HAWAII UNDERSEA RESEARCH LABORATORY

QUICK LOOK REPORT MISSION NO. P4-077

MISSION STATUS

Location: Off Kona, Marker 1

Mission Date: Saturday, November 16, 2002

Maximum Depth: 1105 m

Project Title: Microbially Mediated Glass Alteration

Principal Investigator: Dr. Hubert Staudigel

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

Phone: 858.534.8415

Observer 1: Hubert Staudigel **Observer 2:** Brad Bailey

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

Address: same

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

Our day started at South Point off the big island where we first wanted to try and do a pick up dive of previously deployed exposure samples on Loihi. Unfortunately, the weather was uncooperative and we turned around to head back up the west side of HI to our dive site of the previous two days off Kona. Our new goal was to explore the pillow basalt flow reported to be of the same age as the previous two dives' flows but at 1000m depth.

We started our dive at 11:45 a.m. and touched down on bottom at 951m. We went to 1000m and contoured south to find the feature. We crossed what appeared to be a channel in the sand that was approx. 40m across and 6m deep. We sampled a rock from the upper layer of the channel wall. We continued contouring south until 14:00. We took our position (Lat. 19°28.026, Long. 155°57.817) and headed to depth 1150m and recontoured to the north fearing that we had missed the feature. We found the pillows beginning at 1104m. At 1085m we found the base of a pillow wall and followed the slope to the summit at 1031m. At 15:04, we established Marker #1 and deployed several charges at the summit: WHOI #9 and SIO #16, 17, 18, 23, 24, 26, 45, 46. Four rock samples were taken from the pillows along with scoop #10. We continued to explore the pillow feature and came across two more peaks. This was a large feature of which we were unable to determine the extent before we ran out of time. We left bottom at 17:23 at a depth of 984m (19°28.232 155°58.052).

MISSION EVALUATION:

Limitations, failures, or operational problems noted:
None.

Recommendations for corrective action or improvement:

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

Yes, this mission was successful once we actually were able to find the feature. We were able to establish a new sample site and deploy/collect our own samples. However, we were unable to determine how far the feature extended to the south before we had to come up.

List specimens or samples collected on the mission.

Deployments:
Marker 1: SIO # 16, 17, 18, 23, 24, 26, 45, 46
WHOI # 9

Sample pickups:
Slurp Gun: none
Whole rock samples: 4 at Marker 1, one in sand channel
SIO scoop samples: scoop #10 at Marker 1
Niskin bottle: Marker 1

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 November 16, 2002 (date) in the following way:

a. CTD data by_____(date)

b. voice transcripts, video, and still camera film by November 2004 (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