The response of the Antarctic Circumpolar Current (ACC) to changing winds influences predictions of future climate and interpretations of past climate variations. Many of the fronts that make up the ACC wind through ocean basins with strong flows along the western boundaries. Here I test whether the transport in the ACC along the Campbell Plateau can be explained as a western boundary current of a wind-driven South Pacific gyre by comparing the transport calculated from scatterometer winds using the Island Rule with transport estimates from satellite altimetry and historic hydrography. The Island Rule predicts: 1) total transport between New Zealand and South America consistent with other estimates of transports in and out of the Pacific; 2) a transport consistent with the observed time-averaged flow in the ACC along the Campbell Plateau if advection of momentum is included; and 3) much of the variability along the Campbell Plateau over the 16-year transport time series. The results imply that flows in the ACC along the western boundaries of other basins may also respond directly to the winds and that the link between winds and ocean currents may be a useful tool for palaeoclimate studies.