

MAGNETOSTRATIGRAPHY OF THE MIOCENE-PLIOCENE ETCHEGOIN GROUP, WESTERN SAN JOAQUIN BASIN, CALIFORNIA

Prof. Donald Prothero, Dept. Geology, Occidental College, Los Angeles, CA
90041; prothero@oxy.edu

Results

- ❖ Calibrated by dates on top and base of section, plus diatom biostratigraphy
- ❖ Based on the Ar/Ar date of 2.5 Ma on the top of the San Joaquin Fm., we correlate this long normal magnetozone with Chron C2An (2.5-3.6 Ma), or late Pliocene
- ❖ Based on the Ar/Ar date of 5.0 Ma located 1787 m above the base, and the diatom biostratigraphic and Sr-isotope ages of 5.3-5.5 Ma at the base, we correlate the Jacalitos Fm. with Chron C3r (5.2-6.0 Ma), or latest Miocene-earliest Pliocene
- ❖ The upper part of the Etchegoin Fm. is reversed in polarity, and best correlates with Chron C2Ar (3.6-4.2 Ma)
- ❖ The lower part of the Etchegoin Fm. is normal at the top, then reversed below, with a large unconformity where the unit below Loomis' (1990) "blue sandstone facies" is missing. This interval probably represents upper Chron C3n (4.2-5.2 Ma)
- ❖ Further sampling at Zapato Chino Canyon will cover the lower Etchegoin Fm.

