
Foreword

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Except for continental and volcanic rocks of central and eastern Patagonia, and the area centered in the boundary between Argentina, Brasil, Paraguay and Uruguay (i.e. Paraná Basin) the Jurassic in South America is mostly exposed along the Andean belt, from Argentina and Chile to Colombia. Within this belt the Jurassic is represented by a large variety of marine and continental facies with the best marine successions occurring in west central Argentina, central to northern Chile, and southern Peru. Among these regions the Neuquén Basin (west central Argentina) has been one of the most studied areas since the last half of the 19th century and has become a reference record.

This volume includes a number of papers presented to the 1st Argentine Symposium on Jurassic Stratigraphy held in La Plata, Argentina on May 22nd, 2003, under the sponsorship of the Argentine Commission on Stratigraphy, the Argentine Subcommittee on Jurassic Stratigraphy, the Argentine Geological Society and the Argentine Paleontological Society.

The articles assembled here cover a variety of subjects related to the Jurassic record, mainly of Argentina. Most papers deal with the Neuquén Basin, the main oil- and gas-bearing basin of Argentina, accounting in the year 2003 for 31.5% and 53.6%, respectively, of Argentine oil and gas production. The Neuquén Basin, covering more than 160,000 km², contains a Jurassic sedimentary succession at least 3,000 m thick, where several source and reservoir rock intervals are present. Due to its geological and economical significance the Jurassic record of the Neuquén Basin has been the subject of numerous studies, including most of the presented to the above-mentioned Symposium.

The papers included in this volume have been arranged taking into account subject, scope and age of the studied record. The first four papers focus on facies analysis of some particular parts of the Jurassic succession of the Neuquén Basin, in some cases with especial emphasis in their structural setting. Thus, S. Lanés describes the oldest Mesozoic marine succession in the basin and discusses the paleostructural control of the Late Triassic-Early Jurassic transgression; C. Zavala addresses the sequence stratigraphy of the Lotena Group (Middle Callovian and Oxfordian), as an expression of accommodation to a structurally-controlled topography; R. Palma et al. provide a facies/microfacies description and interpretation of the sedimentological and paleoenvironmental setting of a Callovian shallow marine limestone platform (Calabozo Formation); and C. Zavala et al. analyse the origin, dimensions and hierarchy of bounding surfaces of Kimmeridgian aeolian deposits (Tordillo Formation) in the basin, in order to contribute to a better understanding of the size and internal characteristics of oil-bearing sandstone bodies.

A second group of two papers presents new isotopic data for the Jurassic of the Neuquén Basin. The paper by S. Valencio et al. is a preliminary attempt to establish a strontium, carbon and oxygen isotope stratigraphy from two Pliensbachian sections. The paper by G. Lo Forte et al., presents an isotopic characterization of Callovian (Tábanos Formation) and Oxfordian (Auquilco Formation) marine evaporites, as part of a comprehensive sedimentological study.

The following three papers include results of paleontological studies bearing on Lower Jurassic bios-

stratigraphy, facies and global correlation of the Neuquén Basin. S. Damborenea and M. Manceñido use a quantitative approach to delineate early Jurassic (Hettangian-Sinemurian) benthic associations of bivalves and brachiopods. A. Riccardi describes the first squid species found in the Jurassic of the Neuquén Basin, adding evidence to the similitude between Early Toarcian European and East Pacific faunas and to the existence of a global oceanic anoxic event for that time. A. Rubilar describes a stratigraphically significant heterochronic change in shape and size along a lineage of Middle Jurassic oysters.

Finally, the last paper by N. Cabaleri and C. Armella, presents a facies analysis of a lacustrine bioherm within a Callovian-Oxfordian volcano-sedimentary association

(Cañadón Asfalto Formation) exposed in central Patagonia (Cañadón Asfalto Basin) and discusses its importance for controlling sedimentation in different lacustrine subenvironments.

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