

HAWAII UNDERSEA RESEARCH LABORATORY
QUICK LOOK REPORT MISSION NO. P5-029

MISSION STATUS

Location: Loihi Seamount Summit
Mission Date: 9/3/87
Maximum Depth: 1300 m.
Project Title: "Geology, Geochemistry & Microbiology of
 Hydrothermal Systems, Loihi ..."
Project Leader: Malahoff, McMurtry, Karl
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Observer: G. McMurtry, P. Sedwick
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Scientific Data Acquired : Prepare an abstract outlining your objectives, techniques, findings, etc.

See report for mission no. P5-028. Our techniques included water sampling using high-temp. titanium samplers, Niskin bottle samplers, and Niskin baggie or butterfly samplers. The latter was used primarily for collection of bacterial mats. Vent temperatures were measured using probes on the sample basket. Rock samples and hydrothermal coatings were also collected.

MISSION EVALUATION:

Limitations, failures, or operational problems noted:

The only major limitations of this dive were the camera system's occasional failure; uncalibrated forward temp. probe; malfunctioning rear temp. probe; and problems with the manipulator control.

Recommendations for corrective action or improvement:

1. Fix camera system short.
2. Fix & calibrate temp. probes; design temp. probe to be picked up by manipulator.
3. Fix or replace manipulator.

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

Yes. Our objectives were to locate and sample "Pele's Vents" plus another, deeper hydrothermal field, christened "Pisces Vents", first found during M. Garcia's Alvin dives in Feb. Both fields were located, photographed and sampled. Bacterial colonies and nontronite chimney fields were also observed between the two hydrothermal vent fields.

List specimens or samples collected on the mission.

1. Two Ti water samples
 - a. Pisces Vents (first sample of this field)
 - b. Pele's Vents
2. Niskin water sample at Pele's Vents.
3. Niskin baggie samples (2). Both lost due to bag failure on ascent.
4. Rock sample at Pele's Vents.

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 P5-029 Loihi Seamount Summit
(project title) held on 9/3/87 (date) in the following way:

- a. CTD data by 9/3/89 (date)
- b. voice transcripts, video, and still camera film by
by 9/3/89 (date).ate)
- c. other 9/3/89 (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