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Potential field modelling onshore-offshore central East Greenland

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The onshore geology in East Greenland is well-known due to excellent exposures. The area is dominated by the N-S striking Paleozoic East Greenland Caledonian fold belt and post-Caledonian sedimentary basins. However, East Greenland is characterized by a long and complex geological history including various extensional and collisional events from Archaean to present. It has previously been suggested that Precambrian collisional structures correlate with offshore structures in the Norwegian-Greenland Sea. These structures are likely to be important for the structural development of the central East Greenland shelf as well as formation of oceanic fracture zones. However, due to the overprint of the Caledonian fold belt, the interpretation of these structures is ambiguous. We present a combined geological and geophysical investigation of the onshore-offshore central East Greenland based mainly on potential field data. The purpose is to analyze the correlation between deep seated, Precambrian regional onshore basement structures and offshore basement structures in the Norwegian-Greenland Sea.