

## **Seafloor Image Interpretation in Central Mid-Atlantic Ridge**

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Study area locates in the central part of Mid-Atlantic Ridge between 13.2~13.9°N, nearby the boundary between North and South American Plate. Bathymetry depth ranges from 1816 to 4948 m deep, an area around 100 by 100 km square.

With the assistance from 3D viewing software and exaggerated elevation, faults (mostly normal faults) could be identified and then traced. Except the detachment faults around megamullions, N-S trend normal faults dominate the study area. Megamullions, also known as oceanic core complex, are also identified by the turtle-back like shape. Pillow lava basalt and sheeted dike could be interpreted by its specific texture. The bright, high reflectance represents the occurrence of hard rock, e.g. gabbro and basalt, while the low reflectance represents the area covered by soft, new deposit. Several possible slumping sites are found but not so certain. Deepest basins occur both near the ridge valley and nearby megamullions. Profiles for the E-W direction show the slope in study area varies from 10 to 30 degree, high angle slopes always indicate the breakaway ridge. Fault ramps also found between parallel normal faults.