DATE: 5 August 1984 SAMPLE:
CRUISE ID: SO 33 9DK Box dredge
LOC: II
AREA: B

	time (GMT)	LAT (N)	LON (W)	water depth (m)	wire
ON BOTTOM =	0657	9°41.753	162°10.8600	1927	2300
OFF BOTTOM =	0834	~9°44'	162°10'		1870

time on bottom = 1 hr. 37 min

RECOVERY WEIGHT = Total 350 kg crust 35 kg
basalt + sed = 315 kg

CRUST THICKNESS = 2 mm – 2.5 cm
Avg. = 1 cm
Many nodules (4-8 cm) w/ thin crust (up to 1 cm
SUBSTRATE = basalt, hyaloclastite, basaltic brecc
↳ fresh to mod. altered

COMMENTS: many shark's teeth, whale ear bone
shark's teeth within the crust

* 1 microbio sample
* 2 bio sample
* smear slides made

9DK

SO33 9DK1

SO33 9DK2

Rock Type:	Basalt (AOB?) massive (pillowed?)	Basalt (AOB?) Breccia	Basalt, Pyroclastite (AOB?)
Color:	light olive gray (5Y 5/2) to pale brown (5YR 7/2)	Moderate Brown 5YR 4/4	
Texture:	Subaphyric hyalopilitic subtrachytic	Clastic (some holohyaline pieces)	
Cement:		grayish-yellow phosphorite 5Y 9/4 phosphorized calcite(?)	
Phenocrysts:	Plagioclase ±3%, ±1mm olivine ± 1%, ±1mm	(fewer)	absent
Groundmass:	glass plagioclase? olivine? opaques? clinopyroxene(?) } not determined	-do-	
Vesicles:	absent (deep) to ±50% near upper contact (subscoriaceous) size: ±3 mm filling: calcite?, chalcedony? amygdales 0 - ±25% shape: rounded to irregular	(smaller) -do-	(see next page)
Alteration:	Smectitization (nontronite?) oxidation (especially near upper contact)	(more intense) smectitization, oxidation, zeolitization?, phosphorization?!	
Remarks:	large cobble-size clasts, may be pillow lava fragments Coated with ±5 mm layer of cuspate warty MnO, spotty very pale orange (10YR 9/2) phosphorite aureolic?! oxidation surrounding fractures (hydrothermal fluids?) no glassy limbs observed at upper contact.	coarse sand (±1mm) to large pebble size pieces of highly oxidized hyaline basalt set in phosphorized calcite or calcareous sediment. Sorting very poor, fragments subangular to subrounded. found in some specimens overlying basalt smothers, overlain by Mn-Oxide (usual case) this surface is very irregular and rough — transmits this aspect to the overlying manganese deposit; probably not pyroclastic origin.	

Sometimes between MnO₂ & basalt.

Porosity

Permeability