

A dissected central volcano at Bíggjarskor, Faroe Islands

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Prestfjall Fm fluviolacustrine sediments and Hvannhagi Fm tuffs and agglomerates are capped by Malinstindur Fm compound basaltic flows possibly erupted during the onset of breakup of the NE Atlantic. We report new observations bearing on faulting, uplift, erosion, topographic inversions and explosive volcanic activity occurring prior to the onset of eruption of Malinstindur Fm basalts, including the discovery of an intact dissected central volcano at Bíggjarskor. The Bíggjarskor volcano section is beautifully exposed in a ca 200 m vertical sea cliff and comprises a mixture of basaltic flows, agglomerates and ignimbrites crosscut by vent structures and a complex network of dikes and sills. Incised valleys cut through Hvannhagi and Prestfall Fm sediments on nearby Tindholmur island and are filled with megabreccias, lahar deposits and agglomerates likely coeval with eruption of Bíggjarskor or other nearby volcanoes. Ongoing work is focussed on sequence stratigraphy of Prestfjall and Hvannhagi Fm strata and dating of Bíggjarskor ignimbrites. Prestfjall and Hvannhagi Fm sediments have similar composition and mineralogy to sediments on Mars and mapping and analyses of the Bíggjarskor and Tindholmur sections involve deployment and testing of science questions and payload instruments onboard Mars missions. Field deployment included remote sensing (telephoto) and the mast camera (PanCam, HRC), close-up imager (CLUPI) and Raman spectrometer onboard ESA's ExoMars rover.