

**HAWAI‘I UNDERSEA RESEARCH LABORATORY**  
**QUICK LOOK REPORT**  
**DIVE: P5-581**

**MISSION STATUS**

**Location:** West Oahu shelf, Makaha region

**Latitude:** 21° 28.487

**Longitude:** 158° 14.475

**Mission Date:** 9/23/04

**Duration:** 8hrs, 2mins

**Maximum Depth:** 186m

**Project Title:** The Last Glacial Shoreline at -130m

**Principal Investigator:** Chip Fletcher

**Address:**

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**Phone:** 808-956-2582

**Observer 1:** Ken Rubin

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**Observer 2:**

**Address:**

**Pilot 1:** Terry Kirby

**Pilot 2:**

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

**Objectives:**

The objective of this dive is to find and date shoreline features associated with the last glacial maximum, ca. 20,000 yrs BP in order to constrain the age and depth of the ocean level at the last ice age. Anticipated materials for sampling include corals and other carbonate materials that serve as sea-level position indicators known to grow within definable limits of their contemporaneous sea-level position. These might include shallow coral species, beach rock, coralline algae, mollusks, etc. All of these are datable using various techniques. Bathymetric maps of the region indicate the presence of shelves, walls and other large-scale features that are likely to host potential sample targets.

**Observations, findings, etc:**

We observed a flat bench at ~90m depth that was covered with massive carbonate deposits rather than loose sediment. The seafloor had a typical look of small eroded pits, minor overhangs (~10cm to 1m), and occasional larger outcrops ~2m to 5m in relief. No standing coral was observed. We sampled “scabby” encrusting corals and coralline algae at ~90m that was later dated ca. 14,000 yrs BP.

**Observed Species list:**

No species identified.

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

None

**Recommendations for corrective action or improvement:**

None

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

The mission accomplished its purpose although the target was shallower than expected and hence did not completely fulfill the originally scientific goal but did achieve other objective.

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

Massive carbonate, encrusting coral, some encrusting coralline algae.