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ABSTRACT

The 420-m thick stratigraphic column of the Mural Formation that is exposed in the Cerro Pimas area of northern Sonora, Mexico, is composed of limestone lithofacies ranging from bioclastic wackestone to boundstone, whose biota is characterized by low diversity. Prominent age-diagnostic fossils are benthic foraminifera and long-ranging calcareous algae that indicate the Aptian/Albian boundary is close to the base of the Los Coyotes Member. The carbonates of this formation have negative to positive $\delta^{13}C$ values (–4.63 to +2.6‰) and highly depleted $\delta^{18}O$ values that range from –12.74 to –8.34‰. The absence of correlation between $\delta^{13}C$ and $\delta^{18}O$ values supports a primary marine origin for the $\delta^{13}C$ values of these limestones.