

## **TECTONIC, SEDIMENTARY AND MAGMATIC CENOZOIC EVOLUTION OF THE EASTERN ANDEAN CORDILLERA (22° - 23° S.L.)**

RUBIOLO, D.G.

A combined study of the regional tectonics, sedimentary Cenozoic deposits and the magmatic arc units allows to present an schematic evolution of the Cenozoic basins of the Eastern Cordillera between 22° and 23° S.L. The sedimentary deposits of Pozuelos, Tres Cruces, Santa Victoria Range and Western Subandean Ranges basins are considered. The Cenozoic basins in this region of the Eastern Cordillera could have been developed during three compressive stages, with alternating periods of tectonic calm. A) Eocene - Lower Oligocene (55-28 Ma): An orogenic front generated a foreland basin over the old Cretaceous depocentre of Tres Cruces. B) Upper Oligocene - Lower Miocene (28-16 Ma): A piggyback basin is developed in Pozuelos area and a reduce arc volcanic activity is registered. C) Middle to Upper Miocene (16-9 Ma): New compressive process would have begun. The orogenic front migrated to the Santa Victoria range. The Tres Cruces basin which developed formerly as a foreland basin, is incorporated to the orogenic system and continued its evolution as a piggyback basin. D) Upper Miocene (9-6 Ma): Tectonic activity was developed as out of sequences thrusts behind the orogenic front. This event produced a crustal thickening of the Puna, huge calderas and ignimbritic deposits. E) Upper Miocene to Pleistocene (less than 6 Ma): The orogenic front migrated to the east. A new decollement level affecting the Precambrian basement developed a thick skinned structure in The Eastern Cordillera. In contrast, to the east, the Subandean Ranges show a thin skinned fold and thrust belt. The volcanic arc in the Puna migrated to the west towards the Principal Cordillera.