

HAWAII UNDERSEA RESEARCH LABORATORY
QUICK LOOK REPORT MISSION NO.P5-155

MISSION STATUS

Location: N. Rift Zone - Loihi Volcano
Mission Date: 9-27-90
Maximum Depth: 1475 m.
Project Title: Spatial Distribution Pattern of Rock Types on
Loihi Seamount
Project Leader: Dr. Mike Garcia
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Observers: Beth Jorgenson & John Mahoney
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Scientific Data Acquired : Prepare an abstract outlining your objectives, techniques, findings, etc.

Loihi Seamount exhibits a spatial distribution pattern of rock types from samples collected to date. Tholeiites are concentrated at the summit region. Alkalics are virtually the exclusive rock type collected along lower flanks and rift zones of the volcano. We are presently collecting rocks along the N. Rift Zone where few samples have been collected. These are weakly to strongly alkalic (hawaiite) pillows which have an older appearance (light to heavy sediment coats and marine growth on exposed surfaces) than S. Rift rocks previously collected. The suite of samples will be analyzed for major element, trace element and isotope chemistry using microprobe, XRF and mass spectrometry methods on the glasses.

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.

The dive covered the distance proposed, and sample coverage was good. the mission was an overall success.

List specimens or samples collected on the mission.

- P5-155 1. Glassy rind from shelly pillow
- 2. Shelly fragment
- 3. Platey fragment near skylight
- 4. Talus chunk in truncated pillow region
- 5. Knob from a moderate size pillow
- 6. Tubular pillow fragment
- 7. Flat slab with "hairy" growth
- 8. Fragment - highly oxidized - broken off a huge pillow

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 Spatial Distribution Pattern of Rock Types on Loihi (project title) held on 9-27-90 (date) in the following way:

- a. CTD data by 10/90 (date)
- b. voice transcripts, video, and still camera film by 9/91 (date)
- c. other 9/92 (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