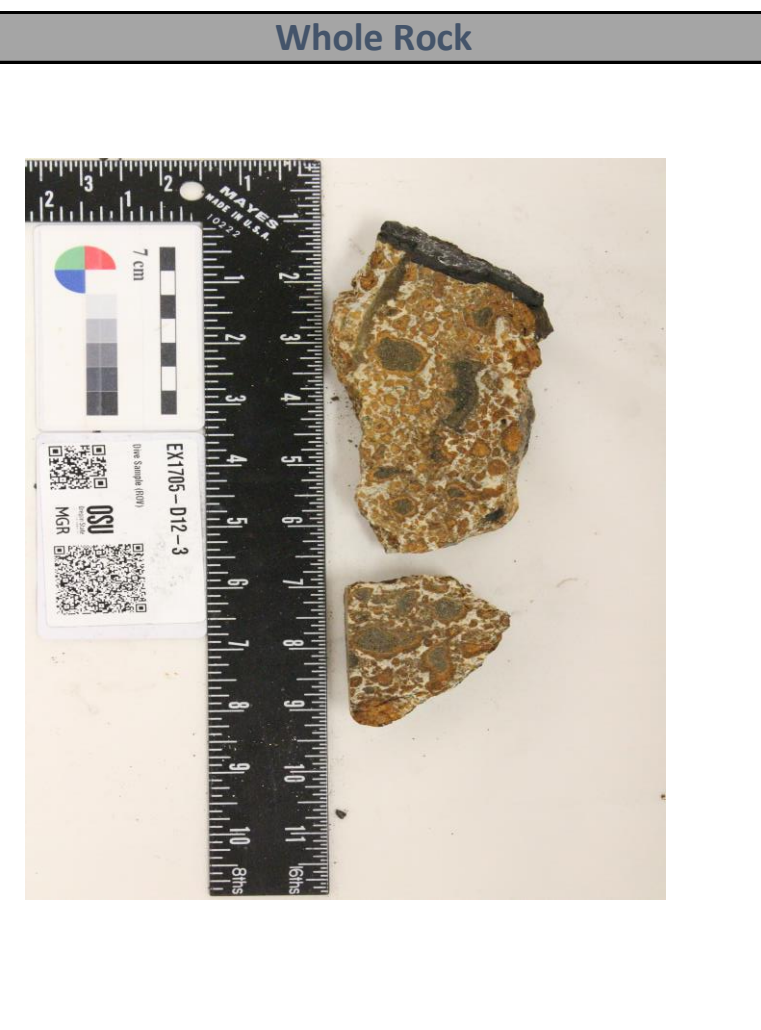


General Information			
Sample Name (IGSN)	EX1705-D12-3		
Describer	Kevin Konrad		
Sample Location	Kingman Deep		
Lithology prefix	Volcanic		
General Lithology	Breccia		
Texture 1	Altered		
Texture 2			
Whole Rock Original (%)	100	Check [ Ph + Vs + Gm = 100% ]	OK
Whole Rock Present (%)	50	Check [ Or = Pr + Rf ]	OK
Whole Rock Replaced (%)	50	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 volcanic breccia or hyaloclastite with a phosphorite cement. The formation of the carbonate cement, which later recrystallized to phosphorite, likely happened within a few million years as the many of the basaltic clasts still contain some preserved olivine. Most clasts appear to be ankaramites with thick Fe-oxide alteration halos. Sample contains a ~2 cm Mn rind.		
Thin Section Summary	The thin section covers some cement and much of a larger basalt clast. The clast is an clinopyroxene-olivine basalt (ankaramite) that is highly vesicular and glass rich. Most vesicles contain palagonite rims while a few contain zeolite infill. The glass is surprisingly fresh and possibly useable for geochemical analyses. Olivine has some iddingsite recrystallization but a few grains are surprisingly fresh. The outer rim consists of phosphorite with some separated shards of basalt. The cement consists of phosphorite with some minor preservation of fossil structures. Most small clasts are pervasively Fe-oxide altered, although some clinopyroxene phenocrysts survive. Below is the composition of the larger basalt clast:		



PHENOCRYSTS [Ph]	OL	PLAG	OPX	CPX	SPINEL	OTHER	VESICLES [Vs]	GRNDM [Gm]	Cross Polarized
Original (%) [ Or ]	15			5			45	35	
Present (%) [ Pr ]	10			4			40	18	
Replaced / Filled (%) [ Rf ]	5			1			5	18	
Check [ Or = Pr + Rf ]	OK	OK	OK	OK	OK	OK	OK	OK	
Minimum Size (mm)	0.25			0.25			0.1		
Maximum Size (mm)	0.75			0.45			1		
Modal Size (mm)	0.5			0.3			0.25		
Shape	anhedral			subhedral			rounded		
Habit									
Zonation Type									
Zonation Extent									
Exsolution Type									
Special Features									
Comments	Some iddingsite recrystallization						Palagonite rims common, some zeolite infill.		



GROUNDMASS [Gp]	OL	PLAG	OPX	CPX	SPINEL	OTHER	GLASS [Gl]	MSTASIS [Ms]
Original (%) [ Or ]	3			3			94	
Present (%) [ Pr ]	2			3			47	
Replaced / Filled (%) [ Rf ]	1			0			47	
Check [ Or = Pr + Rf ]	OK	OK	OK	OK	OK	OK	OK	OK
Minimum Size (mm)	0.05			0.05				
Maximum Size (mm)	0.1			0.1				
Modal Size (mm)	0.06			0.05				
Shape	anhedral			subhedral				
Habit								
Comments							Glass varies from fairly fresh regions to complete Fe-oxide altered regions.	