

168-1031A-6X-01 (piece 6, 24–28 cm)

ROCK NAME: Aphyric plagioclase-pyroxene-olivine basalt

GRAIN SIZE: Microcrystalline to cryptocrystalline

TEXTURE: Intersertal; microglomeroporphyritic; sheaf-spherulitic; vesicular

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPOSITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Olivine	0.0	2.0	0.3-0.5		Euhedral	Completely pseudomorphed by celadonite + iddingsite.
Plagioclase	0.4	0.4	0.6-1.0 (Ave 0.8)		Subhedral to skeletal	Laths, stubby crystals and some quench crystals. Most are elongate laths occurring singly, in rare glomeroporphyritic clots and in plagioclase clusters.
Clinopyroxene	0.2	0.2	0.3-0.6 (Ave 0.35)		Subhedral to anhedral	Mostly in biminerale glomeroporphyritic clots (plag + px). Some occur attached to plagioclase laths.
GROUNDMASS						
Plagioclase	11.2	11.2	0.05-0.5 (Ave 0.4)		Euhedral to skeletal	Microlaths and microlites. Most are swallowtail and hollow quench crystals.
Clinopyroxene	9.6	9.6	0.1-0.3		Euhedral to anhedral	Equant grains to short prisms; occur singly or intergrown with plagioclase microlites.
Opaques	1.4	1.4	0.01-0.025		Euhedral to anhedral	Granular; interstitial in the mesostasis.
Mesostasis	72.2	75.6				Gray; sheaf-spherulitic; consists mostly of cpx and opaque microgranules and fibers.
SECONDARY MINERALOGY						
	PERCENT	REPLACING/ FILLING				COMMENTS:
Saponite	1.0	Vesicles				Not abundant; absent in gray interior. Occurs inside of celadonite linings of vesicles in the alteration halo.
Celadonite	0.8	Vein; vesicles; mesostasis; olivine				Restricted to the alteration halo.
Zeolites	0.2	vesicles; vugs; mafic phenocrysts				Isotropic to near isotropic, colorless; radial splays are fine, to fibrous to columnar. Fills vesicles and replaces euhedral mafic crystals associated with plagioclase phenocrysts and in glomeroporphyritic clots.
Pyrite/pyrrhotite	Tr	Mesostasis				0.02-0.04mm granular, interstitial grains sparsely mark the internal edge of the alteration halo.
Iddingsite	3.0	Veins; vesicles; mesostasis; olivine				Heavily developed in the alteration halo, equivalent to c.1-20% (visual estimate).
VESICLES/ CAVITIES						
	PERCENT	LOCATION	SIZE (mm)	FILLING	SHAPE	COMMENTS:
Gas vesicles	1.6	Even	0.05-0.6	Variable	Round to irregular	Filled by celadonite/iddingsite ± saponite in alteration halo, and empty or filled (partially to completely) by zeolite in the gray rock interior.

COMMENTS: