MAJOR STAGES OF WEST SPITSBERGEN MARGIN EVOLUTION THROUGH THE CENOZOIC

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Several of major stages of Spitsbergen continental margin during the Mesozoic-Cenozoic are recognized basing on MCS and CDP data as well as recently obtained geological data from Svalbard. Expancian processes during the Late Cretaceous - Paleocene are fixed by forming of Pomorsk, Atka and Prince Karl perioceanic troughs. Submergence of these troughs occurred sumaltenously with active movements within fold-and-thrust belt of Spitsbergen. Eocene-Oligocene stage is characterized by depositional progradation of continental slope accompanied by compensation uplift of the shelf edge and adjacent areas: boundaries of Prince Karl horst and Forlandsunnet-Bellsunn troughs system had been formed. It is the evidence of thrusts movements ceasing within fold-and-thrust belt of Spitsbergen. Forlandsunnet-Bellsunn troughs system crosses the whole fold-and-thrust belt and continues outside its boundaries in the Brogger Peninsula area. Vertical movements dominated on the West Spitsbergen continental margin during the Neogene stage. At this time Forlandsunnet-Bellsunn troughs has been formed as distinguishable grabens with normal faults on their flanks. Conjugated uplift of adjacent horsts was the reason of small thrusts dislocating Paleogenic deposits of the Central Tertiary Basin and more abundant normal faults crossing the whole archipelago. Despite the contrasting character of vertical movements of the margin, uplift of the archipelago occurred in the form of dome structure. Sumaltenously fracturing of dome edges according radial faults system and fjord coasts forming occurred. Stratigraphic range of bottom deposits in fjords shows Pliocene-Holocene time.