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MIGHT CD/CA RATIO IN BIVALVE SHELLS MARK A CHANGE IN THE SOUTHERN OCEAN CIRCULATION AT EOCENE/OLIGOCENE BOUNDARY?

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The Eocene La Meseta formation from Seymour Island contains fossiliferous silty sands deposited in a near shore marine environment. *Eurchomalea* and *Cucullaea* bivalves occur in well preserved carbonate concretions that are common along this about 500 m thick sedimentary sequence. Main and trace elements were investigated in both shells from six stratigraphic levels. Results indicate the important increase of Cd/Ca ratio at the top of La Meseta Formation dated from latest Eocene to possibly lowest Oligocene. That trend is synchronized also with a shift in δ 13 C of shell carbonates. Both proxies may imply a change from a largely stratified to a vigorously mixed Southern Ocean related to cryosphere formation on the Antarctic Continent.