

**HAWAI'I UNDERSEA RESEARCH LABORATORY
QUICK LOOK REPORT
DIVE: P5-614**

MISSION STATUS

Location: Monowai Volcano, Kermadec Arc

Begin (Launch) Latitude: 25°48.15 S **Longitude:** 177° 10.00 W
(Bottom) Latitude: 25°48.296 S **Longitude:** 177° 09.996 W

Mission Date: April 09, 2005 **Duration:** 4 hours 59 minutes (Bottom Time)

Maximum Depth (m): ~1166 meters

Project Title: New Zealand American Submarine Ring of Fire Leg I

Principal Investigator: Bob Embley

Address: NOAA/PMEL, 2115 SE O.S.U. Dr., Newport, OR 97365

Phone: (541) 867-0275

Observer 1: David A. Butterfield **Observer 2:**
Address: PMEL/JISAO, Seattle, WA, USA **Address:**

Pilot 1: Terry Kerby **Pilot 2:**

Scientific Data Acquired:

Objectives:

- (1) Sample fluids at HURL marker 8.
- (2) Sample fluids at ridge crest
- (3) Continue investigate along contour of HURL marker 8.

Observations, findings, etc: (Also see Appended Dive Log)

The dive began SE of HURL marker 8. Marker 8, on the south caldera wall, was located at 10:59 (1165m). A 44° C vent fluid sample was taken at marker 8. The search for additional vents moved upslope, and further hydrothermal fluid sampling was conducted at 12:53 (1157m), 14:01 (1143m) and 14:33 (1140m). The dive ended further upslope of marker 8 after another venting area was discovered at 15:41 (1079m). The sub left bottom at 15:56 (1028m).

Species List: NA

MISSION EVALUATION:

A. Limitations, failures, or operational problems noted: NA

B. Recommendations for corrective action or improvement: NA

C. In your opinion, did the mission essentially achieve its purpose? Yes

D. Compare actual work accomplished with the work that was expected to be accomplished. Same

E. List specimens or samples collected on the mission. (See Sample List Below):

Sample Number	Time (L)	Latitude Min/decM 25degS	Longitude Min/decM 177degW	Depth(m)	Comments
PV-614-1-HFS8	11:25	48.237	10.071	1166.2	unfiltered bag water sample near marker 8 (Monowai south crater wall), 44degC, 602ml
PV-614-2-HFS11	11:34	48.237	10.071	1166.2	filtered bag water sample, gff,Tavg 43C, 620ml
PV-614-3-HFS6	11:42	48.237	10.071	1166.2	unfiltered piston water sample, Tavg 35C,650ml
PV-614-4-GT-yellow	11:46	48.237	10.071	1166.2	gas-tight water sample, 28degC
PV-614-5-HFS3	11:53	48.237	10.071	1166.2	sterivex dna filter, Tavg 45degC, vol 1451ml
PV-614-6-GT-blue	12:05	48.237	10.071	1166.2	gas-tight water sample, 46degC
PV-614-7-HFS4	12:09	48.239	10.071	1166.2	sterivex dna filter, Tavg 46degC, vol 1706ml
PV-614-8-HFS14	13:09	48.242	10.083	1157	filtered bag water sample, .22micron,Tavg 25.6, vol 314ml
PV-614-9-HFS17	13:17	48.242	10.083	1157	filtered bag water sample, gff, Tavg26, Note: mistake added 150ml from site at 1140 m, so sample mixed
PV-614-10-HFS20	13:22	48.242	10.083	1157	unfiltered piston water sample, Tavg 32C, 700ml
PV-614-11-HFS1	13:47	48.246	10.098	1143	piston water sample w .22 filter, Tavg6C, 700ml
PV-614-12-HFS5	13:55	48.246	10.098	1143	unfiltered piston water sample, Tavg 8.9, 703ml
PV-614-13-HFS7	14:03	48.246	10.098	1143	sterivex dna filter, Tavg8.6C, 1351ml
PV-614-14-HFS19	14:46	48.251	10.087	1140.5	unfiltered bag water sample, hole (Monowai south crater wall), Tavg52C, 633ml
PV-614-15-GT-white	14:49	48.251	10.087	1140.5	white gas-tight, T 52C
PV-614-16-GT-green	14:50	48.251	10.087	1140.5	green gas-tight, T52C
PV-614-17-HFS18	14:51	48.251	10.087	1140.5	filtered bag w gff, Tavg 51.5, vol 603ml
PV-614-18-HFS17	14:56	48.251	10.087	1140.5	error: added 150ml to 700ml already taken
PV-614-19-HFS16	14:58	48.251	10.087	1140.5	filtered bag water sample w .22micron, Tavg 51.8C, vol 640ml
PV-614-20-HFS15	15:04	48.251	10.087	1140.5	sterivex dna, Tavg 53.9C, vol 1829ml
PV-614-21-HFS22	15:45	48.288	10.134	1079	piston water sample, Tavg 25.4C, 322ml

Notes: GMT: -11; e.g., 10:00 a.m. Local = 2100 GMT

This QL Rpt was prepared by Andrew Opatkiewicz using the Pisces 5 operation log, Butterfield sample log and dive plan.