THIN SECTION LABEL ID:	395E-U1560A-16X-CC-\	N 2/6-TSB-TS110	Thin section no.:	110
Observer:	MH, EA		Piece no.:	1
Total number of domains	:3		Unit/subunit:	1
Thin section summary:	Increase in FeOH overpr Dark grey outer halo defi clays.	inting towards the brown halo as ined by vesicle and groundmass	sociated with the flor replacement by yel	ow margin. Iow-brown
Plane-p	olarized: 63279311	Cross-polarize	d: 63279331	
No. of photomicrographs in da	atabase: 12			
Igneous Petrology				
Lithology:		Style of emplacement:	pillow lava flo	w
Domain number (if >1): 1				

Igneous domain type:

chilled margin

Domain relative abundance (%): 15

Major groundmass texture:

Groundmass grain size (avg):

Phenocrysts	Original (%)	Size MODE (mm)	Shape	Habit	abit Comments			
Olivine	2 0.05 euhedral		euhedral	equant	Mostly altered to iddingsite but some relict fresh domains within crystals, including one with a glassy melt inclusion and bubble.			
Plagioclase	6	6 0.4 euhedral		tabular	Millimeter sized fresh plag phenocrysts, locally seriate to micrometric groundmass laths			
Clinopyroxene	0.5	0.1	euhedral	equant Fresh, some isolated and some as the interstitial phase in glomercrysts plag.				
Groundmass	Original	(%) Co	mment					
Groundmass	88.5	5 Sei ma	iate plag laths that trix with plumose 1	become higher as extures.	pect ratio as they decrease in size, sparsely set in a brownish cryptocrystalline			
Vesicle	Original (%)	Size Mode (mm)	Shape	Comments				
Vesicle	3	0.1	round					

Lithology:

Domain number (if >1):

Igneous domain type: flow interior

2

Major groundmass texture:

Style of emplacement:

pillow lava flow

Domain relative abundance (%): 85 Groundmass grain size (avg):

Phenocrysts	Original (%)	Size MODE (mm)	Shape	Habit	Comments			
Olivine	2	0.05	euhedral	equant	Mostly altered to iddingsite along cracks			
Plagioclase	10	10 0.5 euhedral		tabular	Large plagioclase phenocryst grains observed forming clusters giving rise to glomeroporphyritic texture locally. Twinning in plag grains observed.			
Clinopyroxene	0.5	0.1	euhedral	equant Fresh, some isolated and some as the interstitial phase in glomercr plag.				
Groundmass	Origina	I (%) Coi	nment					
Groundmass	87	Phe	enocrysts of plagio	clase with euhedr	al olivine and clinopyroxene set in a fine grained groundmass.			
Vesicle	Original (%)	Size Mode (mm)	Shape	Comments				
Vesicle	0.5	0.05						

Alteration

Domain type	Alteration %	% Ol repl.	Ol repl. by	% Plag repl.	Plag repl. by	% CPX repl.	CPX repl. by	% groundmass repl.	Groundmass repl. by	% glass repl.	Glass repl. by
background	60				minor clays around grain boundaries		minor clays around grain boundaries	70	brown clay		

Domain type	Alteration %	% Ol repl.	Ol repl. by	% Plag repl.	Plag repl. by	% CPX repl.	CPX repl. by	% groundmass repl.	Groundmass repl. by	% glass repl.	Glass repl. by
other halo-brown	80	100	clay, FeOH	2	FeOH along rims	2	FeOH	90	strong FeOH overprint		

Domain type	Alteration %	% Ol repl.	Ol repl. by	% Plag repl.	Plag repl. by	% CPX repl.	CPX repl. by	% groundmass repl.	Groundmass repl. by	% glass repl.	Glass repl. by
other halo-dark grey	75			5	yellow- orange clay in spots	5	yellow- orange clay in spots	80	brown and yellow- orange clay, less red		

Vein width (mm)	Vein fill sequence (rim to center)	Vein comments	Halo comments
0.02	mixed yellow clay + FeOH		

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THIN SECTION LABEL ID: Observer: Total number of domains Thin section summary:	393-U1560B-2R-1-W 7 MJ, EA : 1 Plagioclase-olivine-pyre intensity is moderate, v	76/77-TSB-TS 168 oxene phyric basalt pillow lava flow with brown and yellow (in halo) clay	Thin section no.: Piece no.: Unit/subunit: , fine-grained. Alte + FeOH.	168 9 1A eration
Plane-po	olarized: 63859721	Cross-polarized	d: 63859741	

No. of photomicrographs in database: 6

Igneous Petrology

Lithology:			plagioclase-olivi phyric basalt pil	ine-pyroxene Iow lava flow	Style of emplacement:	pillow lava flow				
Domain numb	er (if >1):	1							
Igneous domai	in type:		flow interior		Domain relative abundance (%): 100					
Major groundmass texture			variolitic		Groundmass grain size (avg):	fine-grained				
Phenocrysts	Original (%)	Size MOI (mm)	^{DE} Shape	Habit	Comments					
Olivine	0.05	0.2	subhedral	subequant	Sparse ol phenocrysts 0.25mm in size, feebly al boundaries. Some grains are completely altered	tered along cracks and grain d to Fe-OH				
Plagioclase	2	0.3	euhedral	equant	Plagioclase phenocrysts (upto 5mm) often forn sieve texture is observed in few grains.	ning glomerocrysts. Zoning and				
Groundmass	Origina	I (%)	Comment							
Groundmass 97.45 Groundmass altered to brown and y					ow clay + FeOH					
Vesicle	Original (%)	Size Mod (mm)	^e Shape	Comments						
Vesicle 0.5 0.2 round generally unf					ed or mostly with yellow clay lining or completel	y filled, few with brown clay fill				

Domain type	Alteration %	% Ol repl.	Ol repl. by	% Plag repl.	Plag repl. by	% CPX repl.	CPX repl. by	% groundmass repl.	Groundmass repl. by	% glass repl.	Glass repl. by
background	15										

Domain type	Alteration %	% Ol repl.	Ol repl. by	% Plag repl.	Plag repl. by	% CPX repl.	CPX repl. by	% groundmass repl.	Groundmass repl. by	% glass repl.	Glass repl. by
other halo-grey	19										

THIN SECTION LABEL ID: Observer: Total number of domains	393-U1560B-2R-1-W 83/85-TS A. Shchepetkina	SB-TS 165	Thin section no.: Piece no.: Unit/subunit:	165 10 1A
Thin section summary:	Organic-rich micritic limestone in the upper part and less in th structures present in the samp oxidized, forming Fe oxides. The	with foraminifers (~10-12% e lower. Organic matter is d le (~5-10%). Some organic races of angular felspar grai). Micrite is signific ispersed and form matter is pyritized ns.	antly clotted s digitate , some is
Plane-p	olarized: 63832491	Cross-polarized	d: 63832511	
	1850		15608 (165)	
No. of photomicrographs in da	atabase: 22			

THIN SECTION LABEL ID:	393-U1560B-3R-1-W 102/105-TSB-TS 1	66	Thin section no.:	166
Observer:	MJ, EA	F	Piece no.:	15
Total number of domains	:1	ι	Unit/subunit:	1B
Thin section summary:	Plagioclase-olivine phyric basalt sheet la plagioclase, minute olivine grains and po Alteration intensity is moderate, with brow products. Groundmass is locally replaced clay.	va flow, fine graine ssibly cpx set in a f wn and minor yellov d by carbonate, Ol	d, intergranular w fine-grained groun w clay + FeOH as partly replaced by	/ith laths of ndmass. alteration / yellow
Plane-p	olarized: 63832531	Cross-polarized:	63832531	



No. of photomicrographs in database:

7

Igneous Petrology

Lithology:			plagioclase-oliv sheet lava flow	ine phyric basa	It Style of emplacement:	sheet lava flow	
Domain numb	er (if >1):	1				
lgneous domai	in type:		flow interior		Domain relative abundance (%):	100	
Major groundmass texture:			intergranular		Groundmass grain size (avg):	fine-grained	
Phenocrysts	Original (%)	Size MO (mm)	^{DE} Shape	Habit	Comments		
Olivine	0.1	0.4	subhedral	subequant	Sparse ol phenocrysts 0.4mm in size, feebly altered along cracks and graboundaries. Some phenocrysts has completely Fe-oxide		
Plagioclase	2	0.2	euhedral	equant	Plagioclase phenocrysts (upto 5mm) often forming glomerocrysts. sieve texture is observed in few grains.		
Groundmass	Origina	I (%)	Comment				
Groundmass	ndmass 97.9 Laths of plagioclase with minute oli and yellow clay + FeOH				grains and possibly cpx set in a fine-grained gro	oundmass. Alteration to brown	
Vesicle	Original (%)	Size Mod (mm)	^e Shape	Comments			
Vesicle			round	mostly unfilled	but some with yellow clay lining, few (partially)	filled with carbonate	

Domain type	Alteration %	% Ol repl.	Ol repl. by	% Plag repl.	Plag repl. by	% CPX repl.	CPX repl. by	% groundmass repl.	Groundmass repl. by	% glass repl.	Glass repl. by
background	18										

THIN SECTION LABEL ID:	393-U1560B-3R-3-W 118/	121-TSB-TS 167	Thin section no.	.: 167			
Observer:	MJ, EA		Piece no.:	14			
Total number of domains	:: 1		Unit/subunit:	1B			
Thin section summary: Plagioclase-olivine phyric basalt sheet lava flow, fine-grained, laths of plagioclase with minute olivine grains and possibly cpx set in a fine-grained groundmass. Alteration intensity is moderate, with brown clay + FeOH as alteration products. Groundmass is locally replaced by carbonate.							
Plane-p	olarized: 63832571	Cross-polariz	ed: 63832591				
	15.00 1167)						

No. of photomicrographs in database:

0

Igneous Petrology

Lithology:			plagioclase-olivi sheet lava flow	ne phyric basa	lt Style of emplacement:	sheet lava flow		
Domain numb	er (if >1):	1					
Igneous domai	n type:		flow interior		Domain relative abundance (%):	100		
Major groundmass texture:			intergranular		Groundmass grain size (avg):	fine-grained		
Phenocrysts	Original (%)	Size MOI (mm)	^{DE} Shape	Habit	Comments			
Olivine	0.01	0.2	subhedral	subequant	Sparse ol phenocrysts 0.2mm in size, feebly altered along cracks and grain boundaries.			
Plagioclase	2	0.1	euhedral	equant	Plagioclase phenocrysts (upto 2mm) often forming glomerocrysts. Zoning sieve texture is observed in few grains.			
Groundmass	Origina	I (%)	omment					
Groundmass	97.8	9 L a	aths of plagioclase w nd yellow clay + FeC	vith minute olivine PH	grains and possibly cpx set in a fine-grained gro	oundmass. Alteration to brown		
Vesicle	Original (%)	Size Mod (mm)	² Shape	Comments				
Vesicle	0.1	0.1	round	mostly lined wit	h yellow clay and at places seen occupied with	carbonate.		

Domain type	Alteration %	% Ol repl.	Ol repl. by	% Plag repl.	Plag repl. by	% CPX repl.	CPX repl. by	% groundmass repl.	Groundmass repl. by	% glass repl.	Glass repl. by
background	16										

THIN SECTION LABEL ID: Observer: Total number of domains	393-U1560B-4R-3-W 105/ MJ, EA : 1	107-TSB-TS 169	Thin section no.: Piece no.: Unit/subunit:	169 12 1B				
Thin section summary: Plagioclase-olivine phyric basalt sheet lava flow, microcrystalline, felty with laths of plagioclase with minute olivine grains and possibly cpx set in a fine-grained groundma exhibiting sub-ophitic textures at places. Alteration intensity is moderate, with orange- brown clay + FeOH as alteration products. OI partly replaced by mica(?).								
Plane-polarized: 63859761 Cross-polarized: 63859781								
		Ar-3, 12 105/107	ISCOB Y IICO					

No. of photomicrographs in database:

8

Igneous Petrology

Lithology:		plagioclase-oliv sheet lava flow	rine phyric basa	lt Style of emplacement:	sheet lava flow	
Domain number (if >1):		1				
Igneous domai	n type:		flow interior		Domain relative abundance (%):	100
Major groundmass texture:			felty		Groundmass grain size (avg):	microcrystalline
Phenocrysts	Original (%)	Size MC (mm	DDE Shape	Habit	Comments	
Olivine	0.05	0.2	subhedral	subequant	Sparse ol phenocrysts 0.4mm in size, feebly alte boundaries. Some grains are completely altere	ered along cracks and grain d to Fe-OH
Plagioclase	2	0.1	euhedral	equant	Plagioclase phenocrysts (upto 5mm) often forr observed in few grains	ning glomerocrysts. Zoning is
Groundmass	Origina	Original (%) Comment				
Groundmass	97.95 Laths of plagioclase with minute olivi sub-ophitic textures at places.				grains and possibly cpx set in a fine-grained gro	oundmass exhibiting felty and

Domain type	Alteration %	% Ol repl.	Ol repl. by	% Plag repl.	Plag repl. by	% CPX repl.	CPX repl. by	% groundmass repl.	Groundmass repl. by	% glass repl.	Glass repl. by
background	17										

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THIN SECTION LABEL ID: Observer: Total number of domains	393-U1560B-6R-2-W 30/ MJ, EA : 1	34-TSB-TS 170	Thin section no.: Piece no.: Unit/subunit:	170 2 2					
Thin section summary:	Plagioclase-olivine-pyroxe intregranular with laths of exhibiting intergranular ar clay + FeOH as alteration	ene phyric basalt sheet lava flow, plagioclase with 0.2mm olivine a nd sub-ophitic textures. Alteration products.	medium-grained, nd approx. 0.2-0.3 intensity is slight,	3mm cpx , with brown					
Plane-p	olarized: 63859801	Cross-polarized	d: 63859821						
No. of photomicrographs in database: 12									

Igneous Petrology

Lithology:		p p	lagioclase-oliv hyric basalt sh	vine-pyroxene leet lava flow	Style of emplacement:	sheet lava flow
Domain nun	nber (if >1): 1				
Igneous don	nain type:	fle	ow interior		Domain relative abundance (%):	100
Major groun	dmass tex	cture: in	itergranular		Groundmass grain size (avg):	medium-grained
Phenocrysts	Original (%)	Size MODE (mm)	Shape	Habit	Comments	
Olivine	0.5	0.1	subhedral	subequant	OI phenocrysts upto 0.7mm, feebly altered alo	ng cracks and grain boundaries
Plagioclaso	5	0.4	aubadral	aguant	Plagioclase phenocrysts (upto 5mm) often forr	ning glomerocrysts closely

Plagioclase	5	0.4	euhedral	equant	associated with olivine (partially altered) and clinopyroxene exhibiting sub- ophitic texture. Zoning commonly observed.				
Clinopyroxene	0.5	0.25	5 subhedral	subequant	Subhedral cpx (0.5mm) phenocrysts in contact with plagioclase				
Groundmass	Origina	l (%)	Comment	ment					
Groundmass	93.	Laths of plagioclase with 0.2mm olivine grains and 0.2-0.3mm cpx set exhibiting intergranular and sub-o at places.							
Vesicle	Original (%)	Size Mo (mm)	^{de} Shape	Comments					
Vesicle	0.5	0.2	round	mostly lined with clay					

Domain type	Alteration %	% Ol repl.	Ol repl. by	% Plag repl.	Plag repl. by	% CPX repl.	CPX repl. by	% groundmass repl.	Groundmass repl. by	% glass repl.	Glass repl. by
background	11										

THIN SECTION LABEL ID:	393-U1560B-6R-2-W 92/94-1	SB-TS 171	Thin section no.:	171		
Observer:	MJ, EA	Piece no.:	6			
Total number of domain	s: 1		Unit/subunit:	2		
Thin section summary: Plagioclase-olivine-pyroxene phyric basalt sheet lava flow medium grained, intergranular with laths of plagioclase, minute olivine grains and possibly cpx set in fine-grained groundmass exhibiting intergranular and sub-ophitic textures. Alteration intensity is slight, with orange-brown clay + FeOH as alteration products. OI partly replaced by orange-brown clay + FeOH.						
Plane-p	oolarized: 63870141	Cross-polarize	d: 63870161			



No. of photomicrographs in database:

5

Igneous Petrology

Lithology:	Lithology: plagioclase-olivine- phyric basalt sheet		ine-pyroxene eet lava flow	Style of emplacement:	sheet lava flow				
Domain numbe	er (if >1):	1						
lgneous domai	n type:		flow interior		Domain relative abundance (%):	100			
Major groundmass texture:			intergranular		Groundmass grain size (avg):	medium-grained			
Phenocrysts	Original (%)	Size MOE (mm)	^{DE} Shape	Habit	Comments				
Olivine	0.5	0.1	subhedral	I subequant OI phenocrysts upto 0.7mm, feebly altered along cracks and					
Plagioclase	5	0.4	euhedral	equant	Plagioclase phenocrysts (upto 6mm) often forming glomerocrysts closely associated with olivine (partially altered) and clinopyroxene exhibiting sub- ophitic texture. Zoning commonly observed.				
Clinopyroxene	0.2	0.25	subhedral	subequant	Subhedral cpx (0.4mm) microphenocrysts				
Groundmass	Origina	I (%) C	omment						
Groundmass	93.8 Laths of plagioclase with minute oliv				e grains and cpx set exhibiting intergranular and	sub-ophitic textures at places.			
Vesicle	Original (%)	Size Mode (mm)	^e Shape	Comments					
Vesicle	0.5	0.3	round	mostly lined w	with grey clay and at places seen occupied with carbonate.				

Domain type	Alteration %	% Ol repl.	Ol repl. by	% Plag repl.	Plag repl. by	% CPX repl.	CPX repl. by	% groundmass repl.	Groundmass repl. by	% glass repl.	Glass repl. by
background	7										

THIN SECTION LABEL ID:	393-U1560B-8R-1-W 8/10-TSB-TS 172	Thin section no.:	172
Observer:	MJ, EA	Piece no.:	2
Total number of domains	:1	Unit/subunit:	ЗA
Thin section summary:	Plagioclase-olivine-pyroxene phyric basalt pillow lava flow intergranular with laths of plagioclase, small olivine grains medium-grained groundmass exhibiting intergranular and Alteration intensity is slight, with brown clay + FeOH as a replaced by brown clay.	v, medium grained, s and larger cpx set l sub-ophitic texture Iteration products. \$	t in a es at places. Some Ol



No. of photomicrographs in database:

4

Igneous Petrology

Lithology:		plagioclase-olivine-pyroxene phyric basalt pillow lava flow			Style of emplacement:	pillow lava flow			
Domain numb	er (if >1):	1						
lgneous domai	in type:		flow interior		Domain relative abundance (%):	100			
Major groundmass texture			intergranular		Groundmass grain size (avg):	medium-grained			
Phenocrysts	Original (%)	Size MOI (mm)	^{DE} Shape	Habit	Comments				
Olivine	1	0.2	subhedral	subequant	OI phenocrysts upto 0.4mm, feebly altered along cracks and grair				
Plagioclase	2	0.2	euhedral	equant	Plagioclase phenocrysts (upto 6mm) often forming glomerocrysts associated with olivine (partially altered) and clinopyroxene exhibit ophitic texture. Zoning commonly observed.				
Clinopyroxene	0.01	0.25	subhedral	subequant	Subhedral cpx (0.4mm) long with high interfer plagioclase	ence colors in contact with			
Groundmass	Origina	I (%)	omment						
Groundmass	96.4	.9 L	aths of plagioclase	with minute oliving	e grains and cpx set exhibiting intergranular and	sub-ophitic textures at places.			
Vesicle	Original (%)	Size Mode (mm)	^e Shape	Comments	Comments				
Vesicle	0.5	0.2	round	mostly lined w	stly lined with grey clay and at places seen occupied with carbonate.				

Domain type	Alteration %	% Ol repl.	Ol repl. by	% Plag repl.	Plag repl. by	% CPX repl.	CPX repl. by	% groundmass repl.	Groundmass repl. by	% glass repl.	Glass repl. by
background	10										

THIN SECTION LABEL ID:	393-U1560B-8R-1-W 17/19-TSB-TS 173	Thin section no.:	173
Observer:	MJ, EA	Piece no.:	4
Total number of domains	:: 1	Unit/subunit:	3A
Thin section summary:	Plagioclase-olivine-pyroxene phyric basalt pillow lava flow with laths of plagioclase with minute olivine grains and cp groundmass exhibiting intergranular and sub-ophitic textu alteration intensity, with orange-brown and yellow (in gray alteration products. OI partly replaced by orange-brown c gray halo). Vein composed of metamorphosed carbonace shells overgrown by zeolites + authigenic carbonate.	v, fine grained, inte x set in a fine-grain ires. Two halo type / halo) clay + FeOH lay + FeOH or by c ous sediment with	rgranular hed 's with high I as arbonate (in foraminifer

Cross-polarized: 63870281



No. of photomicrographs in database: 23

Igneous Petrology

Lithology:	plagioclase-olivine-pyroxene phyric basalt pillow lava flow	Style of emplacement:	pillow lava flow
Domain number (if >1):	1		
Igneous domain type:	flow interior	Domain relative abundance (%):	100
Major groundmass texture:	intergranular	Groundmass grain size (avg):	fine-grained

Phenocrysts	Original (%)	Size MOD (mm)	Shape	Habit	Comments			
Olivine	1	0.2	euhedral	equant	Ol phenocrysts upto 0.4mm, altered along cracks and grain boundaries			
Plagioclase	2 0.2 euhedral		euhedral	equant	Plagioclase phenocrysts (upto 4mm) often forming glomerocrysts closely associated with olivine (partially altered) and clinopyroxene exhibiting sub- ophitic texture.			
Clinopyroxene	0.01	0.25	euhedral	equant	Euhedral cpx (0.4mm) long with high interference colors in contact with plagioclase			
Groundmass	Origina	(%) Co	omment					
Groundmass	96.4	9 La su	ths of plagioclase w b-ophitic textures a	ith minute olivine t places.	grains and cpx set in a fine-grained groundmass exhibiting intergranular and			
Vesicle	Original (%)	Size Mode (mm)	Shape	Comments				
Vesicle	0.5	0.2	round	mostly unfilled				

393-U1560B-8R-1-W 17/19-TSB-TS 173 Page 1 of 1

Alteration

Domain type	Alteration %	% Ol repl.	Ol repl. by	% Plag repl.	Plag repl. by	% CPX repl.	CPX repl. by	% groundmass repl.	Groundmass repl. by	% glass repl.	Glass repl. by
vein halo-brown	70										

Domain type	Alteration %	% Ol repl.	Ol repl. by	% Plag repl.	Plag repl. by	% CPX repl.	CPX repl. by	% groundmass repl.	Groundmass repl. by	% glass repl.	Glass repl. by
vein halo-dark grey	68										

Vein width (mm)	Vein fill sequence (rim to center)	Vein comments	Halo comments
1.5	met. carbonaceous sediment - zeolite - authigenic carbonate	metamorphosed carbonaceous sediment with multiple foraminifera shells in direct contact to host rock, overgrown by zeolites and authigenic carbonate	

THIN SECTION LABEL ID:	393-U1560B-9R-2-W 24/27-TSB-TS 174	Thin section no.:	174
Observer:	MJ, EA	Piece no.:	3
Total number of domains	s: 1	Unit/subunit:	ЗA
Thin section summary:	Plagioclase-olivine-pyroxene phyric basalt pillow lava flow with laths of plagioclase with minute olivine grains and cp groundmass exhibiting intergranular and sub-ophitic textu moderate intensity, with brown clay + FeOH as alteration across TS, with minor yellow clay in more intensely altere orange-brown clay. Vein partly filled with zeolites with loc	v, fine grained, inte x set in a fine-grair ires. Patchy alterat products; intensity d domain. OI repla al brown clay lining	rgranular ied ion with increases ced by I.

Cross-polarized: 63870201



No. of photomicrographs in database: 11

Igneous Petrology

Lithology:	plagioclase-olivine-pyroxene phyric basalt pillow lava flow	Style of emplacement:	pillow lava flow
Domain number (if >1):	1		
Igneous domain type:	flow interior	Domain relative abundance (%):	100
Major groundmass texture:	intergranular	Groundmass grain size (avg):	fine-grained

Phenocrysts	Original Size MOD (%) (mm)		Shape	Habit	Comments			
Plagioclase	1 0.2		euhedral	equant	3mm plagioclase laths closely associated with olivine and clinopyroxene phenocrysts			
Clinopyroxene	0.01	0.25	euhedral	equant	Euhedral cpx (0.25mm) long with high interference colors			
Groundmass Original (%) Co			nment					
Groundmass 98.99			Laths of plagioclase with minute olivine grains and cpx set in a fine-grained groundmass exhibiting intergranular and sub-ophitic textures at places.					

Domain ty	/pe	Alteration %	% Ol repl.	Ol repl. by	% Plag repl.	Plag repl. by	% CPX repl.	CPX repl. by	% groundmass repl.	Groundmass repl. by	% glass repl.	Glass repl. by
backgrour	nd	28										

Vein width (mm)	Vein fill sequence (rim to center)	Vein comments	Halo comments
0.8	clay - zeolites	zeolite-filled vein with brown clay lining in places; not completely filled, probably due to TS preparation	

THIN SECTION LABEL ID:	393-U1560B-11R-1-W 71/74-TSB-TS 175	Thin section no.: 175
Observer:	MJ, EA	Piece no.: 9
Total number of domains	:1	Unit/subunit: 3B
Thin section summary:	Aphyric basalt pillow lava flow, fine-grained, interminute olivine grains set in a fine-grained groun ophitic textures at places. Alteration intensity is intense in halo, with brown and yellow (in halo) replaced by mica(?) in background and orange-	ergranular, laths of plagioclase with Idmass exhibiting intergranular and sul moderate (background) but more clay + FeOH as alteration products. Of brown clay in halo.
Plane-p	olarized: 63870221 Cros	ss-polarized: 63870241



2

No. of photomicrographs in database:

Igneous Petrology

Lithology:		a	aphyric basalt	t pillow lava flow	Style of emplacement:	pillow lava flow
Domain number (if >1):): 1	l			
Igneous domain type:			low interior		Domain relative abundance (%):	100
Major groundmass texture:			ntergranular		Groundmass grain size (avg):	fine-grained
Phenocrysts	Original (%)	Size MODE (mm)	Shape	Habit	Comments	
Plagioclase 0.1 0.4 e		euhedral	equant	2mm plagioclase crystals forming glomerocrysts. Cores of plagioclase cry resorbed.		
Groundmass	Origina	I (%) Co	omment			

	3								
Groundmass 99.4 Laths of plagioclase with minute olivine grains set in a fine-grained groundmass exhibiting intergranular a ophitic textures at places.									
Vesicle	Original Size Mode (%) (mm)		Shape	Comments					
Vesicle	0.5 0.2 round		round	0.4mm big vesicles, filled Fe-Oh or carbonate					

Do	omain type	Alteration %	% Ol repl.	Ol repl. by	% Plag repl.	Plag repl. by	% CPX repl.	CPX repl. by	% groundmass repl.	Groundmass repl. by	% glass repl.	Glass repl. by
ba	ackground	15										

Domain type	Alteration %	% Ol repl.	Ol repl. by	% Plag repl.	Plag repl. by	% CPX repl.	CPX repl. by	% groundmass repl.	Groundmass repl. by	% glass repl.	Glass repl. by
other halo-brown	31										

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THIN SECTION LABEL ID:	393-U1560B-16R-2-W 66/68-TSB-TS 176	Thin section no.:	176
Observer:	MJ, EA	Piece no.:	8
Total number of domains	:1	Unit/subunit:	3C
Thin section summary:	Glassy basalt pillow lava flow with pale yellow isotropic gla microlites and plagioclase microlaths followed by a plagio pillow lava flow. Groundmass texture changes from glome intergranular as we move away from the variolitic chilled r to yellow clay + FeOH. Alteration intensity of chilled margi + FeOH as alteration products. OI replaced by orange-bro	ass with scattered of clase-olivine phyric proporphyritic to into nargin. Glass partia in is moderate, with own clay + FeOH.	olivine : basalt ersertal and ally altered 1 brown clay

Cross-polarized: 63936071



No. of photomicrographs in database: 0

Igneous Petrology

Lithology:		gl	lassy basalt p	illow lava flow	Style of emplacement:	pillow lava flow
Domain numb	er (if >1): 1				
Igneous doma	in type:	gl	lassy margin		Domain relative abundance (%):	10
Major groundr	nass tex	ture: gl	lass		Groundmass grain size (avg):	glass
Phenocrysts	Original (%)	Size MODE (mm)	Shape	Habit	Comments	
Olivine	0.01	0.1	euhedral	equant	Fresh ol microphenocrysts upto (0.5mm)	
Plagioclase	0.5	0.2	euhedral	equant	Sparse fresh plagioclase (0.4mm) phenocrysts i	n isotropic glass
Groundmass	Origina	I (%) Cor	nment			
Groundmass	99.4	9 Pale	e yellow isotropi	glass with scattere	ed olivine microlites and plagioclase microlaths	
Glass	Glass presen (%)	Glass repla d (%)	Glass original (%)	Glass commen	ıt	
Glass	100		100			
Lithology:		p pi	lagioclase-oli illow lava flov	vine phyric basa v	alt Style of emplacement:	pillow lava flow
Domain numb	er (if >1): 2				
Igneous doma	in type:	cł	nilled margin		Domain relative abundance (%):	90
Major groundr	nass tex	t ure: va	ariolitic		Groundmass grain size (avg):	cryptocrystalline
Phenocrysts	Original (%)	Size MODE (mm)	Shape	Habit	Comments	
Olivine	0.5	0.2	euhedral	equant	Fresh ol microphenocrysts upto (0.4mm). Sligh	tly altered along cracks
Plagioclase	0.5	0.2	euhedral	equant	Plagioclase crystals (upto 2mm) often form glo	merocrysts

Groundmass	Origina	(%)	Comr	nment								
Groundmass	98.9	9	Scattered ovoid brown varioles isolated in glassy groundmass with thin rim of fibrous anisotropic minerals. Groundmass texture changes from glomeroporphyritic to intersertal and intergranular as we move away from variolitic chilled margin.									
Vesicle	Original Size Mode (%)		de	Shape	Comments							
Vesicle	0.1	1 0.1 round		round	mostly unfilled or with yellow clay lining, few completely filled with brown clay							

Domain type	Alteration %	% Ol repl.	Ol repl. by	% Plag repl.	Plag repl. by	% CPX repl.	CPX repl. by	% groundmass repl.	Groundmass repl. by	% glass repl.	Glass repl. by
	32										

Domain type	Alteration %	% Ol repl.	Ol repl. by	% Plag repl.	Plag repl. by	% CPX repl.	CPX repl. by	% groundmass repl.	Groundmass repl. by	% glass repl.	Glass repl. by
	38										

THIN SECTION LABEL ID:	393-U1560B-17R-1-W 70/73-TSB-TS 177	Thin section no.:	177
Observer:	MJ, EA	Piece no.:	10
Total number of domains	s: 1	Unit/subunit:	3C
Thin section summary:	Glassy basalt pillow lava flow with pale yellow isotropic g showing variolitic transition from glassy margin of pillow phyric basalt pillow lava flow. Groundmass texture chang intersertal and intergranular as we move away from the partially altered to yellow clay + FeOH. Alteration intensit to high, with brown clay + FeOH as alteration products. O brown clay + FeOH. Halo across chilled margin defined b veins partially filled with yellow and brown clay + FeOH.	lass followed by ch lava to plagioclase- ges from glomeropo variolitic chilled mar ty of chilled margin DI mostly replaced b by light brown clays	illed margin olivine rphyritic to gin. Glass is moderate by orange- . Narrow

Cross-polarized: 63936111



No. of photomicrographs in database: 2

Igneous Petrology

Lithology:		g	lassy basalt pi	llow lava flow	Style of emplacement:	pillow lava flow		
Domain numb	er (if >1): 1						
Igneous domai	in type:	g	lassy margin		Domain relative abundance (%):	10		
Major groundr	nass tex	ture:			Groundmass grain size (avg):			
Phenocrysts	Original (%)	Size MODE (mm)	Shape	Habit	Comments			
Olivine	0.5	0.1	euhedral	equant	Slightly altered ol microphenocrysts upto (0.2r	nm)		
Plagioclase	0.5	1	euhedral	equant	Sparse fresh plagioclase (0.4mm) phenocrysts	in isotropic glass		
Groundmass	Origina	I (%) Co	mment					
Groundmass	99							
Lithology:		p	lagioclase-oliv illow lava flow	vine phyric basa v	alt Style of emplacement:	pillow lava flow		
Domain numb	er (if >1): 2						
Igneous domai	in type:	с	hilled margin		Domain relative abundance (%): 50			
Major groundr	nass tex	ture:			Groundmass grain size (avg):			
Phenocrysts	Original	Size MODE	Shape	Habit	Comments			

	(/0)	()			
Olivine	0.1	0.1	euhedral	equant	Fresh ol microlites upto (0.2mm), some altered along grain boundaries.
Plagioclase	1	1	euhedral equant		Plagioclase crystals (upto 3mm) often form glomerocrysts and are associated with olivine.
Groundmass	Groundmass Original (%)		mment		
Groundmass 98.9		Ð			
Groundmass 98.9		9			

Lithology:			plagioclase-oli pillow lava flow	vine phyric basa v	lt Style of emplacement:	pillow lava flow				
Domain numbe	er (if >1):	3							
Igneous domain type:			flow interior		Domain relative abundance (%): 40					
Major groundn	nass tex	ture:	intersertal		Groundmass grain size (avg):	cryptocrystalline				
Phenocrysts	Original (%)	Size MO (mm)	^{DE} Shape	Habit	Comments					
Olivine	0.1	0.4	subhedral	subequant	OI phenocrysts upto 0.4mm, altered along cra	cks and grain boundaries				
Plagioclase	1	0.15	euhedral	equant	Plagioclase phenocrysts (upto 4mm) often forming glomerocrysts enclosing olivine (partially altered) - sub-ophitic texture.					
Groundmass	Origina	(%)	Comment							
Groundmass	98.9		Groundmass texture variolitic chilled ma	bundmass texture changes from glomeroporphyritic to intersertal and intergranular as we move away from the iolitic chilled margin.						

Alteration

Domain type	Alteration %	% Ol repl.	Ol repl. by	% Plag repl.	Plag repl. by	% CPX repl.	CPX repl. by	% groundmass repl.	Groundmass repl. by	% glass repl.	Glass repl. by
	28										

Domain type	Alteration %	% Ol repl.	Ol repl. by	% Plag repl.	Plag repl. by	% CPX repl.	CPX repl. by	% groundmass repl.	Groundmass repl. by	% glass repl.	Glass repl. by
	39										

Vein width (mm)	Vein fill sequence (rim to center)	Vein comments	Halo comments
0.02		radial cracks across chilled margin, locally with clay + FeOH as lining	

THIN SECTION LABEL ID:	393-U1560B-19R-1-W 46/48-TSB-TS 178	Thin section no.:	178
Observer:	MJ, EA	Piece no.:	3
Total number of domains	s: 1	Unit/subunit:	3C
Thin section summary:	ained, intergranular, ined groundmass. <i>A</i> I minor yellow (in ha d but altered to oran	Laths of Alteration Io) clay + Ige-brown	



No. of photomicrographs in database:

7

Igneous Petrology

Lithology:			plagioclase-oliv sheet lava flow	vine phyric basal	lt Style of emplacement:	sheet lava flow			
Domain numb	er (if >1):	1						
Igneous domai	Igneous domain type:		flow interior		Domain relative abundance (%):	100			
Major groundmass texture			intergranular		Groundmass grain size (avg):	fine-grained			
Phenocrysts	Original (%)	Size MO (mm)	^{DE} Shape	Habit	Comments				
Olivine	0.01	0.2	euhedral	elongate	0.4mm euhedral olivines showing alteration alowith plagioclase forming sub-ophitic intergrow	ong cracks closely associated /ths.			
Plagioclase	0.01	1	euhedral	equant	3mm plagioclase laths forming glomerocrysts with olivine. Plagioclase showing sieve structure	occasionally seen associated re is observed in few grains.			
Groundmass	Origina	I (%)	Comment						
Groundmass	99.9	8 L	aths of plagioclase blaces	with minute euhedr	al olivine set in a fine-grained groundmass. Gro	undmass is altered in the at			

Domain type	Alteration %	% Ol repl.	Ol repl. by	% Plag repl.	Plag repl. by	% CPX repl.	CPX repl. by	% groundmass repl.	Groundmass repl. by	% glass repl.	Glass repl. by
background	61										

Domain type	Alteration %	% Ol repl.	Ol repl. by	% Plag repl.	Plag repl. by	% CPX repl.	CPX repl. by	% groundmass repl.	Groundmass repl. by	% glass repl.	Glass repl. by
vein halo-brown	77										

THIN SECTION LABEL ID:	THIN SECTION LABEL ID: 393-U1560B-20R-4-W 45/48-TSB-TS 179						
Observer:		Piece no.:	1				
Total number of domains	Unit/subunit:	3D					
Thin section summary:	ained, intergranular, ained groundmass. FeOH in backgrou llow clay + FeOH in and orange-brown	Laths of plagiocla Alteration intensity nd as alteration pro- halo. Ol replaced clay in halo. Narro	se with y is slight- oducts in by w vein fill				
Plane-p	Cross-polarize	d: 63936191					



No. of photomicrographs in database: 0

Igneous Petrology

Lithology:		ā	phyric basalt s	heet lava flow	Style of emplacement:	sheet lava flow				
Domain numbe	er (if >1): 1								
Igneous domain type:			low interior		Domain relative abundance (%):	100				
Major groundmass texture: intergranu					Groundmass grain size (avg):	fine-grained				
Phenocrysts	Original (%)	Size MODI (mm)	Shape	Habit	Comments					
Plagioclase	0.01	2	euhedral	equant	2mm plagioclase laths					
Groundmass	Origina	I (%) Co	omment							
Groundmass	99.9	9 La pli	ths of plagioclase v aces	vith minute euhed	ral olivine set in a fine-grained groundmass. Gro	undmass is altered in the at				

Domain type	Alteration %	% Ol repl.	Ol repl. by	% Plag repl.	Plag repl. by	% CPX repl.	CPX repl. by	% groundmass repl.	Groundmass repl. by	% glass repl.	Glass repl. by
background	12										

Domain type	Alteration %	% Ol repl.	Ol repl. by	% Plag repl.	Plag repl. by	% CPX repl.	CPX repl. by	% groundmass repl.	Groundmass repl. by	% glass repl.	Glass repl. by
vein halo-grey	15										

Vein width (mm)	Vein fill sequence (rim to center)	Vein comments	Halo comments
0.05		composition changes from brown to yellow clay	

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THIN SECTION LABEL ID:	393-U1560B-21R-3-W 0/4-TSE	3-TS 180	Thin section no.:	180					
Observer:	MJ, EA		Piece no.:	1					
Total number of domains	:1		Unit/subunit:	3E					
Thin section summary: Aphyric basalt pillow lava flow, fine grained, intersertal, Laths of plagioclase with m euhedral olivine set in a fine-grained groundmass. Alteration intensity is moderate (background) but more intense in halo, with brown clay + FeOH as alteration produ OI replaced by brown clay + FeOH.									
Plane-polarized: 63936211 Cross-polarized: 63936231									
			1500 - (100)						

No. of photomicrographs in database: 0

Igneous Petrology

Lithology:			aphyric basalt p	oillow lava flow	Style of emplacement:	pillow lava flow				
Domain numbe	er (if >1):	1							
Igneous domai	Igneous domain type:		flow interior		Domain relative abundance (%):	100				
Major groundmass texture: intersertal					Groundmass grain size (avg): fine-grained					
Phenocrysts	Original (%)	Size MO (mm)	^{DE} Shape	Habit	Comments					
Olivine	0.01	0.1	euhedral	equant	0.4mm euhedral olivines showing alteration along cracks					
Plagioclase	0.05	0.2	euhedral	equant	Plagioclase laths (0.4 mm) long forming glomerocrysts.					
Groundmass	Origina	I (%)	omment							
Groundmass	99.9	4 L	aths of plagioclase	with minute euhed	ral olivine set in a fine-grained groundmass. At p	laces alteration to clay is				

Domain type	Alteration %	% Ol repl.	Ol repl. by	% Plag repl.	Plag repl. by	% CPX repl.	CPX repl. by	% groundmass repl.	Groundmass repl. by	% glass repl.	Glass repl. by
background	18										

Domain type	Alteration %	% Ol repl.	Ol repl. by	% Plag repl.	Plag repl. by	% CPX repl.	CPX repl. by	% groundmass repl.	Groundmass repl. by	% glass repl.	Glass repl. by
other halo-brown	45										

THIN SECTION LABEL ID:	393-U1560B-23R-2-W 29/32-T	SB-TS 181	Thin section no.:	181
Observer:	MJ, EA		Piece no.:	1
Total number of domains	:1		Unit/subunit:	3F
Thin section summary:	aths of plagioclase on intensity is sligl + mica(?) as alter Ol partly replaced	e with ht-moderate ation by mica(?)		
Plane-p	olarized: 63936251	Cross-polarized	d: 63936271	



No. of photomicrographs in database:

0

Igneous Petrology

Lithology:			aphyric basalt	sheet lava flow	Style of emplacement: shee	t lava flow			
Domain number (if >1):			1						
Igneous domain type:			flow interior		Domain relative abundance (%): 100				
Major groundr	nass tex	ture:	intergranular		Groundmass grain size (avg): fine-	grained			
Phenocrysts	Original (%)	Size MOI (mm)	^{DE} Shape	Habit	Comments				
Plagioclase 0.01 1.2			euhedral	equant	Sparse phenocrysts of plagioclase (2mm) long forming glomerocrysts.				
Groundmass Original (%)			omment						
Groundmass 99.99			aths of plagioclase	with subhedral oliv	ine set in a finegrained groundmass. At places alteration	n to clay is observed.			

Domain type	Alteration %	% Ol repl.	Ol repl. by	% Plag repl.	Plag repl. by	% CPX repl.	CPX repl. by	% groundmass repl.	Groundmass repl. by	% glass repl.	Glass repl. by
background	13										

Domain type	Alteration %	% Ol repl.	Ol repl. by	% Plag repl.	Plag repl. by	% CPX repl.	CPX repl. by	% groundmass repl.	Groundmass repl. by	% glass repl.	Glass repl. by
vein halo-brown	21										

THIN SECTION LABEL ID:	393-U1560B-27R-1-W 132	2/134-TSB-TS 182	Thin section no.:	182
Observer:	MJ, EA		Piece no.:	20
Total number of domains	: 1		Unit/subunit:	4
Thin section summary:	Plagioclase-olivine phyric by plagioclase with minute olivies with minute olivies with biting intergranular and moderate (background) to	basalt pillow lava flow, fine-grain vine grains and possibly cpx se d sub-ophitic textures at places. slightly more intense (in halo).	ned, intergranular, t in a fine-grained Alteration intensit	laths of groundmass y is
Plane-p	olarized: 63997551	Cross-polarize	d: 63997571	
A B B B B B B B B B B B B B B B B B B B	Ison			

No. of photomicrographs in database:

4

Igneous Petrology

Lithology:		pl pi	lagioclase-olivi illow lava flow	ne phyric basal	lt Style of emplacement:	pillow lava flow
Domain number (if >1):						
Igneous domain type:			ow interior		Domain relative abundance (%):	100
Major groundn	nass tex	ture: in	tergranular		Groundmass grain size (avg):	fine-grained
Phenocrysts	Original (%)	Size MODE (mm)	Shape	Habit	Comments	
Olivine	0.1	0.2	subhedral	subequant	Sparse mostly fresh olivine phenocrysts 0.45mi	n
Plagioclase	1	0.22	euhedral	equant	Plagioclase phenocrysts (upto 4mm) often form	ning glomerocrysts

Groundmass	Origina	1 (%)	Comn	nent					
Groundinass	Origina	1 (70)	comin						
Groundmass	98.4	4	Laths interg	Laths of plagioclase with minute olivine grains and possibly cpx set in a fine-grained groundmass exhibiting intergranular and sub-ophitic textures at places.					
Vesicle	Original Size Mode (%) (mm)		de	Shape	Comments				
Vesicle	0.5	.5 0.4 round			mostly lined with yellow clay and at places seen occupied with carbonate.				

Domain type	Alteration %	% Ol repl.	Ol repl. by	% Plag repl.	Plag repl. by	% CPX repl.	CPX repl. by	% groundmass repl.	Groundmass repl. by	% glass repl.	Glass repl. by
background	14										

Domain type	Alteration %	% Ol repl.	Ol repl. by	% Plag repl.	Plag repl. by	% CPX repl.	CPX repl. by	% groundmass repl.	Groundmass repl. by	% glass repl.	Glass repl. by
vein halo-dark grey	20										

Vein width (mm)	Vein fill sequence (rim to center)	Vein comments	Halo comments
0.1		unfilled - crack during TS preparation?	

THIN SECTION LABEL ID:	393-U1560B-29R-1-W 37	/41-TSB-TS 183	Thin section no	.: 183
Observer:	MJ, EA		Piece no.:	6
Total number of domains	s: 1		Unit/subunit:	5A
Thin section summary:	Plagioclase-olivine phyric laths of plagioclase 0.4mn and minor yellow clay + Fe + FeOH.	basalt pillow lava flow, cryptoc n long. High alteration intensity eOH as alteration products. Ol	rystalline, variolitio , with brown, oran replaced by orang	c with seriate ge-brown, ge-brown clay
Plane-p	oolarized: 63997591	Cross-polariz	ed: 63997611	

No. of photomicrographs in database:

0

Igneous Petrology

Lithology:		plagioclase-oliv pillow lava flow	/ine phyric basa /	lt Style of emplacement:	pillow lava flow			
Domain number (if >1):			1					
Igneous domain type:			flow interior		Domain relative abundance (%):	100		
Major groundn	nass tex	ture:	variolitic		Groundmass grain size (avg):	cryptocrystalline		
Phenocrysts	Original (%)	Size MO (mm)	^{DE} Shape	Habit	Comments			
Olivine	0.1	0.2	subhedral	subequant	parse mostly altered olivine phenocrysts 0.25mm			
Plagioclase	1	0.18	euhedral	equant	Plagioclase phenocrysts (upto 4mm) at places forming glomerocrysts			
Groundmass Original (%)		(%)	Comment					
Groundmass 98.9			Seriate laths of plagi vellow clay;	oclase 0.4mm long	in a groundmass altered to brown and orange-k	orown clay + FeOH + minor		

Domain type	Alteration %	% Ol repl.	Ol repl. by	% Plag repl.	Plag repl. by	% CPX repl.	CPX repl. by	% groundmass repl.	Groundmass repl. by	% glass repl.	Glass repl. by
other halo-brown	65										

THIN SECTION LABEL ID:	393-U1560B-30R-1-W 90/93-TSB-TS 18	84 -	Thin section no.:	184
Observer:	MJ, EA	I	Piece no.:	11
Total number of domains	:: 1	l	Unit/subunit:	5A
Thin section summary:	Plagioclase-olivine phyric basalt pillow la laths of plagioclase 0.4mm long. Alterativ yellow clay + FeOH as alteration produc FeOH, Plag slightly altered to brown clay	ava flow, cryptocrys on intensity is high, ts. OI mostly replac y.	talline, variolitic w with orange-brow ed by orange-bro	vith seriate vn and own clay +
Plane-p	olarized: 63997631	Cross-polarized:	63997651	
			(184)	

No. of photomicrographs in database:

2

Igneous Petrology

Lithology:	Lithology:			ivine phyric basa w	lt Style of emplacement:	pillow lava flow			
Domain numbe	er (if >1):	1						
Igneous domain type:			flow interior		Domain relative abundance (%): 100				
Major groundn	nass tex	ture:	variolitic		Groundmass grain size (avg):	cryptocrystalline			
Phenocrysts	Original (%)	Size MOD (mm)	^E Shape	Habit	Comments				
Olivine	0.1	0.2	subhedral	subequant	Sparse mostly altered olivine phenocrysts 0.4n	าm			
Plagioclase	1	0.18	euhedral	equant	Plagioclase phenocrysts (upto 4mm) at places	forming glomerocrysts			
Groundmass	Origina	I (%) C	omment	ment					
Groundmass	98.	e So ye	eriate laths of place ellow clay;	orown clay + FeOH + minor					

Alteration

Domain type	Alteration %	% Ol repl.	Ol repl. by	% Plag repl.	Plag repl. by	% CPX repl.	CPX repl. by	% groundmass repl.	Groundmass repl. by	% glass repl.	Glass repl. by
other halo-brown	74										

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THIN SECTION LABEL ID:	393-U1560B-31R-2-W 102	2/106-TSB-TS 185	Thin section no	.: 185		
Observer:	MJ, EA		Piece no.:	1		
Total number of domain	s: 1		Unit/subunit:	5B		
Thin section summary: Plagioclase-olivine phyric sheet lava flow, fine-grained, intergranular with laths of plagioclase with minute euhedral olivine set in a fine-grained groundmass. Altera intensity is slight-moderate (background) to moderate (halo), with brown clay + Finica(?) as alteration products in background and additional yellow clay in halo. C replaced by mica(?) in background, which is locally overprinted by yellow clay in						
Plane-p	oolarized: 63997791	Cross-polar	zed: 63997811			
4 10 CM						



3

No. of photomicrographs in database:

Igneous Petrology

Lithology:	Lithology:		plagioclase-oli sheet lava flow	vine phyric basa	lt Style of emplacement:	sheet lava flow			
Domain numbe	er (if >1):	1						
Igneous domain type:			flow interior		Domain relative abundance (%): 100				
Major groundn	nass tex	ture:	intergranular		Groundmass grain size (avg):	fine-grained			
Phenocrysts	Original (%)	Size MC (mm)	^{DE} Shape	Habit	Comments				
Olivine	0.1	0.2	subhedral	subequant	sparse mostly altered ol microphenocrysts				
Plagioclase	1	2	euhedral	elongate	Plagioclase phenocrysts (upto 3.2mm) at place textures observed at places	s forming glomerocrysts. sieve			
Groundmass	Origina	I (%)	Comment						
Groundmass	98.9	9	Laths of plagioclase with minute euhedral olivine set in a fine-grained groundmass. At places alteration to clay is observed.						

Domain type	Alteration %	% Ol repl.	Ol repl. by	% Plag repl.	Plag repl. by	% CPX repl.	CPX repl. by	% groundmass repl.	Groundmass repl. by	% glass repl.	Glass repl. by
background	11										

Domain type	Alteration %	% Ol repl.	Ol repl. by	% Plag repl.	Plag repl. by	% CPX repl.	CPX repl. by	% groundmass repl.	Groundmass repl. by	% glass repl.	Glass repl. by
vein halo-grey	24										

	THIN SECTION LABEL ID:	393-U1560B-32R-2-W 80/84	4-TSB-TS 186	Thin section no.:	186		
	Observer:	MJ, EA		Piece no.:	8		
	Total number of domains	:1		Unit/subunit:	5C		
Thin section summary: Plagioclase-olivine phyric basalt pillow lava flow, cryptocrystalline, variolitic with section intensity is moderate, with brown and related on products in background, and orange-brown clay FeOH in halo. In halo, Plag laths are altered in patchy domains of more intense alteration; OI replaced by orange-brown clay + FeOH.							
	Plane-p	olarized: 63997671	Cross-polarize	d: 63997691			



No. of photomicrographs in database:

3

Igneous Petrology

Lithology:	Lithology:		plagioclase-ol pillow lava flo	ivine phyric basal w	t Style of emplacement:	pillow lava flow				
Domain numbe	er (if >1): [,]	1							
Igneous domain type:			flow interior		Domain relative abundance (%): 100					
Major groundmass texture: variolitic					Groundmass grain size (avg):	cryptocrystalline				
Phenocrysts	Original (%)	Size MOD (mm)	^E Shape	Habit	Comments					
Olivine	0.01	0.1	anhedral	elongate	Sparse OI (1mm) altered along cracks					
Plagioclase	0.5	0.4	euhedral	equant	Plagioclase phenocrysts (upto 2mm) at places forming glomerocrysts. siev textures observed at places					
Groundmass	Origina	I (%) Co	omment							
Groundmass	99.4	.9 Se	eriate laths of plag	gioclase 0.4mm long i	n an altered groundmass					

Domain type	Alteration %	% Ol repl.	Ol repl. by	% Plag repl.	Plag repl. by	% CPX repl.	CPX repl. by	% groundmass repl.	Groundmass repl. by	% glass repl.	Glass repl. by
background	31										

Domain type	Alteration %	% Ol repl.	Ol repl. by	% Plag repl.	Plag repl. by	% CPX repl.	CPX repl. by	% groundmass repl.	Groundmass repl. by	% glass repl.	Glass repl. by
vein halo-brown	44										

THIN SECTION LABEL ID: Observer:	393-U1560B-36R-1-W 132 MJ, EA	2/137-TSB-TS 187	Thin section no.: Piece no.:	187 17
Total number of domains Thin section summary:	: 1 Plagioclase-olivine phyric b laths of plagioclase 0.4mm	basalt pillow lava flow, cryptocrys long. Alteration intensity is high	Unit/subunit: stalline, variolitic v but transitions ac	5C with seriate cross TS,
	overprint of the former by c	range-brown clay.	OI replaced by r	nica(?), to
Plane-p	olarized: 63997711	Cross-polarized	: 63997731	
			1503 1137	

No. of photomicrographs in database:

3

Igneous Petrology

Lithology:		l	olagioclase-oli Dillow lava flov	vine phyric basal v	t Style of emplacement:	pillow lava flow				
Domain numbe	er (if >1): [,]	l							
Igneous domain type:			low interior		Domain relative abundance (%):	100				
Major groundmass texture			variolitic		Groundmass grain size (avg): cryptocrystalline					
Phenocrysts	Original (%)	Size MOD (mm)	E Shape	Habit	Comments					
Olivine	0.01	0.1	1 anhedral elongate S		parse OI (0.5mm) intensely altered along cracks					
Plagioclase 0.5 0		0.4	euhedral	equant	Plagioclase phenocrysts (upto 2mm) at places textures observed at places	forming glomerocrysts. sieve				
Groundmass Original (%)		I (%) Co	omment							
Groundmass 99.49			riate laths of plag	ioclase 0.4mm long i	n an altered groundmass					

Alteration

Domain type	Alteration %	% Ol repl.	Ol repl. by	% Plag repl.	Plag repl. by	% CPX repl.	CPX repl. by	% groundmass repl.	Groundmass repl. by	% glass repl.	Glass repl. by
other halo-brown	63										

393-U1560B-36R-1-W 132/137-TSB-TS 187 Page 1 of 0

THIN SECTION LABEL ID:	393-U1560B-39R-1-W 20/24-T	SB-TS 188	Thin section no.:	188
Observer:		Piece no.:	4	
Total number of domains	s: 1		Unit/subunit:	5C
Thin section summary:	Plagioclase phyric basalt pillow plagioclase with minute olivine exhibiting intergranular and sub intensity, with brown clay + mic mica(?).	lava flow, fine-grained, integrains and cpx set in a fine p-ophitic textures at places. a(?) + FeOH as alteration p	ergranular, with lat -grained groundma Slight-moderate a products. OI partly	hs of ass Iteration altered to
Plane-p	olarized: 63997751	Cross-polarize	d: 63997771	
120		the second second		



6

No. of photomicrographs in database:

Igneous Petrology

Lithology:	Lithology:			hyric basalt pillow	V Style of emplacement:	pillow lava flow				
Domain numb	Domain number (if >1):									
Igneous doma	in type:		flow interior		Domain relative abundance (%):	100				
Major groundmass texture			intergranular		Groundmass grain size (avg): fine-grained					
Phenocrysts	Original (%)	Size MOD (mm)	^E Shape	Habit	Comments					
Plagioclase	0.5	0.2	euhedral	equant	Plagioclase phenocrysts (upto 4mm) often for associated with olivine (partially altered) exhib	ming glomerocrysts closely iting sub-ophitic texture.				
Groundmass	Origina	I (%) C	omment							
Groundmass 99.5 Laths of plagioclase with minute olivir sub-ophitic textures at places.					grains and cpx set in a fine-grained groundma	ss exhibiting intergranular and				

Alteration

Domain type	Alteration %	% Ol repl.	Ol repl. by	% Plag repl.	Plag repl. by	% CPX repl.	CPX repl. by	% groundmass repl.	Groundmass repl. by	% glass repl.	Glass repl. by
background	12										

Vein width (mm)	Vein fill sequence (rim to center)	Vein comments	Halo comments
0.5		unfilled - cracks during TS preparation?	groundmass slightly overprinted by yellow clay

THIN SECTION LABEL ID:	393-U1560B-41R-1-W 115/119-TSB-TS 189	Thin section no.:	189
Observer:	MJ, EA	Piece no.:	16
Total number of domains	::1	Unit/subunit:	6B
Thin section summary:	Plagioclase-olivine phyric basalt sheet lava flow fine-grain plagioclase with minute olivine grains and possibly cpx se exhibiting intergranular and sub-ophitic textures at places brown clay + FeOH. Chilled margin moderately to highly a FeOH as alteration products and partial OI replacement b in halo, brown and yellow clay + FeOH as alteration produ orange-brown clay + FeOH.	ed, intergranular w t in a fine-grained (. Glass slightly alte Iltered, with brown y orange-brown cla ucts and OI replace	rith laths of groundmass red to clay + ay + FeOH; ed by



No. of photomicrographs in database:

Igneous Petrology

Lithology:

plagioclase-olivine phyric basalt sheet lava flow

2

Style of emplacement:

sheet lava flow

Domain number (if >1):

Igneous domain type:

Major groundmass texture: intergranular

Domain relative abundance (%):

Groundmass grain size (avg): fine-grained

Cross-polarized: 63998121

Phenocrysts	Original (%)	Size MODE (mm)	Shape	Habit	Comments			
Olivine	5	0.2	euhedral	equant	several 0.3-0.4 mm sized olivines phenocrysts altered along crack and grain boundaries			
Plagioclase	7	0.4	euhedral	elongate	Plagioclase phenocrysts (upto 4mm) often forming glomerocrysts closely associated with olivine (partially altered) exhibiting sub-ophitic texture.			
Groundmass	Origina	(%) Coi	nment					
Groundmass	88	Lat	s of plagioclase with minute olivine grains and possibly cpx set in a fine-grained groundmass exhibiting rgranular and sub-ophitic textures at places.					

Domain type	Alteration %	% Ol repl.	Ol repl. by	% Plag repl.	Plag repl. by	% CPX repl.	CPX repl. by	% groundmass repl.	Groundmass repl. by	% glass repl.	Glass repl. by
	12										

Domain type	Alteration %	% Ol repl.	Ol repl. by	% Plag repl.	Plag repl. by	% CPX repl.	CPX repl. by	% groundmass repl.	Groundmass repl. by	% glass repl.	Glass repl. by
other halo-dark grey	46										

Domain type	Alteration %	% Ol repl.	Ol repl. by	% Plag repl.	Plag repl. by	% CPX repl.	CPX repl. by	% groundmass repl.	Groundmass repl. by	% glass repl.	Glass repl. by
other halo-brown	54										