This book focuses on the sedimentology of the Hells Kitchen Member of the Port Sussex Formation in East Falkland (Isla Soledad, Las Malvinas). It closely examines two sediment cores spanning these formations that were recovered from the Falkland Islands in 2008 following a mineral exploration programme. The integrated approach of this research, which combines sedimentological data with geochemistry, makes it a robust insight into this past climatic transition and may help to evaluate and inform predictions of future climate change.