

HAWAI‘I UNDERSEA RESEARCH LABORATORY
QUICK LOOK REPORT
DIVE: 673

MISSION STATUS

Location: Penguin Banks, Second Finger, Molokai

Latitude: 21.02795°

Longitude: 157.3589°

Mission Date: 9/08/06

Duration: 4hrs, 2mins

Maximum Depth: 151m

Project Title: The Last Glacial Shoreline at -130m

Principal Investigator: Chip Fletcher

Address:

University of Hawaii, SOEST, Department of Geology and Geophysics, 1680 East West Rd., Honolulu, HI 96822

Phone: 808-956-2582

Observer 1: Ken Rubin

Address: University of Hawaii, SOEST,
Department of Geology and Geophysics,
1680 East West Rd., Honolulu, HI 96822

Observer 2:

Address:

Pilot 1: Max Creamer

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 descended onto a rolling carbonate sand bank at -131m depth. Bedforms were 1-2 m in amplitude and ~25m in wavelength. Armoring by rhodolith beds of pea gravel size was widespread. We moved under strong currents toward the north and NW but unable to make headway we turned south and followed currents for ~1-2 hours. We encountered no outcrops or features to sample. The current turned and we headed back to the original target N to NW of our position and encountered stiff headwinds near our target. Unable to reach the target and missing by only ~20-50 m we ended the dive and exited.

Observed Species list:

No species identified.

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

Stiff currents, poor original bathymetry. Original target seems to have been a mapped anomaly. No samples.

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 reach the target depth of a known event – the last ice age lowstand. But no samples were obtained.

List specimens or samples collected on the mission.

Soft entity.