

Tropical versus Temperate Zone Lacustrine Source Rocks: Conclusions

- Takutu basin formed in the Jurassic, related to opening of the southern North Atlantic Ocean.
- General Levalle basin formed later, in the Early Cretaceous, related to opening of the southern South Atlantic Ocean.
- Both basins were continental-interior rifts, cut off from the sea, but with long lived hypersaline lakes and similar sedimentary fill.
- Takutu sedimentation took place in a tropical paleolatitude at a time of global “hothouse” conditions.
 - Stable tropical climate minimized lake turnover and promoted anoxic lake bottom conditions.
 - Oil-prone source rock, containing algal/ amorphous kerogen, was deposited and preserved.
- General Levalle sedimentation took place at a temperate paleolatitude during mild global “icehouse” conditions.
 - Seasonal lake turnover apparently prevented accumulation and preservation of rich source rock facies.
 - Only lean Type III/IV kerogen was deposited and preserved, with little petroleum potential.