

152-918D-94R-2 (Piece 2, 49–50 cm)

OBSERVER: DEM

ROCK NAME: Pyroxene-plagioclase-phyric basalt.

GRAIN SIZE: Fine- to medium-grained.

TEXTURE: Glomeroporphyritic.

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Olivine	0.5	0.5	0.5		Subhedral.	
Plagioclase	1.8	1.8	0.5–1.0		Lath.	
Clinopyroxene	3.4	3.4	0.4–0.5		Subhedral.	
GROUNDMASS						
Olivine	2.6	2.6	0.2–0.3		Subhedral.	
Clinopyroxene	31.2	31.2	0.1–0.3		Anhedral.	
Plagioclase	47.4	47.4	0.2–0.5		Lath.	
Opaque mineral	6.5	6.5	0.1–0.3		Anhedral.	
Mesostasis	6.6	6.6				Devitrified glass with skeletal pyroxene and plagioclase.

COMMENTS: Very fresh lava; olivine only slightly altered to green clay along the fractures of the crystal.

152-918D-99R-4 (Piece 1, 31–32 cm)

OBSERVER: DEM

ROCK NAME: Aphyric basalt.

GRAIN SIZE: Very fine-grained.

TEXTURE: Intersertal.

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
Olivine	0	1	0.2–0.8		Euhedral.	Altered to iddingsite and green clay.
Clinopyroxene	38	38	0.05–0.2		Grain.	
Plagioclase	45	45	0.1–0.2		Laths.	
Opaque mineral	6	6	0.05–0.1		Anhedral.	
Mesostasis	0	10				Completely replaced by green clay.
SECONDARY MINERALOGY						
Clay	11	REPLACING/ FILLING Olivine and mesostasis.				COMMENTS Green to brownish green clay.

COMMENTS: Lava is relatively fresh; plagioclase are preserved.

152-918D-101R-4 (Piece 7, 50–52 cm)

OBSERVER: DEM

ROCK NAME: Aphyric basalt.

GRAIN SIZE: Very fine-grained.

TEXTURE: Intersertal.

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
Clinopyroxene	39	39	0.05–0.1		Grain.	
Plagioclase	45	45	0.1–0.3		Lath.	
Opaque mineral	6	6	0.05–0.2		Anhedral.	
Mesostasis	0	10				Altered to green clays.
SECONDARY MINERALOGY						
Clays	10	REPLACING/ FILLING Mesostasis.				COMMENTS Altered to green clays (smectite).

COMMENTS: Lava is fresh. Flow-banding visible on hand specimen corresponds to zones with glassy matrix (intersertal texture) alternating with intergranular zones.

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152-918D-105R-3 (Piece 5, 30–33 cm)

OBSERVER: DEM

ROCK NAME: Aphyric basalt.

GRAIN SIZE: Very fine-grained.

TEXTURE: Intergranular to intersertal.

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Plagioclase	<<1	<<1	1.0		Subhedral.	Aggregate of plagioclase phenocrysts partly embayed.
GROUNDMASS						
Plagioclase	48	48	0.1–0.4		Lath.	Some larger laths associated with clinopyroxene and glass.
Clinopyroxene	37	37	0.1–0.2		Grain.	Elongated crystals up to 0.4 mm long in radiating aggregates with plagioclase.
Opaque mineral	7	7	0.1–0.2		Anhedral.	Late crystallizing mineral.
Glass	0	8				Alters to clays.
SECONDARY MINERALOGY	PERCENT	REPLACING/ FILLING				COMMENTS
Clays	8	Glass.				Brown to green colored clay.
VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm)	FILLING	SHAPE	COMMENTS
Vesicles	1		0.2–0.5	Clay.	Rounded.	Brownish green clay lines the vesicle and pale colored radiating smectite is in the center.

COMMENTS: Fresh lava; plagioclase and clinopyroxene are well preserved.

152-918D-108R-1 (Piece 2C, 65–66 cm)

OBSERVER: DEM

ROCK NAME: Aphyric basalt.

GRAIN SIZE: Very fine-grained.

TEXTURE: Intersertal to intergranular.

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Plagioclase	<<1	<<1	1.0		Lath.	Isolated laths.
GROUNDMASS						
Olivine	0	1	0.1–0.4		Anhedral.	Crystals with embayed margins.
Clinopyroxene	34	34	<0.1		Grain.	Intimate association with plagioclase laths in the matrix.
Plagioclase	47	47	0.1–0.2		Lath.	
Opaque mineral	6	6	<0.1		Anhedral.	
Glass	0	12				Present in patches disseminated in the intergranular matrix.
SECONDARY MINERALOGY	PERCENT	REPLACING/ FILLING				COMMENTS
Clays	13	Olivine and glass from the matrix.				Brownish green in color.
VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm)	FILLING	SHAPE	COMMENTS
Vesicles	5		1	Clay and calcite.	Irregular.	Filled mainly with clear calcite; some with smectite.

152-918D-109R-1 (Piece 2D, 59–60 cm)

OBSERVER: DEM

ROCK NAME: Aphyric basalt.

GRAIN SIZE: Very fine-grained.

TEXTURE: Intersertal to intergranular.

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
Olivine	0	1	0.4		Anhedral.	Crystals are embayed and altered to iddingsite.
Plagioclase	48	48	0.1–0.2		Lath.	Some larger crystals (0.4 mm) form glomeroporphyritic aggregates with clinopyroxene and glass.
Clinopyroxene	35	35	<0.1		Grain.	
Opaque mineral	6	6	<0.1			
Glass	0	10				Totally replaced by clays.
SECONDARY MINERALOGY	PERCENT	REPLACING/ FILLING				COMMENTS
Clays	11	Olivine and glass.				Brownish green clay.
VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm)	FILLING	SHAPE	COMMENTS
Vesicles	15	Disseminated.	2–5	Clay and Cu.	Irregular.	Filled with pale colored aggregates of smectite. Flecks of native copper are present in the clay material lining the vesicles.

COMMENTS: This rock is only slightly altered; some mica-like clays are present in the very fine-grained matrix.

152-918D-110R-4 (Piece 10, 111–112 cm)

OBSERVER: DEM

ROCK NAME: Aphyric basalt.

GRAIN SIZE: Very fine-grained.

TEXTURE: Intersertal to intergranular.

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
Olivine	0	<1	0.3–0.5		Subhedral.	Altered to iddingsite and clays; embayed margins.
Clinopyroxene	37	37	<0.1		Grain.	Some crystals are more elongated (pigeonite?).
Plagioclase	48	48	0.1–0.5		Lath.	Forms some doleritic aggregates.
Opaque mineral	6	6	<0.1			
Glass	0	9				Altered to brownish clays.
SECONDARY MINERALOGY	PERCENT	REPLACING/ FILLING				COMMENTS
Clays	9	Olivine and glass.				Brownish green clay.
VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm)	FILLING	SHAPE	COMMENTS
Vesicles	1		0.5–1	Clay and Cu.	Rounded.	Filled with smectites; flecks of native copper in the clay material lining the vesicles.

COMMENTS: Branching pyroxene develops with radiating plagioclase in the glomeroporphyritic assemblages.

152-918D-111R-3 (Piece 12, 111–114 cm)

OBSERVER: DEM

ROCK NAME: Aphyric basalt.

GRAIN SIZE: Very fine-grained.

TEXTURE: Intersertal to intergranular.

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
Olivine	0	0.5	0.1–0.3		Subhedral.	Altered to iddingsite and clays.
Clinopyroxene	37.5	37.5	<0.1		Grain.	
Plagioclase	49.5	49.5	0.1–0.4		Lath.	
Opaque mineral	3.5	3.5	<0.1			
Glass	0	9				Altered to clays.
SECONDARY MINERALOGY	PERCENT	REPLACING/ FILLING				COMMENTS
Clays	9.5	Olivine and glass.				Alteration of the glassy matrix.
VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm)	FILLING	SHAPE	COMMENTS
Vesicles	2		1–2	Clay.	Rounded.	Filled with brownish green smectites.

