

Dive No.	K-205		Date	2001/08/29	
PI	Name		Affiliation		
Japanese	ミッシェル クームス		アメリカ合衆国地質調査所		
English	Michelle Coombs		U.S. Geological Survey Menlo Park, CA		
Specialty	petrology and volcanology				
Purpose	To study the lithology and structure of the outermost, deepest Waianae landslide block				
Area	Waianae landslide, 54 km SW of Oahu				
Site	Distal landslide block				
Landing	Latitude	Longitude	Time	Depth	
Leaving	21° 03.31' N	158° 37.98' W	9:44	4655 m	
	21° 03.78' N	158° 37.36' W	14:39	4316 m	
Dive distance	1800 m		Deepest point	4655 m	
Dive summary	<p>The dive track was planned to cover a steep slope near the base of a distal Waianae landslide block. Telecomm cables to both the NW and SE severely limited site selection, but a spine with 21 degree slope and ~400m elevation gain was located in the cable-free zone. The goal of the dive was to characterize the lithology and structure of the landslide block for the following purposes: to determine the early evolution of Waianae volcano, and to determine emplacement mechanisms and block motion related to the Waianae landslide.</p> <p>For the first 110m of vertical rise, the slope was covered with increasing amounts of talus. At elevation 4543 m, the first in-place outcrop was observed and sampled. Outcrop of fractured, jointed volcanic breccias alternated with muddy talus slopes until an elevation of ~4360 m. Above this point, the ridge was covered in slope-parallel, moderately indurated sediments with MnO coating. At depth 4291, heavily MnO-coated pillow lavas thwarted attempts at sampling. At the top of ridge, Kaiko descended to the SE to 4330 m and then again rose to the NE. Two final outcrops of Mn-coated mudstone were sampled at ~4320 m depth.</p> <p>Twenty-one rock samples were collected: 8 loose blocks, 10 in-place blocks, and 3 likely in-place blocks. All are clastic, ranging from breccias to mudstones.</p>				
Payload	Nine sample baskets, two push cores				
Visual Records	Broadcast quality camera; Center, right and left cameras, and still camera				
Sample	Rocks: 21		Cores: 2		
Video Highlights	(1) 10:32-10:36, (2) 10:48-10:55, (3) 11:04-11:07, (4) 12:03-12:07				
Key words	Waianae landslide, Waianae volcano, Volcanic breccia, Hyaloclastite				