

## ISOTOPIC DATA ON SEDIMENTARY PROVENANCE OF DEVONIAN SEQUENCES FROM WESTERN ARGENTINA: COMPARATIVE ANALYSES OF MAIN DETRITAL SOURCES

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We report isotopic data from Devonian sequences that crop out within the southern Precordillera region and the San Rafael Block (Mendoza province) in the Cuyania terrane. In the Precordillera sector the Lower Devonian siliciclastic Villavicencio Fm is composed of massive dark grey sandstones alternating with laminated mud beds, and laminated sandy heterolithic facies showing wave action. Lithofacies are typical of marine shallow shelf sands. Some levels record endemic land plant fossils. Sandstone petrography shows mixing of recycled orogen and continental block provenances for these feldspathic-lithic wackes. U-Pb ages (LA-ICP-MS) on detrital zircons from three samples show a Mesoproterozoic dominant mode suggesting mainly sources of 'Grenville-age' (more than 50% of the analyzed zircons) probably located to the east of the study area. In the San Rafael Block, two units are assigned to the Devonian system, the Horqueta and the Río Seco de los Castaños Fms, both folded, cleaved and faulted during Devonian-Carboniferous main event. The first one is a sandy-dominated metasedimentary sequence. The U-Pb (LA-ICP-MS) detrital zircon ages from six samples show main clusters from Mesoproterozoic and Neoproterozoic-Lower Paleozoic ages. The Río Seco de los Castaños is also a marine-siliciclastic unit that records a distal to proximal platform-deltaic sedimentary system. The lithofacies are immature arkosic sandstones showing recycled orogen and continental block provenance. Sm-Nd model ages ( $T_{DM}$ ) record the provenance from the Mesoproterozoic basement of Cuyania terrane. For U-Pb (LA-ICP-MS), two samples were analyzed. We observe that most of the detrital zircons come from the Lower Paleozoic sources with less representation of Neo-Meso-Paleoproterozoic and Nearchean sources. We analyzed the typology and age of detrital zircons and other isotopic data (Rb-Sr, Sm-Nd and Lu-Hf) in order to interpret a change of detrital sources from north to south in the Devonian basins in the context of western Gondwana evolution.