

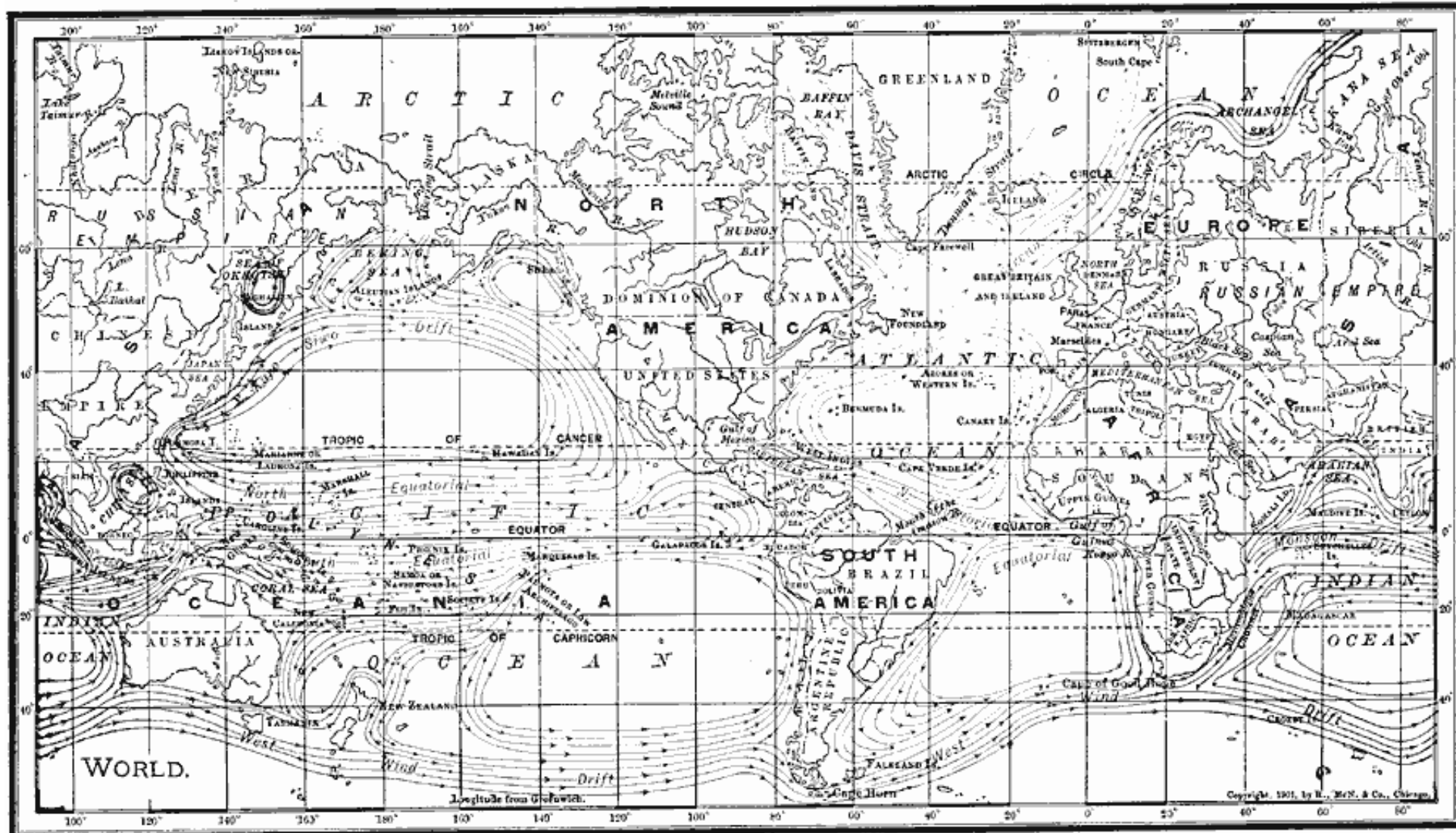
Ocean Currents

Surface Currents--

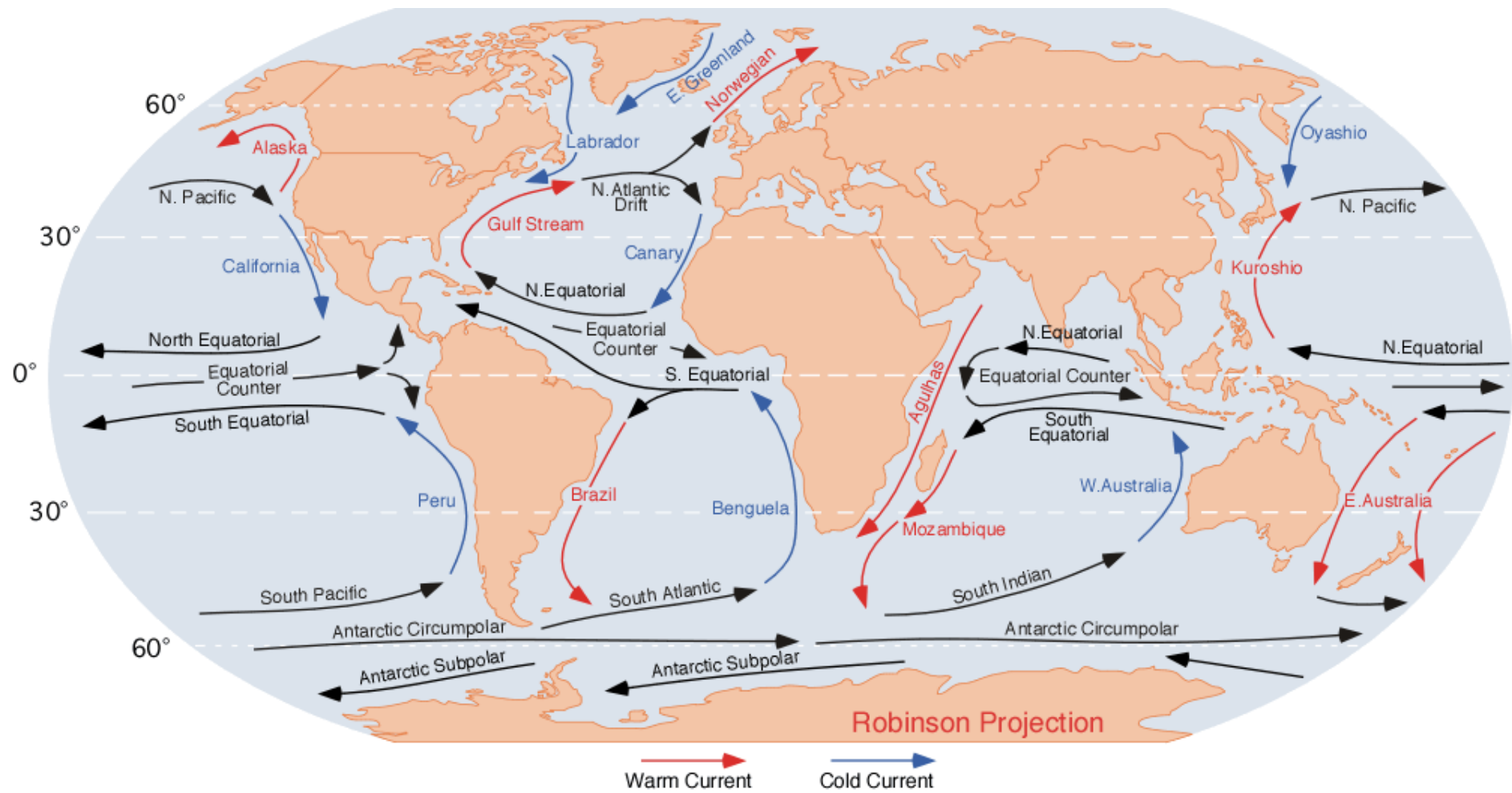
- **Surface Circulation**
- These waters make up about 10% of all the water in the ocean.
- These waters are the upper 400 meters of the ocean

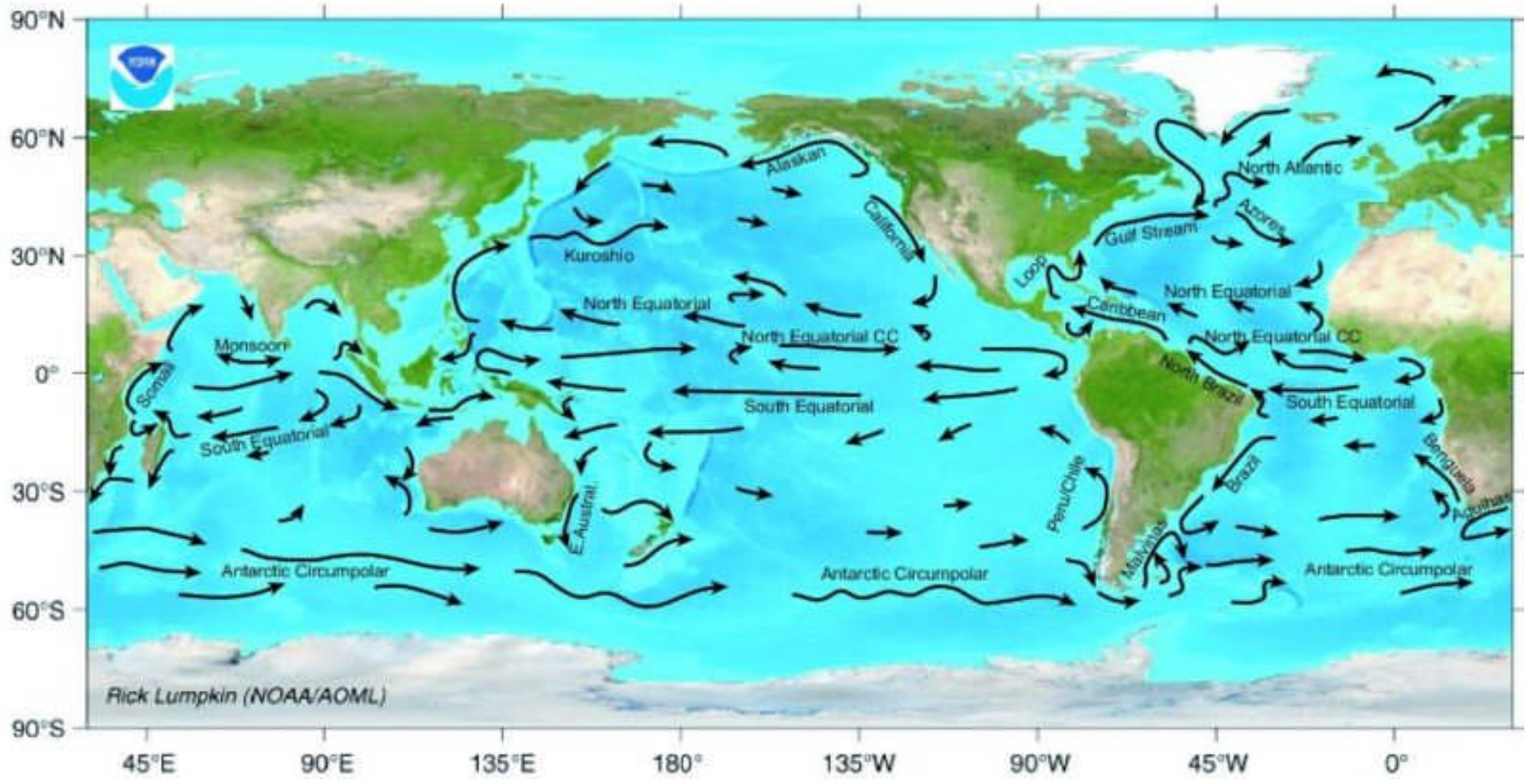
Deep Water Currents--

- **Thermohaline Circulation**
 - These waters make up the other 90% of the ocean
 - These waters move around the ocean basins by density driven forces and gravity.
 - The density difference is a function of different temperatures and salinity
 - These deep waters sink into the deep ocean basins at high latitudes where the temperatures are cold enough to cause the density to increase.
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MAP OF OCEAN CURRENTS. (Fig. 56.)





Rick Lumpkin (NOAA/AOML)

Agulhas Current	Indian	Warm
Alaska Current	North Pacific	Warm
Benguela Current	South Atlantic	Warm/Cool
Brazil Current	South Atlantic	Warm
California Current	North Pacific	Cool
Canaries Current	North Atlantic	Cool
East Australian Current	South Pacific	Warm
Equatorial Current	Pacific	Warm
Gulf Stream	North Atlantic	Warm
Humboldt (Peru) Current	South Pacific	Cool
Kuroshio (Japan) Current	North Pacific	Warm
Labrador Current	North Atlantic	Cool
North Atlantic Drift	North Atlantic	Warm
North Pacific Drift	North Pacific	Warm
Oyashio (Kamchatka) Current	North Pacific	Cool
West Australian Current	Indian	Cool
West Wind Drift	South Pacific	Cool

