

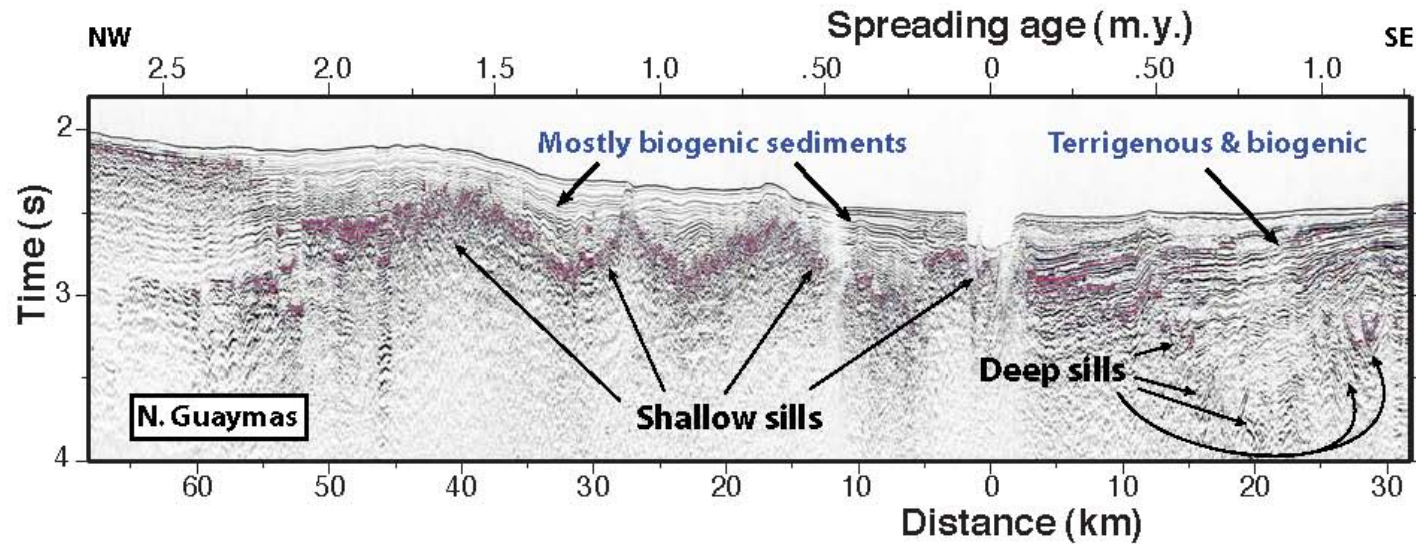
# SCIENCE PLAN: FLUIDS

- What are the mechanisms and consequences of fluid and volatile exchange between the Earth, Oceans, & atmosphere at rifted continental margins, and between the lithosphere and the mantle?

# SCIENCE PLAN: FLUIDS

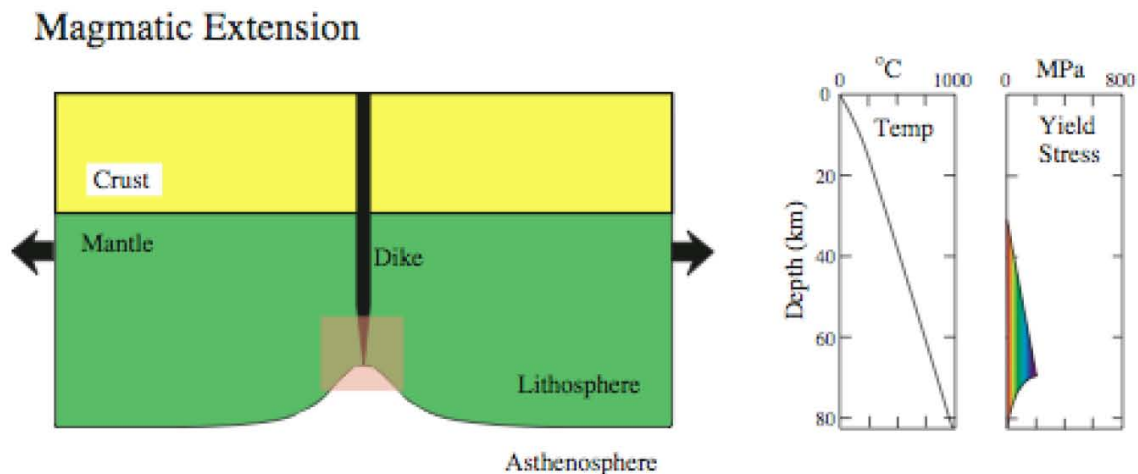
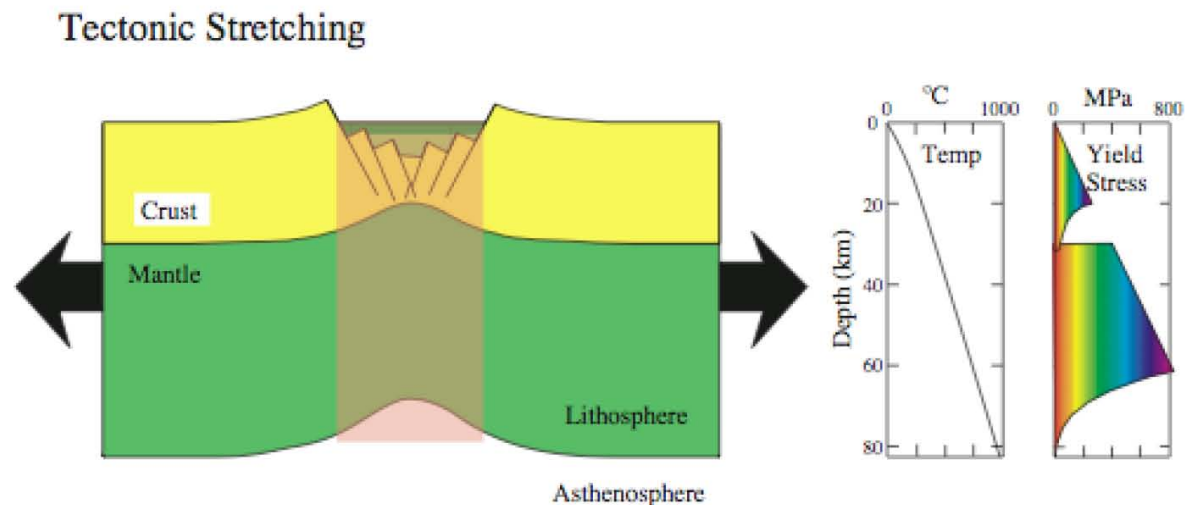
- What are the net volatile fluxes at continental rifts?
- What are the reservoirs and release mechanisms for volatiles from rift inception to breakup?
- What role do volatiles play in the initiation and evolution of rifting?

# What are the reservoirs and release mechanisms for volatiles from rift inception to breakup?



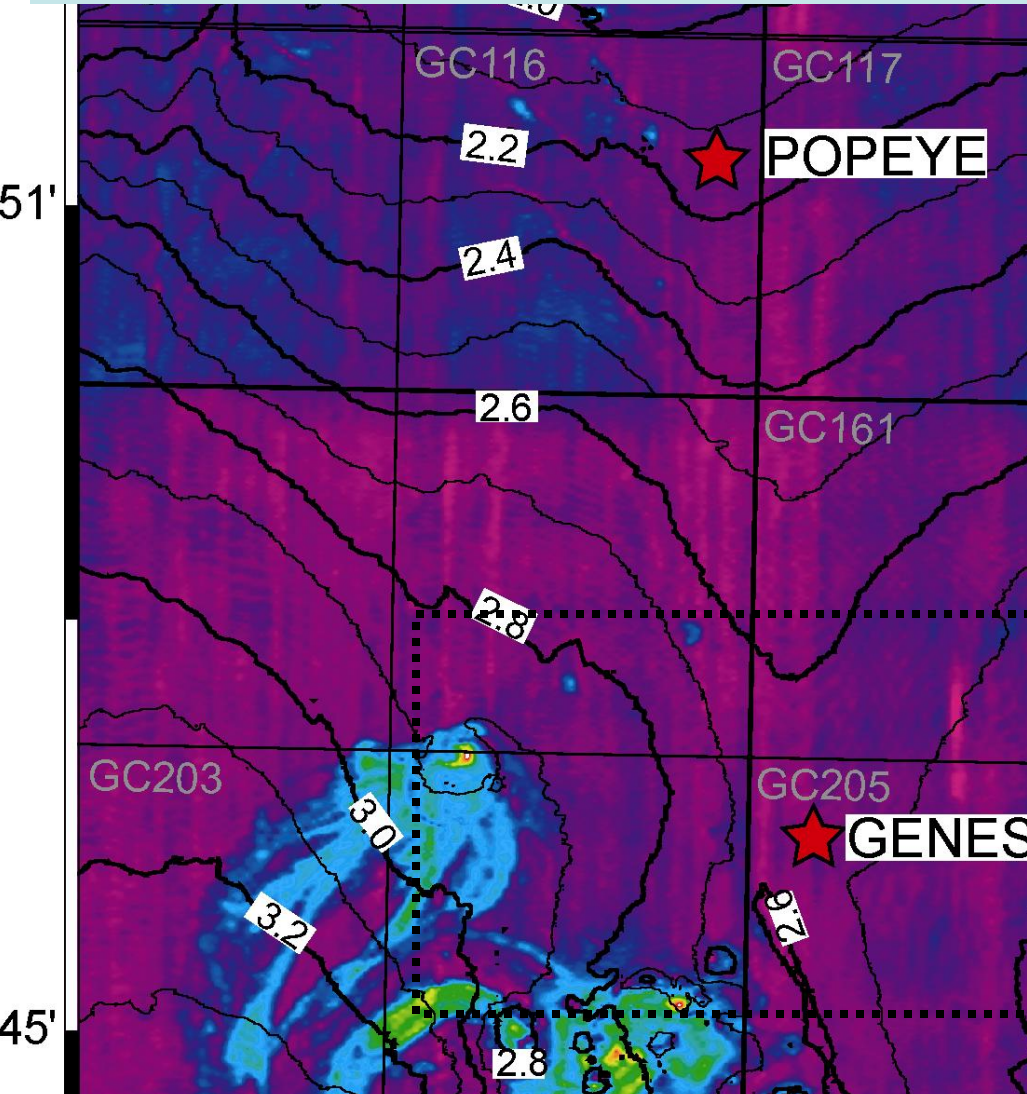
*Figure 5.14. (top) Multi-channel seismic profile showing shallow sills intruded into biogenic sediments in the northern Guaymas Basin, Gulf of California. (left) Tube worms observed with deep-tow camera system located above a prominent sill ~27 km northwest of the rift axis in the top panel. Figure courtesy of Dan Lizarralde.*

# What role do volatiles play in the initiation and evolution of rifting?

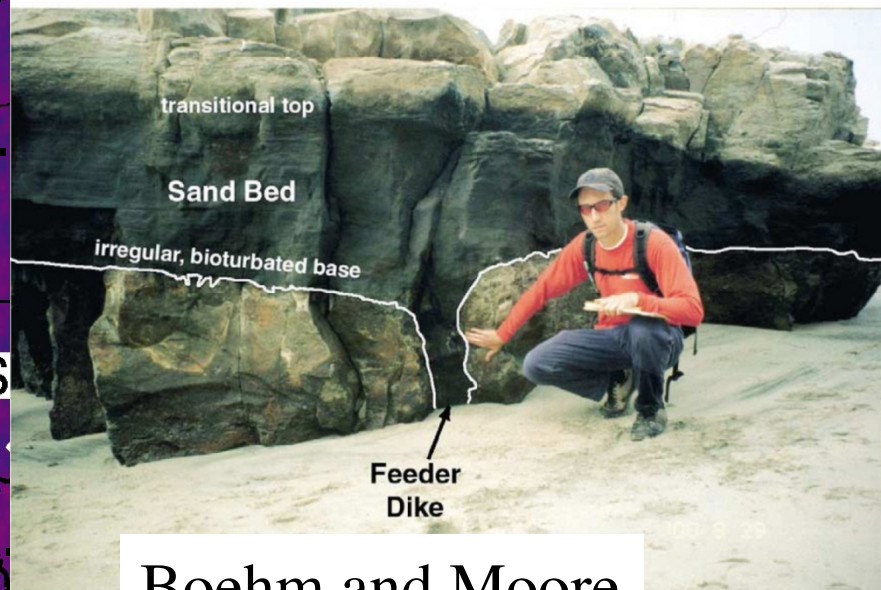


Buck, 2006

# What are the fluid and thermal fluxes along mature continental margins, How do they evolve during margin evolution and with climate? How do the control margin evolution?



(a)



Boehm and Moore