

General Information			
Sample Name (IGSN)	EX1706-D6-2		
Describer	Kevin Konrad		
Sample Location	Keli Ridge		
Lithology prefix	Olivine/Orthopyroxene-Clinopyroxene		
General Lithology	Basalt		
Texture 1	Altered		
Texture 2			
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 three-phase alkali basalt with plagioclase(?), clinopyroxene and olivine (iddingsite rare) phenocrysts. Sample has a glassy rind present in a few slabs. Some fractures have phosphorite infill. Sample has a thin Fe-Mn crust		
Thin Section Summary	A clinopyroxene phyric basalt with ultramafic xenoliths (opx-cpx-olivine-spinel). No plagioclase are observed in thin section, despite potential grains observed in hand sample. Clinopyroxene phenocrysts are Ti-augite but show low order birefringence (section likely over polished). The xenolith displays some minor disequilibrium texture with the single olivine grain recrystallized to iddingsite. Some highly altered macrocrysts are observed, recrystallized to a serpentine like mineral, likely once OPX xenocrysts(?). Sample matrix is glassy with some microcrysts of clinopyroxene. Palagonite rimmed vesicles are common.		



PHENOCRYSTS [Ph]	OL	PLAG	OPX	CPX	SPINEL	OTHER	VESICLES [Vs]	GRNDM [Gm]	Cross Polarized
Original (%) [ Or ]	1		10	15	5	3	10		
Present (%) [ Pr ]	0		0	14	5	2	5		
Replaced / Filled (%) [ Rf ]	1		10	1	0	1	5		
Check [ Or = Pr + Rf ]	OK	OK	OK	OK	OK	OK	OK	OK	
Minimum Size (mm)	0.5		0.25	0.5	0.25		0.1		
Maximum Size (mm)	0.5		1.5	1.5	0.75		0.2		
Modal Size (mm)	0.5		1	1.2	0.5		0.15		
Shape	anhedral		anhedral	subhedral	subhedral		subrounded		
Habit									
Zonation Type									
Zonation Extent									
Exsolution Type				Minor exsolution					
Special Features				Bluish extinction					
Comments	Iddingsite.		100% recrystallized to a fine serpentine like grain. May be altered olivine grains not OPX	Some, maybe all are xenocrysts (disaggregated xenolith)	Likely xenocrysts	One CPX-OPX-OLV-SPN xenolith.	Palagonite rim		



GROUNDMASS [Gp]	OL	PLAG	OPX	CPX	SPINEL	OTHER	GLASS [Gl]	MSTASIS [Ms]
Original (%) [ Or ]		10		10			80	
Present (%) [ Pr ]		8		9			0	
Replaced / Filled (%) [ Rf ]		2		1			80	
Check [ Or = Pr + Rf ]	OK	OK	OK	OK	OK	OK	OK	OK
Minimum Size (mm)		0.1		0.05				
Maximum Size (mm)		0.2		0.2				
Modal Size (mm)		0.1		0.1				
Shape		subhedral		subhedral				
Habit		laths		laths				
Comments							Likely all altered, darkness and degree of Fe-oxide alteration varies.	