

HAWAII UNDERSEA RESEARCH LABORATORY

QUICK LOOK REPORT MISSION NO. P5- 547

MISSION STATUS

Location: Loihi Seamount – South Rift

Mission Date: Dec 5, 2003

Maximum Depth: 1721

Project Title: Microbial Glass Alteration

Principal Investigator: Dr. Hubert Staudigel

Address: UCSD/SIO M/S 0225
La Jolla, Ca 92093

Phone: 858.534.8764

Observer 1: David Emerson

Observer 2: Katrina Edwards

Address: George Mason University
Oceanographic

Address: Woods Hole
Institution

Scientific Data Acquired : Prepare an abstract outlining your objectives, techniques, findings, etc.

The overall goal of our study is to explore how microbial activity mediates the dissolution and alteration of volcanic glass. We hope to understand the feedbacks between microbial activity and water-rock chemical exchange and the relevance of these processes to the origin of life, global chemical cycles, and the ocean floor ecology. To this end we study surfaces of natural rocks and we use exposure of known materials for studying the alteration process over the period of exposure.

Dive 547 was devoted to sample some microbial mats and to visit our exposure experiments at Marker 17, for an exchange of experiments and for collecting additional natural samples of waters, microbial mats and rocks.

All goals of the mission were accomplished,

We visited and sampled two main sites, a new site with microbial mats on the Western side of the side of the South rift at about 1700m water depth, and our previous exposure experiment site at Marker 17.

MISSION EVALUATION:

Limitations, failures, or operational problems noted:

none

Recommendations for corrective action or improvement:

N/a

In your opinion, did the mission essentially achieve its purpose? Compare actual work accomplished with the work that was expected to be accomplished.

yes

List specimens or samples collected on the mission.

DATA RELEASE

Data may be retained by the project leader for up to 2 years after the mission date with the following exception. NOAA may request to use photos for publication or publicity purposes at any time.

Fill in the appropriate statement below and sign this form.

I hereby release the data archived by HURL for public consumption following mission

_____ (project title)

held on December 4, 2003 (date) in the following way:

- a. CTD data by n/a (date)
- b. voice transcripts, video, and still camera film by December 2005 (date)
- c. other _____ (date)
- d. I will give my written consent to individuals wishing to use these data prior to the above dates depending on the nature of the request(s).

_____ Principal Investigator