

## The Jimenez sections in Northeastern Mexico and their sedimentary record across the Santonian-Campanian boundary

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The Santonian-Campanian boundary is among the last Cretaceous stages without a Global Boundary Stratotype Section and Point (GSSP), mostly due to the absence of adequate sections. Here we introduce two north-eastern Mexican sections from Jiménez, Coahuila, immediately south of the Rio Grande. These are superbly exposed, lithostratigraphically monotonous and rich in fossils, and they cross the Santonian-Campanian boundary. The sections have long been known for their occurrence of giant *Parapuzosia*, but were never studied in detail. Along the perennial Río Tecolote, a tributary to the Rio Grande, an estimated 30 m section of sediment is exposed over ca. 3 km of the riverbed and in tributaries to the north. The outcrops comprise a succession of grey and white limestone at the base, followed by bright grey and white limestone, and 5 m of yellow chalk at the top. The top of the section is also accessible in a well exposed section at Jiménez, where we identified *Sphenoceras*, *Cordiceras*, and plates of crinoids *Marsupites testudinaris* and *Uintacrinus anglicus*. These fossils indicate that the uppermost Santonian and basal Campanian is present there, according to the biostratigraphic zonation presented by (GALE et al., 2008) for the Austin Chalk near Dallas, Texas. The second outcrop area is at Tepeyac along the Río Blanco, ca. 50 km to the South. Several hundreds of square meters of outcrop are exposed in a wide and mostly dry riverbed. The section is 30 m thick and consists of white limestone intercalated with thin-bedded grey marl. *Submorticeras tequesquitense* indicates an early Campanian age for the upper levels of this section. Our initial data lead to the following preliminary conclusions: Santonian-Campanian boundary sections in the Jiménez area are lithologically monotonous, rich in fossils, and individual beds can be followed over continuous outcrops of up to 1 km extension. Both the Río Blanco and the Río Tecolote outcrops may contain complete and well expanded records of the Santonian-Campanian boundary, but this needs additional research. During the Upper Cretaceous, the area was located in an oceanic junction between the Tethys, North- and South Atlantic, and the Western Interior Seaway of North America, which suggests that a mixture of faunal elements from these palaeobiogeographical provinces is present.

GALE, A.S. et al., 2008. Cret. Res., **29**, 131–167.