

HAWAII UNDERSEA RESEARCH LABORATORY

QUICK LOOK REPORT MISSION NO. P5-404

MISSION STATUS

Location: Loihi Seamount summit

Mission Date: Oct 20, 1998

Maximum Depth: 1216m

Project Title: Submarine Hyaloclastites

Principal Investigator: Batiza / Clague

Address: MBARI, P.O. Box 628, Moss Landing, CA 95039

Phone: 831-775-1781

Observer 1: David Clague

Observer 2:

Address: Same as above

Address:

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

This project's main objectives are to evaluate the role of explosive volcanism at water depths as great as 2000 m in producing pyroclastic deposits. Work in 1987 established that low-energy steam explosions occur as deep as 1400 m and produce lava bubble-wall fragments. Our work this year has documented the occurrence of hawaiian-style lava fountains on Loihi's summit and ~~even~~ more energetic phreatomagmatic explosive activity that produced bedded ash deposits of magmatic and lithic origins. To accomplish these goals we surveyed and found thick deposits (to 11 m thick) along fault scarps on Loihi's summit and systematically sampled these deposits using cores and sediment scoops.

MISSION EVALUATION:

Limitations, failures, or operational problems noted:

Dive accomplished all objectives. All equipment functioned properly with exception of several sediment scoops - which were difficult to trigger

Recommendations for corrective action or improvement:

have more sediment scoops available w/ spares.

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

Mission exceeded any expectations as we found and sampled thick ash deposits at three sites and visually surveyed 2 additional sections of layered ash (hyaloclastite).

List specimens or samples collected on the mission.

- 8 sediment scoops
- 2 push cores
- 1 box core
- 5 rock samples

Dive 404

## 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

Submarine hydroclusts on Loihi (project title)

held on 10/20/98 (date) in the following way:

- a. CTD data by NA (date)
- b. voice transcripts, video, and still camera film by 10/20/99 (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).

David Cloque Principal Investigator