

SEARCH FOR THE UPPER BOUNDARY OF THE KIAMAN MAGNETIC INTERVAL IN ARGENTINA

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The Permo-Carboniferous Reverse Superchron (PCRS; Kiaman of Irving and Parry, 1963) persisted through the Late Carboniferous to Late Permian. Although the position of the lower limit of the PCRS is relatively well-determined, the upper limit is not. We report on work in progress in the search for the upper Kiaman boundary in Argentina. A belt of deformed Late Paleozoic partly glaciogenic clastic sediments stretches westward across Argentina from the Sierras Australes, through the lowlands of La Pampa province, and trends northward through Mendoza province and beyond. In La Pampa and westward, the Choiyoi silicic volcanic rocks overlie the Late Paleozoic clastic section. Choiyoi volcanism began in Permian and continued into the Triassic. It appears probable that the upper limit of the PCRS lies near the beginning of Choiyoi magmatic activity. Two deformative episodes (Early Permian San Rafael phase; Triassic extension and faulting) affected these Late Paleozoic to Triassic rocks, and complicated their magnetization histories. In the northwest end of this zone, polarity reversals established by Valencio and co-workers (Valencio, 1970; Valencio et al., 1971; Valencio et al., 1977) suggest that the upper limit of the PCRS is older than about 258 Ma. Work by Tomezzoli (Tomezzoli, 1997) at the southeast end of this zone indicates the presence of syn- to late-tectonic magnetizations in Permian sediments. One of the challenges in this search for the upper limit of the long reverse interval of the PCRS is establishing the age of magnetization(s) relative to the stratigraphic age. Current results are summarized.