

Deep marine deposits of the Gramscatho Basin of south Cornwall reflect two tectonic regimes; Early to Middle Devonian rifting of continental lithosphere with formation of oceanic lithosphere to the south, and Middle Devonian to earliest Carboniferous convergence along its southern margin. Sediments on thinned continental crust to the north and oceanic lithosphere to the south were juxtaposed in the Late Devonian when nappes of deep water flysch and olistostrome were thrust up on to the northern continental margin of the basin. Basin closure was accommodated by forward propagating thrust nappes, accompanied by penecontemporaneous sedimentation. The stratigraphical sequences of major nappes illustrate the progradation of flysch with climactic sedimentation of olistostrome in late Mid- to Late Devonian times. The Lizard Complex, including the Lizard ophiolite, within that nappe stack, constitutes part of one of the GCR sites which are largely in the allochthonous rocks. Many of those sites feature the olistostrome, Roseland Breccia Formation, with its great variety of sedimentary, igneous and metamorphic clasts (up to 1.5 km), and the association of ocean floor basalt and penecontemporaneous acidic volcanics indicative of the coming together of oceanic and continental plates. A site at the top of the parautochthonous continental margin succession displays the erosion products of the youngest nappe as it emerged and advanced across the sediment surface, marking closure of the oceanised Gramscatho Basin and continental collision.