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8. Agmatites, Basaltic Intrusions and Younger Deformations in the „Berliner Mauer", Cape Sibbald, Aviator Glacier Tongue, North Victoria Land, Antarctica

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The southern part of the Mountaineer Range forms a dissected, high plateau between Parker and Aviator glaciers. The highest peak is approximately 2330 m above sea level. For this peak we propose the name „Brandenburger Spitze" (Brandenburg Peak)#. To the south, the plateau drops down to the Aviator Glacier, in a nearly vertical, about 1200 m high bluff with some spectacular icefalls. For this bluff the name „Berliner Mauer" (Berlin Wall)# is proposed; for a small, tower-like detached rock at Cape Sibbald we propose the name „Checkpoint Charlie"#. During several helicopter landings we were able to climb down to the foot of this big bluff to collect samples.

The main rock types in the upper part of the bluff are granites of the Granite Harbour Intrusives, whereas the lower part consists of Aviator Agmatites. After BERTHELSEN (1961) agmatite describes metamorphic breccias and breccia-like rocks where the fragments are more basic than the „groundmass". The first report of the agmatites by GANOVEX-TEAM (1987), only viewed from the helicopter, mentioned „dark igneous and partly metamorphic material which is floating in a matrix of light coloured granite". However, the fragments of all parts of the bluff which we could observe consist of different types of migmatic gneisses. Darker parts are enriched in biotite. No gabbro or other basic rocks could be recognized in the agmatite. The generation of the agmatites and the intrusion of granites belong to the late Ross cycle (500-480 Ma).

The „Berliner Mauer" is penetrated by many younger mafic dikes and sills of a post-Ross event, presumable of Mesozoic or Cenozoic age. The strike of the dikes is SW-NE or SSW-NNE, in accordance with the axes of the Ross Sea Rift System (TESSENSOHN & WÖRNER 1991, HINZ & KRISTOFFERSEN 1987). The sills dip with 10- 30° to the WSW and W. The basaltic veins are tectonically displaced by faults running SW-NE to SSW-NNE. This youngest structural event seems to be part of the young uplift of the Transantarctic Mountains and the graben formation in the Ross Sea.

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proposed names are up to now not official.

Fig. 1: SE corner of Mountaineer Range (Cape Sibbald) with Aviator Glacier and Aviator Ice Tongue. The more than 1200 m high bluff of „Berliner Mauer" is visible in the shadow to the left.

Abb. 1: Südost-Ecke der Mauntaineer Range am Cape Sibbald, Aviator-Gletscher im Vordergrund. Die über 1.200 m hohe Wand der „Berliner Mauer" ist links im Schatten sichtbar.

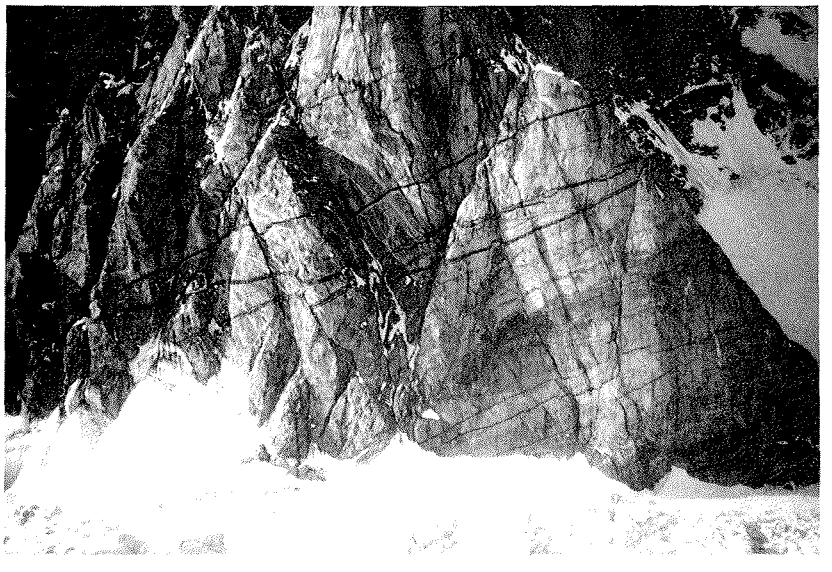

Fig. 2: Eastern part of the lower „Berliner Mauer" with basaltic dikes and sills, crosscut by normal faults. The height of the visible part of this bluff is about 300 m.

Abb. 2: Ausschnitt aus der dem unteren östlichen Teil der „Berliner Mauer" mit basaltischen Gängen und Lagergängen, die von Abschiebungen versetzt werden. Die Höhe des abgebildeten Teils der Wand ist etwa 300 m.