

HAWAII UNDERSEA RESEARCH LABORATORY  
QUICK LOOK REPORT MISSION NO.P5-145

## MISSION STATUS

Location: Loihi, North tip  
Mission Date: 4 April 1990  
Maximum Depth: 6363 ft.  
Project Title: Petrology of Loihi Lavas  
Project Leader: Michael Garcia  
Address: Geology-Geophysics Department  
University of Hawaii  
Honolulu, Hawaii 96822  
Phone: 948-6641  
Observers: John Mahoney  
Address: Same as above

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

The purpose of this dive was to explore and sample the contact of Loihi with Kilauea and to collect along the distal end of the North rift of Loihi. After some initial frustration trying to find the N. rift, we collected 8 samples from 8 distinct pillow cones. Most have some glass, some excellent (up to 1 cm thick); a few had little or no glass.

To our surprise the slopes of Kilauea are covered with coarse black sand. The age of the glass sand is unknown but probably is less than 10 years because it has dead organisms on it. Locally the black sand was scoured with small dunes trending at right angle to the dunes in the black sand. The sand was gray to brown. Origin of this feature? Bottom under black sand is white clay.

## MISSION EVALUATION:

## Limitations, failures, or operational problems noted:

Problems - Locating ourselves on the bottom. Ship had us located correctly but we were unable to use the map to locate ourselves due to local relief (cones). It would be nice to have a claw with greater strength and a bigger opening to collect larger samples. The Panasonic camera wasn't working. Everything else worked well.

## Recommendations for corrective action or improvement:

None needed.

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

Yes and no. We collected some good rocks from the distal end of Loihi's north rift and saw the contact area with Kilauea. However, we had hoped we could traverse more of the rift zone. We only got from 1950-1805 m. Basket worked well for samples.

List specimens or samples collected on the mission.

8 pillow lava fragments were collected

## 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 Petrology of Loihi Lavas  
(project title) held on 4 April 1990 (date) in the following way:

- a. CTD data by none collected (date)
- b. voice transcripts, video, and still camera film  
by April 1992 (date)
- c. other None (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).

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Project Leader