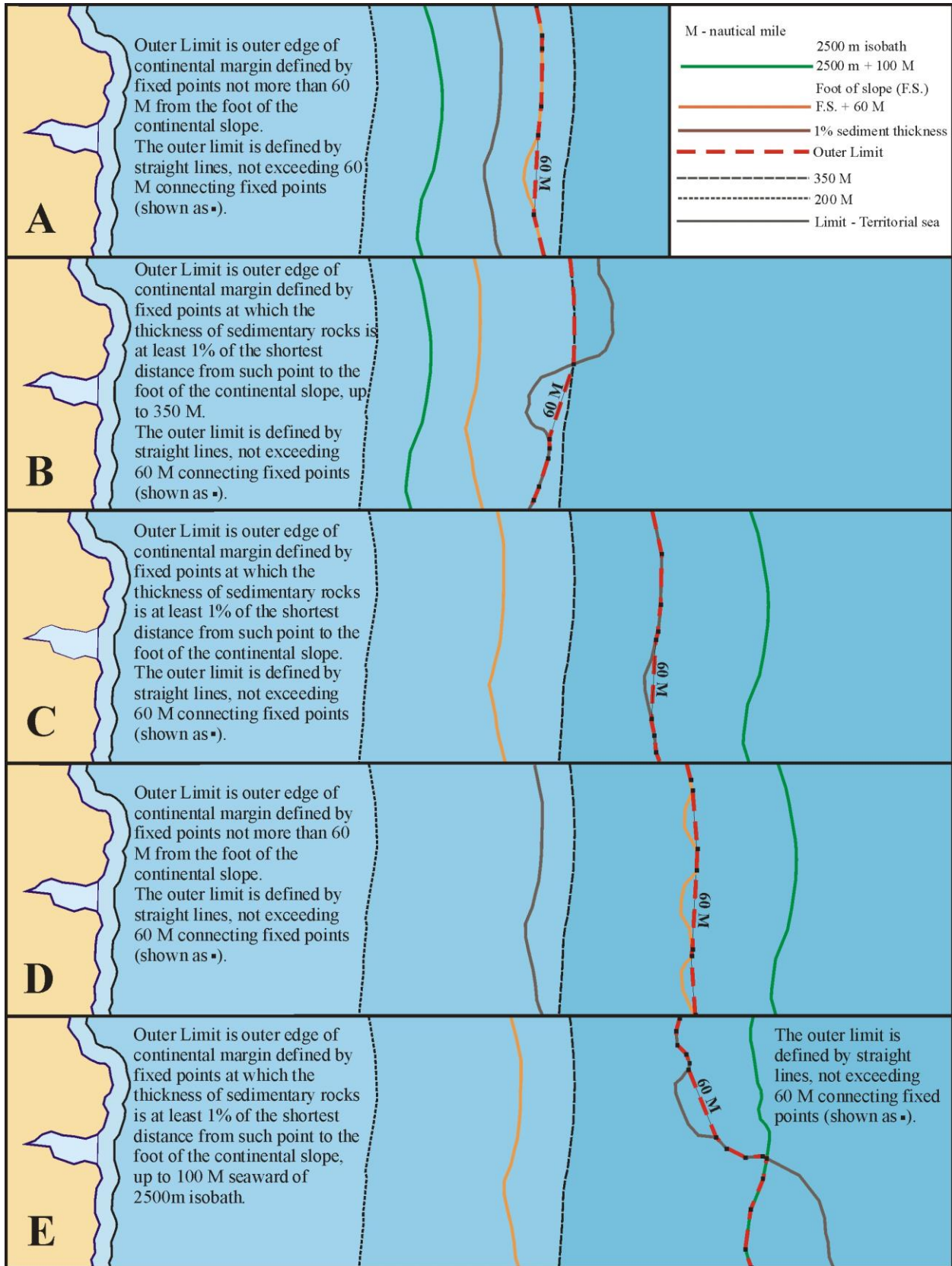
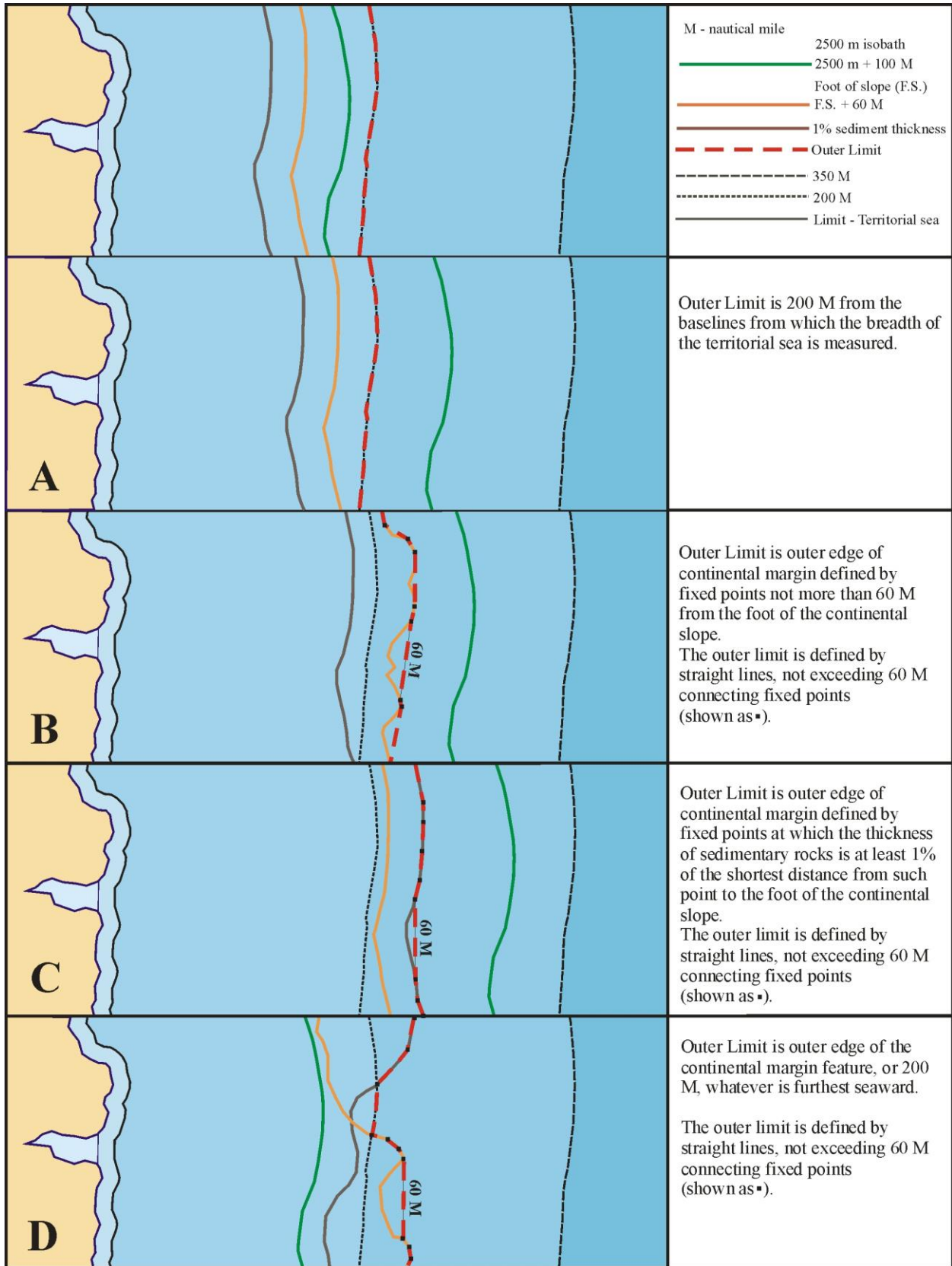


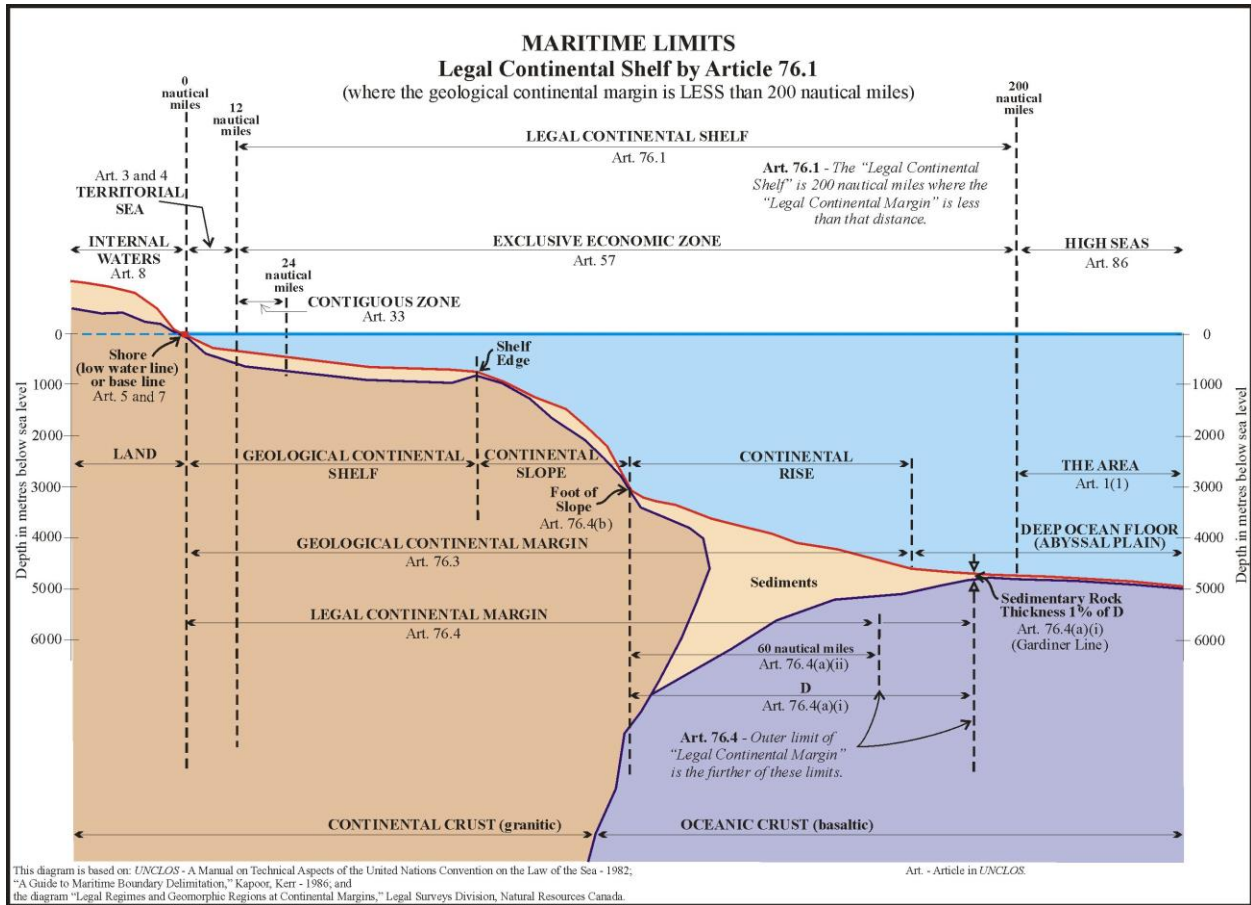
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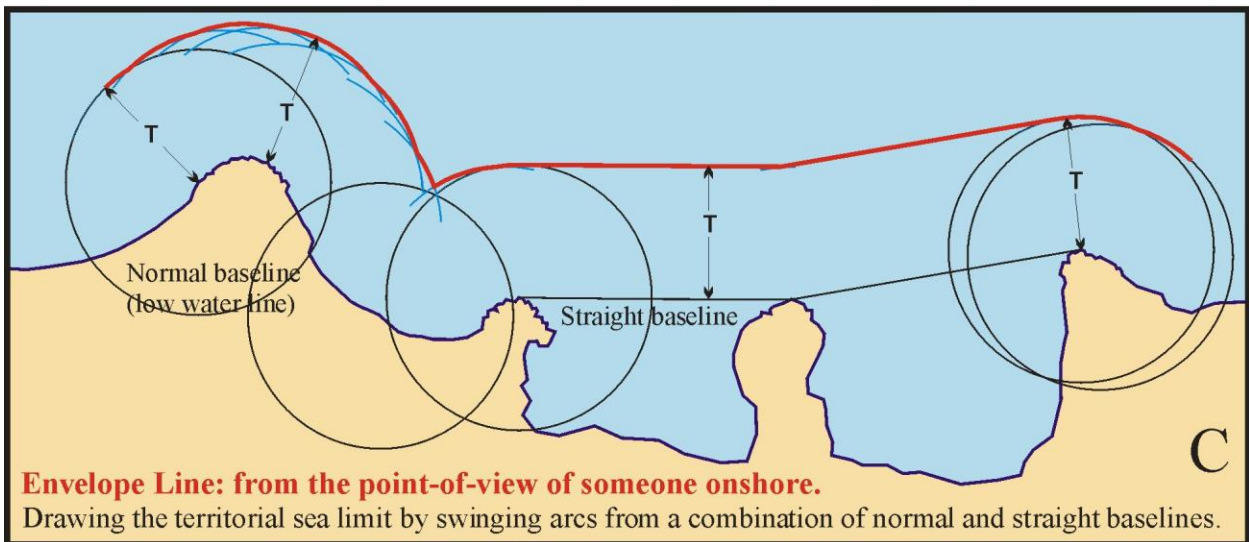
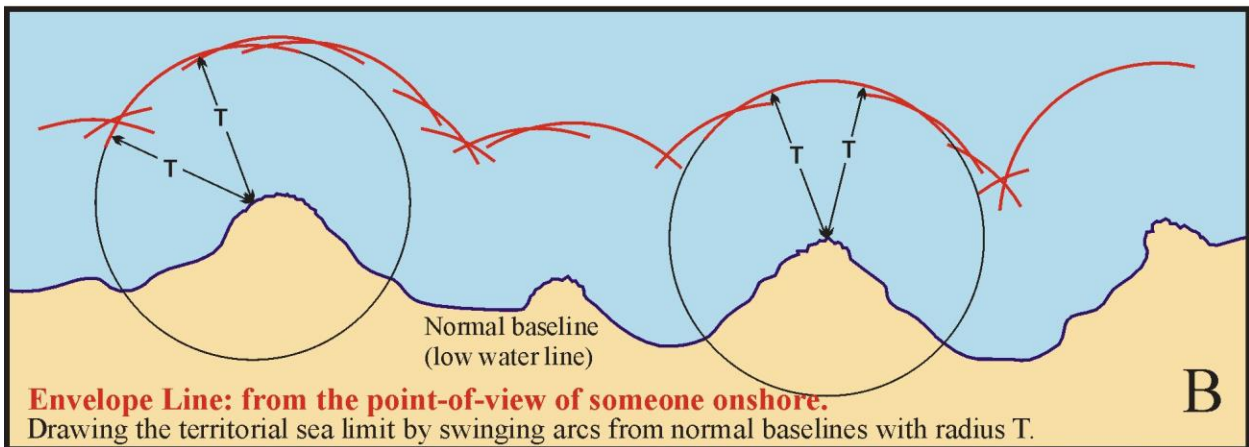
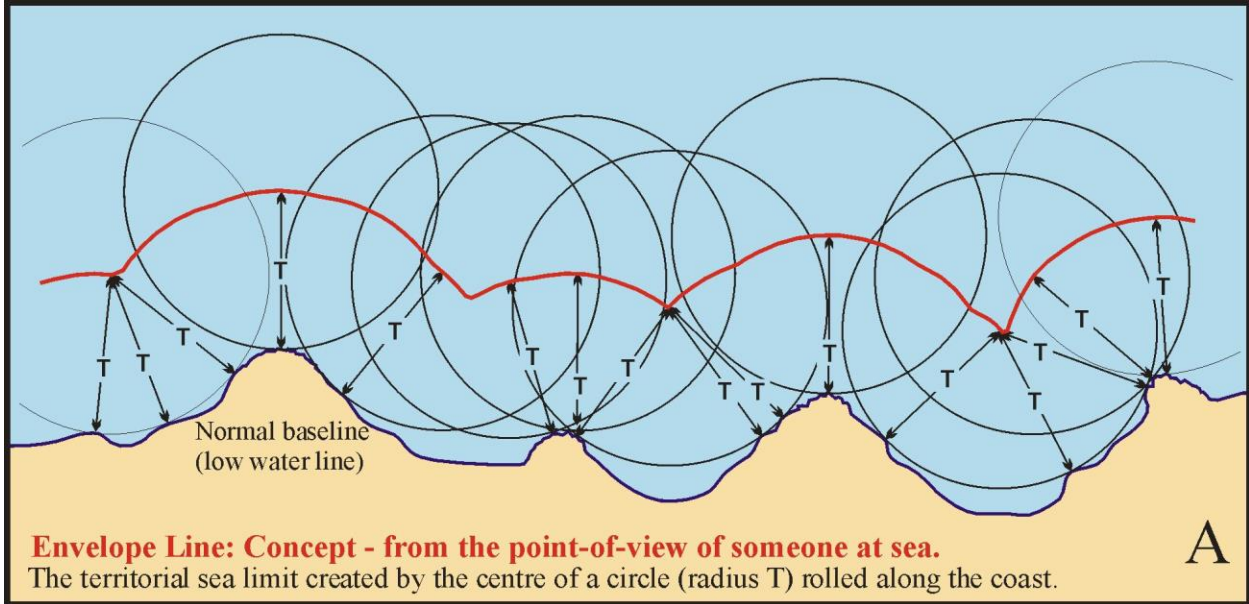


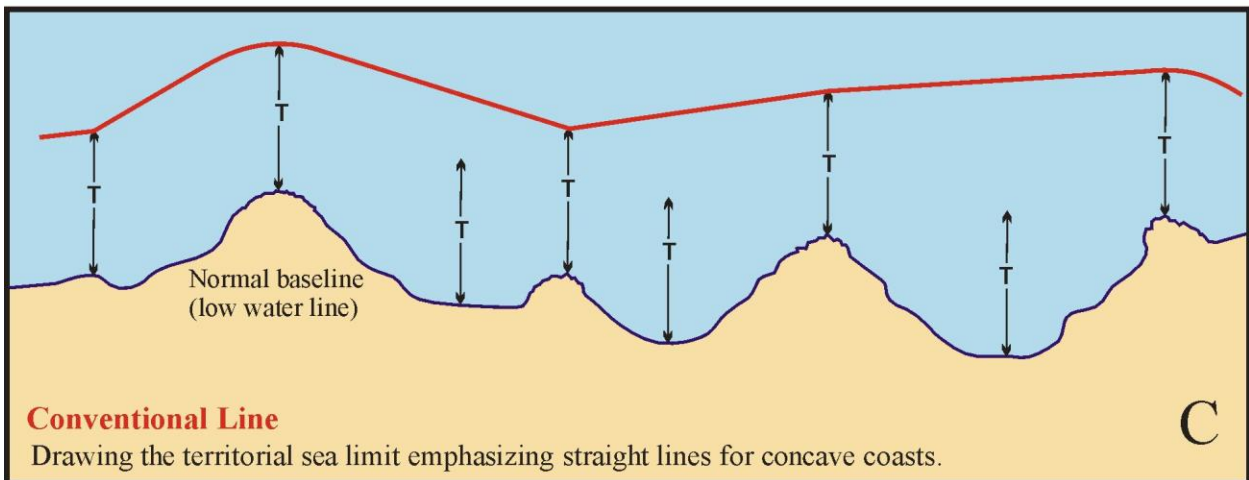
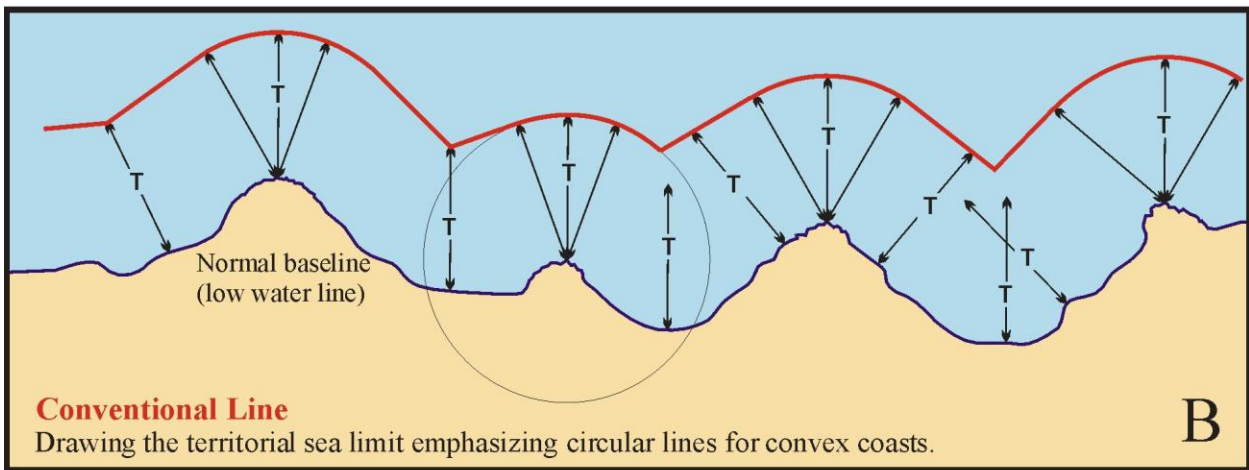
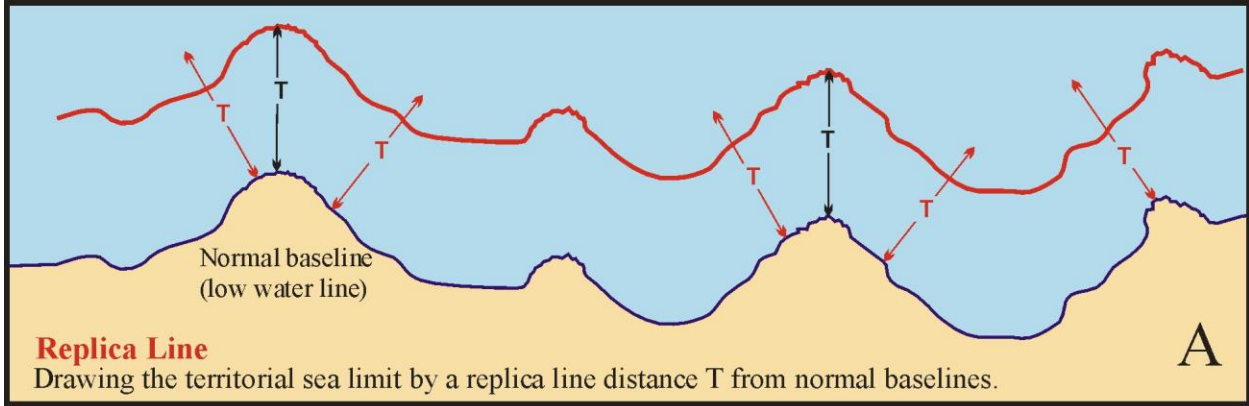
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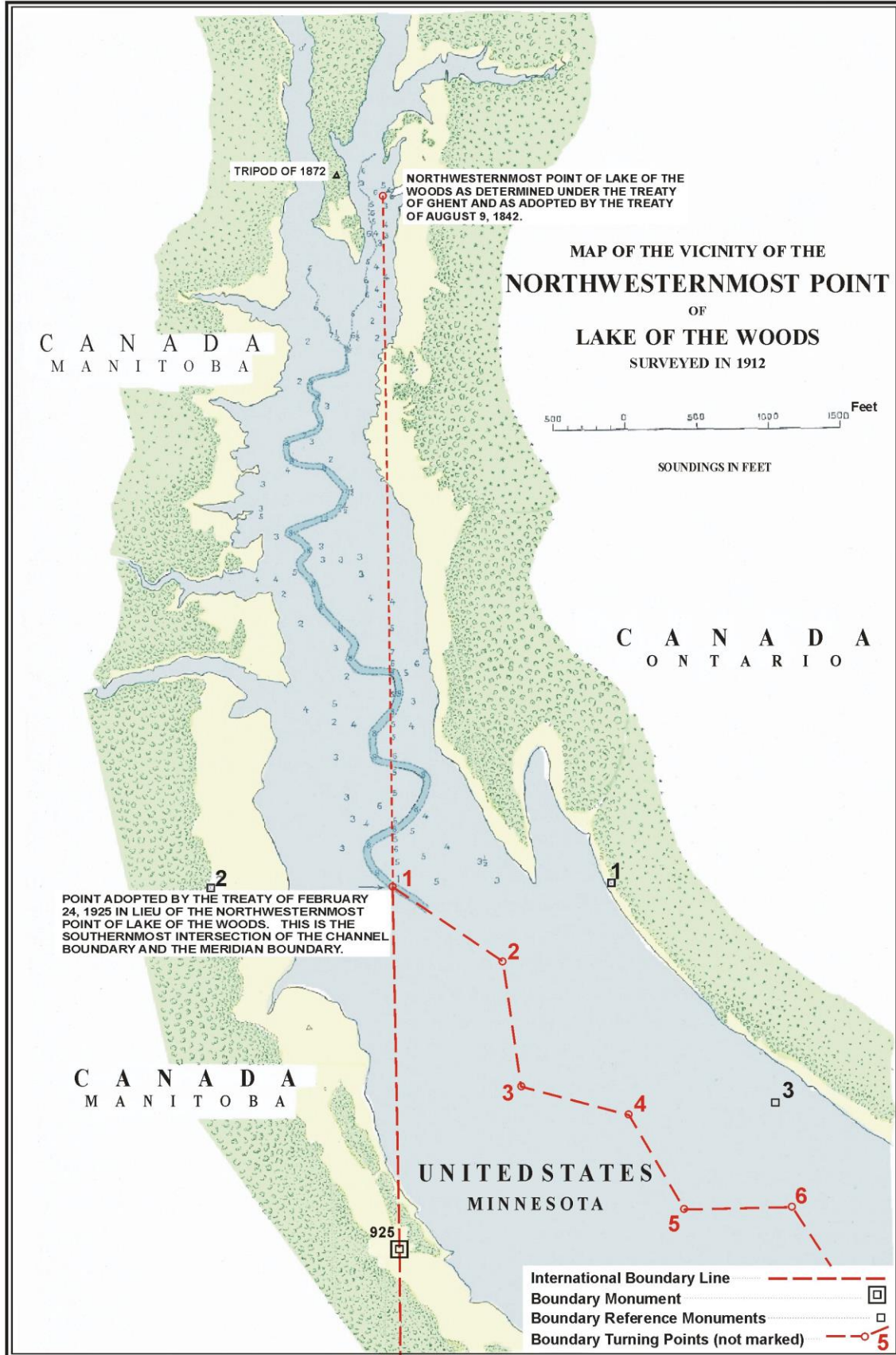


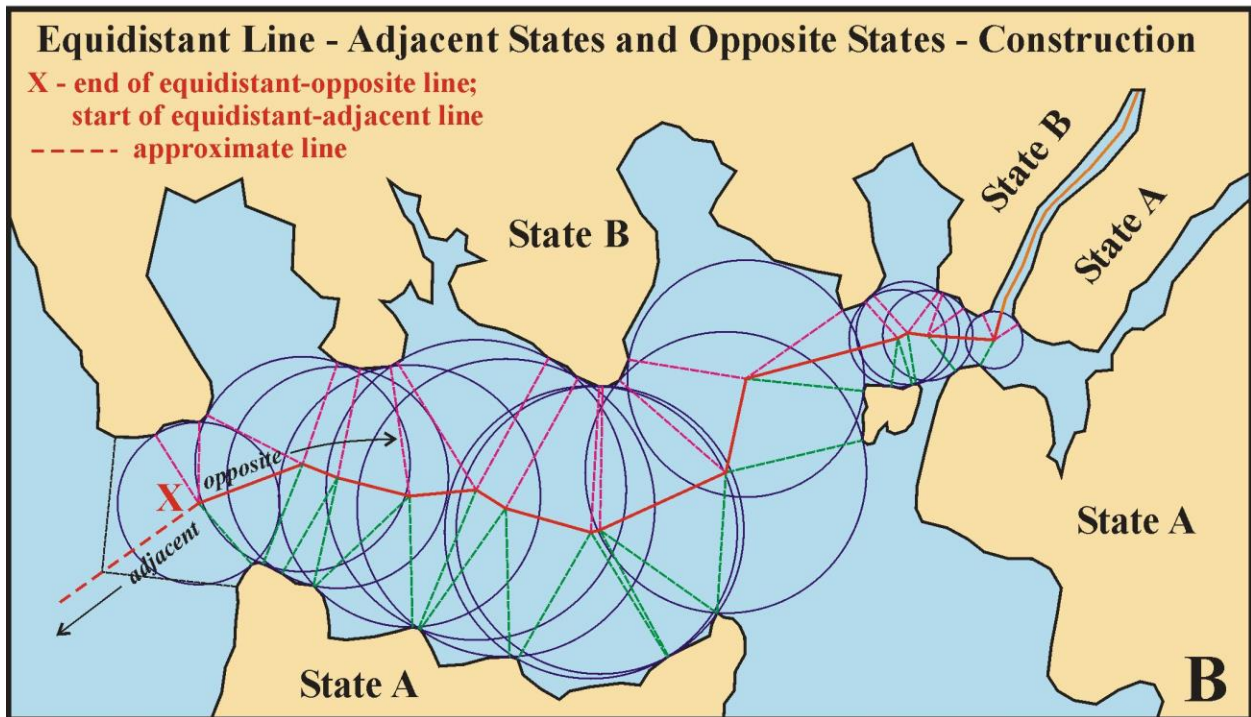
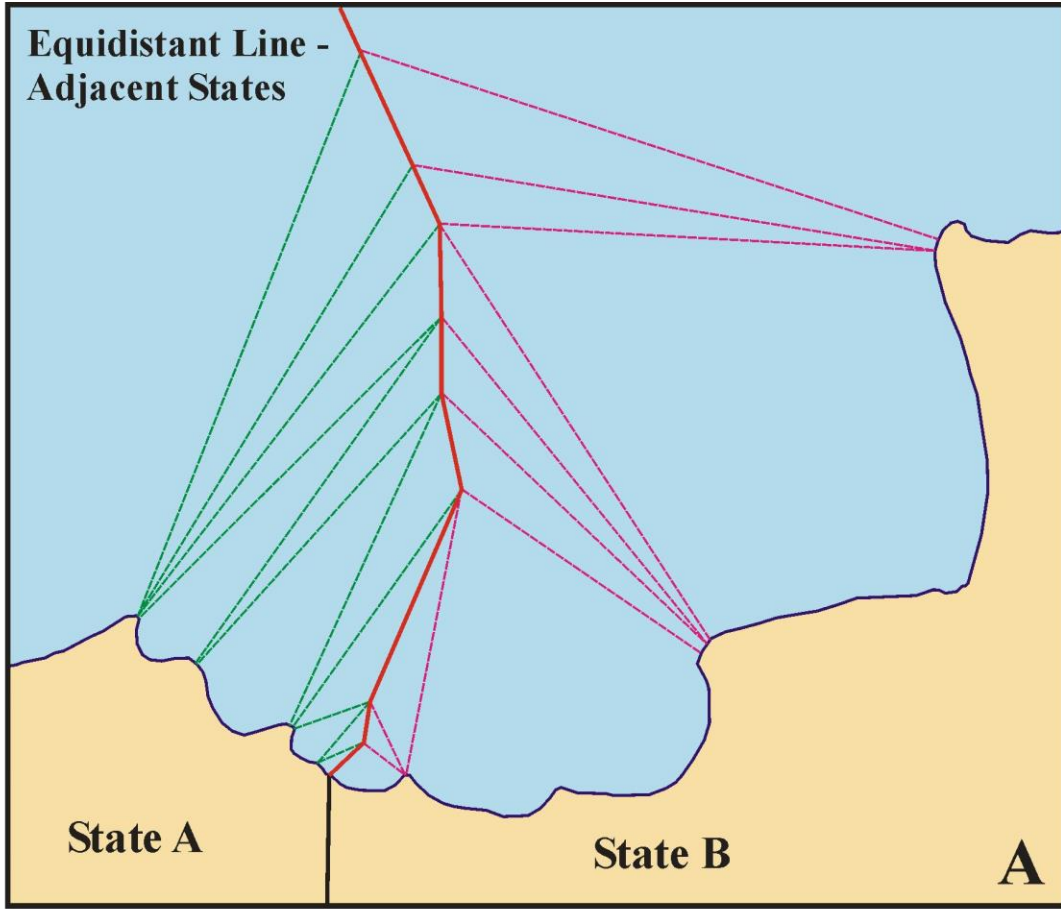
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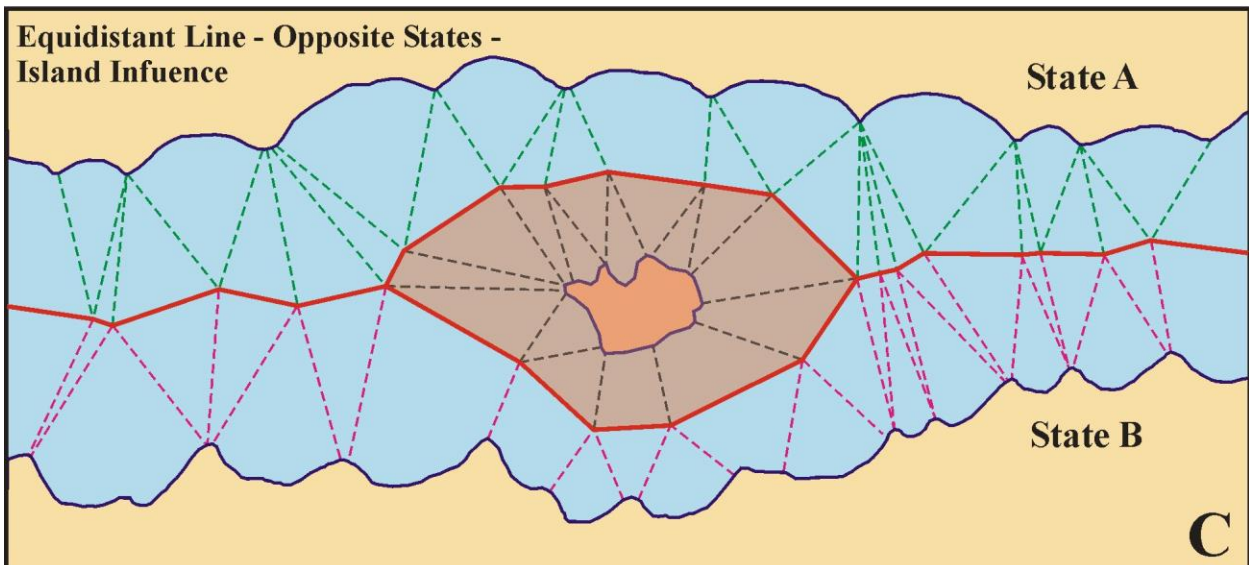
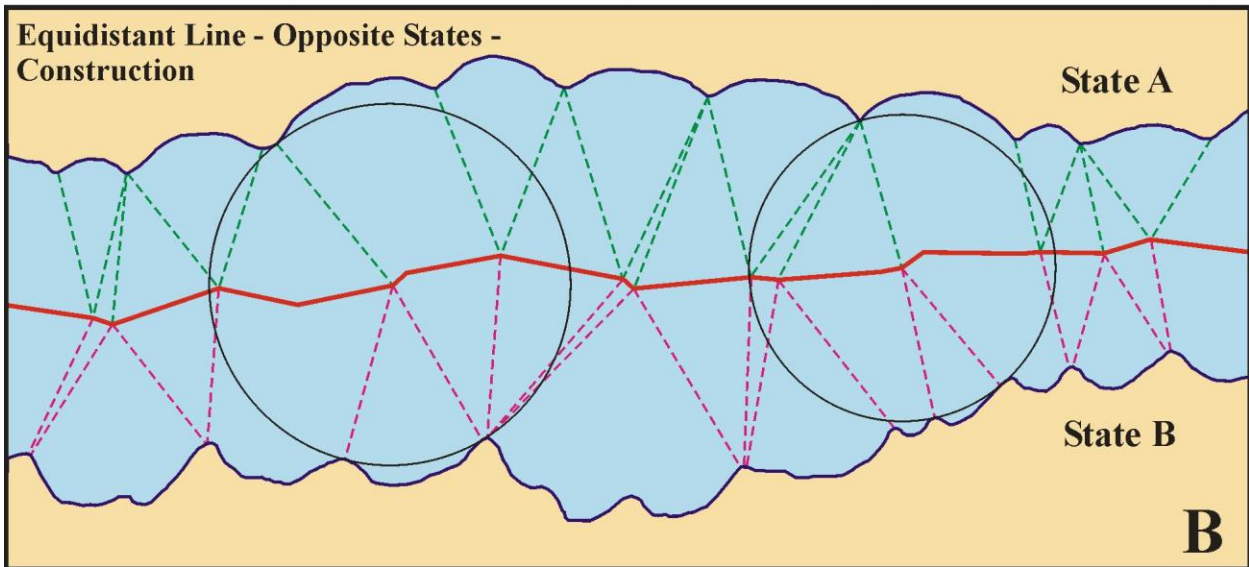
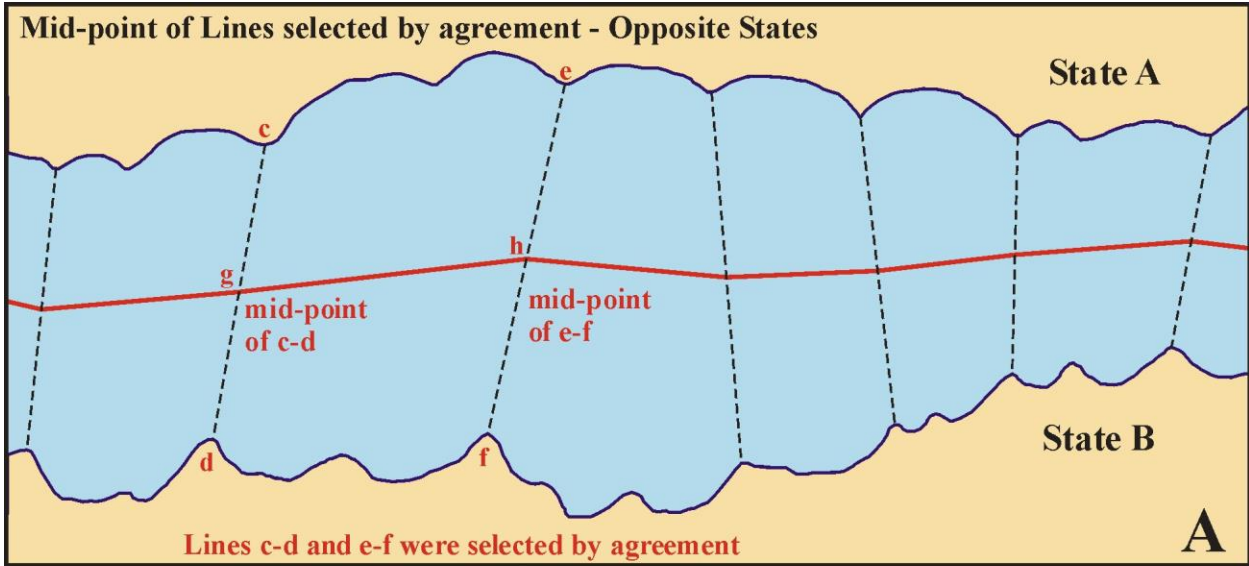


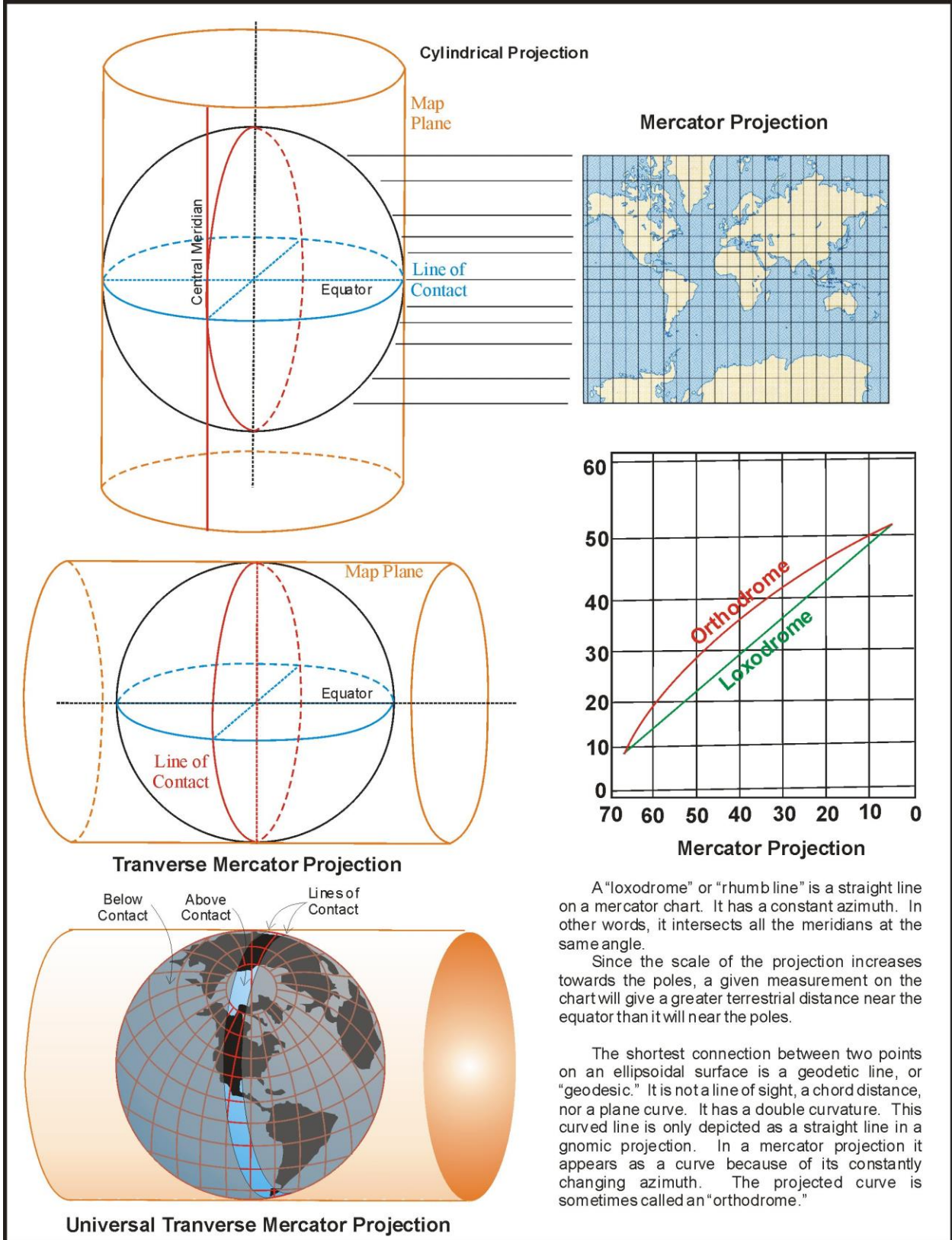










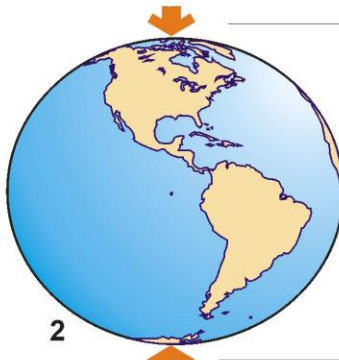


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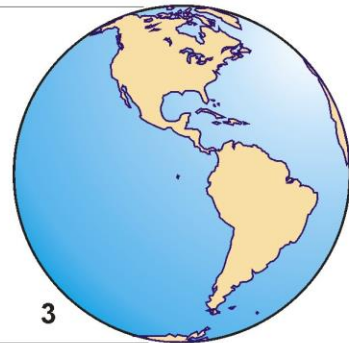
1
Oblate Triaxial Ovaloid

Southern hemisphere is larger than northern hemisphere.



2
Oblate Ellipsoid

Hemispheres of equal size.

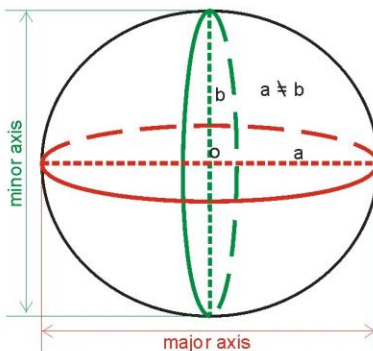


3
Spheroid

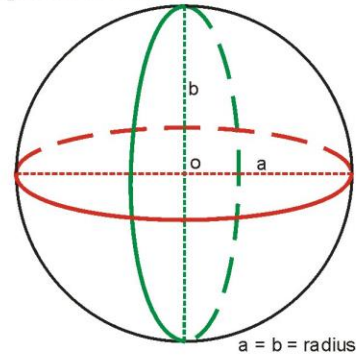
Mathematical Representations

The Earth is actually pear-shaped with the southern hemisphere being slightly larger than the northern hemisphere. It is also slightly flat at the north and south poles. Its circumference at the equator is 40,075 km, while the circumference through the poles is 40,008 km. Compared to a perfect sphere, Earth has a variance of 1/598 or .167%.

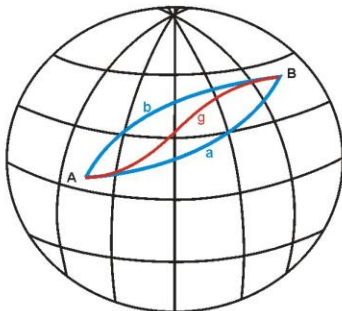
Going from 1 to 2 to 3 above, the shape of the Earth gets simpler allowing the mathematical representation of the Earth to get simpler as well. The actual shape (1) is too complicated for a mathematical representation.



major axis
Ellipse



Sphere



Red line between A and B is a **geodesic line**.
Blue lines between A and B are plane curves.

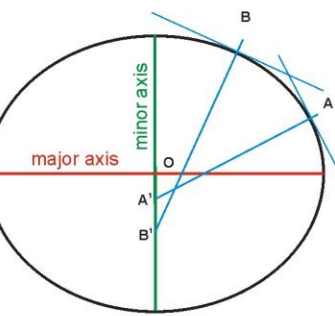
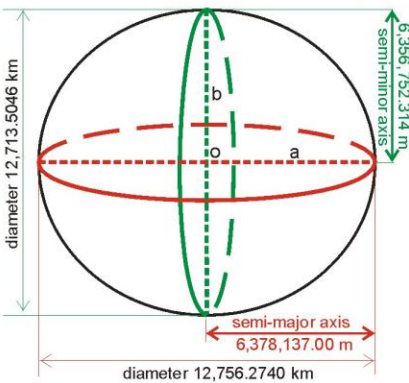
To go from A to B, the apparent bearing (heading), or direction, would be along route a. This is only true at Point A.

To go from B to A, the apparent bearing would be along route b. This is only true at point B.

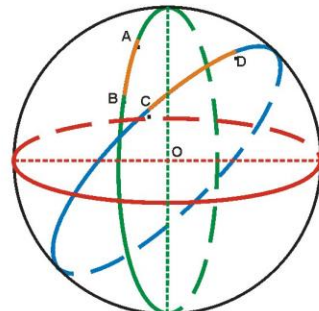
The true route between A and B on the surface of the ellipsoid would be the red line - route g - a geodesic line.

Because of the flattening of the ellipsoid, the radius of curvature of the surface varies with latitude, and measurements from A and B are oriented differently. See diagram to the right.

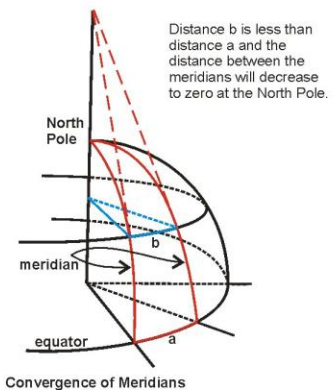
A minute of latitude at the equator is about 1843 metres and at the poles about 1862 metres.



On a sphere, lines at A and B perpendicular to the surface would pass through O.



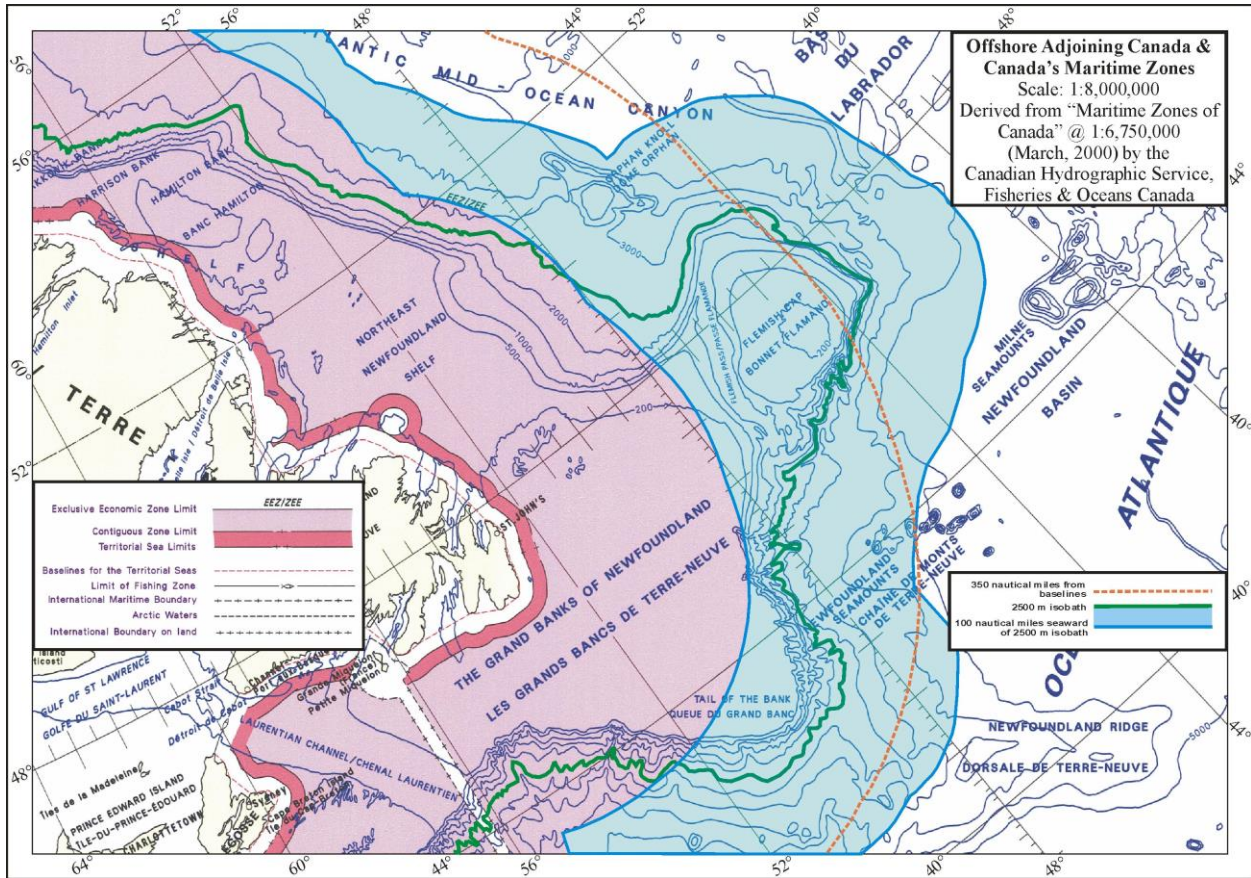
A-B, C-D - Segments of great circles



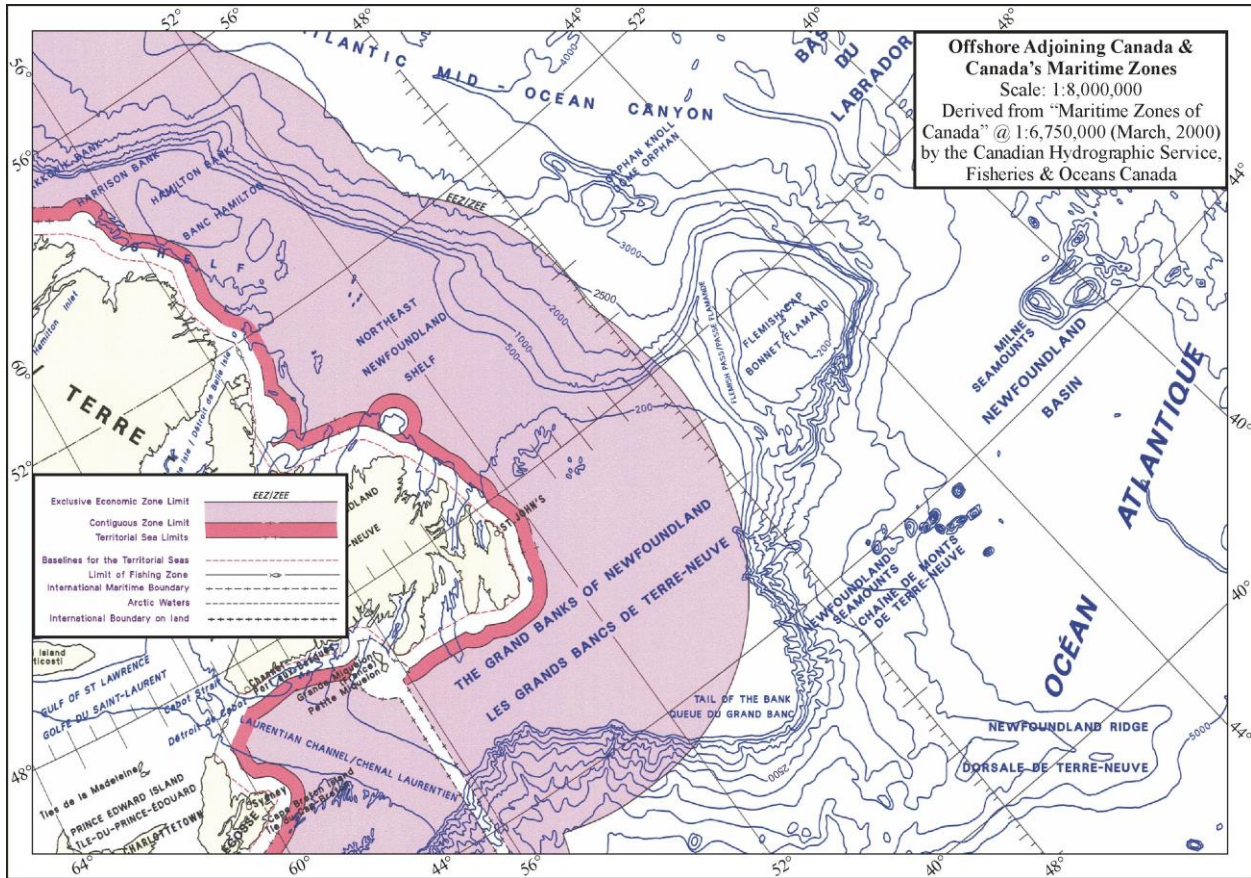
Distance b is less than distance a and the distance between the meridians will decrease to zero at the North Pole.

Convergence of Meridians

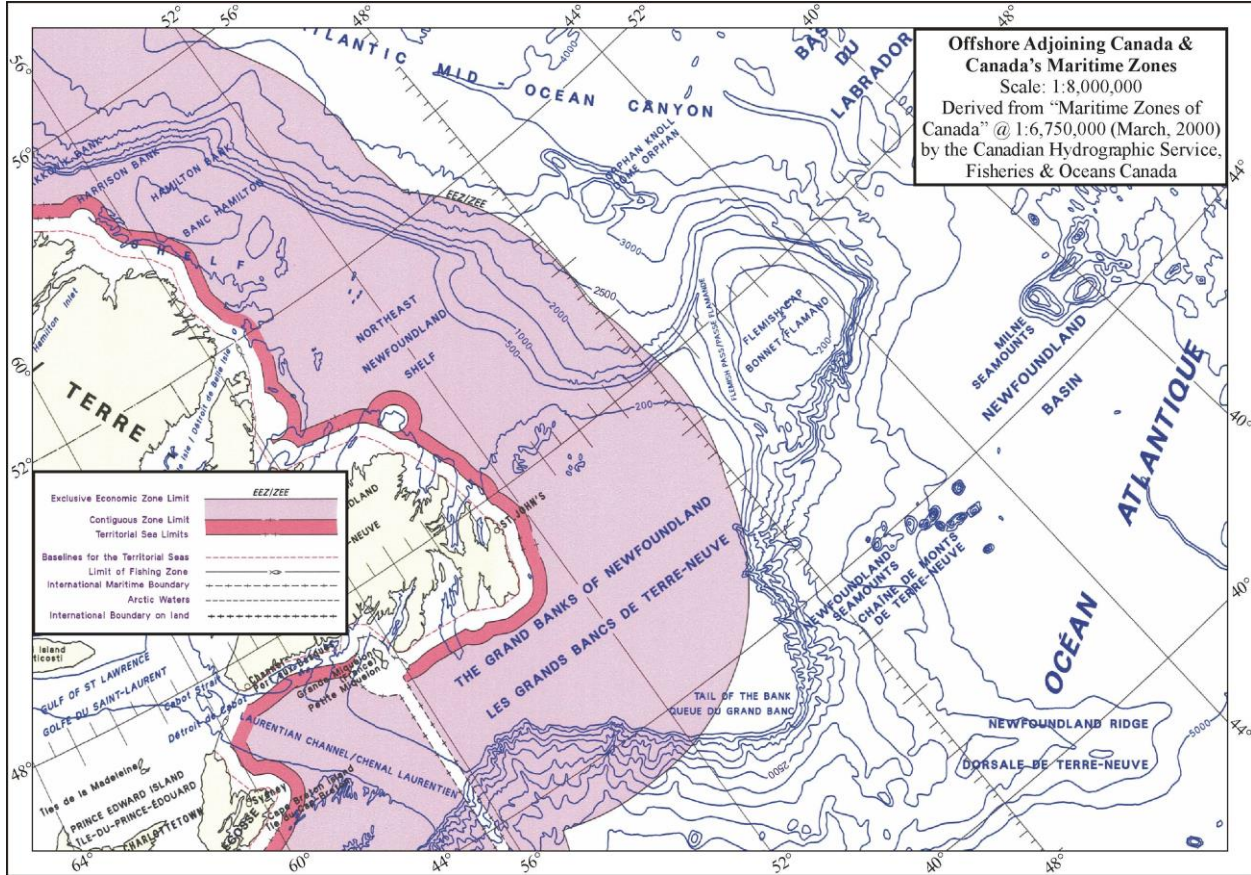
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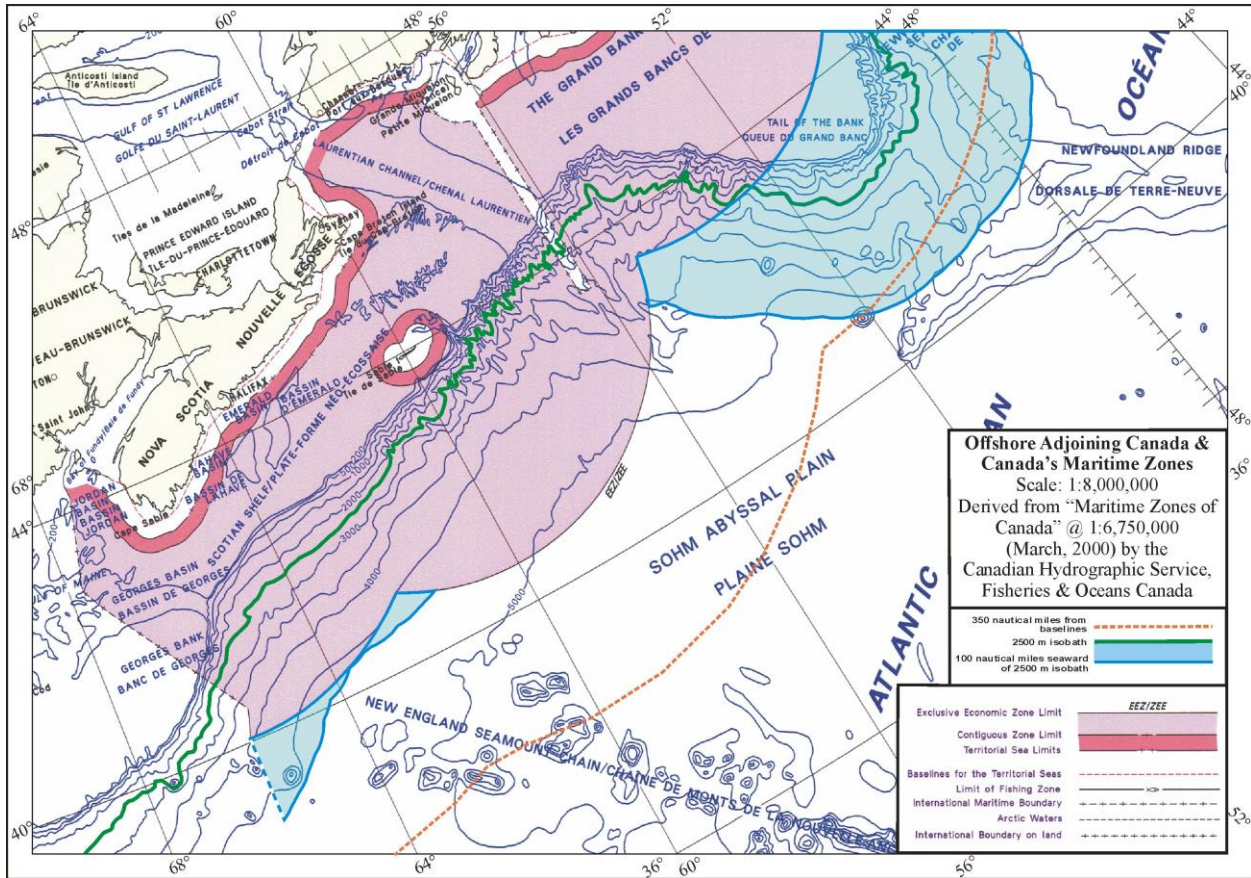
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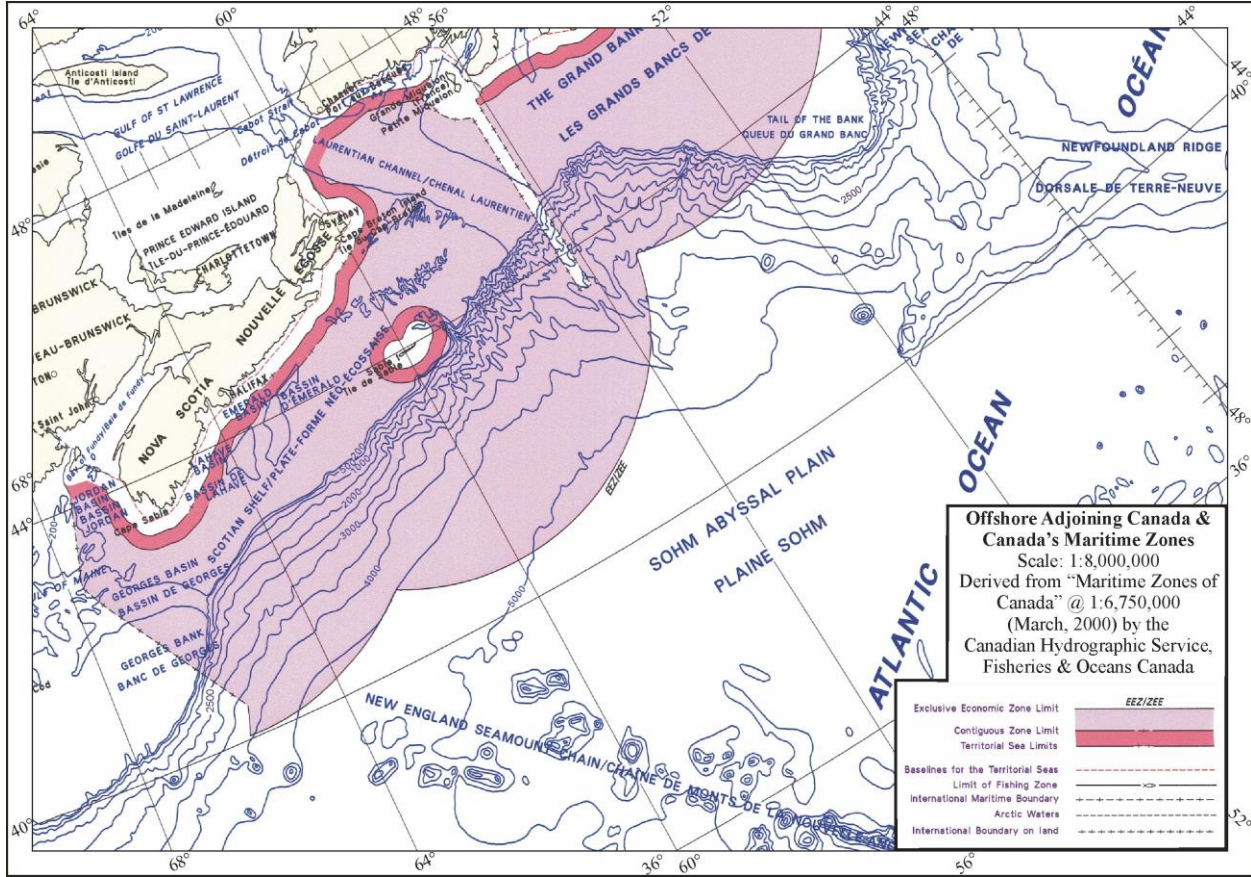
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Offshore Adjoining Canada & Canada's Maritime Zones
 Scale: 1:8,000,000
 Derived from "Maritime Zones of Canada" @ 1:6,750,000 (March, 2000) by the Canadian Hydrographic Service, Fisheries & Oceans Canada

Exclusive Economic Zone Limit	EEZ/ZEE
Contiguous Zone Limit	
Territorial Sea Limits	
Baselines for the Territorial Seas	-----
Limit of Fishing Zone	-----
International Maritime Boundary	-----
Arctic Waters	-----
International Boundary on land	-----

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