SEQUENCE STRATIGRAPHY IN CONTINENTAL TO MARINE TRANSITIONS. AN EXAMPLE FROM THE MIDDLE JURASSIC CUYO GROUP, SOUTH NEUQUEN BASIN, ARGENTINA.

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The Middle Jurassic Cuyo Group in the southern Neuquén Basin comprises shallow marine to continental beds up to 1200 m of thickness. Twelve sedimentary sections were measured through the succession, in which facies and sequence stratigraphic analysis have been carried out. The study allowed us to recognize eight depositional sequences, related to both 3rd and 4th-order scales (*sensu* Exxon). Because these outcrops extend from mainly fluvial deposits on the east to coeval shallow marine deposits on the west, they allow to analyze sequence stratigraphic relationships, facies, and paleoenvironmental changes during the evolution of a depositional sequence. (1) In shallow marine environments, 3rd-order sequences start with a major erosive and non-depositional event followed by up to 20 meters of sandy-braided fluvial to high sinuosity estuarine channel deposits linked with a late lowstand systems tract - early transgressive systems tract stage. The transgressive systems tract deposits are characterized by 2-6 meters thick shallowing upward tidal bars with a retrogradational parasequence set. Highstand systems tract deposits starts with open-shelf mudstones followed by 4-6 meters of shallowing upward cycles of input to wave dominated stream-mouth bars, with a progradational parasequence set. (2) In mainly continental areas, 3rd order sequences begin with up to 10 meters of coarse grained braided-river deposits resting over a regional discontinuity. These deposits are interpreted as developed in early transgressive systems tract stage. The Transgressive systems tract deposits are expressed by 12-14 meters of marsh levels, with tidal influence. The highstand systems tract deposits start with off-shore marine mudstones, followed by a strongly prograding input-dominated deltaic systems, and ending with thick high-sinuosity sandy fluvial deposits.