

# Geochemistry, Geophysics, Geosystems

# Supporting Information for

## The Mid-Atlantic Ridge near 13°20'N: High-Resolution Magnetic and Bathymetry Imaging

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## Introduction

This file contains two figures. Figure S1 illustrates the method used for removing the effects of vehicle pitch on the near-seabed magnetic field measures by *Autosub 6000*. Figure S2 illustrates the annihilator derived during inversion of then sea-surface field and its addition to the inferred magnetization.



# Figure S1.

Example of pitch correction for profile M104N. **a)** Initial magnetic total field measurements along the transect (top) and corresponding vehicle pitch (below). Values along the abscissa are sample numbers from start of traverse (sample spacing approximately 0.7 m). Red box outlines scope of part (b). **b)** Close-up of samples 27950 – 28600. **c)** Plot of magnetic field versus pitch from (b). Red line is the best-fit polynomial. **d)** Magnetic field profile from (a) following pitch correction shown in (c).



Figure S2.

Panels showing magnetization inferred from the sea-surface magnetic field (bottom left), annihilator (top left) and magnetization solution with  $\pm 1$  or  $\pm 2$  times the annihilator.