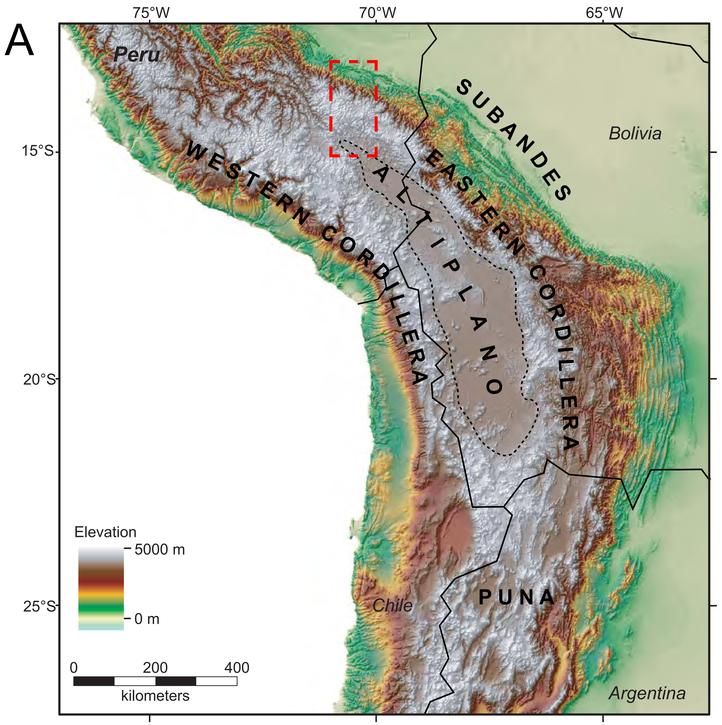
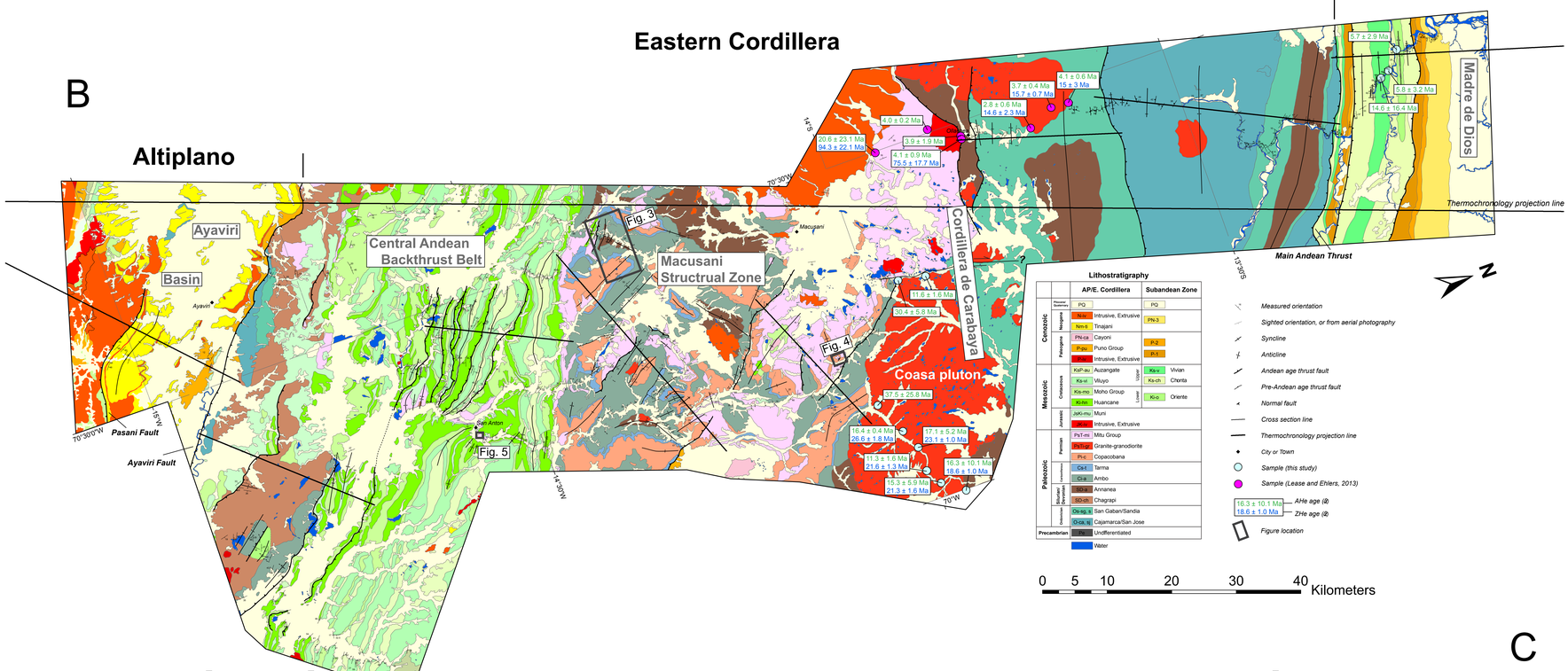
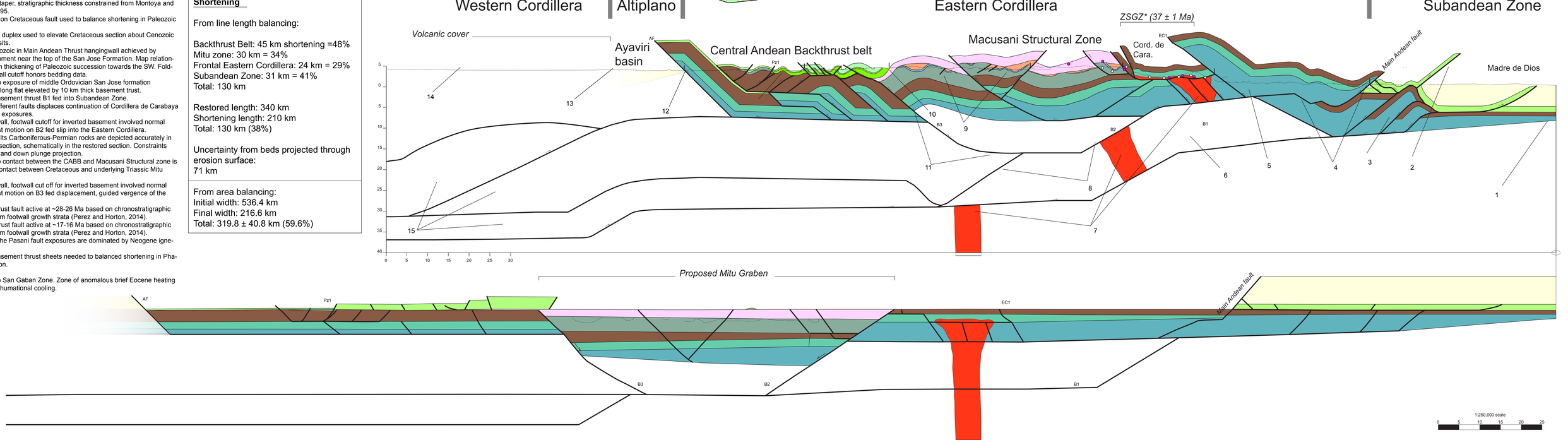
A



B



C



Annotations

1. Foreland taper, stratigraphic thickness constrained from Montoya and Mathalone, 1996.
2. Extra slip on Cretaceous fault used to balance shortening in Paleozoic duplex below.
3. Paleozoic duplex used to elevate Cretaceous section about Cenozoic foreland deposits.
4. Thin Paleozoic in Main Andean Thrust hangingwall achieved by second detachment near the top of the San Jose Formation. Map relationships constrain thickening of Paleozoic succession towards the SW. Folding over footwall cutoff honors bedding data.
5. Wide map exposure of middle Ordovician San Jose formation achieved with long flat elevated by 10 km thick basement trust.
6. Slip on basement thrust B1 fed into Subandean Zone.
7. Slip on different faults displaces continuation of Cordillera de Carabaya pluton surface exposures.
8. Hangingwall, footwall cutoff for inverted basement involved normal fault B2. Thrust motion on B2 fed slip into the Eastern Cordillera.
9. Folds, faults Carboniferous-Permian rocks are depicted accurately in the deformed section, schematically in the restored section. Constraints from mapping and down plunge projection.
10. Long map contact between the CABB and Macusani Structural zone is a deposition contact between Cretaceous and underlying Triassic Mitu Group rocks.
11. Hangingwall, footwall cut off for inverted basement involved normal fault B3. Thrust motion on B3 fed displacement, guided vergence of the CABB.
12. Ayaviri thrust fault active at ~28-26 Ma based on chronostratigraphic constraints from footwall growth strata (Perez and Horton, 2014).
13. Pasani thrust fault active at ~17-16 Ma based on chronostratigraphic constraints from footwall growth strata (Perez and Horton, 2014).
14. South of the Pasani fault exposures are dominated by Neogene igneous cover.
15. Slip on basement thrust sheets needed to balanced shortening in Phanerozoic section.

*ZSGZ: Zongo San Gaban Zone. Zone of anomalous brief Eocene heating followed by exhumational cooling.

Shortening

From line length balancing:

Backthrust Belt: 45 km shortening =48%
Mitu zone: 30 km = 34%
Frontal Eastern Cordillera: 24 km = 29%
Subandean Zone: 31 km = 41%
Total: 130 km

Restored length: 340 km
Shortening length: 210 km
Total: 130 km (38%)

Uncertainty from beds projected through erosion surface:
71 km

From area balancing:
Initial width: 536.4 km
Final width: 216.6 km
Total: 319.8 ± 40.8 km (59.6%)