

HAWAII UNDERSEA RESEARCH LABORATORY
QUICK LOOK REPORT MISSION NO.P5-158

MISSION STATUS

Location: Loihi
Mission Date: October 3, 1990
Maximum Depth: 2000 m.
Project Title: Petrology of Loihi
Project Leader: Dr. Mike Garcia
Address: Geology & Geophysics Department
University of Hawaii
Honolulu, HI 96822
Phone: 956-6641
Observers: Wendy Zayac, Mike Garcia
Address: Same as above

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

The objective of this dive was to sample the dissected eastern flank of Loihi's summit from 2000 to 1150 m. All samples were to be collected in place from pillows with glassy surfaces. Findings: The E. flank of Loihi is eroding by mass wastage exposing the interior of the volcano. It was a surprise to find numerous dikes on this side. They trend mostly N-S (330 near from 1930 - 1500 m.). Higher up, 1350 m., they are trending ~ 150°. 10 samples were collected. 8 have glassy margins. The other two are massive lavas. Talus mantles most of the hillside especially between dikes but pillows are exposed randomly. The surface of the talus is covered with fine debris (clay-size) that is matted.

MISSION EVALUATION:

Limitations, failures, or operational problems noted:

None of the cameras were working. Temperature probe not available (but wasn't needed). Time was lost due to launching not far enough east of the target site. the strong tidal current pushed us too far west.

Recommendations for corrective action or improvement:

Obvious and apparently in progress. We can't launch in depth exceeding 2,000 m.

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

Basic objectives were accomplished thanks to the skillful eye-hand coordination of the pilot (Dave) in picking up samples. We would have liked more time at the summit to survey uncharted areas (but that was a secondary objective if we had time).

List specimens or samples collected on the mission.

10 lava samples from 1,925 to 1,220 m. water depth.

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
(project title) held on October 4, 1990 (date) in the following way:

- a. CTD data by Anytime (date)
- b. voice transcripts, (no camera data taken)
by Anytime (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).

Project Leader