

HAWAII UNDERSEA RESEARCH LABORATORY  
QUICK LOOK REPORT MISSION NO. P5-312

MISSION STATUS

**Location:** Loihi's Rift Zone

**Mission Date:** October 4, 1996

**Maximum Depth:** 1468 m.

**Project Title:**

**Principal Investigator:** F. Sansone/G. McMurtry

**Address:** SOEST  
University of Hawaii  
Honolulu, HI 96822

**Phone:** (808)956-8370/(808)956-2364

**Observer 1:** David Clague

**Observer 2:** 2nd pilot

**Address:** MBARI  
Moss Landing  
CA 95039-0628

**Address:**

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

The dive objectives was to determine the source of a hydrothermal plume at ~1350 m depth and to evaluate if the source vents were related to the recent seismic/summit collapse crisis on Loihi Seamount. We found a new vent field at 1324 m. depth with water as hot as 11.2°C flowing through recently formed open fissures. The fissures were formed as part of the recent event and presumably formed in response to extension related to intrusion of a dike along the upper part of the south rift zone.

**MISSION EVALUATION:**

**Limitations, failures, or operational problems noted:**

Sediment scoop triggered in basket, numbered marker not properly saved in basket, hose to vacuum drifted in front of pilot's view port, obscuring view.

Dive objectives were too ambitious, so little time was available to explore.

**Recommendations for corrective action or improvement:**

Check basket more carefully.

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

Mission was highly successful with discovery of new vent field, collection of water, measurement of temperature of 11.2°C. Mapping was limited by rough terrain and desire to cover too great a distance in single dive. Shallow vents at Kapo vent could not be found due to poor information on their exact location.

**List specimens or samples collected on the mission.**

- 5 lava samples
- 1 bacterial mat sample
- 3 sediment suction samples (one same as bacterial mat sample and another the same as polychaete worms)
- 1 suction sample of 2 polychaete worms
- 3 Niskin bottles of water
- 4 mini-Niskin bottles of water

## 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

Loihi (project title)

held on 10-4-96 (date) in the following way:

- a. CTD data by 10-4-98 (date)
- b. voice transcripts, video, and still camera film by 10-4-98 (date)
- c. other 10-4-98 (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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Principal Investigator