

General Information			
Sample Name (IGSN)	EX1706-D11-3		
Describer	Kevin Konrad		
Sample Location	Ridge Seamount		
Lithology prefix	Three-phase		
General Lithology	alkali basalt		
Texture 1	Trachytic		
Texture 2	Heavily altered		
Whole Rock Original (%)	100	Check [Ph + Vs + Gm = 100%]	OK
Whole Rock Present (%)	60	Check [Or = Pr + Rf]	OK
Whole Rock Replaced (%)	40	Check [Or = Pr + Rf]	OK
Total Groundmass Original (%)	100	Check [Gp + Gl + Ms = 100%]	OK
Total Groundmass Present (%)	50	Check [Or = Pr + Rf]	OK
Total Groundmass Replaced (%)	50	Check [Or = Pr + Rf]	OK
Whole Rock Summary	A vesicular olivine and clinopyroxene basalt with completely infilled (carbonate?) vesicles. The olivine are recrystallized to iddingsite. Groundmass appears to be cryptocrystalline with some fine plagioclase microcrysts. Sample is encrusted in a 4-4.5 cm thick FeMn crust.		
Thin Section Summary	A coarse grained three phased basalt with olivine, clinopyroxene and plagioclase. The olivine grains are a mix of iddingsite and some scarcely preserved olivine crystal. The clinopyroxene grains have some talc alteration as well as iddingsite chadacrysts. Plagioclase is mostly microcrystic with a few larger grains. The groundmass consists of aligned plagioclase grains and a heavily altered mesostasis. Sample is vesicular with calcite infilling for most vesicles. Some small rings of palagonite (amygdules) are found within the groundmass.		



PHENOCRYSTS [Ph]	OL	PLAG	OPX	CPX	SPINEL	OTHER	VESICLES [Vs]	GRNDM [Gm]
Original (%) [Or]	10	5		8			30	
Present (%) [Pr]	1	4		6			5	
Replaced / Filled (%) [Rf]	9	1		2			25	
Check [Or = Pr + Rf]	OK	OK	OK	OK	OK	OK	OK	OK
Minimum Size (mm)	0.25	0.25		0.25			0.1	
Maximum Size (mm)	1	0.5		1.25			3.5	
Modal Size (mm)	0.5	0.35		0.5			2	
Shape	anhedral	subhedral		anhedral			subrounded	
Habit		elongated						
Zonation Type		twinning		sector				
Zonation Extent		minor		minor				
Exsolution Type								
Special Features				blueish extinction				
Comments	Mostly recrystallized to iddingsite. Few surviving cores.			Likely Ti-Augite			Mostly infilled with radial calcite. Some palagonite. Two vesicles are empty	



GROUNDMASS [Gp]	OL	PLAG	OPX	CPX	SPINEL	OTHER	GLASS [Gl]	MSTASIS [Ms]
Original (%) [Or]		50						50
Present (%) [Pr]		35						0
Replaced / Filled (%) [Rf]		15						50
Check [Or = Pr + Rf]	OK	OK	OK	OK	OK	OK	OK	OK
Minimum Size (mm)		0.05						
Maximum Size (mm)		0.25						
Modal Size (mm)		0.1						
Shape		laths						
Habit								
Comments		Trachytic						A mush of fine grained alteration products. Likely some magnetite as well.