

87SR/86SR RESULTS FROM THE POLONEZ COVE AND CAPE MELVILLE FORMATIONS (TERTIARY), KING GEORGE ISLAND, WEST ANTARTICA

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Results of four $^{87}\text{Sr}/^{86}\text{Sr}$ determinations furnish additional evidence for the interpretation of age of the Low Head Member (Polonez Cove Formation) and Cape Melville Formation and Cenozoic stratigraphy of King George Island. Both formations contain evidence of deposition under glacial influence respectively assigned to the Polonez and Melville glaciations. Determinations were made on coral eskeleton and bivalve shell from conglomeratic sandstone ("fossiliferous rudite" facies=LH3) of the Low Head Member (2 determinations) and on bivalve shells from a sandy coquina in the upper part of the Cape Melville Formation (2 determinations). Lowest values obtained were 0.707943 for the Low Head Member and 0.707848 for the Cape Melville Formation. Comparison of results with a normalized curve (0.71025) of variation of $^{87}\text{Sr}/^{86}\text{Sr}$ during the Tertiary suggests an Early Oligocene-Late Eocene age for the two units. Data supports correlation between the Polonez Cove and the Cape Melville formations. They may represent respectively the proximal shallow marine and distal marine shelf facies of a single stratigraphic unit.