Foredeep Basins

Basic Principles

South

t.w.t.

Onchore Alaska

Onchore Alaska

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Courtesy of Marathon Oil Co

seconds

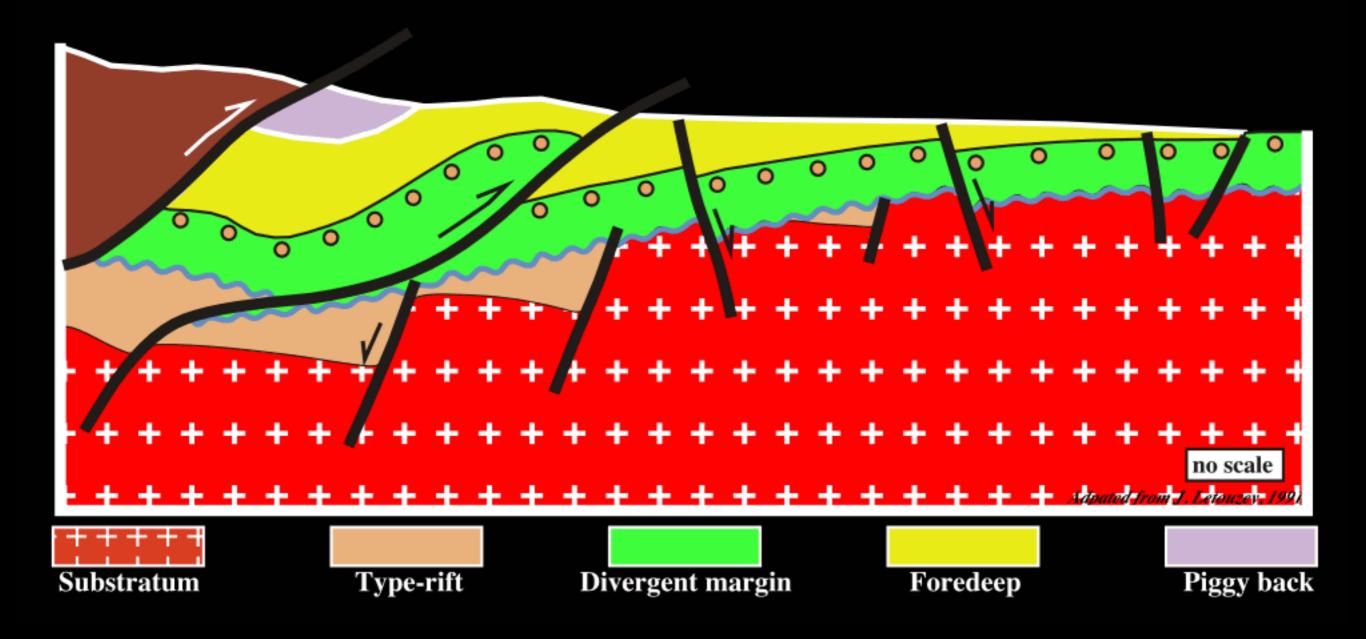
North

20 km

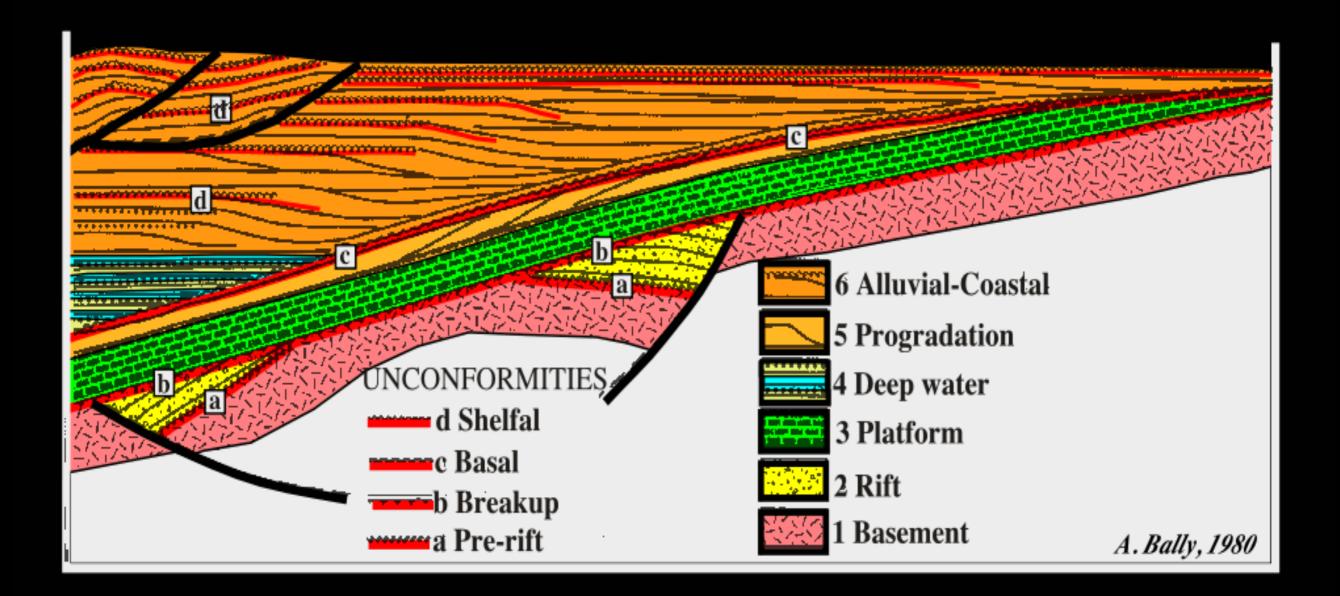
CCramez, Switzerland

Santa Cruz, May 2003

Tectonic-sedimentary units



Idealized Foredeep

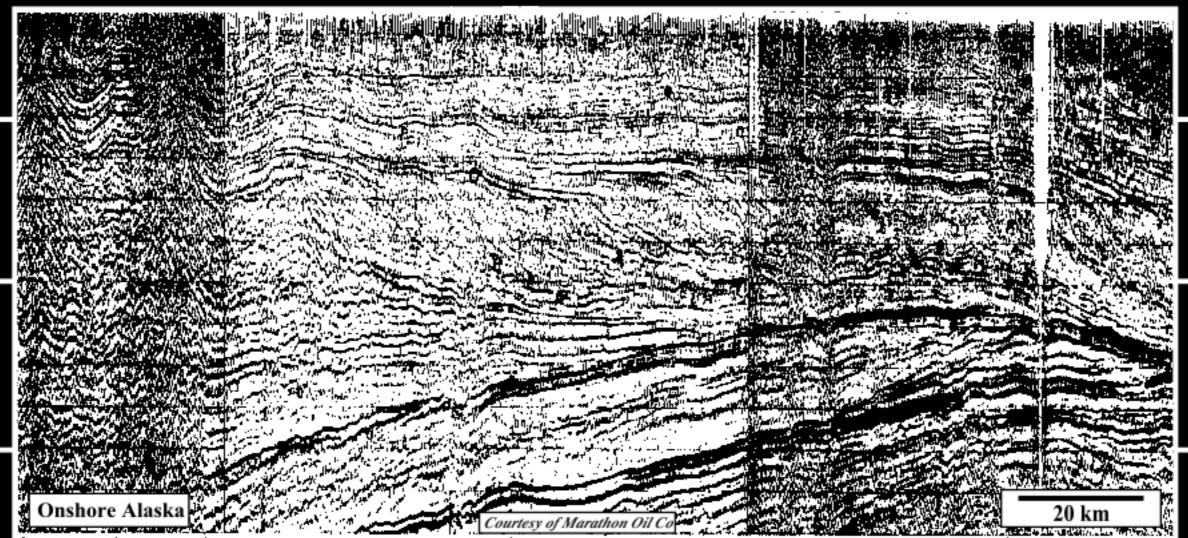


Foredeep Basin

South

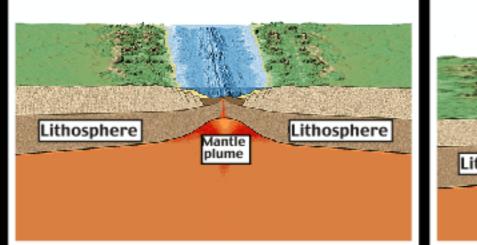
t.w.t.

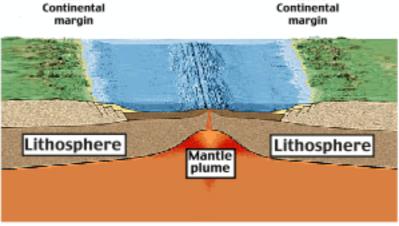
North



Santa Cruz, May 2003

Wilson's Cycle

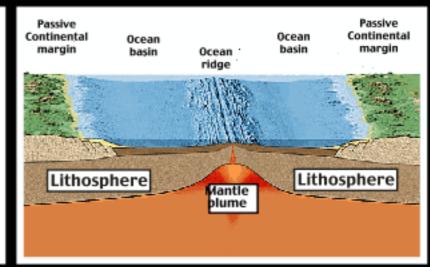


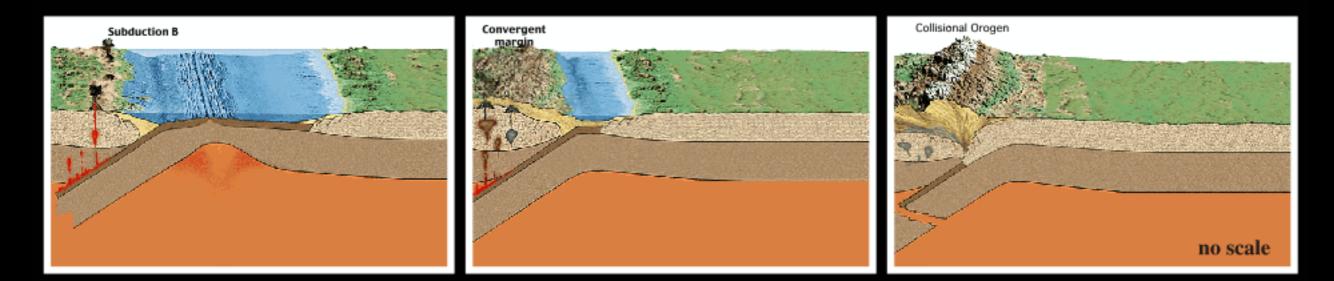


Passive

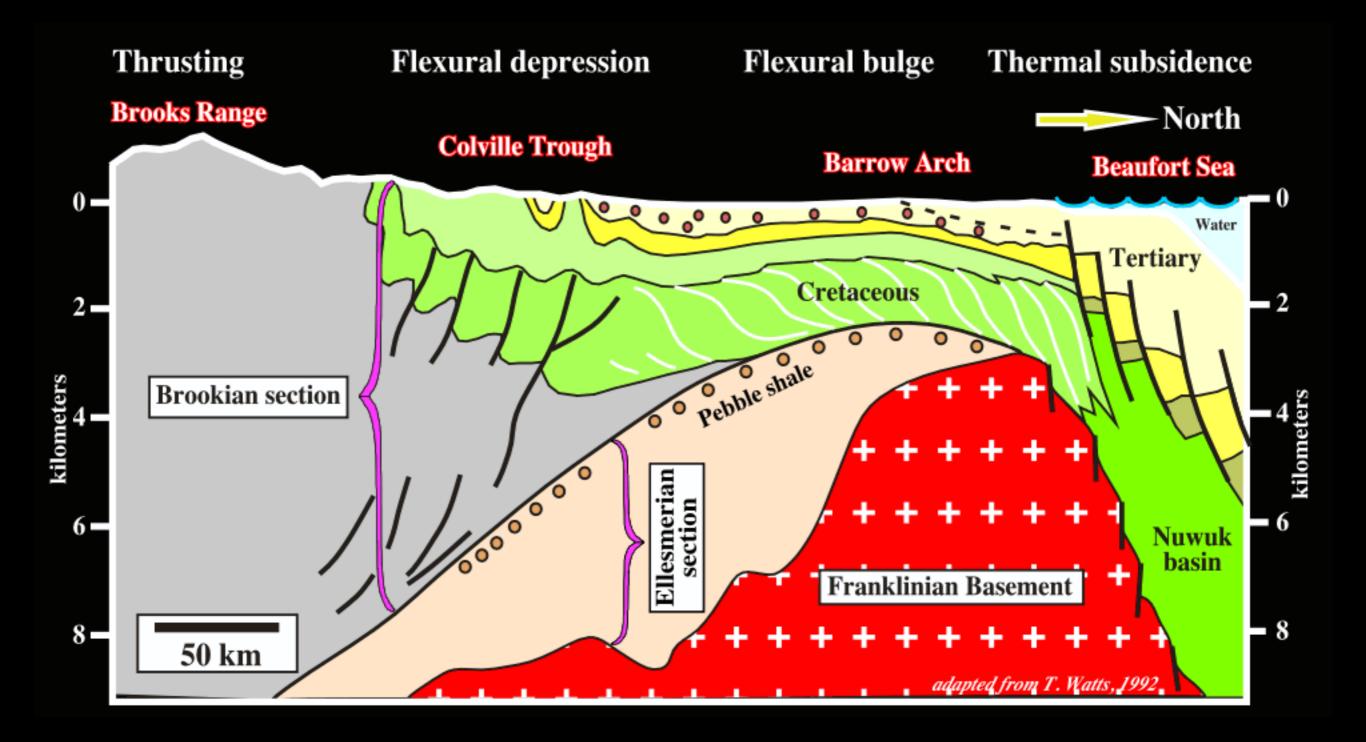
Continental

Passive

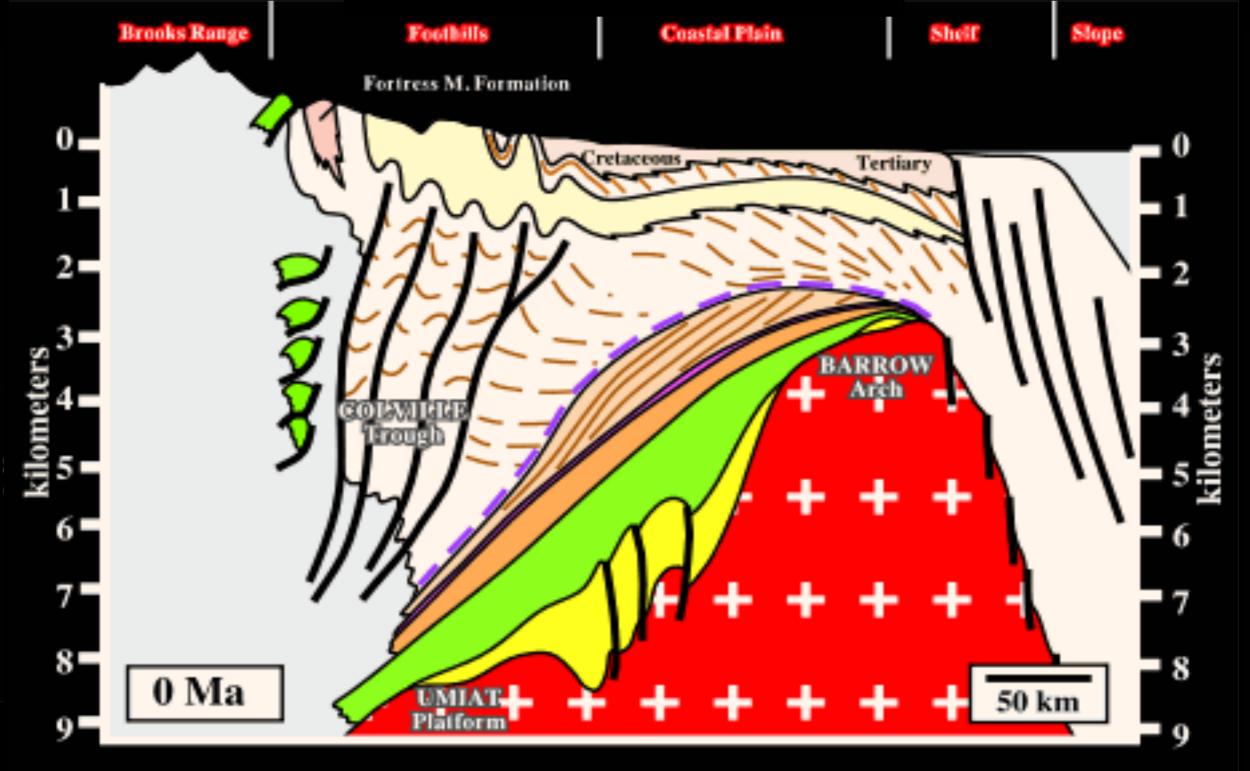




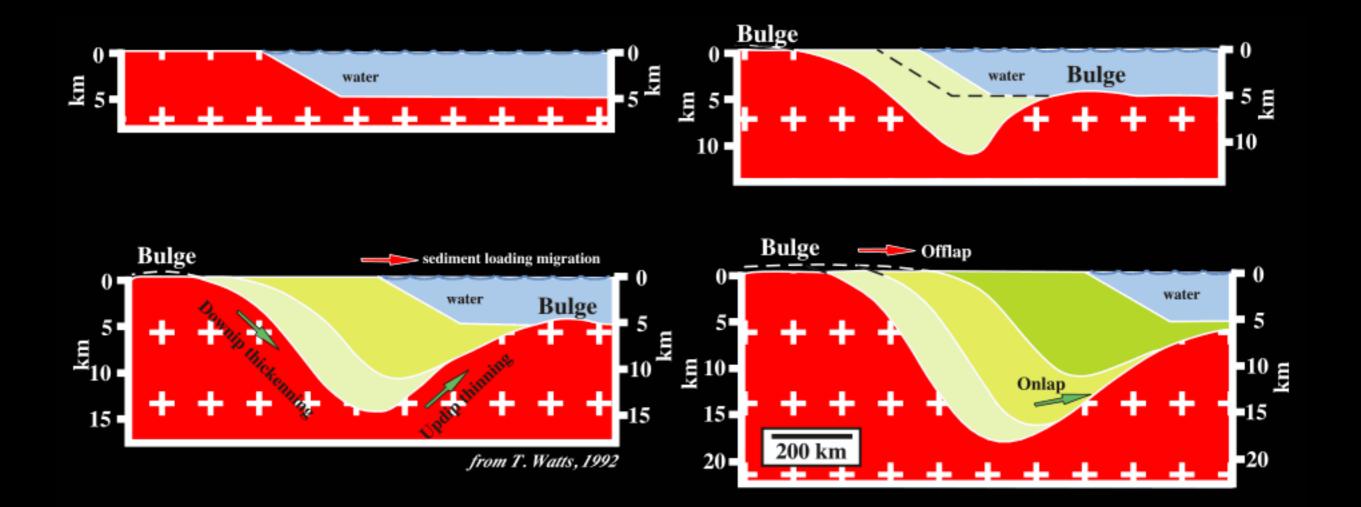
Foredeep basin



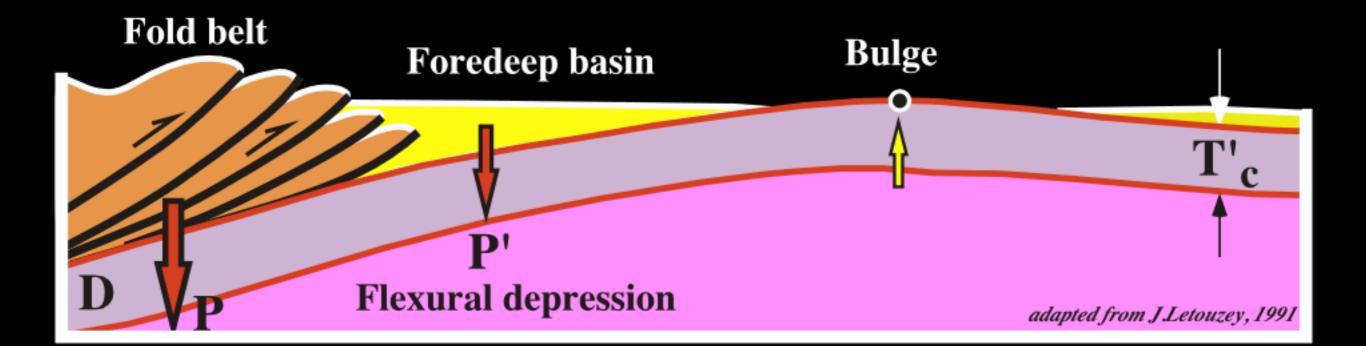
Alaska North Slope Reconstructions



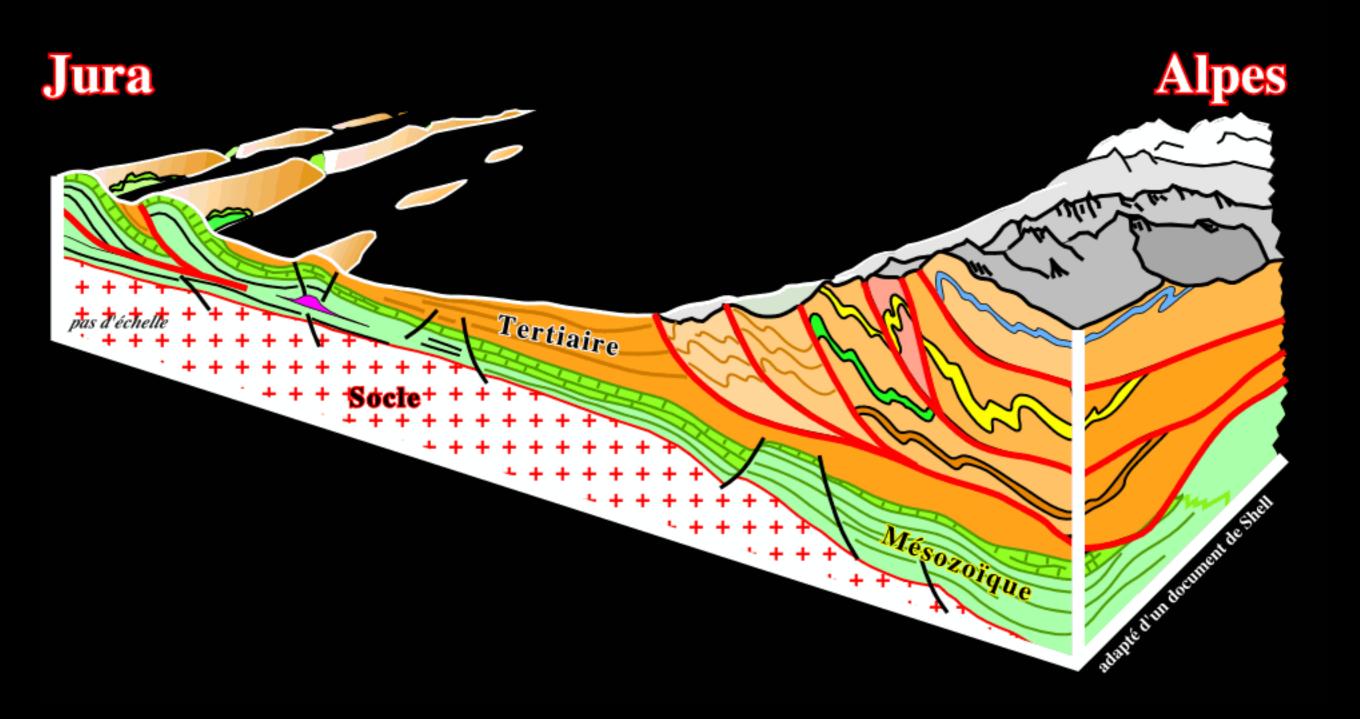
Sedimentary Loading



Foredeep subsidence

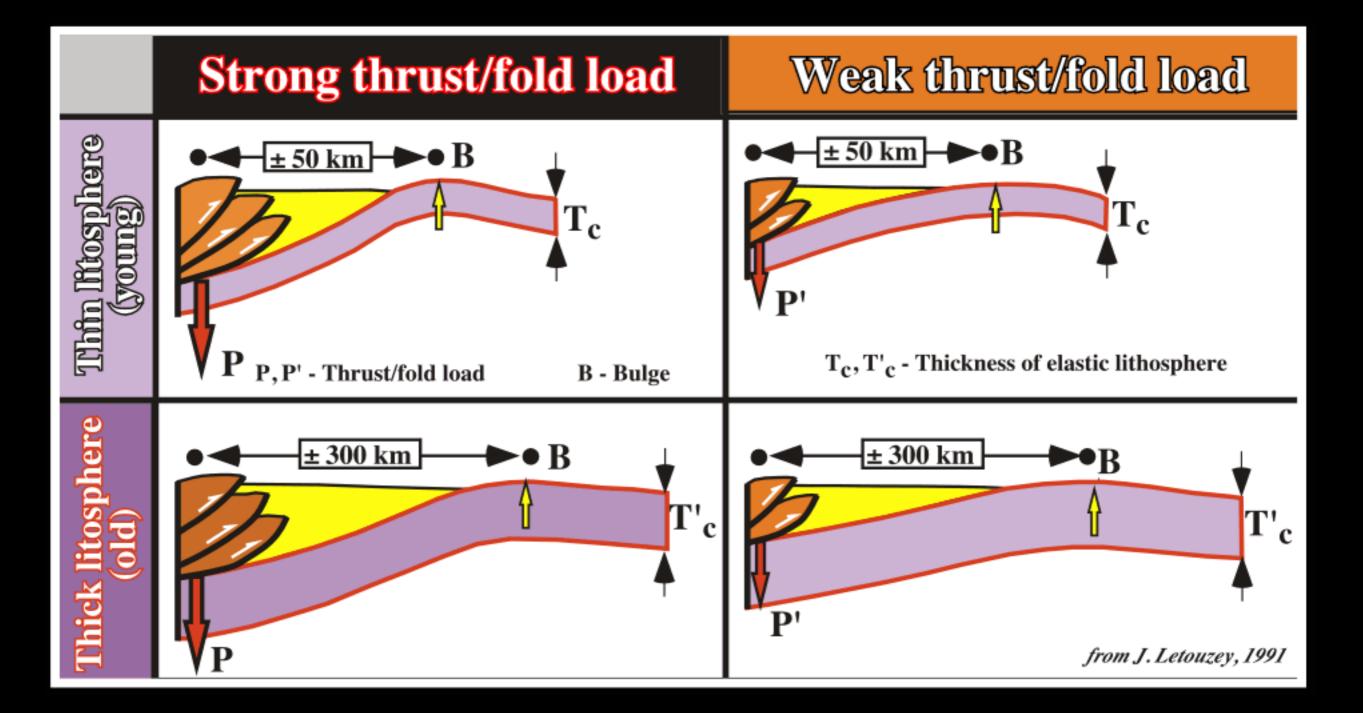


Foredeep subsidence



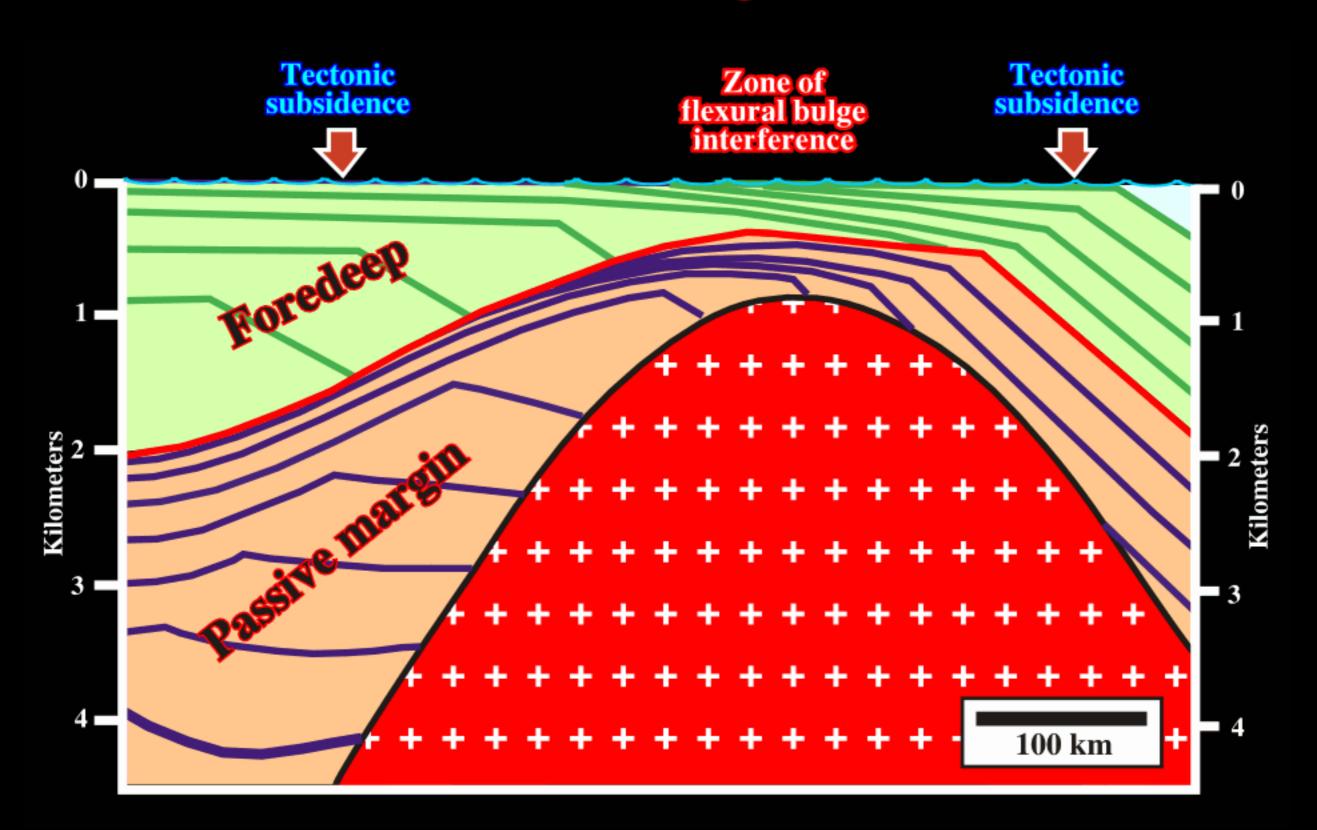
Santa Cruz, May 2003

Dimensions of a Foredeep



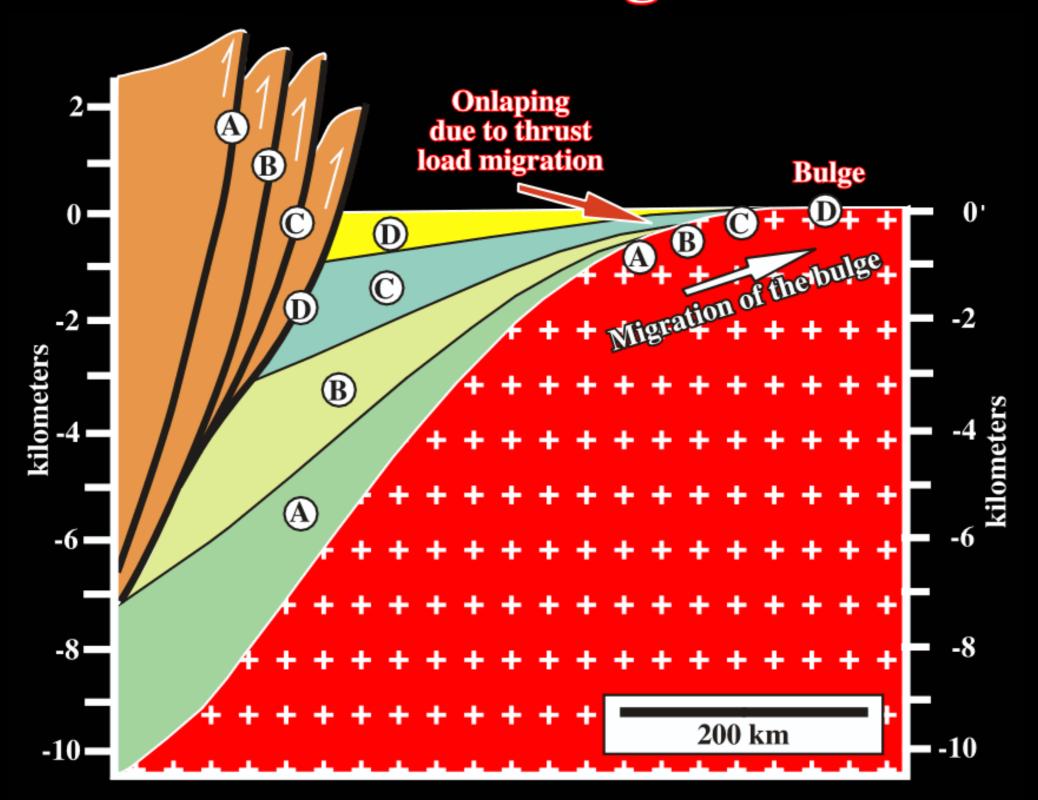
CCramez, Switzerland

Sedimentary Loads



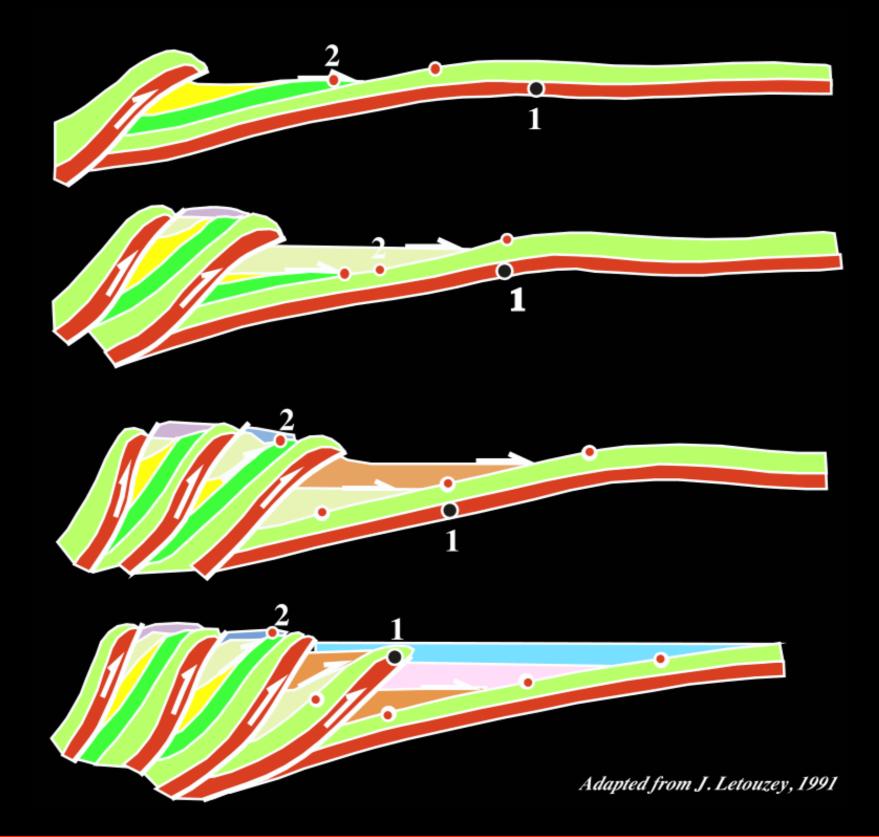
CCramez, Switzerland

Outward migration of the bulge



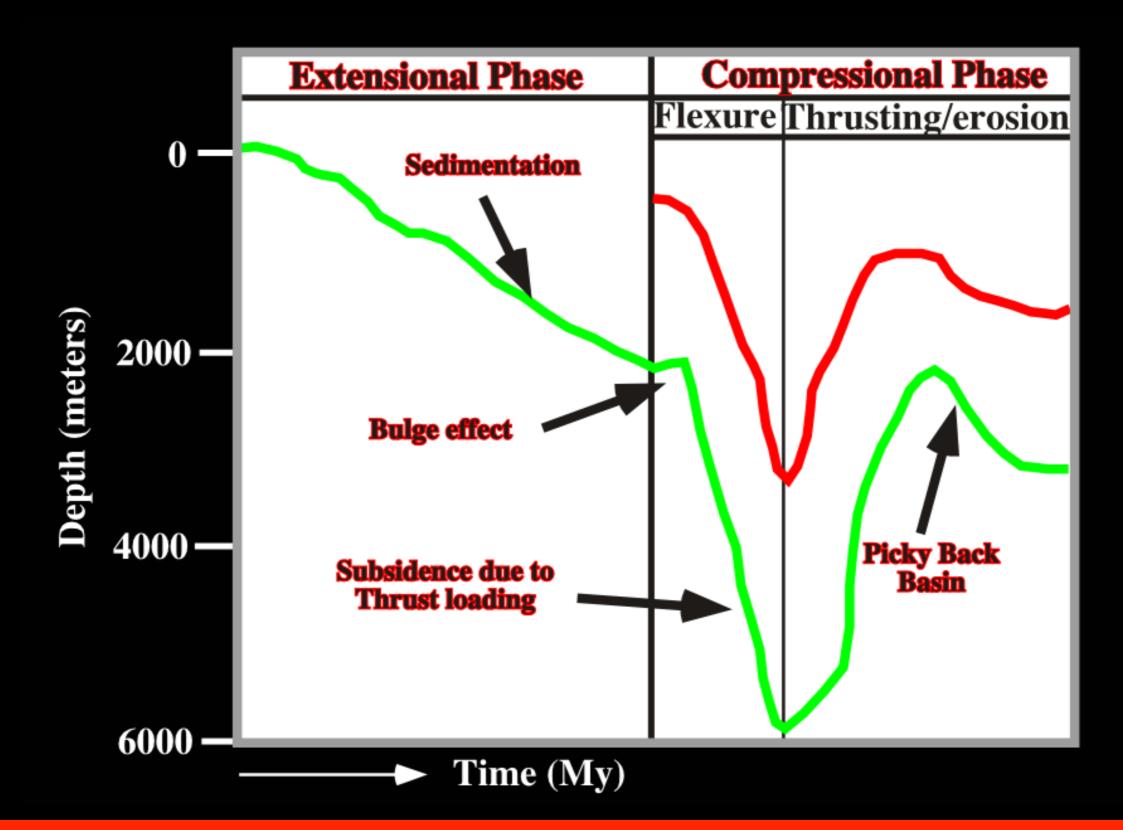
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Evolution of a foredeep



Santa Cruz, May 2003

Sedimentary burial



The second secon

Thanks you very much

Santa Cruz, May 2003