

Dive No.	K 209		Date	2001/09/05	
PI	Name		Affiliation		
Japanese	ミッシェル クームス		アメリカ地質調査所		
English	Michelle Coombs		U.S. Geological Survey Menlo Park, CA		
Specialty	petrology and volcanology				
Purpose	To study the lithology and structure of Papa'u seamount				
Area	Papa'u Seamount, along west edge of Hilina slump, 15 km south of the island of Hawaii				
Site	West side of Papa'u				
Landing	Latitude	Longitude	Time	Depth (m)	
Leaving	19° 07.45' N	155° 16.58' W	8:58	1756	
	19° 07.67' N	155° 16.45' W	14:57	742	
Dive distance	4200 m		Deepest point	1756 m	
Dive summary	<p>Dive K-209 ascended the west side of Papa'u seamount, south of Kilauea. Much of the dive traveled over uniform, mud- and talus-covered slopes. Of note are large boulders, many ~1m in diameter, that litter the slope amongst much more prevalent smaller debris. Rounded, often reddish clasts are more common in the upper 300 m. We sighted two in-place outcrops of weakly indurated breccia at 1404 and 1230 m. The weak induration seen here may explain the absence of microtopography on the slope; the material is too weak to form large ridges or cliffs.</p> <p>Three discontinuous, light-colored, fine-grained bands outcrop at 1286, 1035 m and 962 m. Two very uniform, sediment-free talus slopes were crossed at 1172 and 1104 m. These are almost identical in nature, consisting of angular, weathered blocks 20-40 cm in diameter. During the upper 300 m, the dive track crossed numerous evenly spaced benches and gentle rises, at roughly 20 m spacing. They trend NW-SE, parallel to the overall seamount structure. The summit of the seamount was reached at 14:43 and 742 m.</p> <p>Twenty five rock samples were collected during the course of the dive, as well as four piston cores. All of the rocks are basalt lavas. They vary, in no systematic fashion, in vesicularity and mineralogy. The lithologic variety and occurrence of the clasts in weakly indurated breccia suggests that Papa'u consists of landslide debris, perhaps from subaerially-erupted Kilauea.</p>				
Payload	Nine sample boxes, four push cores				
Visual Records					
Sample	Rocks: 25 Cores: 4				
Video Highlights	(1) 10:59-11:05 (2) 11:27-11:33 (3) 12:41-12:50				
Key words	Papa'u seamount, Hilina landslide, Kilauea				