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SEDIMENTACION CONTINENTAL, TECTONICA Y VOLCANISMO OLIGO-MIOCENO: LA CUENCA INTRAMONTANA CRUCERO EN LOS ANDES SURORIENTALES DE PERU

OLIGO–MIOCENE CONTINENTAL SEDIMENTATION, TECTONICS AND VOLCANISM: THE CRUCERO INTRAMONTANE BASIN IN THE SOUTHEASTERN HIGH ANDES OF PERU

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The Crucero intramontane basin, located north of the Titicaca lake (14°20S, 7&°W), has been connected with the Altiplano endoreic basins since Oligocene times. It has been filled up with nearly 1000 m of continental detrital sediments and volcanic rocks of acid and intermediate composition: the Cayconi formation. The continental sediments of the Cayconi formation consist of reddish, badly sorted fluvial and alluvial conglomerates and gravels that pass laterally to grey fine and well stratified lacustrine strata. These continental strata and the interbebbed volcanics over-lie, through a sharp unconformity, a Paleozoic and Cretaceous bedrock previously deformed by the late Eocene to early Oligocene Incaic phase.

The volcanic intercalations of the Cayconi formation are basaltic andesites, dacites rhyolites and ash-flow tuffs with frequent xenoliths of granite, gneiss and slates. K-Ar dating of these volcanic rocks yieded ages between 25 and 22 Ma and allows to assume a late Oligocene to earliest Miocene age for the Cayconi formation.

Rhyolitic ash-flow tuffs of great extension and of mid-late Miocene age overlie the Cayconi formation.

In both the late Oligocene to earliest Miocene and mid-Miocene acid magmatism, muscovite and cordierite are common. Their high peraluminous character indicates an S-type magmatism.