

Magnetic Stratigraphy of the Early Miocene Olcese Sand, Kern County, California

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The Olcese Sand, northeast of Bakersfield, California, is famous for its marine vertebrates and dense shell beds. Its age is poorly constrained, although it is thought to be early Miocene. Magnetic samples were taken from the 220-ft-thick Nickel Cliff section of the Olcese Sand as well as isolated sections on Ernst Ranch and along Poso Creek. The samples were demagnetized with both alternating field and thermal demagnetization, and produced stable remanence that passed a reversal test. The Olcese Sand is mostly reversed in polarity, except for short normal magnetozones at the base and top of the section. Based on Sr ages ranging from 16.9 to 17.6 Ma, we correlate the Olcese Sand with Chrons C5Cn3n to C5Dn (16.6 to 17.5 Ma), or latest early Miocene.