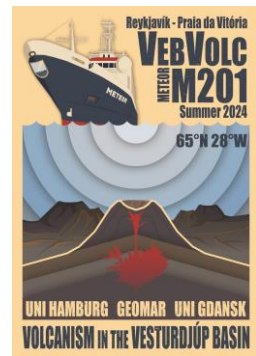


FS METEOR

Expedition M201 VebVolc

09.06. – 18.07.2024 | Reykjavik – Praia da Vitoria



6. Weekly Report (08. - 14. July 2024)



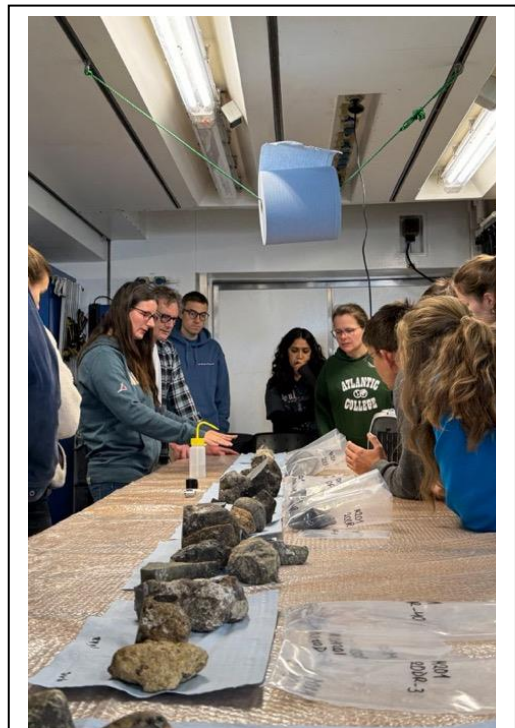
The geophysics team after days of profiling.

We began the sixth week of M201 with a seismic profile that covered the entire Vesturdjúp Basin toward the Reykjanes Ridge. This profile was north of the long Reykjanes-Vesturdjúp line that we measured at the beginning of the expedition and complements the depiction of the crustal structures and geological relationships based on the experiences gained in the past few weeks. Several shorter lines meandering northwards over the Reykjanes Ridge elucidated the

transition from deep effusive volcanism to shallow explosive volcanism. The geophysics team's profiling ended on the morning of Wednesday, July 10, when all equipment was brought back on board, and the digital streamer was flushed and demobilized.

On the Reykjanes Ridge, we had the rest of the day to conduct OFOS dives and collect volcanic samples with the rock dredge. The OFOS dives were planned to visually observe the products of effusive and explosive volcanism and find evidence of hydrothermal vents in an area already known to show signs of hydrothermal activity. When many white shrimps, typical for hydrothermal vents, appeared on the video stream, we knew we were very close to active, hot vents. Although we did not observe the vents themselves, our data provide valuable information about the most likely location of these vents, which could be crucial for their identification in a future expedition.

Since the water depths were barely deeper than 400 m, we could also perform two short dredge hauls and, for the first time during M201, collect dropstone-free volcanic samples. Late in the evening, we set course for Reykjavik. By early morning, we were anchored off the harbor entrance, and two expedition members were taken ashore by the pilot boat for medical treatment. One person remained ashore for precautionary observation, which required a change in the chief scientist position. One patient returned on board shortly after 5 p.m. after



Due to the wide variety of collected rock types, we were able to provide the very interested colleagues on board the Meteor with a comprehensive introduction to petrology. © N. Augustin

successful treatment. Shortly afterward, we set off and began our transit south. Strong southerly winds and accompanying swells slowed our journey on Friday and Saturday. The news that the colleague left in Iceland was discharged healthy was received with relief.

The transit is used for various activities. The laboratories are being tidied up, samples are being sorted, labeled, and packed, and data is being processed and secured. During evening meetings, the working groups present their methods and observations, and the findings are discussed.

All participants are well and send their greetings home.

Christian Hübscher
Chief Scientist