THIN SECTION:	324-U1347A-12R-1-W 2_5-TS69			Piece No:		Unit:4	OBSERVER:THIN SECTION:TS69
ROCK NAME:	sparsely phyric basalt						
WHERE SAMPLED:	Top of massive flow						
GRAINSIZE:	very fine grained						
TEXTURE:	sparsely phyric,intersertal						
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	3						
plagioclase	3			1.4x0.2	1.2x0.2	subhedral	
MICROPHENOCRYST							
clinopyroxene	2			0.8x0.4	0.6x0.4	subhedral	
olivine	0.1			0.4x0.2	0.3x0.2	subhedral	completely altered
VESICLES	7			1.4	0.3	high to moderate	
GROUNDMASS	94						
plagioclase	5			0.2x0.01	0.1x0.01		
opaque Minerals	0.1			0.01	0.01		
glass	94						
clinopyroxene	1			0.05x0.05	0.05x0.05		
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
brown clay	5					pyroxene	
opaques	5						
brown clays	100					pyroxene	
grayish clays	15					plagioclase	
grayish clay	5					plagioclase	
brown clays	95					glass	
STRUCTURE	Massive structure.						
COMMENTS							
SUMMARY DESCRIPTION	Intersertal Sparsely Plagioclase-Phyric Basalt; Crystallinity: 11%; Alteration Degree: 87%; Veins: None; Vesicle Filling: Calcite, white clay; Structure: No structure in groundmass.						

THIN SECTION:	324-U1347A-12R-1-W 57_59-TS70			Piece No:		Unit:4	OBSERVER:THIN SECTION:TS70
ROCK NAME:	sparsely phyric plagioclase basalt						
WHERE SAMPLED:	middle of massive flow						
GRAINSIZE:	microcrystalline [324]						
TEXTURE:	sparsely phyric,intersertal						
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	3						
plagioclase	3			0.8x2	0.3x0.8	subhedral	
MICROPHENOCRYST							
clinopyroxene	3			0.8	0.2	subhedral	
olivine	0.1	100		0.5	0.2	subhedral	
VESICLES	5			3	1.5	high, rounded	~50% filled with segregated melt
GROUNDMASS	95						
opaque Minerals	5			0.1	0.02	skeletal	
plagioclase	15				0.05x0.8	subhedral	
glass	80						
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
Fe-oxyhydroxides	10					magnetite	
brown clays	10					plaigioclase	
brown clays	100					glass	
calcite	80					olivine	
brown clays	20					clinopyroxene	
brown clays	10					plagioclase	
brown clay	15					vesicle	devitrified glass of segregation vesicle
STRUCTURE	Unoriented massive structure.						
COMMENTS							
SUMMARY DESCRIPTION	Intersertal Sparsely Plagioclase-Phyric Basalt; Crystallinity: 25%; Alteration Degree: 77%; Veins: None; Vesicle Filling: brown clay and melt segregation; Structure: No structure in groundmass						

THIN SECTION:	324-U1347A-12R-2-W 40_42-TS71			Piece No:		Unit:4	OBSERVER:THIN SECTION:TS71
ROCK NAME:	sparsely phyric plagioclase basalt						
WHERE SAMPLED:	middle part of thick massive basaltic lava						
GRAINSIZE:	microcrystalline [324]						
TEXTURE:	intersertal,sparsely phyric						
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	4						
plagioclase	4			1x2	0.2x0.8	subhedral	
MICROPHENOCRYST							
olivine	0.1			0.3	0.2	subhedral	
clinopyroxene	2			0.6	0.4	subhedral	
VESICLES	0						
GROUNDMASS	94						
glass	60						
Opaque Minerals	5			0.05	0.02	subhedral	
plagioclase	15				0.05x0.5	acicular	
clinopyroxene	20				0.05x0.3	acicular	plagioclase intergrown
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
brown clay	100					glass	
brown clay	10					clinopyroxene	
Fe oxyhydroxide	5					magnetite	
brown clay	5					plagioclase	
brown clay	50					vesicle	there is just one vesicle in the slide and it contains segregated melt altered to brown clay
STRUCTURE	Massive structure. No deformation.						
COMMENTS							
SUMMARY DESCRIPTION	Intersertal Sparsely Plagioclase-Phyric Basalt; Crystallinity: 44%; Alteration Degree: 60%; Veins: None; Vesicle Filling: brown clay and melt segregation; Structure: No structure in groundmass						

THIN SECTION:	324-U1347A-13R-2-W 56_59-TS72			Piece No:		Unit:4	OBSERVER:THIN SECTION:TS72
ROCK NAME:	sparsely phyric plagioclase basalt						
WHERE SAMPLED:	middle part of thick massive basaltic lava						
GRAINSIZE:	microcrystalline [324]						
TEXTURE:	intergranular,sparsely phyric						
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	3						
plagioclase	3			1x2	0.4x1.2	subhedral	
MICROPHENOCRYST							
clinopyroxene	3			0.7	0.3x0.5	subhedral	
olivine	0.1				0.2	subhedral	
VESICLES	0						
GROUNDMASS	94						
plagioclase	30				0.05x0.5	subhedral	
clinopyroxene	3				0.05x0.3	skeletal & blocky	
glass	65						
Opaque Minerals	2			0.05	0.02	skeletal	
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
calcite	100					olivine	
brown clay	80					glass	patches within interstial glass are isotropic
brown clay	10					clinopyroxene	
Fe oxyhydroxides	5					magnetite	
brown clay	10					plagioclase	
STRUCTURE	Massive structure.						
COMMENTS							
SUMMARY DESCRIPTION	Intersertal Sparsely Plagioclase-Phyric Basalt; Crystallinity: 39%; Alteration Degree: 53%; Veins: None; Vesicle Filling:None; Structure: No structure in groundmass						

THIN SECTION:	324-U1347A-13R-5-W 38_40-TS73			Piece No:		Unit:4	OBSERVER:THIN SECTION:TS73
ROCK NAME:	sparsely phyric plagioclase basalt						
WHERE SAMPLED:	middle part of thick massive basaltic lava						
GRAINSIZE:	very fine grained [324]						
TEXTURE:	intergranular,sparsely phyric						
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	2						
plagioclase	2			0.8x0.8	0.5x1	subhedral	
MICROPHENOCRYST							
clinopyroxene	3			1	0.3	subhedral	
VESICLES	2			2	0.5	Low, subrounded	
GROUNDMASS	95						
plagioclase	20				0.2x0.5	subhedral	
glass	75						
Opaque Minerals	5			0.2	0.05	euhedral	
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
brown clay	10					plagioclase	
brown clays	98					glass	
brown clay	10					plagioclase	
brown clay	10					pyroxene	
opaque phases	2						
brown clay	20					pyroxene	
calcite						vesicle	alteration halo of brown-gray clay and opaques
brown clay						vesicle	as rim
STRUCTURE	Intergranular texture and massive structure. Veins are right lateral en echelon arrangement showing sinistral motion sense. It is also shown by bookshelf structure of plagioclase.						
COMMENTS							
SUMMARY DESCRIPTION	Intergranular Sparsely Plagioclase-Phyric Basalt; Crystallinity: 29%; Alteration Degree: 73%; Veins: calcite core and brown clay rim; Vesicle Filling: brown clay rim and calcite core; Structure: Veins are right lateral en echelon arrangement showing sinistral motion sense. No structure in groundmass						

THIN SECTION:	324-U1347A-13R-6-W 84_86-TS74			Piece No:		Unit:4	OBSERVER:THIN SECTION:TS74
ROCK NAME:	sparsely phyric basalt						
WHERE SAMPLED:	middle part of thick massive flow						
GRAINSIZE:	very fine grained						
TEXTURE:	sparsely phyric,intersertal						
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	5						
plagioclase	3			1.2x0.2	1x0.2	subhedral	
MICROPHENOCRYST							
clinopyroxene	2			0.9x0.4	0.6x0.4	subhedral	
VESICLES	7			1	0.3	low sphericity	
GROUNDMASS	95						
glass	65						
clinopyroxene	7			0.5x0.2	0.4x0.2	subhedral	
opaque Minerals	3			0.1x0.1	0.1x0.05	subhedral	
plagioclase	25			0.6x0.1	0.2x0.1	subhedral	
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
brown clays	15					pyroxene	
brown clays	100					glass	patches of calcite are also replacing
brown clays	10					plagioclase	
brown clay						vesicle	as rim
brown clays						vesicle	alteration halo around the vesicle 1mm
opaques						vesicle	
calcite	100					vesicle	
STRUCTURE	Massive structure with one calcite-filling vein. Vein has a chilled margin at basal side showing a close coeval generation. It is likely related to cracking and subsequent calcite crystalization from fluids.						
COMMENTS							
SUMMARY DESCRIPTION	Intersertal Sparsely Plagioclase-Phyric Basalt; Crystallinity: 38%; Alteration Degree: 65%; Veins: None; Vesicle Filling: brown clay rim and calcite core; Structure: No structure in groundmass						

THIN SECTION:	324-U1347A-13R-6-W 139_142-TS75			Piece No:		Unit:4	OBSERVER:THIN SECTION:TS75
ROCK NAME:	sparsely phyric basalt						
WHERE SAMPLED:	Bottom of massive flow						
GRAINSIZE:	microcrystalline						
TEXTURE:	sparsely phyric,intersertal						
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	3						
plagioclase	2			1x0.3	0.8x0.2	subhedral	
MICROPHENOCRYST							
olivine	0.1			0.6x0.3	0.3x0.3	subhedral	
clinopyroxene	1			0.4x0.3	0.3x0.3	subhedral	
VESICLES	5			1.6	0.6	low sphericity	
GROUNDMASS	97						
glass	80						
plagioclase	15			0.1x0.05	0.02x0.01		
opaque Minerals	5			0.02x0.02	0.02x0.02		
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
white clays	40					pyroxene	
opaques	5					glass	
brown clays	95					glass	
white clays	5					plagioclase	
brown clays	50					pyroxene	
brown clays	5					plagioclase	
white clays	10					plagioclase	
calcite	100					vesicle	
opaques						vesicle	in alteration halo (0.2 mm)
brown clay						vesicle	as rim
STRUCTURE	Amygdaloidal structure and chilled margin with slightly oriented plagioclase phenocrysts.						
COMMENTS							
SUMMARY DESCRIPTION	Intersertal Sparsely Plagioclase-Phyric Basalt; Crystallinity: 22%; Alteration Degree: 79%; Veins: calcite core and brown clay rim; Vesicle filling: calcite core and brown clay rim; Structure: No structure in groundmass.						

THIN SECTION:	324-U1347A-13R-7-W 17_20-TS76			Piece No:		Unit:5	OBSERVER:THIN SECTION:TS76
ROCK NAME:	aphyric basalt						
WHERE SAMPLED:	upper chilled margin of massive flow with sandstone contact						
GRAINSIZE:	glassy [324]						
TEXTURE:	glassy,aphyric						
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	0						
MICROPHENOCRYST							
plagioclase	3	5		0.5x1	0.1x1	acicular	
pyroxene	1	5		0.5	0.3	subhedral	
VESICLES	5			1	0.3	highly spherical	
GROUNDMASS	100						
plagioclase	1	5			0.05x0.2	subhedral	
glass	99	10					preserved as fresh glass
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
brown clay	5					plagioclase	
brown clay	5					plagioclase	
paragonite	10					glass	
brown clay	5					pyroxene	
STRUCTURE	Plagioclase laths and small crystals of pyroxene are sparsely distributed and, partly have a subophitic structure.						
COMMENTS							
SUMMARY DESCRIPTION	Hyalo Aphyric Basalt, Vesicularity 5%; Crystallinity: 5%; Alteration Degree: 10%; Veins: None; Vesicle Filling: None; Structure: Upper chilled margin of massive flow with sandstone contact. Plagioclase laths and small crystals of pyroxene are sparsely distributed with a partly subophitic structure. Single fracture filled with gray clay.						

THIN SECTION:	324-U1347A-13R-7-W 34_37-TS81			Piece No:		Unit:5	OBSERVER:THIN SECTION:TS81
ROCK NAME:	Sparsely phyric basalt						
WHERE SAMPLED:	Chilled upper crust (glass preserved)						
GRAINSIZE:	glassy [324]						
TEXTURE:	sparsely phyric,glassy						
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS							
plagioclase	3			0.5x0.5	0.2x1	subhedral	
MICROPHENOCRYST							
Olivine*	0.1				0.3	subhedral	
clinopyroxene	2			0.7	0.3	subhedral	
VESICLES	3			1.5	0.5	highly spherical	
GROUNDMASS	95						
glass	100						fresh glass preserved
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
brown clays	10					glass	devitrification around fractures
glass	20					vesicle	
STRUCTURE	Chilled margin. There are at least two cracking events resulting in cut/broken plagioclase phenocrysts are cut.						
COMMENTS							
SUMMARY DESCRIPTION	Glassy Sparsely Plagioclase-Phyric Basalt; Crystallinity: 5%; Alteration Degree: 9%; Veins: None; Vesicle filling: calcite; Structure: Chilled margin. No structure in groundmass.						

THIN SECTION:	324-U1347A-13R-7-W 69_72-TS78			Piece No:		Unit:5	OBSERVER:THIN SECTION:TS78
ROCK NAME:	sparsely phyric basalt						
WHERE SAMPLED:	Upper part of massive flow						
GRAINSIZE:	very fine grained						
TEXTURE:	hyalophytic,sparsely phyric						
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	3						
plagioclase	3			1.6x0.2	1x0.1	subhedral	
MICROPHENOCRYST							
clinopyroxene	2			0.6x0.3	0.5x0.3	subhedral	
olivine	0.1			0.5x0.3	0.4x0.3	subhedral	
VESICLES	5			1.2	0.3	low sphericity	
GROUNDMASS	95						
clinopyroxene	1			0.1x0.02	0.1x0.02	subhedral	
glass	97						partly spherulitic
plagioclase	2			0.1x0.04	0.08x0.02	subhedral	
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
dark brown clay	100					glass	
dark brown clay	2					plagioclase	
brown clays	100					olivine	
dark brown clay	10					pyroxene	
dark brown clay	1					glass	upper part of TS is made of fresh glass and alteration degree increases toward the bottom
brown clays	100					olivine	
STRUCTURE	Chilled margin with some slightly oriented plagioclase phenocrysts cut by some cracks.						
COMMENTS							
SUMMARY DESCRIPTION	Hyalophytic Sparsely Plagioclase-Phyric Basalt; Crystallinity: 8%; Alteration Degree: 92%; Veins: None; Vesicle filling: calcite core and brown clay rim; Structure: Oriented plagioclase phenocrysts. No structure in groundmass						

THIN SECTION:	324-U1347A-14R-1-W 108_110-TS79			Piece No:		Unit: 5	OBSERVER:THIN SECTION:TS79
ROCK NAME:							
WHERE SAMPLED:							
GRAINSIZE:							
TEXTURE:							
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS							
MICROPHENOCRYST							
clinopyroxene	2			1	0.4	subhedral	
GROUNDMASS							
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
STRUCTURE							
COMMENTS							
SUMMARY DESCRIPTION							

THIN SECTION:	324-U1347A-14R-2-W 52_54-TS80			Piece No:		Unit:5	OBSERVER:THIN SECTION:TS80
ROCK NAME:	Sparsely phyric basalt						
WHERE SAMPLED:	Core part of massive flow						
GRAINSIZE:	microcrystalline						
TEXTURE:	aphyric,intersertal						
PRIMARY	PERCENT	REL. VOL.	SIZE(mm)				
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	0						
MICROPHENOCRYST							
plagioclase	5			0.3x0.6	1x0.2	subhedral	
VESICLES	10			3	1	highly spherical	
GROUNDMASS	93						
opaque Minerals	8			0.05	0.02	subhedral	
glass	82						
plagioclase	10				0.1x0.3	subhedral	
SECONDARY			SIZE(mm)				
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
brown clay	100					glass	
brown clay	15					plagioclase	
brown clay	40					clinopyroxene	
brown clay	15					plagioclace	
Fe oxyhydroxides	5					magnetite	
saponite	10					vesicle	fibrous brown clay with 3rd order birifringence
STRUCTURE	Massive structure and amygdaloidal structure with some slightly oriented plagioclase and olivine phenocrysts.						
COMMENTS							
SUMMARY DESCRIPTION	Intersertal Aphyric Basalt; Crystallinity: 24%; Alteration Degree: 81%; Veins: None; Vesicle Filling: saponite; Structure: Slightly oriented plagioclase and pyroxene. No structure in groundmass.						

THIN SECTION:	324-U1347A-15R-1-W 9_11-TS83			Piece No:		Unit:5	OBSERVER:THIN SECTION:TS83
ROCK NAME:	aphyric basalt						
WHERE SAMPLED:	thick massive flow						
GRAINSIZE:	very fine grained						
TEXTURE:	aphyric,aphyric,intersertal						
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	0						
plagioclase	1		0.9	1.8	1.1	anhedral	rare glomerocrysts, mostly plagioclose, rare clinopyroxene
MICROPHENOCRYST							
pyroxene	1			0.8	0.4	subhedral	
GROUNDMASS	98						
plagioclase	30	0		0.8	0.5	laths to columnar	
pyroxene	40	5		1	0.5	subhedral to subophytic	
opaque Minerals	3	0		0.15	0.05	anhedral	
glass	30	100		0.08			
pyroxene	40	5		1	0.5	subhedral to subophytic	
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
brown clay	10					clinopyroxene	
Fe oxyhydroxides	5					magnetite	
saponite	60					olivine	
calcite	40						
brown clay	90					glass	some fibrous florets of clay that could be saponite. About 10% of glassy material is reflective, which suggests that it is fresh.
brown clay	5					plagioclase	
brown clay	5					plagioclase	
STRUCTURE	Massive structure.						
COMMENTS							
SUMMARY DESCRIPTION	Intersertal Aphyric Basalt; Crystallinity: 74%; Alteration Degree: 29%; Veins: saponite; Vesicle Filling: None; Structure: No structure in groundmass.						

THIN SECTION:	324-U1347A-15R-1-W 107_109-TS84			Piece No:		Unit:7	OBSERVER:THIN SECTION:TS84
ROCK NAME:	sparsely plagioclase-phyric basalt						
WHERE SAMPLED:	top chilled margin of inflation unit						
GRAINSIZE:	cryptocrystalline						
TEXTURE:	sparsely phyric,glassy						
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	1						
plagioclase	1			1x1	0.5x1	subhedral	some glomerocrysts
MICROPHENOCRYST							
plagioclase	3			0.1x1.2	0.1x0.5	subhedral	
pyroxene	1			0.5	0.3	subhedral	some plagioclase intergrown
olivine	1			0.4	0.2	subhedral	
VESICLES	7			2.5	1	high, rounded	
GROUNDMASS	94						
glass	99						fresh glass preserved
plagioclase	1				0.01x0.05	plumose	
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
dark brown clays	10					pyroxene	
dark brown clays	50					glass	Alteration degree increases from margin of the sample to middle/bottom.
dark brown clays	10					plagioclase	
brown clay	100					olivine	
STRUCTURE	Micro-breccias developed in micro-fracture. Massive stucture.						
COMMENTS							
SUMMARY DESCRIPTION	Glassy Sparsely Plagioclase-Phyric Basalt; Crystallinity: 7%; Alteration Degree: 48%; Veins: None; Vesicle Filling: None; Structure: Chilled margin. Micro-breccias developed in micro-fracture. No structure in groundmass.						

THIN SECTION:	324-U1347A-15R-2-W 24_26-TS85			Piece No:		Unit:7	OBSERVER:THIN SECTION:TS85
ROCK NAME:							
WHERE SAMPLED:	massive thick flow						
GRAINSIZE:							
TEXTURE:							
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS							
MICROPHENOCRYST							
VESICLES	3				0.8		
GROUNDMASS	85						
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
brown clays	8					pyroxene	
calcite	70					olivine	
opaques	7					glass	
brown clays	30					olivine	
brown clays	90					plagioclase	
brown clays	10					plagioclase	
brown clays	90					glass	fresh glass still remains
brown clays	10					pyroxene	
STRUCTURE							
COMMENTS							
SUMMARY DESCRIPTION							

THIN SECTION:	324-U1347A-16R-2-W 100_104-TS86			Piece No:		Unit:5	OBSERVER:THIN SECTION:TS86
ROCK NAME:	amygdaloidal basalt						
WHERE SAMPLED:	thick massive flow						
GRAINSIZE:	very fine grained						
TEXTURE:	aphyric,intersertal						
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	0						
plagioclase	1	20	1	2.5	2	anhedral	rare glomerocrysts, mostly plagioclase, rare clinopyroxene
MICROPHENOCRYST							
plagioclase	1	20					
clinopyroxene	0.1	20					
VESICLES	10		1	7	4	low sphericity	
GROUNDMASS	98						
glass	30	100		0.08			
plagioclase	40	20		1.2	0.8	laths to columnar	
opaque Minerals	3	0		0.15	0.05	dendritic needles and subhedral	
pyroxene	40	20		1	0.5	subhedral to subophytic	
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
brown clays	20					Plagioclase	
brown clays	20					Pyroxene	
brown clays	100					glass	
white clays	4					vesicle	
calcite	96					vesicle	alteration halo of brown clays and opaques
STRUCTURE	Amygdaloidal structure.						
COMMENTS							
SUMMARY DESCRIPTION	Intersertal Aphyric Basalt, diktytaxitic, 10% vesicular; Crystallinity: 83%; Alteration Degree: 32%; Veins: None; Vesicle Filling: Calcite and white clays, with an alteration halo of brown clays and opaques; Structure: Amygdaloidal structure. No structure in groundmass.						

THIN SECTION:	324-U1347A-16R-3-W 39_42-TS87			Piece No:		Unit:9	OBSERVER:THIN SECTION:TS87
ROCK NAME:	amygdaloidal basalt						
WHERE SAMPLED:	thick massive flow						
GRAINSIZE:	0.2						
TEXTURE:	intersertal,aphyric						
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	0						
MICROPHENOCRYST							
olivine	0.1	100					
clinopyroxene	0.1	15					
plagioclase	1	10					
VESICLES	30			5	1	subrounded	
GROUNDMASS	70						
plagioclase							
plagioclase	35	10		1	0.6	columnar to lath	
glass	45	100					
Opaque Minerals	5	0		0.1	0.03	subhedral	
pyroxene	15	15		0.6	0.4	subhedral	
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
brown clays	10					plagioclase	
brown clays	98					Glass	
opaques	2					glass	
brown clays	15					pyroxene	
white clay	1					vesicle	
calcite	99					vesicle	alteration halo of brown clays and opaques
STRUCTURE	Amygdaloidal structure.						
COMMENTS							
SUMMARY DESCRIPTION	Intersertal Amygdaloidal Aphyric Basalt, Vesicularity 30%; Crystallinity: 56%; Alteration Degree: 49%; Veins: None; Vesicle Filling: Calcite, White Clay; Structure: Amygdaloidal structure. No structure in groundmass.						

THIN SECTION:	324-U1347A-16R-4-W 4_8-TS88			Piece No:		Unit:9	OBSERVER:THIN SECTION:TS88
ROCK NAME:	aphyric basalt						
WHERE SAMPLED:	thick massive flow						
GRAINSIZE:	very fine grained						
TEXTURE:	aphyric,intersertal						
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	0.5						
plagioclase	1	10	1	2.5	1.8	tabular, subhedral	rare plagioclase clots
MICROPHENOCRYST							
plagioclase	1	10					
VESICLES	0						
GROUNDMASS	99.5						
plagioclase							
opaque Minerals							
opaque Minerals	5	0		0.2	0.09	subhedral to euhedral	
plagioclase	40	10		1.2	0.8	columnar to laths	
glass	30	100					
pyroxene	25	35		0.8	0.6	subhedral to anhedral	
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
calcite	2					glass	
opaques	2					glass	
white clays	35					pyroxene	
brown clays	96					glass	
brown clays	10					plagioclase	
brown clay	100					vesicle	alteration halo of brown clays and opaques
STRUCTURE	Massive and amygdaloidal structures with two veins filled with cross-fiber calcite.						
COMMENTS							
SUMMARY DESCRIPTION	Intersertal Aphyric Basalt, Vesicularity 0%; Crystallinity: 71%; Alteration Degree: 42%; Veins: One generation filled with calcite, a second with fibrous brown clays; Vesicle Filling: Brown Clay; Structure: Thick massive basalt flow. Massive and amygdaloidal structures with two veins filled with cross-fiber calcite. No structure in groundmass.						

THIN SECTION:	324-U1347A-16R-5-W 99_102-TS89			Piece No:		Unit:9	OBSERVER:THIN SECTION:TS89
ROCK NAME:	aphyric basalt						
WHERE SAMPLED:	thick massive flow						
GRAINSIZE:	very fine grained						
TEXTURE:	aphyric,intersertal						
PRIMARY	PERCENT	REL. VOL.	SIZE(mm)				
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	0						
plagioclase	0.5	10	1.2	1.6	1.4	anhedral	contain glass inclusions (altered)
MICROPHENOCRYST							
plagioclase	1	10					
GROUNDMASS	100						
pyroxene	15	60		0.6	0.4	subhedral	
plagioclase	25	10		1.1	0.6	columnar to lath	
opaque Minerals	5	30		0.08	0.05	anhedral	
glass	55	100					
SECONDARY			SIZE(mm)				
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
opaques	2					glass	
calcite	3					glass	
brown clays	10					plagioclase	
brown clays	95					glass	
white clays	60					pyroxene	
calcite	100					vesicle	Alteration halo of dark brown clays and opaques
STRUCTURE	Massive structure with pipe vesicle.						
COMMENTS							
SUMMARY DESCRIPTION	Intersertal Aphyric Basalt, Thick Massive Flow, Vesicularity 0%; Crystallinity: 46%; Alteration Degree: 67%; Veins: Filled with Calcite; Vesicle Filling: None; Structure: No structure in groundmass. Massive structure with pipe vesicle.						

THIN SECTION:	324-U1347A-17R-2-W 9_11-TS92			Piece No:		Unit:11	OBSERVER:THIN SECTION:TS92
ROCK NAME:	highly-phyric plagioclase basalt						
WHERE SAMPLED:	upper chilled margin with baked-sandstone, massive flow unit						
GRAINSIZE:	microcrystalline						
TEXTURE:	intersertal to hyalopilitic,highly phyric						
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	7						
plagioclase	7	2	1	3.5	1.7	tabular, anhedral to subhedral	contains glass inclusions
MICROPHENOCRYST							
GROUNDMASS	93						
glass	90	100					fresh basaltic glass
pyroxene	4	3		0.7	0.5	subhedral	
plagioclase	6	2		1.1	0.6	lath to columnar	
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
dark brown clays	90					glass	
brown clay	10					glass	
dark brown clay	3					Pyroxene	
brown clays	100					Olivine	
dark brown clay	2					Plagioclase	
STRUCTURE	A few veins of gray color are heterogeneously distributed.						
COMMENTS							
SUMMARY DESCRIPTION	Intersertal intersertal to hyalopilitic Basalt, upper chilled margin with baked-sandstone, massive flow unit, Vesicularity 0%; Crystallinity: 16%; Alteration Degree: 84%; Veins: None; Vesicle Filling: None; Structure: Plagioclase lathes are more concentrated than lower part, but plagioclase microphenocrysts are homogeneously distributed. A few veins of gray color are heterogeneously distributed.						

THIN SECTION:	324-U1347A-17R-2-W 27_30-TS93			Piece No:		Unit:11	OBSERVER:THIN SECTION:TS93
ROCK NAME:	moderately plagioclase-phyric basalt						
WHERE SAMPLED:	upper chilled margin of massive flow						
GRAINSIZE:	cryptocrystalline						
TEXTURE:	moderately phyric,glassy						
PRIMARY	PERCENT	REL. VOL.	SIZE(mm)				
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	10						
plagioclase	5	5		2x3	1x2	subhedral	some glomerocrysts, clear glass inclusions
MICROPHENOCRYST							
olivine	0.1	50		0.3	0.1	subhedral	
pyroxene	2	5		0.5	0.2	subhedral	plagioclase are intergrown
plagioclase	3	5		0.2x2	0.1x0.5	subhedral	
VESICLES	0						
GROUNDMASS	90						
plagioclase	2	5			0.01x0.05	plumose	
glass	98	51					fresh glass preserved
SECONDARY			SIZE(mm)				
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
brown clay	5					plagioclase	
brown clay	50					glass	about 50% of the slide consists of devitrified glass
calcite	1					glass	
brown clay	50					olivine	
brown clay	5					clinopyroxene	
STRUCTURE	Subophitic structure in glassy part. Some irregular joints.						
COMMENTS							
SUMMARY DESCRIPTION	Moderately plagioclase-phyric basalt, upper chilled margin of massive flow, Vesicularity 0%; Crystallinity: 12%; Alteration Degree: 46%; Veins: None; Vesicle Filling: None; Structure: Subophitic structure in glassy part. Some irregular joints.						

THIN SECTION:	324-U1347A-17R-2-W 48_50-TS94			Piece No:		Unit:11	OBSERVER:THIN SECTION:TS94
ROCK NAME:	moderately plagioclase phyric basalt						
WHERE SAMPLED:	Middle of massive flow						
GRAINSIZE:	microcrystalline						
TEXTURE:	intersertal,moderately phyric						
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	6						
plagioclase	5	30		1.5x3	1x2	subhedral	some glomerocryst
olivine	0.1	100			1	euhedral	
pyroxene	1	30		1	0.6	euhedral	some glomerocryst
MICROPHENOCRYST							
VESICLES	1			1.8	0.5	moderately spherical	
GROUNDMASS	94						
glass	75	100					
pyroxene	10	30			0.2	subhedral	some plagioclase intergrown
plagioclase	15	30		0.2x1	0.1x0.5	subhedral	
magnetite	0.1	5					
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
brown clay	100					glass	
brown clay	30					plagioclase	
calcite	90					olivine	
Fe oxyhydroxide	5					magnetite	
brown clay	30					pyroxene	
saponite	10					olivine	
brown clay	30					plagioclase	plagioclases alteration is based on ~30% non reflective material in reflected light.
gray clay	60					vesicle	cryptocrystaline clay
calcite	40					vesicle	
STRUCTURE	Subophitic structures.						
COMMENTS							
SUMMARY DESCRIPTION	Moderately Plagioclase-Phyric Intersertal Basalt; Middle of Massive Flow; Vesicularity 1%; Crystallinity: 30%; Alteration Degree: 79%; Veins: None; Vesicle Filling: Calcite and Gray Clays; Structure: Subophitic structures.						

THIN SECTION:	324-U1347A-17R-3-W 65_67-TS95			Piece No:		Unit:11	OBSERVER:THIN SECTION:TS95
ROCK NAME:	moderately phyric basalt						
WHERE SAMPLED:	core of porphyritic basaltic flow with melt segregation						
GRAINSIZE:	very fine grained						
TEXTURE:	moderately phyric,intergranular						
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	5						
plagioclase	5	20		1x3	0.8x2.	subhedral	some glomerocrystic
MICROPHENOCRYST							
clinopyroxene	1	30		0.4x0.8	0.4	subhedral	
VESICLES	15			1.5	1	low sphericity	large vesicles (2cm) within segregated melt
GROUNDMASS	95						
plagioclase	35	20		0.1x1	0.1x0.4	subhedral	
Opaque Minerals	5	5		0.1	0.03	subhedral	
glass	60	100					
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
brown clay	100					glass	
Fe oxyhydroxides	5					magnetite	
brown clay	20					plagioclase	
pyrite	1					glass	
brown clay	20					plagioclase	segregation groundmass
brown clay	99					glass	segregation groundmass
brown clay	30					pyroxene	
calcite	100					vesicle	
STRUCTURE	Fine lathes surround amygdules. Fine lath's layers of 0.2 to 2 mm thickness around amygdules. Possibly concentrating part of amygdules makes pipe structure, which direction is sub-perpendicular (approximately 80 degree's dip).						
COMMENTS							
SUMMARY DESCRIPTION	Moderately Plagioclase-Phyric Intergranular Basalt; Cryptocrystalline; Core of porphyritic basaltic flow with melt segregation; Vesicularity 15%; Crystallinity: 44%; Alteration Degree: 65%; Veins: None; Vesicle Filling: Calcite; Structure: Fine lathes surround amygdules. Fine lath's layers of 0.2 to 2 mm thickness around amygdules. Possibly concentrating part of amygdules makes pipe structure, which direction is sub-perpendicular (approximately 80 degree's dip).						

THIN SECTION:	324-U1347A-18R-1-W 42_43-TS96			Piece No:		Unit:11	OBSERVER:THIN SECTION:TS96
ROCK NAME:	plag-phyric basalt						
WHERE SAMPLED:	Massive flow						
GRAINSIZE:	very fine grained						
TEXTURE:	highly phyric,porphyritic						
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	8						
plagioclase	7	10		1.2	1	subhedral	some glomerocrysts, zoned plagioclases
MICROPHENOCRYST							
pyroxene	1	15		0.9	0.9	subhedral	several grains together
VESICLES	0						
GROUNDMASS	92						
opaque Minerals	0.5	25		0.1x0.05	0.05x0.05	blocky	wedge-shaped
plagioclase	25	10		0.8x0.05	0.3x0.05	subhedral	acicular
pyroxene	5	20		0.4x0.4	0.1x0.1	blocky	subhedral
glass	70	100					
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
calcite	100					vesicle	one vesicle in TS
STRUCTURE	Subophitic structure. A kind of irregular vein composed of finer groundmass including plagioclase spherulite, pyroxene microcrystal, amorphous materials, opaque minerals and fine vesicles (amygdules). It is 0.1 mm thickness and cuts phenocryst and normal groundmass.						
COMMENTS							
SUMMARY DESCRIPTION	Moderately Plagioclase-Phyric Intersertal Basalt; Very fine grained; Massive flow, toward bottom of massive flow; Vesicularity 0%; Crystallinity: 36%; Alteration Degree: 68%; Veins: None; Vesicle Filling: Calcite; Structure: Subophitic structure. A kind of irregular vein composed of finer groundmass including plagioclase spherulite, pyroxene microcrystal, amorphous materials, opaque minerals and fine vesicles (amygdules). It is 0.1 mm thickness and cuts phenocryst and normal groundmass.						

THIN SECTION:	324-U1347A-18R-1-W 93_96-TS97			Piece No:		Unit:11	OBSERVER:THIN SECTION:TS97
ROCK NAME:	plag-phyric basalt						
WHERE SAMPLED:	massive flow						
GRAINSIZE:	very fine grained						
TEXTURE:	highly phyric,porphyritic / phyric						
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	11						
plagioclase	10	10		2.6	1	subhedral	some glomerocrysts
clinopyroxene	1	10		.3			one in the TS
MICROPHENOCRYST							
VESICLES	1			0.2	0.2		two vesicles <0.2 mm
GROUNDMASS	89						
Opaque Minerals	0.05	5		0.05x0.05	0.05x0.05	blocky	
plagioclase	30	10		0.6x0.05	0.3x0.05	subhedral	acicular
pyroxene	1	10		0.4x0.4	0.2x0.2	subhedral	subhedral to anhedral
glass	69	100					
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
brown clay	10					pyroxene	
calcite	90					olivine	
saponite	10					olivine	
Fe oxyhydroxide	5					magnetite	
brown clay	10					plagioclase	
brown clay	100					glass	
brown clay	10					plagioclase	
STRUCTURE	Subophitic structure. Phenocrysts heterogeneously distributed.						
COMMENTS							
SUMMARY DESCRIPTION	Moderately Plagioclase-Phyric Intersertal Porphyritic Basalt; Very fine grained; Massive flow, toward bottom of massive flow; Vesicularity 1%; Crystallinity: 39%; Alteration Degree: 65%; Veins: Irregular calcite vein of 0.2 mm thickness; Vesicle Filling: None; Structure: Subophitic structure. Phenocrysts heterogeneously distributed, except in one part of thin section where concentrated.						

THIN SECTION:	324-U1347A-18R-2-W 41_44-TS98			Piece No:		Unit:11	OBSERVER:THIN SECTION:TS98
ROCK NAME:	moderately plagioclase phyric basalt						
WHERE SAMPLED:	core of thick massive flow						
GRAINSIZE:	very fine grained						
TEXTURE:	intersertal,moderately phyric						
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	6						
plagioclase	5	5		1x3	0.5x2	subhedral	glomerocrystic, some phenocrst show frayed edges
pyroxene	1	15		1.2	0.6	subhedral	glomerocrystic
MICROPHENOCRYST							
VESICLES	2			0.5	0.3	low sphericity, subrounded	
GROUNDMASS	94						
glass	64	100					
Opaque Minerals	1	5		0.1	0.03	skeletal	
pyroxene	10	15		0.4	0.2	subhedral	
plagioclase	25	5		0.3x1	0.1x0.6	acicular	
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
brown clay	100					glass	
brown clay	15					pyroxene	
brown clay	5					plagioclase	
brown clay	5					plagoclase	
Fe oxyhydroxide	5					magnetite	
STRUCTURE	Subophitic structure. Phenocrysts are heterogeneously distributed.						
COMMENTS							
SUMMARY DESCRIPTION	Moderately Plagioclase-Phyric Intersertal Porphyritic Basalt; Very fine grained with glomerocrysts; Core of thick massive flow; Vesicularity 2%; Crystallinity: 40%; Alteration Degree: 63%; Veins: Two generations of veins with either only calcite or calcite and brown clay fillings; Vesicle Filling: None; Structure: Subophitic structure. Phenocrysts are heterogeneously distributed. Thick irregular vein of 2 mm thickness with alteration halo including very fine plagioclase lathes.						

THIN SECTION:	324-U1347A-18R-2-W 122_126-TS99			Piece No:		Unit:11	OBSERVER:THIN SECTION:TS99
ROCK NAME:	moderately phyric basalt						
WHERE SAMPLED:	core of porphyritic basaltic flow						
GRAINSIZE:	very fine grained						
TEXTURE:	intersertal,moderately phyric						
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	5						
plagioclase	5	30		1.6x2	1x2	subhedral	some glomerocrystic
MICROPHENOCRYST							
clinopyroxene	2	30		0.6	0.3	subhedral	
VESICLES	2			1	0.5	high, rounded	
GROUNDMASS	95						
pyroxene	2	30			0.1x0.2	subhedral	
Opaque Minerals	3	5		0.1	0.03	subhedral	
plagioclase	20	30		0.3x1.2	0.2x0.8	subhedral	
glass	75	100					
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
Fe oxyhydroxide	5					magnetite	
brown clay	30					plagioclase	
brown clay	30					pyroxene	
calcite	70					olivine	
saponite	30					olivine	
brown clay	100					glass	
gray clay	50					vesicle	the typical vesicle in the rock
calcite	100					vesicle	only found close to vein
STRUCTURE	Single irregular vein filled by calcite. Subophitic structure.						
COMMENTS							
SUMMARY DESCRIPTION	Moderately Plagioclase-Phyric Intersertal Porphyritic Basalt; Very fine grained with glomerocrysts; Core of thick massive flow; Vesicularity 2%; Crystallinity: 30%; Alteration Degree: 78%; Veins: Filled with calcite and gray clays; Vesicle Filling: Calcite and gray clays; Structure: Single irregular vein filled by calcite. Subophitic structure.						

THIN SECTION:	324-U1347A-18R-3-W 122_123-TS100			Piece No:		Unit:11	OBSERVER:THIN SECTION:TS100
ROCK NAME:	sparsely plag-phyric basalt						
WHERE SAMPLED:	within uppermost pillow lobe in hole						
GRAINSIZE:	very fine grained						
TEXTURE:	sparsely phyric,seriate						
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	3						
plagioclase	3	1		1.6	1	euhedral	
MICROPHENOCRYST							
clinopyroxene	2	5					
VESICLES	0						
GROUNDMASS	97						
opaque Minerals	5	1		0.02x0.02			
olivine	10	100		0.6x0.4	0.4x0.3	subhedral	all olivine pseudomorphed
pyroxene	5	5		0.8x0.8	0.4x0.4	subhedral	
plagioclase	80	5		1.2x0.2	0.3x0.1	subhedral	plagioclase spherulites comprise about 65% of groundmass
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
brown clay	100					glass	
brown clay	5					plagioclase	
saponite	95					olivine	
brown clay	1					plagioclase	
calcite	5					olivine	
brown clay	5					pyroxene	
Fe oxyhydroxide	1					magnetite	
STRUCTURE	Massive structure.						
COMMENTS							
SUMMARY DESCRIPTION	Sparsely Plagioclase-Phyric Seriate Porphyritic Basalt; Very fine grained with glomerocrysts; Within the uppermost pillow lob in Unit X; Vesicularity 0%; Crystallinity: 100%; Alteration Degree: 15%; Veins: None; Vesicle Filling: None; Structure:No structure in groundmass.						

THIN SECTION:	324-U1347A-18R-4-W 104_108-TS101			Piece No:		Unit:14	OBSERVER:THIN SECTION:TS101
ROCK NAME:	highly phyric basalt						
WHERE SAMPLED:	middle part of thin inflation unit						
GRAINSIZE:	very fine grained						
TEXTURE:	highly phyric,intersertal						
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS							
plagioclase	5	10		2x3	0.5x1	tabular	some glomerocrysts
MICROPHENOCRYST							
pyroxene	3	10		1.1	0.4	subhedral	plagioclase intergrown
olivine	1	100		0.4	0.2	subhedral	
VESICLES	0						
GROUNDMASS	82						
plagioclase	25	5		0.2x1	0.1x0.6	acicular	
pyroxene	15	10			0.01x0.2	dendritic	plagioclase intergrown
glass	60	90					
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
Fe oxyhydroxide	1					magnetite	
brown clay	5					plagioclase	
saponite	100					olivine	
brown clay	10					plagioclase	
brown clay	10					pyroxene	
brown clay	90					glass	some glassy areas are reflective
STRUCTURE	Subophitic structure. Veins are heterogeneously distributed. Calcite vein show anti-axial structure.						
COMMENTS							
SUMMARY DESCRIPTION	Moderately Plagioclase-Phyric Intersertal Basalt; Very fine grained with glomerocrysts; Middle part of a thin inflation unit; Vesicularity 0%; Crystallinity: 45%; Alteration Degree: 53%; Veins: Three generations, with calcite, brown clay and/or pyrite fillings; Vesicle Filling: None; Structure: Subophitic structure. Veins are heterogeneously distributed. Calcite vein show the anti-axial structure.						

THIN SECTION:	324-U1347A-18R-5-W 32_36-TS102			Piece No:		Unit:16	OBSERVER:THIN SECTION:TS102
ROCK NAME:	moderately phyric plagioclase basalt						
WHERE SAMPLED:	Margin of pillow basalt with fresh glassy rim						
GRAINSIZE:	cryptocrystalline						
TEXTURE:	moderately phyric,glassy						
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS							
plagioclase	3	1		1.5x3	0.6x1.2	tabular	
MICROPHENOCRYST							
pyroxene	2	1		1	0.5	subhedral	plagioclase intergrown
plagioclase	2	1		0.4x0.8	0.1x0.3	subhedral	
VESICLES	1			0.8	0.4	high, rounded	No vesicles on glassy rim
GROUNDMASS	97						
glass	99	60					fresh glass on the rim
plagioclase	1	1		0.01x0.5	0.005x0.1	acicular	
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
brown clay	trace					pyroxene	
brown clay	trace					plagioclase	
brown clay	trace					plagioclae	
palagonite	30					glass	
brown clay	30					glass	
calcite	60					vesicle	
STRUCTURE	Single vein penetrats amygdules and microphenocrysts. Plagioclase laths and small crystals of pyroxene are sparsely distributed.						
COMMENTS							
SUMMARY DESCRIPTION	Moderately Plagioclase-Phyric Intersertal Basalt; Cryptocrystalline with glomerocrysts; Middle part of a thin inflation unit; Vesicularity 1%; Crystallinity: 8%; Alteration Degree: 55%; Veins: Filling with calcite, nontronite and brown clay; Vesicle Filling: Calcite; Structure: Single vein penetrats amygdules and microphenocrysts. Plagioclase laths and small crystals of pyroxene are sparsely distributed. Fresh glass.						

THIN SECTION:	324-U1347A-18R-5-W 80_81-TS103			Piece No:		Unit:17	OBSERVER:THIN SECTION:TS103
ROCK NAME:	moderately plag-phyric basalt						
WHERE SAMPLED:	interior of massive flow						
GRAINSIZE:	microcrystalline						
TEXTURE:	moderately phyric,porphyritic / phyric						
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	5						
plagioclase	5	2		3x1.4	2x1.2	euhedral	
MICROPHENOCRYST							
pyroxene	2	5		0.8x0.6	0.6x0.6	subhedral	
VESICLES	5			0.6	0.6	highly spherical	
GROUNDMASS	95						
olivine	2	100		0.4x0.3			
mesostasis	75	90					
plagioclase	20	20		1x0.1	0.2x0.06	euhedral	
pyroxene	3	10		0.1x0.1	0.1x0.1	subhedral	
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
white clays	2					plagioclase	
opaques	5					glass	
brown clays	85					glass	fres glass is preserved (5%)
white clays	20					plagioclase	
calcite	50					olivine	
brown clays	50					olivine	
white clays	5					pyroxene	
white clays	10					pyroxene	
brown clays						vesicle	as rim
calcite	100					vesicle	
STRUCTURE	Partly plagioclase lathes surround amygdules.						
COMMENTS							
SUMMARY DESCRIPTION	Moderately Plagioclase-Phyric Basalt; Microcrystalline with glomerocrysts; Interior of a massive flow; Vesicularity 5%; Crystallinity: 30%; Alteration Degree: 69%; Veins: Filling with calcite, nontronite and brown clay; Vesicle Filling: Calcite and minor brown clays; Structure: Partly plagioclase lathes surround amygdules.						

THIN SECTION:	324-U1347A-19R-1-W 106_107-TS104			Piece No:		Unit:21	OBSERVER:THIN SECTION:TS104
ROCK NAME:	highly plag-phyric basalt						
WHERE SAMPLED:	~12cm below chilled margin of pillow rim						
GRAINSIZE:	very fine grained						
TEXTURE:	porphyritic /,highly phyric						
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	3						
plagioclase	3	5		2x2	1.8x1.8	euhedral	some glomerocrysts
MICROPHENOCRYST							
pyroxene	1	5		1x1	0.6x0.6	subhedral	
VESICLES	2			1	0.4	highly spherical	
GROUNDMASS	97						
pyroxene	1	10		0.2x0.2	0.2x0.2	subhedral	
olivine	2	100		0.8x0.8	0.8x0.8	subhedral	pseudomorphed
mesostasis	87	95					fine plag spherulite and F-Ti oxides
plagioclase	10	10		1x0.1	0.6x0.1	euhedral	
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
white clays	10					plagioclase	
white clays	5					pyroxene	
opaques	5					glass	
calcite	60					olivine	
white clays	5					plagioclase	along the rim of the phenocryst
white clays	10					pyroxene	
brown clays	40					olivine	
brown clays	90					glass	fresh glass is remaining 5%
calcite						vesicle	
STRUCTURE	Subophitic structure. Irregular thin veins.						
COMMENTS							
SUMMARY DESCRIPTION	Moderately Plagioclase-Phyric Basalt; Very fine grained with glomerocrysts; 12 cm below chilled margin of pillow rim; Vesicula rity 2%; Crystallinity: 19%; Alteration Degree: 80%; Veins: Filling with calcite; Vesicle Filling: Calcite; Structure: Subophitic structure. Irregular thin veins.						

THIN SECTION:	324-U1347A-19R-2-W 74_77-TS105			Piece No:		Unit:24	OBSERVER:THIN SECTION:TS105
ROCK NAME:	moderately plagioclase phyric basalt						
WHERE SAMPLED:	Lower edge of 0.5m thick pillow unit (chilled margin)						
GRAINSIZE:	glassy [324]						
TEXTURE:	highly phyric,glassy						
PRIMARY	PERCENT	REL. VOL.	SIZE(mm)				
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	5						
plagioclase	3	2		4 x 4	2 x 2	subhedral	plag-pyx glomerocrysts
pyroxene	2	5		1.5 x 1.5	1 x 1	subhedral	plag-pyx glomerocrysts
MICROPHENOCRYST							
plagioclase	2	2		0.2 x 0.1	0.2 x 0.1	subhedral	small isolated laths
olivine	0.1	100		0.15 x 0.15	0.15 x 0.15	subhedral	euhedral - preserved in glass
VESICLES	0			1	0.8	highigh/rounded	Mostly clay-filled
GROUNDMASS	95						
glass	93	2					where unaltered - clear brown/green
SECONDARY			SIZE(mm)				
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
dark brown clays	2					plagioclase	
dark brown clays						glass	alteration degree of glass is variable (from 5% to 100%)
dark brown clays	5					pyroxene	
calcite						vesicle	
STRUCTURE	Three irregular veins. Massive structure of quenched glass and crystals.						
COMMENTS							
SUMMARY DESCRIPTION	Moderately Plagioclase Hyalophyric Basalt; Glassy with glomerocrysts; Lower edge of 0.5 m thick pillow unit (chilled margin); Vesicularity 0%; Crystallinity: 7%; Alteration Degree: 2%; Veins: Two generations filled with calcite or calcite, brown and green clays; Vesicle Filling: Calcite; Structure: Three irregular veins. Massive structure of quenched glass and crystals. Fresh glass.						

THIN SECTION:	324-U1347A-19R-3-W 49_52-TS106			Piece No:		Unit:27	OBSERVER:THIN SECTION:TS106
ROCK NAME:	sparsely plagioclase-phyric basalt						
WHERE SAMPLED:	Side chilled margin of pillow lava						
GRAINSIZE:	microcrystalline [324]						
TEXTURE:	sparsely phyric,spherulitic						
PRIMARY	PERCENT	REL. VOL.	SIZE(mm)				
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	3						
plagioclase	3	10		2x3	1x2	tabular	some glomerocrysts
MICROPHENOCRYST							
olivine	0.1	100		0.5	0.3	subhedral	
pyroxene	1	10		1	0.4	subhedral	plagioclase intergrown
VESICLES				2	0.5	low sphericity	
GROUNDMASS	96						
pyroxene	5	10			0.1	subhedral	
glass+sphelurite	80	100					fresh glass preserved
plagioclase	15	10		0.2x0.5	0.05x0.5	acicular	
SECONDARY			SIZE(mm)				
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
dark brown clays	100					glass	alteration degree is variable within the TS
dark brown clays	10					plagioclase	
bronze brown clays	60					Olivine	
calcite	40					Olivine	
dark brown clays	10					Pyroxene	
STRUCTURE	Massive structure of quenched glass and crystals. Some irregular veins penetrate phenocrysts and host.						
COMMENTS							
SUMMARY DESCRIPTION	Sparsely-Phyric Spherulitic Basalt; Very fine grained with pheno/microphenocrysts of tabular plagioclase and glomerocrysts; Side chilled margin of pillow lava; Vesicularity 0%; Crystallinity: 23%; Alteration Degree: 79%; Veins: Three generations with calcite (A), green clay (B) and brown clay (C) filling; Vesicle Filling: None; Structure: Massive structure of quenched glass and crystals. Some irregular veins penetrate phenocrysts and host.						

THIN SECTION:	324-U1347A-19R-3-W 122_124-TS107			Piece No:		Unit:29	OBSERVER:THIN SECTION:TS107
ROCK NAME:	plagioclase phyric basalt						
WHERE SAMPLED:	Centre of small inflation unit						
GRAINSIZE:							
TEXTURE:	glassy,phyric						
PRIMARY	PERCENT	REL. VOL.	SIZE(mm)				
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	1						
plagioclase	1	15		2 x 2	1.5 x 1.5	tabular	glomerocrysts containing 2 or 3 large plagioclase with sub-domians
MICROPHENOCRYST							
olivine	0.1	100		0.6 x 0.6	0.5 x 0.5	subhedral	very altered and mostly replaced by clays
pyroxene	1	10		0.15 x 0.15	0.1 x 0.1	subhedral	
plagioclase	2	15		0.4 x 0.04	0.3 x 0.03	acicular	needle-like and range of sizes
VESICLES	0		0.8	1.2	1.0	high, rounded	sparse, calcite-filled
GROUNDMASS	99						
glass	98	100					almost entirely altered glass
SECONDARY			SIZE(mm)				
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
white clays	15					plagioclase	
brown clays	10					pyroxene	along the rim of the phenocryst
calcite	30					olivine	
opaques	5					glass	
brown clays	95					glass	
white clays	10					pyroxene	
bronze brown clays	70					olivine	
white clays	50					plagioclase	
calcite						vesicle	
STRUCTURE	Massive structure. Irregular and curved veins.						
COMMENTS							
SUMMARY DESCRIPTION	Sparsely Plagioclase Hyalophyric Basalt; Glassy with glomerocrysts; Center of a small inflation unit; Vesicularity <1%; Crystallinity: 4%; Alteration Degree: 95%; Veins: Two generations filled with calcite or calcite, brown and green clays; Vesicle Filling: Calcite; Structure: Massive structure. Irregular and curved veins.						

THIN SECTION:	324-U1347A-20R-1-W 96_97-TS108			Piece No:		Unit:30	OBSERVER:THIN SECTION:TS108
ROCK NAME:	moderately plagioclase-phyric basalt						
WHERE SAMPLED:	middle of thin inflation unit						
GRAINSIZE:	cryptocrystalline						
TEXTURE:	intersertal,moderately phyric						
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	3						
plagioclase	3	10		1.6x3.0	0.4x1	subhedral	some glomerocrysts
MICROPHENOCRYST							
plagioclase	2	10		0.3x1.2	0.1x0.8	acicular	
pyroxene	2	10		0.8	0.4	subhedral	
olivine	0.1	100		0.4	0.2	subhedral	some skeletal
VESICLES	0			0.8	0.4	high and rounded	
GROUNDMASS	97						
pyroxene	20	20			0.02x0.2	dendritic	
glass	70	100					
plagioclase	10	20			0.02x0.4	acicular	
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
brown clays	95					glass	
white clays	20					pyroxene	
calcite	2					olivine	
white clays	20					plagioclase	
white clays	10					plagioclase	
bronze clays	98					olivine	
opaques	5					glass	
white clays	10					pyroxene	
STRUCTURE	massive structure. one plagioclase with plumose structure.						
COMMENTS							
SUMMARY DESCRIPTION	Sparsely Plagioclase Intersertal Basalt; Cryptocrystalline with glomerocrysts; Center of a small inflation unit; Vesicularity <1%; Crystallinity: 35%; Alteration Degree: 71%; Veins: Two generations filled with calcite or calcite, brown and green clays; Vesicle Filling: Calcite; Structure: Massive structure. One plagioclase with plumose structure.						

THIN SECTION:	324-U1347A-20R-3-W 74_76-TS109			Piece No:		Unit:34	OBSERVER:THIN SECTION:TS109
ROCK NAME:	moderately phyric basalt						
WHERE SAMPLED:	Middle part of massive flow						
GRAINSIZE:	0.2						
TEXTURE:	intersertal,moderately phyric						
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	5						
plagioclase	5	2		1.8x1.6	1.1x0.3	subhedral	glomerocrysts
MICROPHENOCRYST							
clinopyroxene	1	2		0.8x0.7	0.4x0.4	subhedral	
olivine	0.1	100		0.7x0.2	0.3x0.3	subhedral	
plagioclase	2	2					
VESICLES	0.1			0.6	0.3	highly spherical	
GROUNDMASS	95						
glass	75	100					
pyroxene	10	2		0.1x0.1	0.02x0.02	anhedral	
Opaque Minerals	5	0		0.1x0.1	0.02x0.02	subhedral	
plagioclase	10	2		0.3x0.05	0.2x0.02	acicular	
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
opaques	5					glass	
calcite	50					olivine	
brown clays	95					glass	
white clays	2					plagioclase	
white clays	2					pyroxene	
bronze clays	50					olivine	
white clays	2					plagioclase	
white clays	2					pyroxene	
calcite	100					vesicle	
STRUCTURE	Massive structure.						
COMMENTS							
SUMMARY DESCRIPTION	Sparsely Plagioclase Intersertal Basalt; Very fine grained with glomerocrysts; Middle part of massive flow; Vesicularity <1%; Crystallinity: 31%; Alteration Degree: 70%; Veins: None; Vesicle Filling: Calcite; Structure: Massive structure.						

THIN SECTION:	324-U1347A-21R-1-W 14_16-TS110			Piece No:		Unit:35	OBSERVER:THIN SECTION:TS110
ROCK NAME:	aphyric basalt						
WHERE SAMPLED:	middle part of thin inflation unit						
GRAINSIZE:	fine grained						
TEXTURE:	intergranular,aphyric						
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	0						
MICROPHENOCRYST							
plagioclase	5	5		0.4x1	0.2x1	elongate	
pyroxene	1	10		0.8	0.3	subhedral	plagioclase intergrown and glomerocrysts
VESICLES	2			1.5	0.8	low sphericity	
GROUNDMASS	70						
glass	70	100					
plagioclase	20	5			0.1x0.5	acicular	
opaque Minerals	10	5		0.2	0.1	skeletal	
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
brown clay	100					glass	
Fe oxyhydroxide	5					magnetite	
brown clay	5					plagioclase	
brown clay	10					clinopyroxene	
brown clay	5					plagioclase	
gray clay	60					vesicle	
STRUCTURE	Empty vesicles. Massive structure.						
COMMENTS							
SUMMARY DESCRIPTION	Aphyric Intergranular Basalt; Fine grained with glomerocrysts and microphenocrysts of plagioclase/clinopyroxene; Middle part of thin inflation unit; Vesicularity 2%; Crystallinity: 34%; Alteration Degree: 68%; Veins: None; Vesicle Filling: Calcite and gray clays; Structure: Massive structure.						

THIN SECTION:	324-U1347A-21R-2-W 8_11-TS111			Piece No:		Unit:37	OBSERVER:THIN SECTION:TS111
ROCK NAME:	highly plagioclase phyric basalt						
WHERE SAMPLED:	middle of massive flow						
GRAINSIZE:	very fine grained						
TEXTURE:	highly phyric,intergranular						
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	6						
plagioclase	5	2		1.5x3	1x2	subhedral	some glomerocrysts
MICROPHENOCRYST							
pyroxene	1	2		0.8	0.3	subhedral	plagioclase intergrown
VESICLES	0						
GROUNDMASS	94						
plagioclase	25	2		0.2x1	0.1x0.6	acicular	
opaque Minerals	3	0		0.3	0.1	skeletal	
glass	72	100					
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
brown clays	2					plagioclase	
brown clays	2					pyroxene	
brown clays	95					glass	
opaques	5					glass	
brown clays	2					pyroxene	
brown clays	2					plagioclase	
STRUCTURE	Massive structure, two veins with syntaxial growth of calcites.						
COMMENTS							
SUMMARY DESCRIPTION	Aphyric Intergranular Basalt; Very fine grained with glomerocrysts and microphenocrysts of plagioclase/clinopyroxene; Middle part of massive flow; Vesicularity 0%; Crystallinity: 32%; Alteration Degree: 68%; Veins: Two generations, one with only pyrite filling and the second one filled with calcite and brown clays; Vesicle Filling: None; Structure: Massive structure, two veins with syntaxial growth of calcites.						

THIN SECTION:	324-U1347A-21R-3-W 76_77-TS112			Piece No:		Unit:37	OBSERVER:THIN SECTION:TS112
ROCK NAME:	sparsely plagioclase phyric basalt						
WHERE SAMPLED:	middle part of massive flow						
GRAINSIZE:	microcrystalline [324]						
TEXTURE:	sparsely phyric,intersertal						
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS							
plagioclase	2	25		1.5x2	1x2	subhedral	glomerocryst
MICROPHENOCRYST							
pyroxene	3	20		1	0.4	subhedral	
plagioclase	3	25		0.5x1.2	0.3x0.5	tabular	
VESICLES	0						
GROUNDMASS	92						
glass	68	100					
pyroxene	5	20			0.1	subhedral	
plagioclase	25	25		0.1x1	0.05x0.6	acicular	
opaque Minerals	2	0		0.2	0.05	skeletal	
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
brown clays	98					glass	
opaques	2					glass	
brown clays	20					Pyroxene	
brown clays	25					Plagioclase	
STRUCTURE	Massive structure and amygdaloidal structure with one joint across phenocryst.						
COMMENTS							
SUMMARY DESCRIPTION	Sparsely Plagioclase Phyric Intersertal Basalt; Microcrystalline with glomerocrysts and microphenocrysts of plagioclase/clinopyroxene; Middle part of massive flow; Vesicularity 0%; Crystallinity: 37%; Alteration Degree: 71%; Veins: Filled with brown clay; Vesicle Filling: None; Structure: Massive structure with one joint across a single phenocryst.						

THIN SECTION:	324-U1347A-21R-4-W 16_19-TS113			Piece No:		Unit:37	OBSERVER:THIN SECTION:TS113
ROCK NAME:	sparsely plagioclase phyric basalt						
WHERE SAMPLED:	bottom of massive flow						
GRAINSIZE:	glassy [324]						
TEXTURE:	intersertal,sparsely phyric						
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	3						
plagioclase	3	30		2x4	1x2	tabular	
MICROPHENOCRYST							
plagioclase	2	30		0.2x1	0.05x0.5	acicular	
pyroxene	2	15		1	0.6	subhedral	plagioclase intergrown
VESICLES	3			4	2	highly elongate	coalesced
GROUNDMASS	93						
glass	99	100					
plagioclase	1	30			0.01x0.2	acicular	
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
brown clays	30					plagioclase	
brown clays	50					olivine	
brown clays	98					glass	
opaques	2					glass	
brown clays	15					pyroxene	
calcite	50					olivine	
white clays						vesicle	
calcite						vesicle	
STRUCTURE	Chilled margin and massive structure. Plagioclase phenocrysts are preferentially oriented along the margin.						
COMMENTS							
SUMMARY DESCRIPTION	Sparsely Plagioclase Phyric Intersertal Basalt; Glassy with glomerocrysts and microphenocrysts of plagioclase/clinopyroxene; Bottom part of massive flow; Vesicularity 3%; Crystallinity: 8%; Alteration Degree: 94%; Veins: None; Vesicle Filling: Calcite with white clays; Structure: Chilled margin. Plagioclase phenocrysts are preferentially oriented along the margin.						

THIN SECTION:	324-U1347A-21R-4-W 39_43-TS114			Piece No:		Unit:38	OBSERVER:THIN SECTION:TS114
ROCK NAME:	aphyric basalt						
WHERE SAMPLED:	middle of massive unit						
GRAINSIZE:	microcrystalline						
TEXTURE:	aphyric,intersertal						
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	0						
MICROPHENOCRYST							
plagioclase	1	85		0.4x1	0.2x0.8	acicular	
pyroxene	0.1	85		0.8	0.3	subhedral	
VESICLES	2			2	0.5	moderately spherical	
GROUNDMASS	99						
opaque Minerals	3	0		0.05	0.02	skeletal	
glass	85	100					
plagioclase	12	85		0.05x1	0.02x0.2	acicular	
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
brown clays	100					glass	
brown clays	85					plagioclase	
brown clays	85					pyroxene	
calcite						vesicle	infilling between the white clays
white clays						vesicle	rounded-shape white clays
STRUCTURE	No structure in groundmass.						
COMMENTS							
SUMMARY DESCRIPTION	Aphyric Intersertal Basalt; Microcrystalline with microphenocrysts of acicular plagioclase; Center part of massive flow; Vesicularity 2%; Crystallinity: 16%; Alteration Degree: 95%; Veins: None; Vesicle Filling: Calcite with white clays; Structure: No structure in groundmass. Thick vein of more approximately 7 mm thickness with thin alteration halo.						

THIN SECTION:	324-U1347A-21R-5-W 16_18-TS115			Piece No:		Unit:40	OBSERVER:THIN SECTION:TS115
ROCK NAME:	aphyric basalt						
WHERE SAMPLED:	middle part of massive flow						
GRAINSIZE:	microcrystalline [324]						
TEXTURE:	aphyric,intersertal						
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	0						
MICROPHENOCRYST							
plagioclase	4	60		0.3x1.2	0.1x0.8	acicular	
pyroxene	2	60		0.6	0.3	subhedral	plagioclase intergrown
VESICLES	2			2	0.5	elongate	some filled with segregated melt
GROUNDMASS	99						
glass	85	100					
opaque Minerals	5	0			0.1	skeletal	
plagioclase	10	60		0.05x0.2	0.01x0.05	acicular	
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
brown clays	50					olivine	
opaques	3					glass	
brown clays	60					plagioclase	
calcite	50					olivine	
brown clays	60					pyroxene	
brown clays	97					glass	
calcite						vesicle	
brown clay						vesicle	as rim
STRUCTURE	Fine laths are concentrated around amygdules. Partly subophitic structure.						
COMMENTS							
SUMMARY DESCRIPTION	Aphyric Intersertal Basalt; Microcrystalline with microphenocrysts of acicular plagioclase; Center part of massive flow; Vesicularity 2%; Crystallinity: 20%; Alteration Degree: 89%; Veins: Pyrite filling; Vesicle Filling: Calcite with brown clays; Structure: Fine laths are concentrated around amygdules. Partly subophitic structure.						

THIN SECTION:	324-U1347A-22R-1-W 59_61-TS117			Piece No:		Unit:41	OBSERVER:THIN SECTION:TS117
ROCK NAME:	aphyric basalt						
WHERE SAMPLED:	middle part of massive flow						
GRAINSIZE:	microcrystalline						
TEXTURE:	aphyric,intersertal						
PRIMARY	PERCENT	REL. VOL.	SIZE(mm)				
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	0						
MICROPHENOCRYST							
olivine	0.1	100		1	0.3	subhedral	
pyroxene	0.1	10		0.6	0.3	subhedral	
plagioclase	1	5		0.5x1	0.1x1	acicular	
VESICLES	3			2	0.5	low sphericity	some filled with segregated melt
GROUNDMASS	99						
plagioclase	7	5		0.02x0.4	0.01x0.1	acicular	
opaque Minerals	3	5		0.05	0.02	skeletal	
glass	90	100					
SECONDARY			SIZE(mm)				
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
STRUCTURE	Fine groundmass around amygdules.						
COMMENTS							
SUMMARY DESCRIPTION	Aphyric Intersertal Basalt; Microcrystalline with pheno/microphenocrysts of tabular plagioclase and glomerocrysts; Middle part of massive flow; Vesicularity 3%; Crystallinity: 11%; Alteration Degree: 90%; Veins: None; Vesicle Filling: Calcite, brown clays; Structure: Fine groundmass around amygdules.						

THIN SECTION:	324-U1347A-22R-3-W 69_71-TS118			Piece No:		Unit:42	OBSERVER:THIN SECTION:TS118
ROCK NAME:	vesicular basalt						
WHERE SAMPLED:	middle of massive flow (>5m thick)						
GRAINSIZE:	cryptocrystalline						
TEXTURE:	intersertal,aphyric						
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	0						
MICROPHENOCRYST							
plagioclase	1	5		0.4x1	0.1x0.6	subhedral	
pyroxene	0.1	10		0.5	0.2	subhedral	plagioclase intergrown
VESICLES	15			2.5	1	low sphericity	
GROUNDMASS	88						
plagioclase	15	5			0.02x0.15	subhedral	
Opaque Minerals	5	10		0.1	0.05	skeletal	
glass	80	100					
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
brown clay	5					plagioclase	
brown clay	5					plagioclase	
Fe oxyhydroxide	10					magnetite	
brown clay	100					glass	
brown clay	10					pyroxene	
calcite	20					vesicle	
pyrite	trace					vesicle	
brown clay	50					vesicle	
STRUCTURE	Subophitic structure.						
COMMENTS							
SUMMARY DESCRIPTION	Aphyric Vesicular Intersertal Basalt; Cryptocrystalline with microphenocrysts of plagioclase; Center part of a ~5m massive flow; Vesicularity 15%; Crystallinity: 21%; Alteration Degree: 80%; Veins: Filled with brown clays, calcite and a trace of pyrite; Vesicle Filling: Calcite with brown clays; Structure: Subophitic structure.						

THIN SECTION:	324-U1347A-22R-4-W 1_2-TS119			Piece No:		Unit:72	OBSERVER:THIN SECTION:TS119
ROCK NAME:	aphyric basalt						
WHERE SAMPLED:	pipe vesicle filled with segregated melt in the middle part of massive flow						
GRAINSIZE:	very fine grained						
TEXTURE:	intersertal,aphyric						
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	0						
MICROPHENOCRYST							
pyroxene	0.1	40		0.4	0.2	subhedral	
plagioclase	2	60		0.4x0.8	0.2x0.4	subhedral	
VESICLES	7			2	0.3	low sphericity	
GROUNDMASS	99						
glass	87	100					
opaque Minerals	3	0			0.1		
plagioclase	10	60			0.05x0.2	acicular	
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
brown-bronze clays	40					Olivine	
white clays	40					pyroxene	
white clays	60					Plagioclase	
brown clays	100					glass	pyrite grains are disseminated in the groundmass
calcite	60					Olivine	
brown clays						vesicle	as rim
calcite						vesicle	mixture of calcite and white clays
STRUCTURE	Subophitic structure in coarse grained part.						
COMMENTS							
SUMMARY DESCRIPTION	Aphyric Vesicular Intersertal Basalt; Very fine grained with microphenocrysts of plagioclase; Microcrystalline in aggregate; Center part of a massive flow including pipe vesicle filled with melt aggregate; Vesicularity 7%; Crystallinity: 15%; Alteration Degree: 92%; Veins: Filled with brown clays, calcite; Vesicle Filling: Calcite with brown clays; Structure: Subophitic structure away from aggregate.						

THIN SECTION:	324-U1347A-22R-5-W 96_98-TS122			Piece No:		Unit:46	OBSERVER:THIN SECTION:TS122
ROCK NAME:	Sparsely plagioclase phyric basalt						
WHERE SAMPLED:	Lower part of massive flow unit						
GRAINSIZE:	very fine grained						
TEXTURE:	sparsely phyric,intersertal						
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	3						
plagioclase	3	10		2.6x2	1.4x0.4	subhedral	
MICROPHENOCRYST							
pyroxene	2	10		0.6x0.5	0.3x0.3	subhedral	
olivine	0.1	100		1.6x0.6	0.4x0.2	subhedral	skeletal
VESICLES	1			1.6	0.3	low sphericity	
GROUNDMASS	95						
plagioclase	7	15		0.3x0.05	0.2x0.05	acicular	
opaque Minerals	1	0		0.02x0.02	0.02x0.02	subhedral	
glass	87	100					
pyroxene	5	15		0.2x0.2	0.1x0.1	subhedral	
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
brown clays	50					olivine	
brown clays	100					glass	
brown clays	10					plagioclase	
brown clays	15					plagioclase	
brown clays	15					pyroxene	
calcite	50					olivine	
brown clays	10					pyroxene	
calcite						vesicle	alteration halo of brown clays and opaques
light brown clay						vesicle	along the rim
STRUCTURE	Ophitic structure.						
COMMENTS							
SUMMARY DESCRIPTION	Sparsely Plagioclase-Phyric Intersertal Basalt; Very fine grained with microphenocrysts of plagioclase; Lower part of a massive flow; Vesicularity 1%; Crystallinity: 17%; Alteration Degree: 85%; Veins: None; Vesicle Filling: Calcite with light brown clays; Structure: Subophitic structure.						

THIN SECTION:	324-U1347A-23R-2-W 100_103-TS125			Piece No:		Unit:48	OBSERVER:THIN SECTION:TS125
ROCK NAME:	aphyric basalt						
WHERE SAMPLED:	middle part of thin inflation unit						
GRAINSIZE:	very fine grained						
TEXTURE:	aphyric,intersertal						
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	0						
MICROPHENOCRYST							
plagioclase	3	10		1.0x0.6	0.8x0.4	tabular	
olivine	0.1	100		0.6x0.3	0.6x0.3	subhedral	
VESICLES	2			0.8	0.4	low sphericity	
GROUNDMASS	97						
plagioclase	15	40		0.5x0.2	0.4x0.05		
opaque Minerals	5	0		0.1x0.1	0.1x0.1	subhedral	
glass	70	100					
pyroxene	10	30		0.4x0.3	0.2x0.2	subhedral	
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
brown clays	100					glass	
white clays	15					pyroxene	
white-brown clays	10					plagioclase	
brown clays	30					pyroxene	
brown clays	90					olivine	
calcite	10					olivine	
brown clays	40					plagioclase	
calcite						vesicle	
white clay						vesicle	rim of brownish clay
STRUCTURE	Subophitic structure. Fine groundmass around amygdules. One vein of 1.5 mm thickness.						
COMMENTS							
SUMMARY DESCRIPTION	Aphyric Intersertal Basalt; Very fine grained with pheno/microphenocrysts of plagioclase; Middle of thin inflation unit; Vesicularity 2%; Crystallinity: 32%; Alteration Degree: 77%; Veins: Complex veining with calcite, brown and white clays, and pyrite filling; Vesicle Filling: Calcite, White clays; Structure: Subophitic structure. Fine groundmass around amygdules. One vein of 1.5 mm thickness.						

THIN SECTION:	324-U1347A-23R-2-W 115_118-TS123			Piece No:		Unit:48	OBSERVER:THIN SECTION:TS123
ROCK NAME:	sparsely plagioclase phyric basalt						
WHERE SAMPLED:	middle part of thin inflation unit						
GRAINSIZE:	very fine grained						
TEXTURE:	intergranular,sparsely phyric						
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	1						
plagioclase	1	10		1.2x0.6	1.0x0.4	tabular	
MICROPHENOCRYST							
plagioclase	3	10		0.8x0.6	0.6x0.3	tabular	
pyroxene	2	100		0.8x0.6	0.6x0.5	subhedral	
VESICLES	2			1.6	0.1	low sphericity	
GROUNDMASS	94						
plagioclase	10	20		0.4x0.1	0.3x0.02	acicular	
opaque Minerals	3	0		0.05x0.05	0.05x0.05	subhedral	
glass	77	100					
pyroxene	10	100		0.3x0.3	0.1x0.1	subhedral	
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
brown clays	10					plagioclase	along the rim
calcite	20					Olivine	intergrowth of both calcite and clays
brown-bronze clays	80					Olivine	
brown clays	100					glass	pyroxenes look relatively fresh either in the groundmass or as phenocryst
brown clays	20					plagioclase	
STRUCTURE	Ophitic structure. Single vein cut groundmass and microphenocryst.						
COMMENTS							
SUMMARY DESCRIPTION	Sparsely Plagioclase-Phyric Intergranular Basalt; Very fine grained with pheno/microphenocrysts of plagioclase; Middle part of an inflation unit; Vesicularity 2%; Crystallinity: 28%; Alteration Degree: 86%; Veins: Calcite, white clay and pyrite filling; Vesicle Filling: None; Structure: Ophitic structure. Single vein cut groundmass and microphenocryst.						

THIN SECTION:	324-U1347A-23R-3-W 1_4-TS124			Piece No:		Unit:49	OBSERVER:THIN SECTION:TS124
ROCK NAME:	aphyric basalt						
WHERE SAMPLED:	Top of thin inflation unit						
GRAINSIZE:	very fine grained						
TEXTURE:	aphyric,hyalophytic						
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	0.5						
plagioclase	0.5	10		2.0x1.8		tabular	
MICROPHENOCRYST							
olivine	0.1	100		0.3x0.3	0.2x0.2	subhedral	
plagioclase	2	10		0.8x0.2	0.6x0.2	subhedral	
VESICLES	1			1.4	0.2	low sphericity	
GROUNDMASS	99						
opaque Minerals	1	0		0.3x0.2	0.2x0.2	subhedral	
plagioclase	10	10		0.5x0.1	0.3x0.1	acicular	
pyroxene	5	10		0.6x0.2	0.4x0.2	subhedral	
glass	84	100					
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
brown clays						glass	alteration degree of glass varies from none to highly altered
bronze-brown clays						olivine	phenocryst of plagioclase and pyroxene are relatively fresh
STRUCTURE	Subophitic structure. Some veins are heterogeneously distributed.						
COMMENTS							
SUMMARY DESCRIPTION	Aphyric Hyalophytic Basalt; Very fine grained with pheno/microphenocrysts of plagioclase; Top of inflation unit; Vesicularity 0%; Crystallinity: 18%; Alteration Degree: 84%; Veins: Three generations with variably palagonite (A), sulfide (B) and calciate and fibrous brown clays (C); Vesicle Filling: None; Structure: Subophitic structure. Some veins are heterogeneously distributed.						

THIN SECTION:	324-U1347A-23R-4-W 39_41-TS126			Piece No:		Unit:52	OBSERVER:THIN SECTION:TS126
ROCK NAME:	aphyric basalt						
WHERE SAMPLED:	middle part of thin inflation unit						
GRAINSIZE:	very fine grained						
TEXTURE:	intersertal,aphyric						
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	0						
MICROPHENOCRYST							
plagioclase	2	5		0.8x0.6	0.6x0.4	tabular	
olivine	0.1	100		0.6x0.4	0.4x0.3	subhedral	
VESICLES	1			1.2	0.3	moderately spherical	
GROUNDMASS	98						
opaque Minerals	1	0		0.02x0.02	0.02x0.02	subhedral	
glass	91	100					
pyroxene	3	10		0.5x0.4	0.4x0.2	subhedral	
plagioclase	5	10		0.6x0.1	0.3x0.05	acicular	
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
bronze-brown clays	50					olivine	
calcite	50					olivine	
brown clays	10					Pyroxene	
brown clays	10					Plagioclase	
white clays	5					pyroxene	along the rims
white clays	5					plagioclase	along the rims
brown clays	100					glass	
light brown clay						vesicle	as rim
calcite						vesicle	
STRUCTURE	Subophitic structure.						
COMMENTS							
SUMMARY DESCRIPTION	Aphyric Intersertal Basalt; Very fine grained with pheno/microphenocrysts of plagioclase; Middle of thin inflation unit; Vesicularity 1%; Crystallinity: 11%; Alteration Degree: 90%; Veins: None: Calcite, Light brown clays; Structure: Subophitic structure.						

THIN SECTION:	324-U1347A-23R-6-W 95_96-TS127			Piece No:		Unit:53	OBSERVER:THIN SECTION:TS127
ROCK NAME:	aphyric basalt						
WHERE SAMPLED:	middle part of inflation unit						
GRAINSIZE:	very fine grained						
TEXTURE:	aphyric,intersertal						
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	0						
MICROPHENOCRYST							
plagioclase	2	50		1.0x1.0	1.0x0.4	tabular	
olivine	0.1	100		1.0x1.0	0.5x0.5	subhedral	
VESICLES	3			1.2	0.4	low sphericity	
GROUNDMASS	98						
plagioclase							
glass	64	100					
pyroxene							
opaque Minerals							
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
brown clays							
white clays							
brown clays							
calcite						vesicle	
brown clays						vesicle	Alteration halo around the vesicles of
STRUCTURE	Subophitic structure. Fine groundmass around amygdules.						
COMMENTS							
SUMMARY DESCRIPTION	Aphyric Intersertal Basalt; Very fine grained with pheno/microphenocrysts of plagioclase; Middle of inflation unit; Vesicularity 3%; Crystallinity: 37%; Alteration Degree: 77%; Veins: Second generation with only light brown clays infilling: Two types filled with brown clays (A) and calcite (B); Structure: Subophitic structure. Fine groundmass around amygdules.						

THIN SECTION:	324-U1347A-24R-1-W 77_79-TS128			Piece No:		Unit:53	OBSERVER:THIN SECTION:TS128
ROCK NAME:	aphyric basalt						
WHERE SAMPLED:	middle part of thick massive unit						
GRAINSIZE:	very fine grained						
TEXTURE:	aphyric,intersertal						
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	0						
MICROPHENOCRYST							
plagioclase	2	10		1.0x0.8	1.0x0.4	tabular	
olivine	0.1	100		0.8x0.4		subhedral	
VESICLES	2			1.2	0.6	moderately spherical	
GROUNDMASS	98						
glass	60	100					
pyroxene							
plagioclase							
opaque Minerals							
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
brown clays	70					plagioclase	
bronze-brown clays	50					olivine	
white-brown clays	10					pyroxene	
calcite	50					olivine	
white-brown clays	10					plagioclase	
brown clays	30					pyroxene	
brown clays	100					glass	
calcite						vesicle	
brown clay						vesicle	
STRUCTURE	Subophitic structure. Irregular veins heterogeneously distributed.						
COMMENTS							
SUMMARY DESCRIPTION	Aphyric Intersertal Basalt; Very fine grained with pheno/microphenocrysts of plagioclase; Middle of thick massive inflation unit; Vesicularity 2%; Crystallinity: 41%; Alteration Degree: 79%; Veins: Calcite filling only; Vesicle Filling: Two types filled with brown clays (A) and calcite (B); Structure: Subophitic structure. Irregular veins heterogeneously distributed.						

THIN SECTION:	324-U1347A-24R-2-W 64_67-TS129			Piece No:		Unit:53	OBSERVER:THIN SECTION:TS129
ROCK NAME:	aphyric basalt						
WHERE SAMPLED:	Interior of massive basalt						
GRAINSIZE:	very fine grained						
TEXTURE:	sparsely phyric,intersertal						
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	1						
plagioclase	1	20		2x1	1x0.5	euhedral to subhedral	
olivine	0.1	100		0.5x0.5	0.3x0.3	subhedral	altered to saponite
MICROPHENOCRYST							
VESICLES	2			0.4	0.2	low sphericity	
GROUNDMASS	99						
plagioclase	40	20		0.5x0.2	0.4x0.2	lath	
Opaque Minerals	2	10		0.2x0.1	0.1x0.1	skeletal	
Augite	40	20		0.5x0.4	0.3x0.2	fibrous, dendritic	
glass	18	100					
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
brown clay	100					glass	
Fe oxyhydroxide	10					magnetite	
brown clay	20					plagioclase	
saponite	40					olivine	
brown clay	20					clinopyroxene	
calcite	60					olivine	
brown clay	20					vesicle	
calcite	20					vesicle	
STRUCTURE	Massive structure with irregular veins filled with polycrystalline calcite.						
COMMENTS							
SUMMARY DESCRIPTION	Aphyric Intersertal Basalt; Very fine grained with pheno/microphenocrysts of plagioclase; Interior of massive inflation unit; Vesicularity 2%; Crystallinity: 82%; Alteration Degree: 34%; Veins: Calcite or calcite and brown clay filling; Vesicle Filling: Brown clay, Calcite; Structure: Massive structure with irregular veins filled with polycrystalline calcite.						

THIN SECTION:	324-U1347A-24R-3-W 57_58-TS130			Piece No:		Unit:53	OBSERVER:THIN SECTION:TS130
ROCK NAME:	sparsely phyric basalt						
WHERE SAMPLED:	lower part of thick massive unit						
GRAINSIZE:	very fine grained						
TEXTURE:	sparsely phyric,intersertal						
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	2						
plagioclase	2	20		1.2x0.6	1x0.8	tabular	
MICROPHENOCRYST							
olivine	0.1	100		0.4x0.3		euhedral	
VESICLES	3			0.8	0.3	moderately spherical	
GROUNDMASS	97						
glass	65	100					
plagioclase	25	20		0.6x0.2	0.4x0.1	acicular	
pyroxene	7	20		0.4x0.3	0.3x0.2	subhedral	
Opaque Minerals	3	5		0.1x0.1	0.1x0.1	subhedral	
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
Fe oxyhydroxide	5					magnetite	
calcite	90					olivine	
brown clay	20					plagioclase	
brown clay	100					glass	
brown clay	20					pyroxene	
brown clay	10					olivine	
brown clay	30					vesicle	
calcite	50					vesicle	
STRUCTURE	Massive structure, some micro-cracks cut plagioclase phenocrysts.						
COMMENTS							
SUMMARY DESCRIPTION	Sparsely Phyric Intersertal Basalt; Very fine grained with pheno/microphenocrysts of plagioclase; Lower part of thick massive inflation unit; Vesicularity 3%; Crystallinity: 36%; Alteration Degree: 71%; Veins: None; Vesicle Filling: Brown clay, Calcite; Structure: massive structure, some micro-cracks cut plagioclase phenocryst.						

THIN SECTION:	324-U1347A-24R-7-W 19_22-TS132			Piece No:		Unit:61	OBSERVER:THIN SECTION:TS132
ROCK NAME:	sparsely plagioclase-phyric basalt						
WHERE SAMPLED:	top chilled margin of pillow lava						
GRAINSIZE:	cryptocrystalline						
TEXTURE:	sparsely phyric,spherulitic						
PRIMARY	PERCENT	REL. VOL.	SIZE(mm)				
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS							
plagioclase	1	1		2x4	1x1	glomerocryst	
MICROPHENOCRYST							
pyroxene	0.1	1			0.4	subhedral	
VESICLES	1			2	0.5	low sphericity	
GROUNDMASS	99						
plagioclase	5	1		0.2x0.5	0.05x0.5	blocky and acicular	
pyroxene	5	1			0.2	subhedral	plagioclase intergrown
glass+sphelurite	90	50					fresh glass preserved
SECONDARY			SIZE(mm)				
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
palagonite	50					glass	
brown clay	trace					pyroxene	
brown clay	trace					plagioclase	
STRUCTURE	Chilled margin. with post cooling joints or veins.						
COMMENTS							
SUMMARY DESCRIPTION	Sparsely-Phyric Spherulitic Basalt; Very fine grained with pheno/microphenocrysts of tabular plagioclase and glomerocrysts; Top of chilled margin of pillow lava; Vesicularity 1%; Crystallinity: 11%; Alteration Degree: 45%; Veins: None; Vesicle Filling: None; Structure: Chilled margin with post cooling joints. Fresh glass preserved.						

THIN SECTION:	324-U1347A-24R-7-W 79_80-TS133			Piece No:		Unit:61	OBSERVER:THIN SECTION:TS133
ROCK NAME:	massive basalt						
WHERE SAMPLED:	bottom of the massive flow						
GRAINSIZE:	very fine grained						
TEXTURE:	intersertal,sparsely phyric						
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	2						
plagioclase	1	10		2x0.5	1x0.5	euhedral to subhedral	some glomerocrysts
pyroxene	1	10		1x0.6	0.8x0.5	euhedral to subhedral	
MICROPHENOCRYST							
olivine	0.1	100		0.8x0.8	0.5x0.5	subhedral	
VESICLES				0.2x0.2	0.1x0.1	low sphericity	
GROUNDMASS	98						
pyroxene	40	20		0.4x0.3	0.2x0.2	subhedral, fibrous. dendritic	
plagioclase	40	20		0.6x0.2	0.4x0.2	lath to acicular	
glass	18	100					
opaque Minerals	2	5		0.04x0.04	0.02x0.02	skeletal	
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
Fe oxyhydroxide						magnetite	
brown clay						plagioclase	
brown clay						glass	
saponite						glass	the saponite is brown fibrous and has 3rd order birifringence
brown clay						plagioclase	
brown clay						pyroxene	
STRUCTURE	Massive structure with one irregular joint.						
COMMENTS							
SUMMARY DESCRIPTION	Sparsely Phyric Intersertal Basalt; Very fine grained with pheno/microphenocrysts of plagioclase and clinopyroxene; Sometimes glomerocrystic; Near base of thick massive inflation unit; Vesicularity 0%; Crystallinity: 82%; Alteration Degree: 34%; Veins: None; Vesicle Filling: None; Massive structure with one irregular joint.						

THIN SECTION:	324-U1347A-24R-9-W 8_9-TS134			Piece No:		Unit:65	OBSERVER:THIN SECTION:TS134
ROCK NAME:	massive basalt						
WHERE SAMPLED:	interior of massive basalt						
GRAINSIZE:	very fine grained						
TEXTURE:	sparsely phyric,intersertal						
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	2						
plagioclase	1	15		1.5x1.0	1.0x0.5	euhedral to subhedral	
MICROPHENOCRYST							
pyroxene	1	15		0.6x0.6	0.4x0.4	subhedral	
VESICLES	2			1.2x1.2		low sphericity	
GROUNDMASS	98						
plagioclase	30	15		0.5x0.2	0.4x0.2	acicular, skeletal	
pyroxene	40	15		0.4x0.4x	0.2x0.2	subhedral, dendritic	
Opaque Minerals	1	5		0.05x0.02	0.02x0.02	skeletal	
glass	27	100					
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
brown clay	15					plagioclase	
Fe oxyhydroxide	5					magnetite	
saponite	40					glass	brown color and 3rd order birifringence
brown clay	15					pyroxene	
brown clay	60					glass	
brown clay	15					plagioclase	
saponite	10					vesicle	
STRUCTURE	Amygdalaoidal structure and massive structure, some phenocrysts and amygdules are cut by conjugate joints.						
COMMENTS							
SUMMARY DESCRIPTION	Sparsely Phyric Intersertal Basalt; Very fine grained with pheno/microphenocrysts of plagioclase; Interior of massive inflation unit; Vesicularity 2%; Crystallinity: 72%; Alteration Degree: 39%; Veins: None; Vesicle Filling: Saponite; Amygdaloidal structure and massive structure, some phenocrysts and amygdules are cut by conjugate joints.						

THIN SECTION:	324-U1347A-25R-1-W 5_9-TS135			Piece No:		Unit:65	OBSERVER:THIN SECTION:TS135
ROCK NAME:	sparsely phyric basalt						
WHERE SAMPLED:	mid part of massive flow						
GRAINSIZE:	very fine grained						
TEXTURE:	intersertal,sparsely phyric						
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	1						
plagioclase	1	40		1.8x0.8	1x0.3	tabular	
MICROPHENOCRYST							
VESICLES	3			1.4	0.6	highly spherical	
GROUNDMASS	99						
pyroxene	10	40		0.4x0.3	0.3x0.3	subhedral	
opaque Minerals	3	0		0.04x0.04x	0.04x0.04	subhedral	
glass	62	100					
plagioclase	25	40		0.6x0.4	0.4x0.1	acicular	
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
brown clays	40					pyroxene	
brown clays	40					plagioclase	
white clays	40					plagioclase	
white clays	30					pyroxene	
brown clays	100					glass	
clay						vesicle	
STRUCTURE	Amygdaloidal structure amd chilled margin related to cracking.						
COMMENTS							
SUMMARY DESCRIPTION	Sparsely Phyric Intersertal Basalt; Very fine grained with pheno/microphenocrysts of tabular plagioclase; Interior of massive inflation unit; Vesicularity 3%; Crystallinity: 39%; Alteration Degree: 76%; Veins: Filled with calcite and green clay; Vesicle Filling: Clay; Amygdaloidal structure amd chilled margin related to cracking.						

THIN SECTION:	324-U1347A-25R-2-W 26_28-TS136			Piece No:		Unit:67	OBSERVER:THIN SECTION:TS136
ROCK NAME:	massive basalt						
WHERE SAMPLED:	interior of massive basalt						
GRAINSIZE:	microcrystalline						
TEXTURE:	intersertal,sparsely phyric						
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	2						
plagioclase	2	10		2x1.6	1.5x1	euhedral to subhedral	mostly glomerocrysts
MICROPHENOCRYST							
olivine	0.1	100		0.8x0.6	0.5x0.5	euhedral to subhedral	
VESICLES	1			1.6	1	low sphericity	pyrite in vesicle
GROUNDMASS	98						
pyroxene	35	10		0.3x0.2	0.1x0.1	subhedral, dendritic	
plagioclase	35	10		0.4x0.1	0.2x0.05	acicular, skeletal	
glass	29	100					
opaque Minerals	1	5		0.03x0.02	0.02x0.02	skeletal	
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
brown clay	10					plagioclase	
brown clay	10					plagioclase	
Fe oxyhydroxide	5					magnetite	
brown clay	100					glass	
brown clay	10					pyroxene	
brown clay	15					plagioclase	segregated melt in vug
brown clay	5					glass	
Fe oxyhydroxide	100					magnetite	
pyrite	5					vesicle	fills vesicles close to the vug
gray clay	80					vesicle	showing shrinkage fractures
saponite	5					vesicle	on the rim of vesicles
STRUCTURE	Amygdaloidal structure amd chilled margin related to cracking.						
COMMENTS							
SUMMARY DESCRIPTION	Sparsely Phyric Intersertal Basalt; Microcrystalline with pheno/microphenocrysts of tabular plagioclase; Many glomerocrysts and melt segregations; Interior of massive inflation unit; Vesicularity 0%; Crystallinity: 72%; Alteration Degree: 36%; Veins: None; Vesicle Filling: Gray clay, saponite and pyrite; Vug Filling: Calcite, gray glay and saponite; Amygdaloidal structure amd chilled margin related to cracking.						

THIN SECTION:	324-U1347A-25R-2-W 78_79-TS137			Piece No:		Unit:67	OBSERVER:THIN SECTION:TS137
ROCK NAME:	massive basalt						
WHERE SAMPLED:	interior of massive basalt						
GRAINSIZE:	microcrystalline						
TEXTURE:	intersertal,sparsely phyric						
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	2						
plagioclase	2	5		1.5x1.0	1x0.6	subhedral	mostly glomerocrysts, often with glass inclusions
MICROPHENOCRYST							
olivine	0.1	100		0.8x0.6	0.5x0.5	subhedral	pseudomorphs
VESICLES	2			1	0.5	low sphericity	
GROUNDMASS	98						
pyroxene	15	5		0.1x0.1	0.4x0.2	subhedral	
glass	40	100					
plagioclase	40	5		0.2x0.05	0.4x0.05	laths	
opaque Minerals	1	5		0.1x0.05	0.02x0.02	skeletal	
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
Fe oxyhydroxide	5					magnetite	
brown clay	5					plagioclase	
brown clay	100					glass	
brown clay	5					plagioclase	
brown clay	5					pyroxene	
gray clay	90					vesicle	
saponite	5					vesicle	
STRUCTURE	Massive structure, plagioclase oriented along two prefferential orientations.						
COMMENTS							
SUMMARY DESCRIPTION	Sparsely Phyric Intersertal Basalt; Microcrystalline with pheno/microphenocrysts of tabular plagioclase; Many glomerocrysts some with glass inclusions; Interior of massive inflation unit; Vesicularity 2%; Crystallinity: 57%; Alteration Degree: 46%; Veins: None; Vesicle Filling: Gray clay, saponite; Structure: Massive structure, plagioclase oriented along two prefferential orientations.						

THIN SECTION:	324-U1347A-25R-3-W 138_142-TS138			Piece No:		Unit:68	OBSERVER:THIN SECTION:TS138
ROCK NAME:	sparsely phyric basalt						
WHERE SAMPLED:	mid part of thin inflation unit						
GRAINSIZE:	very fine grained						
TEXTURE:	sparsely phyric,intersertal						
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	2						
plagioclase	2	5		1.6x0.8	1.0x0.6	tabular	
MICROPHENOCRYST							
olivine	0.1	100		0.4x0.3		subhedral	
VESICLES	2			0.7	0.2	moderately spherical	
GROUNDMASS	98						
opaque Minerals	3	5		0.1x0.1	0.05x0.05	subhedral	
pyroxene	10	10		0.3x0.2	0.2x0.2	subhedral	
glass	62	100					
plagioclase	25	10		0.6x0.1	0.4x0.1	acicular	
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
brown clay	100					pyroxene	
brown clay	10					plagioclase	
brown clay	100					glass	
brown clay	5					pyroxene	
brown clay	10					pyroxene	
Fe oxyhydroxide	5					magnetite	
brown clay	50					plagioclase	
brown clay	5					plagioclase	
brown clay	100					glass	
brown clay	99					vesicle	
pyrite	1					vesicle	
STRUCTURE	Massvie structure cut by one zigzaged extensional vein filled with polycrystalline calcites.						
SUMMARY DESCRIPTION	Sparsely Phyric Intersertal Basalt; Very fine grained with pheno/microphenocrysts of tabular plagioclase; Interior of thin inflation unit; Vesicularity 2%; Crystallinity: 39%; Alteration Degree: 64%; Veins: Filled with brown clay, pyrite and gray clay; Vesicle Filling: Calcite, pyrite; Structure: Massvie structure cut by one zigzaged extensional vein filled with polycrystalline calcites. Vein halo exists of brown clay.						

THIN SECTION:	324-U1347A-25R-4-W 98_99-TS139			Piece No:		Unit:69	OBSERVER:THIN SECTION:TS139
ROCK NAME:	massive basalt						
WHERE SAMPLED:	interior of massaive basalt unit						
GRAINSIZE:	very fine grained						
TEXTURE:	sparsely phyric,intersertal						
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	2						
plagioclase	2	5		1.4	1.2	subhedral	glomerocrysts
MICROPHENOCRYST							
pyroxene	0.1	10		0.8	0.6	anhedral to subhedral	
VESICLES	0.5			1	0.7	highly spherical	
GROUNDMASS	98						
pyroxene	10	10		0.1x0.1	0.1x0.1	subhedral	
glass	70	100					
Opaque Minerals	3	5		0.05	0.02	subhedral	
plagioclase	15	10		0.45x0.05	0.2x0.05	columnar to laths	
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
brown clay	5					plagioclase	
Fe oxyhydroxide	5					magnetite	
brown clay	10					pyroxene	
pyrite	tr					glass	
brown clay	10					plagioclase	
brown clay	100					glass	
brown clay	100					vesicle	
STRUCTURE	Massvie structure.						
COMMENTS							
SUMMARY DESCRIPTION	Sparsely Phyric Intersertal Basalt; Very fine grained with pheno/microphenocrysts of tabular plagioclase; Interior of massive inflation unit; Vesicularity 0.5%; Crystallinity: 30%; Alteration Degree: 73%; Veins: None; Vesicle Filling: Brown clays; Structure: Massvie						

THIN SECTION:	324-U1347A-25R-6-W 41_42-TS140			Piece No:		Unit:72	OBSERVER:THIN SECTION:TS140
ROCK NAME:	sparsely phyric basalt						
WHERE SAMPLED:	low part of thin inflation unit						
GRAINSIZE:	very fine grained						
TEXTURE:	sparsely phyric,intersertal						
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	1						
plagioclase	1	15		1.6x0.5	1x0.4	tabular	
MICROPHENOCRYST							
olivine	0.1	100		0.4x0.2		subhedral	
VESICLES	1			0.4	0.2	moderately spherical	
GROUNDMASS	99						
opaque Minerals	3	0		0.05x0.05	0.02x0.02	subhedral	
glass	70	100					
plagioclase	20	50		0.4x0.05	0.3x0.05	acicular	
pyroxene	7	40		0.2x0.2	0.2x0.1	subhedral	
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
bronze-brown clays	30					olivine	
brown clays	100					glass	
brown clays	40					pyroxene	
light brown clays	15					plagioclase	
brown clays	50					plagioclase	
light brown clays	35					pyroxene	
calcite	70					olivine	
brown clays						vesicle	as rim
calcite						vesicle	
STRUCTURE	Massvie structure.						
COMMENTS							
SUMMARY DESCRIPTION	Sparsely Phyric Intersertal Basalt; Very fine grained with pheno/microphenocrysts of tabular plagioclase; Lower part of thin inflation unit; Vesicularity 1%; Crystallinity: 31%; Alteration Degree: 82%; Veins: None; Vesicle Filling: Calcite, Brown clays; Structure: Massvie structure.						

THIN SECTION:	324-U1347A-25R-6-W 82_86-TS141			Piece No:		Unit:74	OBSERVER:THIN SECTION:TS141
ROCK NAME:	aphyric basalt						
WHERE SAMPLED:	bottom chilled margin of thin inflation unit						
GRAINSIZE:	glassy [324]						
TEXTURE:	aphyric,intersertal						
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	0						
MICROPHENOCRYST							
plagioclase	1	10		0.8x0.6	0.6x0.4	tabular	
olivine	0.1	100		0.2x0.1		subhedral	
VESICLES	5			1.8	0.6	moderately spherical	
GROUNDMASS	99						
plagioclase	10	10		0.4x0.05	0.2x0.02	acicular	
pyroxene	3	10		0.3x0.2	0.2x0.1	subhedral	
glass	87	95					
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
brown clays	100					olivine	
brown clays	10					plagioclase	
brown clays	95					glass	Variation in the alteration degree from the top to the bottom of TS changing from reltively fresh to highly-completely altered
brown clays	10					pyroxene	
STRUCTURE	Subophitic structure also in glassy part. Vesicules are heterogeneously distributed.						
COMMENTS							
SUMMARY DESCRIPTION	Aphyric Hyalophytic Spherulitic Basalt; Glassy with pheno/microphenocrysts of tabular plagioclase; Bottom chilled margin of inflation unit, fresh glass preserved; Vesicularity 5%; Crystallinity: 14%; Alteration Degree: 83%; Veins: Light brown clay filling; Vesicle Filling: None; Structure: Subophitic structure also in glassy part. Vesicles are heterogeneously distributed.						

THIN SECTION:	324-U1347A-26R-1-W 108_111-TS143			Piece No:		Unit:79	OBSERVER:THIN SECTION:TS143
ROCK NAME:	sparsely phyric basalt						
WHERE SAMPLED:	lower chilled margin of pillow						
GRAINSIZE:	very fine grained						
TEXTURE:	sparsely phyric,intersertal						
PRIMARY	PERCENT	REL. VOL.	SIZE(mm)				
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	1						
plagioclase	1	2		1.6x0.8	1.2x0.4	tabular	
MICROPHENOCRYST							
plagioclase	2	2		0.6x0.3	0.5x0.2	tabular	
olivine	0.1	100		0.3x0.3		subhedral	
VESICLES	5			3	0.4	low sphericity	
GROUNDMASS	97						
plagioclase	10	2		0.5x0.02	0.2x0.02	acicular	
pyroxene	3	2		0.3x0.2	0.2x0.2	subhedral	
glass	87	95					
SECONDARY			SIZE(mm)				
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
brown clays	2					plagioclase	
brown clays						glass	variation of alteration degree from 0 to 100% depending on where in the TS
brown clays	2					Pyroxene	
brownish clays	100					vesicle	
STRUCTURE	Chilled margin, massvie structure with several irregular joints.						
COMMENTS							
SUMMARY DESCRIPTION	Aphyric Hyalophytic Spherulitic Basalt; Glassy with pheno/microphenocrysts of tabular plagioclase; Bottom chilled margin of pillow lava, fresh glass preserved; Vesicularity 5%; Crystallinity: 16%; Alteration Degree: 80%; Veins: Brown clay filling; Vesicle Filling: None; Structure: Chilled margin, massive structure with several irregular joints.						

THIN SECTION:	324-U1347A-26R-2-W 77_78-TS144			Piece No:		Unit:80	OBSERVER:THIN SECTION:TS144
ROCK NAME:	sparsely phyric basalt						
WHERE SAMPLED:	upper part of thick massive flow						
GRAINSIZE:	very fine grained						
TEXTURE:	sparsely phyric,intergranular						
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	2						
plagioclase	2	5		1.6x0.6	1.0x0.6	tabular	
MICROPHENOCRYST							
olivine	0.1	100		0.4x0.3		subhedral	
plagioclase	1	5		0.8x0.4	0.6x0.4	tabular	
VESICLES	1			1	1	moderately spherical	
GROUNDMASS	97						
clinopyroxene	15	5		0.3x0.2	0.2x0.1	subhedral	
plagioclase	25	5		0.5x0.1	0.5x0.05	acicular	
glass	55	100					
opaque Minerals	5	0		0.05x0.05	0.05x0.05	subhedral	
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
brown-bronze clays	60					olivine	
brown clays	5					plagioclase	
brown clays	5					pyroxene	
brown clays	100					glass	
calcite	40					olivine	
calcite						vesicle	
STRUCTURE	Massive structure.						
COMMENTS							
SUMMARY DESCRIPTION	Sparsely-Phyric Intergranular Basalt; Very fine grained with pheno/microphenocrysts of tabular plagioclase; Upper part of thick massive flow; Vesicularity 1%; Crystallinity: 47%; Alteration Degree: 55%; Veins: None; Vesicle Filling: Calcite; Structure: Massive structure.						

THIN SECTION:	324-U1347A-27R-1-W 45_48-TS145			Piece No:		Unit:80	OBSERVER:THIN SECTION:TS145
ROCK NAME:	sparsely phyric basalt						
WHERE SAMPLED:	upper part of thick massive flow						
GRAINSIZE:	very fine grained						
TEXTURE:	sparsely phyric,intersertal						
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	1						
plagioclase	1	25		1.2x1.0	1.0x0.5	tabular	
MICROPHENOCRYST							
plagioclase	1	25		0.7x0.4	0.6x0.3	tabular	
VESICLES	1			1.6	0.4	moderately spherical	
GROUNDMASS	98						
glass	52	100					
clinopyroxene	15	100		0.3x0.3	0.2x0.1	subhedral	
plagioclase	30	25		0.6x0.05	0.4x0.02	acicular	
opaque Minerals	3	0		0.05x0.05	0.05x0.05	subhedral	
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
brown clays	25					pyroxene	
calcite	70					olivine	
brown clays	100					glass	sulfides are present
brown-bronze clays	30					olivine	
brown clays	25					plagioclase	
STRUCTURE	Massive structure with one vein filled with en echelon calcites.						
COMMENTS							
SUMMARY DESCRIPTION	Sparsely-Phyric Intersertal Basalt; Very fine grained with pheno/microphenocrysts of tabular plagioclase; Upper part of thick massive flow; Vesicularity 1%; Crystallinity: 49%; Alteration Degree: 74%; Veins: Calcite filling; Vesicle Filling: None; Structure: Massive structure with one vein filled with en echelon calcites.						

THIN SECTION:	324-U1347A-27R-1-W 65_67-TS146			Piece No:		Unit:81	OBSERVER:THIN SECTION:TS146
ROCK NAME:	sparsely phyric basalt						
WHERE SAMPLED:	middle part of thick massive flow						
GRAINSIZE:	very fine grained						
TEXTURE:	sparsely phyric,intersertal						
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	1						
plagioclase	1	40		1.4x0.6	1.0x0.6	tabular	
MICROPHENOCRYST							
olivine	0.1	100		0.6x0.5		subhedral	
plagioclase	2	40		0.7x0.5	0.7x0.5	tabular	
VESICLES	1			0.5	0.3	low sphericity	
GROUNDMASS	97						
glass	50	100					
plagioclase	30	40		0.5x0.05	0.3x0.02	acicular	
clinopyroxene	15	40		0.2x0.2	0.2x0.1	subhedral	
opaque Minerals	5	0		0.05x0.05	0.05x0.05	subhedral	
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
brown clays	40					pyroxene	
brown clays	30					olivine	
brown clays	40					plagioclase	
brown clays	100					glass	
calcite	70					olivine	
STRUCTURE	Massive structure with one joint.						
COMMENTS							
SUMMARY DESCRIPTION	Sparsely-Phyric Intersertal Basalt; Very fine grained with pheno/microphenocrysts of tabular plagioclase; Middle part of thick massive flow; Vesicularity 1%; Crystallinity: 52%; Alteration Degree: 67%; Veins: Calcite filling; Vesicle Filling: None; Structure: Massive structure with one joint.						

THIN SECTION:	324-U1347A-28R-1-W 72_73-TS147			Piece No:		Unit:81	OBSERVER:THIN SECTION:TS147
ROCK NAME:	sparsely phyric basalt						
WHERE SAMPLED:	middle part of massive flow						
GRAINSIZE:	very fine grained						
TEXTURE:	sparsely phyric,intersertal						
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	1						
plagioclase	1	40		1.2x0.8	1.0x0.5	tabular	
MICROPHENOCRYST							
olivine	0.1	100		0.6x0.3		subhedral	
plagioclase	2	40		0.7x0.4	0.6x0.3	tabular	
VESICLES	1			1.6	0.8	low sphericity	
GROUNDMASS	97						
plagioclase	30	40		0.6x0.1	0.5x0.05	acicular	
glass	45	100					
opaque Minerals	5	0		0.1x0.1	0.05x0.05	subhedral	
clinopyroxene	20	40		0.3x0.2	0.2x0.2	subhedral	
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
brown clays	40					pyroxene	
brown clays	40					plagioclase	
brown clays	100					glass	
brown clays	100					vesicle	
STRUCTURE	Massvie structure.						
COMMENTS							
SUMMARY DESCRIPTION	Sparsely-Phyric Intersertal Basalt; Very fine grained with pheno/microphenocrysts of tabular plagioclase; Middle part of thick massive flow; Vesicularity 1%; Crystallinity: 56%; Alteration Degree: 64%; Veins: None; Vesicle Filling: Brown clays; Structure: Massive structure.						

THIN SECTION:	324-U1347A-28R-7-W 50_52-TS148			Piece No:		Unit:81	OBSERVER:THIN SECTION:TS148
ROCK NAME:	sparsely phyric basalt						
WHERE SAMPLED:	middle part of massive flow						
GRAINSIZE:	very fine grained						
TEXTURE:	intersertal,sparsely phyric						
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	1						
plagioclase	1	40		2.8x1.0	1.4x0.6	tabular	
MICROPHENOCRYST							
plagioclase	1	40		0.8x0.4	0.7x0.4	tabular	
olivine	0.1	100		0.6x0.5		subhedral	
VESICLES	1			1.8	0.8	moderately spherical	
GROUNDMASS	98						
glass	40	100					
plagioclase	35	40		0.6x0.2	0.5x0.1	acicular	
clinopyroxene	20	40		0.6x0.4	0.4x0.4	subhedral	
opaque Minerals	5	0		0.2x0.2	0.1x0.1	subhedral	
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
greenish clays	100					glass	
greenish clays	40					Pyroxene	
greenish clays	40					Plagioclase	
bronze-brown clays	70					Olivine	
calcite	30					Olivine	
STRUCTURE	Massive structure. Two kinds of veins in this thin section. One is irregular shape, another one is filled with syntaxial calcite. The former is cut by the later.						
COMMENTS							
SUMMARY DESCRIPTION	Sparsely-Phyric Intersertal Basalt; Very fine grained with pheno/microphenocrysts of tabular plagioclase; Middle part of thick massive flow; Vesicularity 1%; Crystallinity: 61%; Alteration Degree: 62%; Veins: Two generations with calcite and green clays (A) and calcite alone (B); Vesicle Filling: None; Structure: Massive structure. One vein is irregular shape, another one is filled with syntaxial calcite. The former is cut by the later.						

THIN SECTION:	324-U1347A-29R-4-W 119_120-TS149			Piece No:		Unit:81	OBSERVER:THIN SECTION:TS149
ROCK NAME:	sparsely plagioclase phyric basalt						
WHERE SAMPLED:	upper part of flow						
GRAINSIZE:	microcrystalline						
TEXTURE:	sparsely phyric,intersertal						
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	3						
plagioclase	3	10		1x3	1x2	glomerocrysts	
MICROPHENOCRYST							
VESICLES	1			1	0.5	highly spherical	
GROUNDMASS	97						
opaque Minerals	5	0		0.06	0.02	skeletal	
plagioclase	30	10		0.1x0.5	0.02x0.2	acicular	
glass	60	100					
pyroxene	5	40		0.4	0.1	dendritic	
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
Fe oxyhydroxide						magnetite	
brown clay						plagioclase	
brown clay						plagioclase	
brown clay						pyroxene	
brown clay						glass	
calcite	100					vesicle	
STRUCTURE	Plagioclase spherulite and/or fine groundmass partly surround amygdules.						
COMMENTS							
SUMMARY DESCRIPTION	Sparsely-Phyric Intersertal Basalt; Microcrystalline with pheno/microphenocrysts of tabular plagioclase and glomerocrysts; Upper part of thick massive flow; Vesicularity 1%; Crystallinity: 42%; Alteration Degree: 63%; Veins: None; Vesicle Filling: Calcite; Structure: Plagioclase spherulite and/or fine groundmass partly surround amygdules.						

THIN SECTION:	324-U1347A-29R-5-W 51_53-TS150			Piece No:		Unit:81	OBSERVER:THIN SECTION:TS150
ROCK NAME:	aphyric basalt						
WHERE SAMPLED:	flow interior						
GRAINSIZE:	microcrystalline						
TEXTURE:	aphyric,intersertal						
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	0						
MICROPHENOCRYST							
plagioclase	3	30		0.8x1.7	0.2x0.8	tabular	
VESICLES	5			1.5	1	highly spherical	
GROUNDMASS	97						
glass	64	100					
opaque Minerals	3	5		0.06	0.02	skeletal	
pyroxene	3	30		0.4	0.2	dendritic	
plagioclase	30	30		0.2x0.8	0.1x0.4	acicular	
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
Fe oxyhydroxide	5					magnetite	
brown clay	30					pyroxene	
brown clay	100					glass	
brown clay	30					plagioclase	
brown clay	30					plagioclase	
calcite	100					vesicle	
STRUCTURE	Amygdules and vesicles are surrounded by plagioclase spherulites. Subophitic structure.						
COMMENTS							
SUMMARY DESCRIPTION	Sparsely-Phyric Intersertal Basalt; Microcrystalline with pheno/microphenocrysts of tabular plagioclase and glomerocrysts; Interior part of thick massive flow; Vesicularity 5%; Crystallinity: 38%; Alteration Degree: 73%; Veins: None; Vesicle Filling: Calcite; Structure: Amygdules and vesicles are surrounded by plagioclase spherulites. Subophitic structure.						

THIN SECTION:	324-U1347A-29R-5-W 83_84-TS151			Piece No:		Unit:81	OBSERVER:THIN SECTION:TS151
ROCK NAME:	sparsely plagioclase phyric basalt						
WHERE SAMPLED:	flow interior						
GRAINSIZE:	very fine grained						
TEXTURE:	sparsely phyric,intergranular						
PRIMARY	PERCENT	REL. VOL.		SIZE(mm)			
MINERALOGY	ORIGINAL	REPLACED	min.	max.	mode.	MORPHOLOGY	COMMENTS
PHENOCRYSTS	3						
plagioclase	3	30		1.5x3	0.5x1	glomerocryst	
MICROPHENOCRYST							
pyroxene	0.1	20			0.8	glomerocryst	
VESICLES	2			2	1	highly spherical	
GROUNDMASS	97						
glass	30	100					
opaque Minerals	10	5		0.1	0.03	skeletal	
plagioclase	30	30		0.1x0.8	0.03x0.5	acicular	
pyroxene	30	20		0.3	0.1	subhedral	
SECONDARY				SIZE(mm)			
MINERALOGY			min.	max.	mode.	REPLACING/FILLING	COMMENTS
brown clay	30					plagioclase	
brown clay	20					pyroxene	
saponite	40					olivine	
saponite	10					glass	
brown clay	30					plagioclase	
calcite	60					olivine	
Fe oxyhydroxide	5					magnetite	
brown clay	20					pyroxene	
brown clay	90					glass	
saponite	80					vesicle	
gray clay	5					vesicle	
STRUCTURE	Amygdules and vesicles are surrounded by plagioclase spherulites. Ophitic structure.						
COMMENTS							
SUMMARY DESCRIPTION	Sparsely-Phyric Intersertal Basalt; Very fine grained with pheno/microphenocrysts of tabular plagioclase and glomerocrysts; Interior part of thick massive flow; Vesicularity 2%; Crystallinity: 71%; Alteration Degree: 45%; Veins: None; Vesicle Filling: Partially filled by saponite and gray clay; Structure: Amygdules and vesicles are surrounded by plagioclase spherulites. Ophitic structure.						