

Mapping of Ocean Floor

40's – 50's use of echo sounding—using sound waves to map ocean floor to located mountains and valleys

Mid-ocean ridge – underwater mountain range

Theory of Sea Floor Spreading

60's Harry Hess—hot dense material below Earth's crust rises toward surface @ mid-ocean ridge then pushes seafloor apart –magma flows from cracks forming new floor

Evidence

68 Glomar Challenger—drilled holes in floor for rock samples young rocks near ridge oldest farther away

New organisms discovered by submersibles

Magnetic Clues—magnetic lines reversed directions every 1000 to million years

Magnetic Time Scale—Magnetite shows reversals in magnetic field

Detected by magnetometer—showed new rock being formed at mid-ocean ridge & explained crust movement