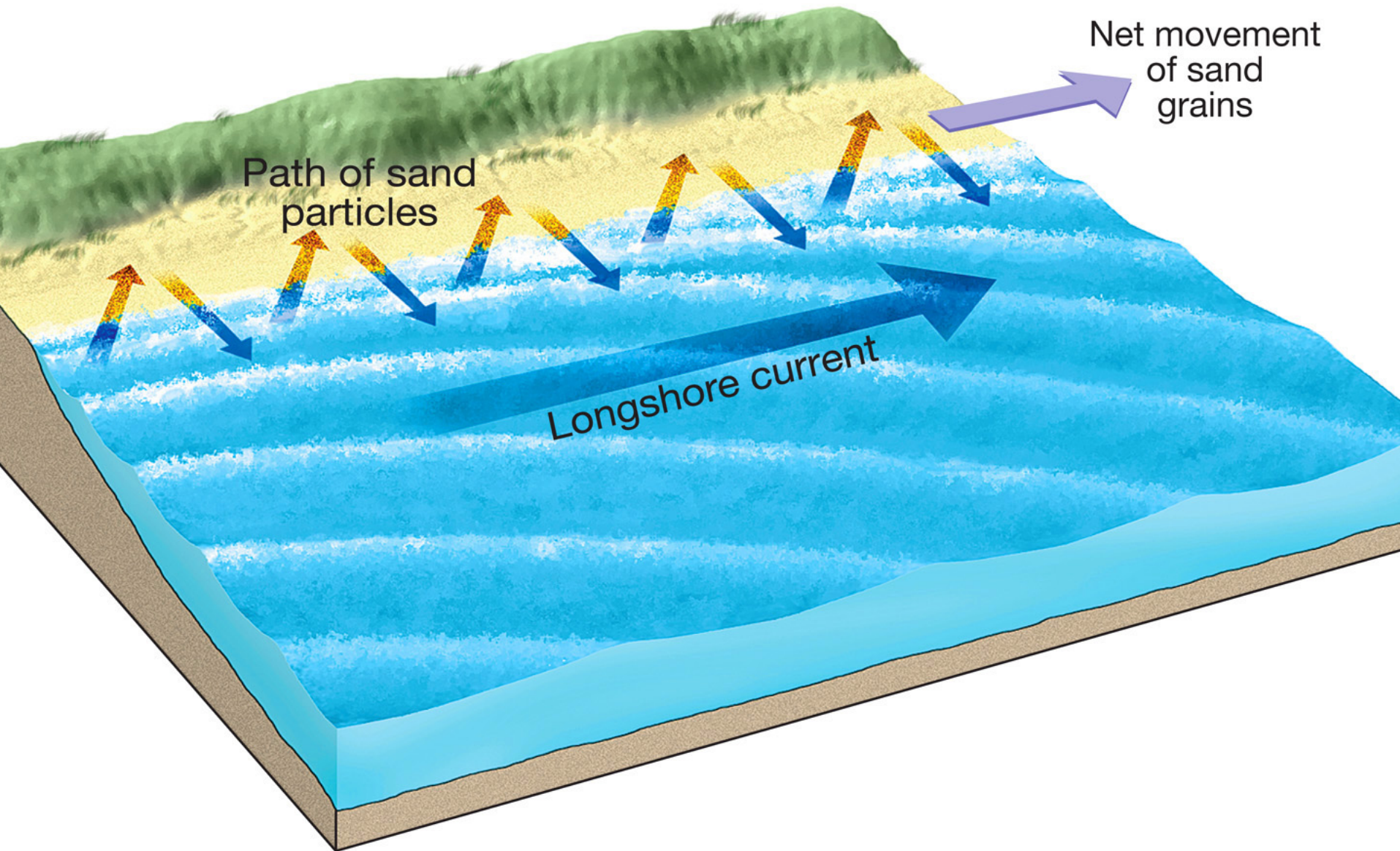


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Beach deposits

Headland





Path of sand particles

Net movement of sand grains

Longshore current



Wave-cut
platform

Marine terrace

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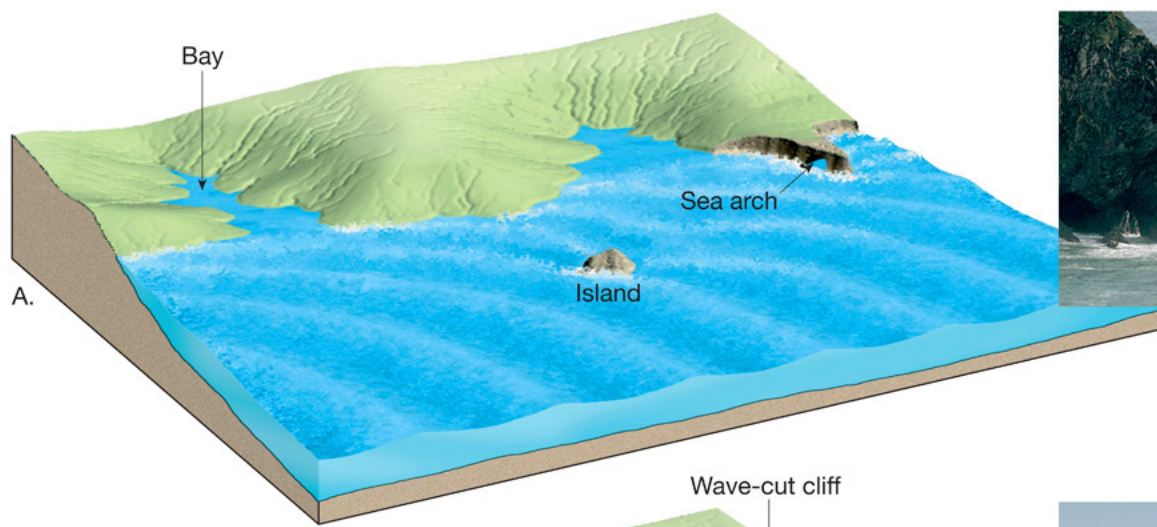
baymouth bar

tidal delta

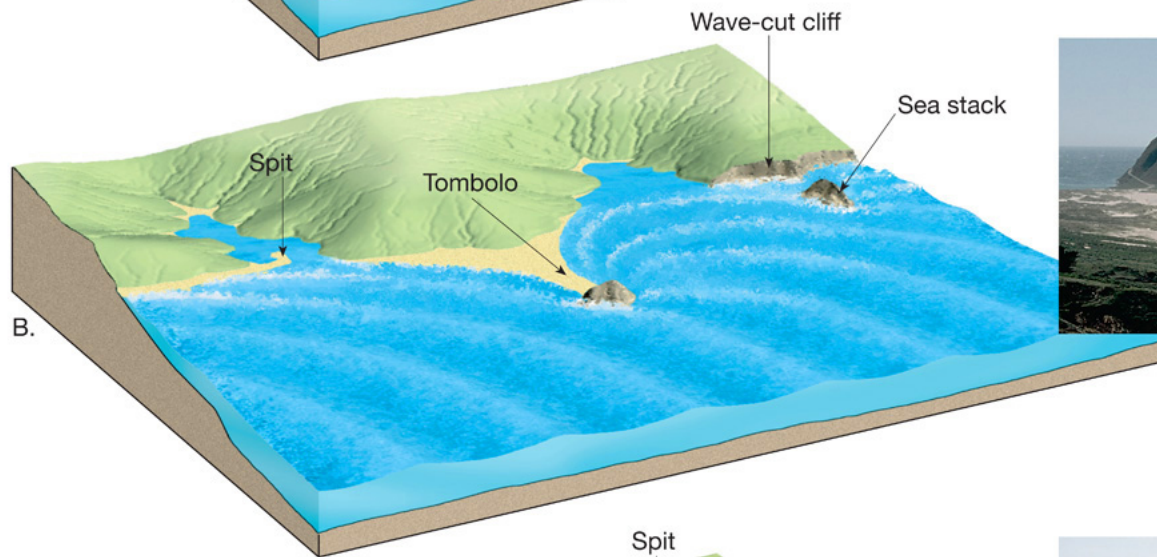
spit



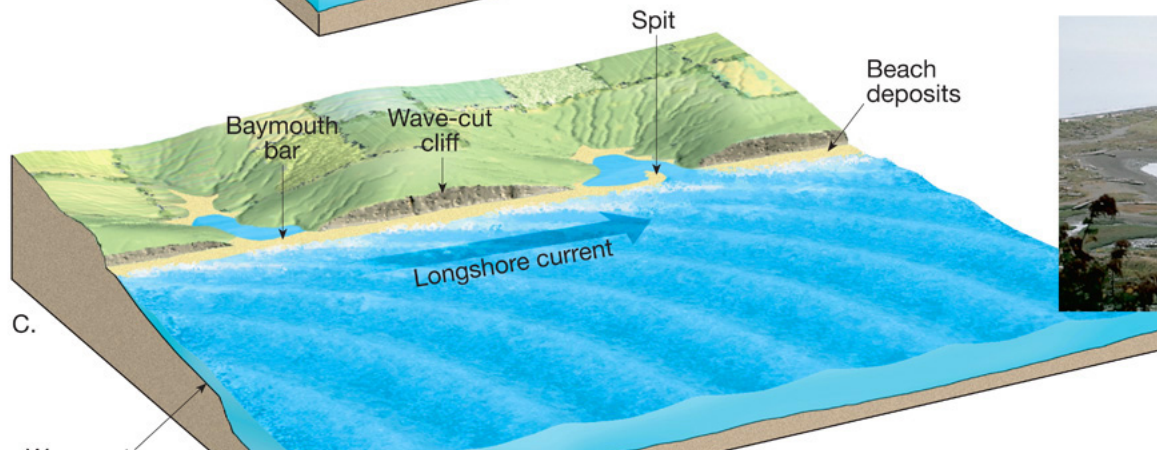




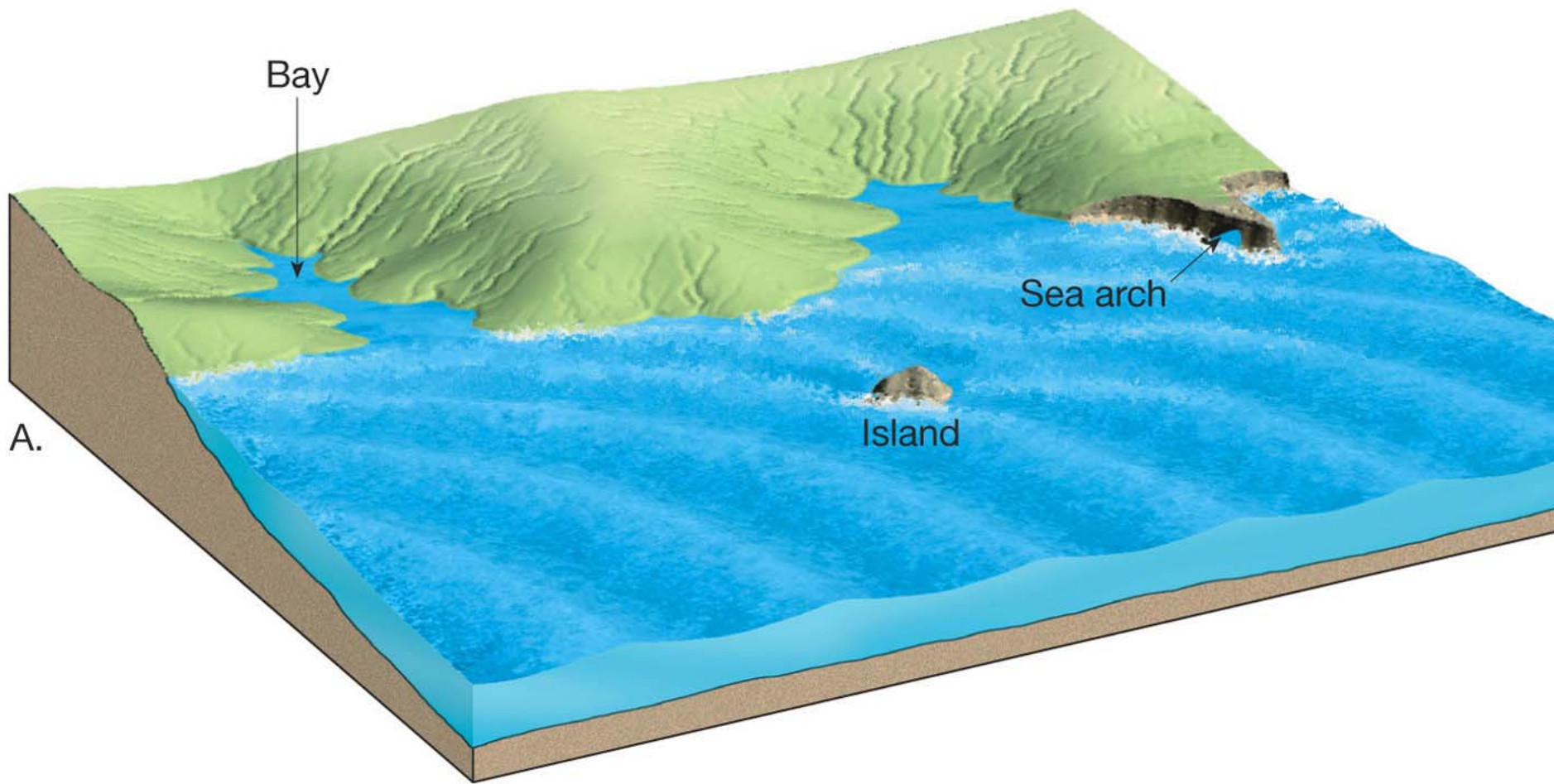
Sea arch



Tombolo



Spit

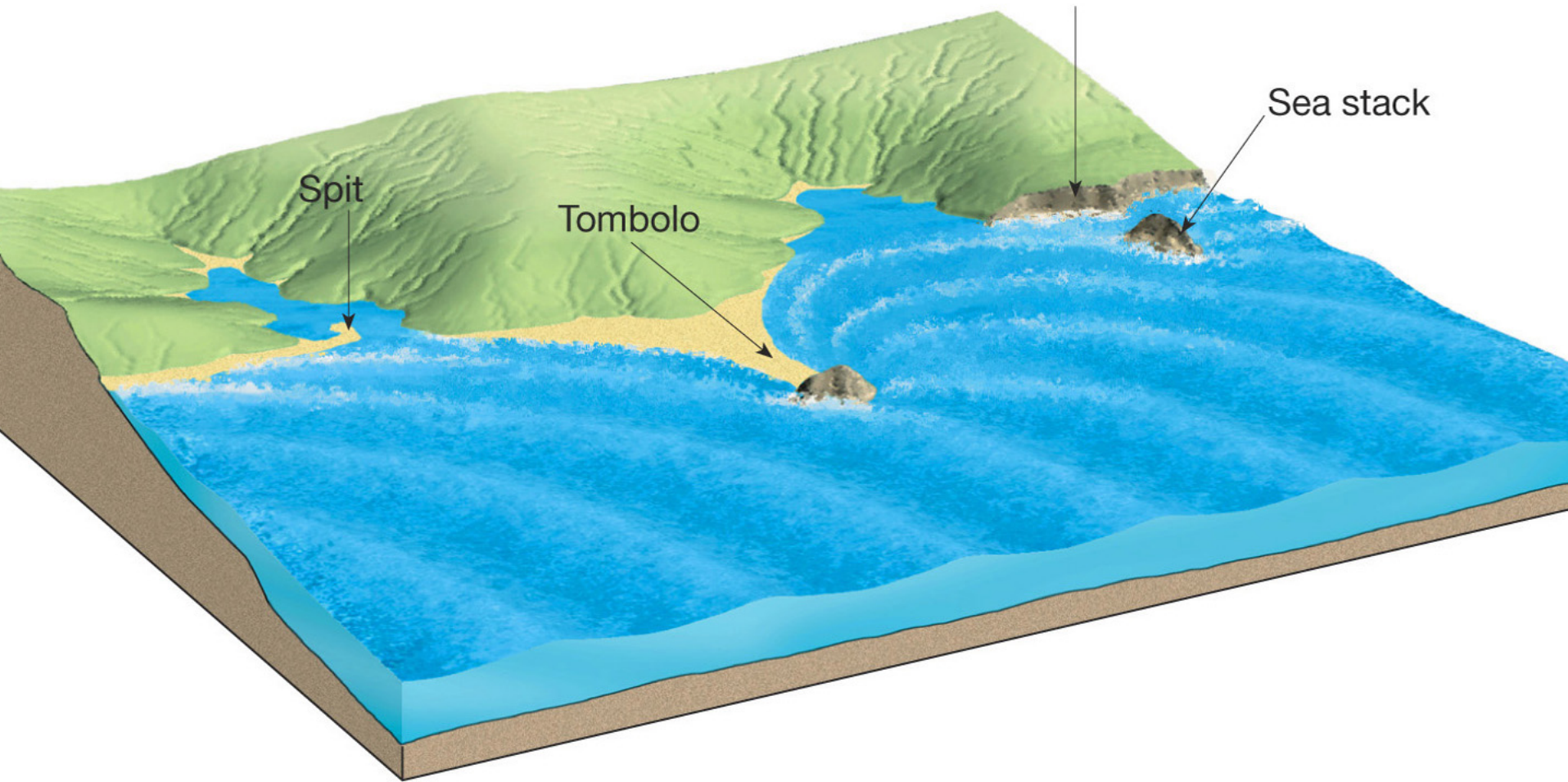


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Sea arch

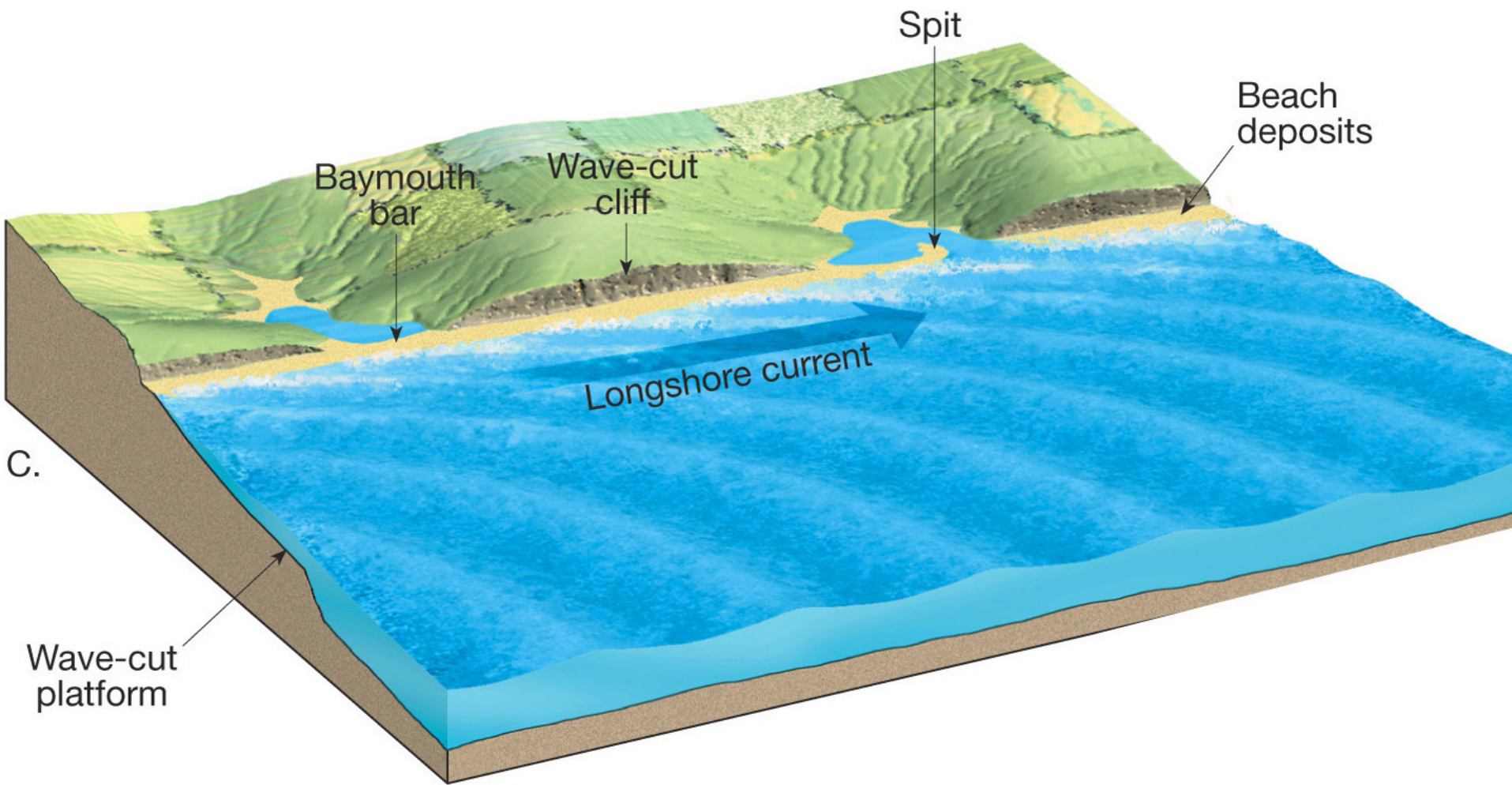
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Tombolo



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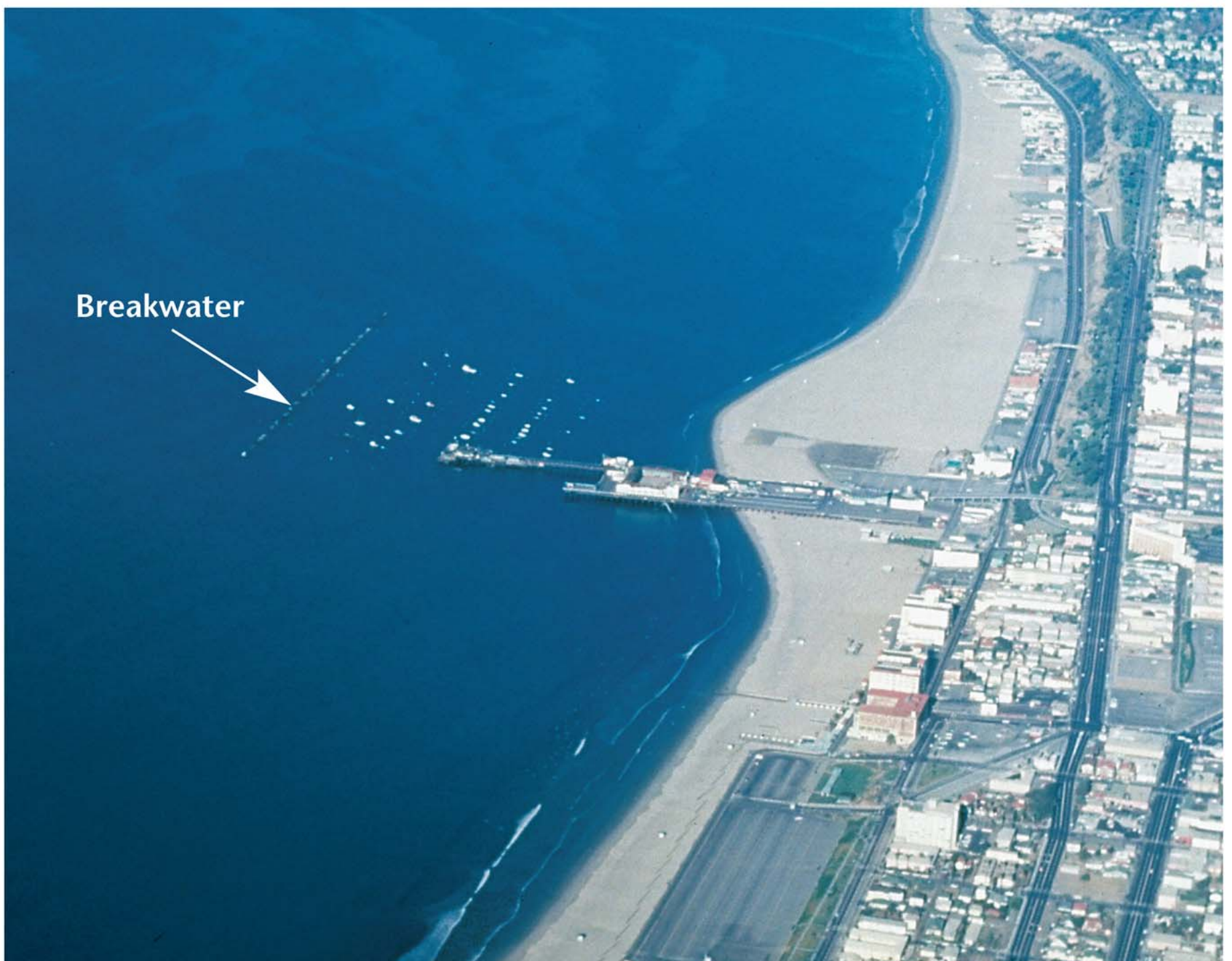


Spit





Breakwater





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B.

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