148-504B-239R-1 (Piece 9, 26–30 cm) ROCK NAME: Moderately phyric plagioclase-olivine diabase. GRAIN SIZE: Fine-grained. TEXTURE: Porphyritic, subophitic. WHERE SAMPLED: Unit 270

DDIMADV	DEDCENT	DEDCENT	STAL	COMBO		
MINERALOGY	PRESENT	ORIGINAL	(mm)	SITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS			()	billon (
Olivine	0	1	0.4-1.1		Equant, euhedral,	Mostly altered to talc. May occur in plagioclase glomerocrysts.
Plagioclase	7	7	0.5-1.6		Euhedral, subhedral.	
Plagioclase	42	42	0.1-0.5		Euhedral, subhedral	
					laths.	
Clinopyroxene	27	45	0.3-1.1		Anhedral, equant.	Subophitic-ophitic.
Oxides	2	2	0.02-0.35		Subhedral, equant.	
SECONDARY		REPLACING	3/			
MINERALOGY	PERCENT	FILLING				COMMENTS
Chlorite	Tr	Olivine.				Surrounds relict olivine. Also in cracks in plagioclase.
Actinolite	20	Clinopyrox	enc.			Mineralogy ranges from finely fibrous actinolite to actinolite/hornblende to hornblende.
Hornblende	Tr	Clinopyrox	ene			With actinolite
Talc	2	Olivine	che.			nui demone.
Pyrite	Tr	Silicates and	d magnetite			2 to 100 µm
Hematite	Tr	Magnetite	i mugnettte.			Imenohematite(?)
Pyrrhotite	Tr	magnetite.				Inclusions in plagioclase
Magnetite	Tr	Olivine.				With talc.
VESICLES/		**************	SIZE	**********		
CAVITIES	PERCENT	LOCATION	(mm)	FILLING	SHAPE	COMMENTS
Patch	2	Documon	1	Actinolite	Irregular	Actinolite replaces everything excent the plagioclase crystal core
	- T		•	Actinonite.	megutar.	within the notch
ROCK NAME: M GRAIN SIZE: Fine TEXTURE: Porph	(Piece 14, 45 oderately phyr -grained. yritic, suboph	–51 cm) ric plagioclase itic.	-olivine diabase.	OBSERVER: IMS	WHERE SA	MPLED: Unit 271
ROCK NAME: M GRAIN SIZE: Fine TEXTURE: Porph	(Piece 14, 45 oderately phyr -grained. yritic, suboph	-51 cm) ric plagioclase itic.	-olivine diabase.	OBSERVER: IMS	WHERE SA	MPLED: Unit 271
ROCK NAME: M GRAIN SIZE: Fine TEXTURE: Porph	PERCENT PRESENT	-51 cm) ric plagioclase itic. PERCENT ORIGINAI	-olivine diabase.	OBSERVER: IMS COMPO- STTION	WHERE SA	MPLED: Unit 271
INFORMATION INFORMATICA INFORM	(Piece 14, 45 oderately phyr -grained. yritic, suboph PERCENT PRESENT	–51 cm) ric plagioclase itic. PERCENT ORIGINAL	-olivine diabase. SIZE (mm)	OBSERVER: IMS COMPO- SITION	WHERE SA MORPHOLOGY	MPLED: Unit 271 COMMENTS
ROCK NAME: M GRAIN SIZE: Fine TEXTURE: Porph PRIMARY MINERALOGY PHENOCRYSTS Oliving	Piece 14, 45 oderately phyr -grained. yritic, suboph PERCENT PRESENT	-51 cm) ric plagioclase itic. PERCENT ORIGINAL	SIZE (mm)	OBSERVER: IMS COMPO- SITION	WHERE SA MORPHOLOGY	MPLED: Unit 271
ROCK NAME: M GRAIN SIZE: Fine TEXTURE: Porph PRIMARY MINERALOGY PHENOCRYSTS Olivine Plagioglage	0 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	-51 cm) ric plagioclase itic. PERCENT ORIGINAL 1 2	SIZE (mm)	OBSERVER: IMS COMPO- SITION	WHERE SA MORPHOLOGY Euhedral, equant.	MPLED: Unit 271
148-304B-239K-1 ROCK NAME: M GRAIN SIZE: Fine TEXTURE: Porph PRIMARY MINERALOGY PHENOCRYSTS Olivine Plagioclase	Piece 14, 45 oderately phyri- grained. yritic, suboph PERCENT PRESENT 0 3	-51 cm) ric plagioclase itic. PERCENT ORIGINAL 1 3	-olivine diabase. SIZE (mm) 0.4–1.5 0.4–1.8	OBSERVER: IMS COMPO- SITION	WHERE SA MORPHOLOGY Euhedral, equant. Euhedral to	MPLED: Unit 271
148-304B-239K-1 ROCK NAME: M GRAIN SIZE: Fine TEXTURE: Porph PRIMARY MINERALOGY PHENOCRYSTS Olivine Plagioclase Spinel	(Piece 14, 45 oderately phyr- -grained. yritic, suboph PERCENT PRESENT 0 3	-51 cm) ric plagioclase itic. PERCENT ORIGINAL 1 3	SIZE (mm) 0.4-1.5 0.4-1.8	OBSERVER: IMS COMPO- SITION	WHERE SA MORPHOLOGY Euhedral, equant. Euhedral to subhedral laths.	MPLED: Unit 271 COMMENTS
148-304B-239K-1 ROCK NAME: M GRAIN SIZE: Fine TEXTURE: Porph PRIMARY MINERALOGY PHENOCRYSTS Olivine Plagioclase Spinel CPOLINIMASS	(Piece 14, 45 oderately phyr ergained. yritic, suboph PERCENT PRESENT 0 3 Tr	-51 cm) ric plagioclase itic. PERCENT ORIGINAL 1 3 Tr	-olivine diabase. SIZE (mm) 0.4–1.5 0.4–1.8 0.06	OBSERVER: IMS COMPO- SITION Iron rich.	WHERE SA MORPHOLOGY Euhedral, equant. Euhedral to subhedral laths. Anhedral, equant.	MPLED: Unit 271 COMMENTS In plagioclase.
148-304B-239K-1 ROCK NAME: M GRAIN SIZE: Fine TEXTURE: Porph PRIMARY MINERALOGY PHENOCRYSTS Olivine Plagioclase Spinel GROUNDMASS Plagioclase	(Piece 14, 45 oderately phyr -grained. yritic, suboph PERCENT PRESENT 0 3 Tr 30	-51 cm) ric plagioclase itic. PERCENT ORIGINAL 1 3 Tr 42	SIZE (mm) 0.4-1.5 0.4-1.8 0.06 0.1-0.4	OBSERVER: IMS COMPO- SITION Iron rich.	WHERE SA MORPHOLOGY Euhedral, equant. Euhedral to subhedral laths. Anhedral, equant. Euhedral aphedral	MPLED: Unit 271 COMMENTS In plagioclase.
148-304B-239K-1 ROCK NAME: M GRAIN SIZE: Fine TEXTURE: Porph PRIMARY MINERALOGY PHENOCRYSTS Olivine Plagioclase Spinel GROUNDMASS Plagioclase Clinapurovena	(Piece 14, 45 oderately phyr -grained. yritic, suboph PERCENT PRESENT 0 3 Tr 39 11	-51 cm) ric plagioclase itic. PERCENT ORIGINAL 1 3 Tr 42 43	-olivine diabase. SIZE (mm) 0.4–1.5 0.4–1.8 0.06 0.1–0.4 0.1–2.0	OBSERVER: IMS COMPO- SITION Iron rich.	WHERE SA MORPHOLOGY Euhedral, equant. Euhedral to subhedral laths. Anhedral, equant. Euhedral-anhedral. Anhedral	MPLED: Unit 271 COMMENTS In plagioclase.
148-304B-239K-1 ROCK NAME: M ROCK NAME: M ROCK NAME: Porph TEXTURE: Porph PRIMARY MINERALOGY PHENOCRYSTS Olivine Plagioclase Spinel GROUNDMASS Plagioclase Clinopyroxene Olivine	(Piece 14, 45 oderately phyr ergained. yritic, suboph PERCENT PRESENT 0 3 Tr 39 11 0	-51 cm) ric plagioclase itic. PERCENT ORIGINAL 1 3 Tr 42 43 4	-olivine diabase. SIZE (mm) 0.4–1.5 0.4–1.8 0.06 0.1–0.4 0.1–2.0 0.1–0.2	OBSERVER: IMS COMPO- SITION Iron rich.	WHERE SA MORPHOLOGY Euhedral, equant. Euhedral to subhedral laths. Anhedral, equant. Euhedral-anhedral. Anhedral. Euhedral to	MPLED: Unit 271 COMMENTS In plagioclase. Large grains are oikocrysts.
148-304B-239K-1 ROCK NAME: M GRAIN SIZE: Fine TEXTURE: Porph PRIMARY MINERALOGY PHENOCRYSTS Olivine Plagioclase Spinel GROUNDMASS Plagioclase Clinopyroxene Olivine	(Piece 14, 45 oderately phyr -grained. yritic, suboph PERCENT PRESENT 0 3 Tr 39 11 0	-51 cm) ric plagioclase itic. PERCENT ORIGINAL 1 3 Tr 42 43 4	SIZE (mm) 0.4–1.5 0.4–1.8 0.06 0.1–0.4 0.1–2.0 0.1–0.2	OBSERVER: IMS COMPO- SITION Iron rich.	WHERE SA MORPHOLOGY Euhedral, equant. Euhedral to subhedral laths. Anhedral, equant. Euhedral-anhedral. Anhedral. Euhedral to	MPLED: Unit 271 COMMENTS In plagioclase. Large grains are oikocrysts.
148-504B-239K-1 ROCK NAME: M GRAIN SIZE: Fine TEXTURE: Porph PRIMARY MINERALOGY PHENOCRYSTS Olivine Plagioclase Spinel GROUNDMASS Plagioclase Clinopyroxene Olivine Magnetite	PERCENT PRESENT 0 3 Tr 39 11 0 2	-51 cm) ric plagioclase itic. PERCENT ORIGINAL 1 3 Tr 42 43 4 4	SIZE (mm) 0.4-1.5 0.4-1.8 0.06 0.1-0.4 0.1-2.0 0.1-0.2 0.03-0.25	OBSERVER: IMS COMPO- SITION Iron rich.	WHERE SA MORPHOLOGY Euhedral, equant. Euhedral to subhedral laths. Anhedral, equant. Euhedral-anhedral. Anhedral. Euhedral to subhedral, equant. Euhedral to	MPLED: Unit 271 COMMENTS In plagioclase. Large grains are oikocrysts.
148-304B-239K-1 ROCK NAME: M GRAIN SIZE: Fine TEXTURE: Porph PRIMARY MINERALOGY PHENOCRYSTS Olivine Plagioclase Spinel GROUNDMASS Plagioclase Clinopyroxene Olivine Magnetite	(Piece 14, 45 oderately phyri- grained. yritic, suboph PERCENT PRESENT 0 3 Tr 39 11 0 2	-51 cm) ric plagioclase itic. PERCENT ORIGINAL 1 3 Tr 42 43 4 4 4	-olivine diabase. SIZE (mm) 0.4–1.5 0.4–1.8 0.06 0.1–0.4 0.1–2.0 0.1–0.2 0.03–0.25	OBSERVER: IMS COMPO- SITION Iron rich.	WHERE SA MORPHOLOGY Euhedral, equant. Euhedral to subhedral laths. Anhedral, equant. Euhedral, equant. Euhedral to subhedral, equant. Euhedral to subhedral, equant.	MPLED: Unit 271 COMMENTS In plagioclase. Large grains are oikocrysts.
148-304B-239K-1 ROCK NAME: M GRAIN SIZE: Fine TEXTURE: Porph PRIMARY MINERALOGY PHENOCRYSTS Olivine Plagioclase Spinel GROUNDMASS Plagioclase Clinopyroxene Olivine Magnetite SECONDARY MINERALOGY	PERCENT PRESENT 0 3 Tr 39 11 0 2	-51 cm) ric plagioclase itic. PERCENT ORIGINAL 1 3 Tr 42 43 4 4 REPLACINC	-olivine diabase. SIZE (mm) 0.4–1.5 0.4–1.8 0.06 0.1–0.4 0.1–2.0 0.1–0.2 0.03–0.25	OBSERVER: IMS COMPO- SITION Iron rich.	WHERE SA MORPHOLOGY Euhedral, equant. Euhedral to subhedral laths. Anhedral, equant. Euhedral-anhedral. Anhedral. Euhedral to subhedral, equant. Euhedral to subhedral, equant.	MPLED: Unit 271 COMMENTS In plagioclase. Large grains are oikocrysts.
148-304B-239K-1 ROCK NAME: M GRAIN SIZE: Fine TEXTURE: Porph PRIMARY MINERALOGY PHENOCRYSTS Olivine Plagioclase Spinel GROUNDMASS Plagioclase Clinopyroxene Olivine Magnetite SECONDARY MINERALOGY Chlorica	PERCENT 2 PERCENT 39 11 0 2 PERCENT 3 2	-51 cm) ric plagioclase itic. PERCENT ORIGINAL 1 3 Tr 42 43 4 4 REPLACINC FILLING Olivies	SIZE (mm) 0.4-1.5 0.4-1.8 0.06 0.1-0.4 0.1-2.0 0.1-0.2 0.03-0.25	OBSERVER: IMS COMPO- SITION Iron rich.	WHERE SA MORPHOLOGY Euhedral, equant. Euhedral to subhedral laths. Anhedral, equant. Euhedral-anhedral. Anhedral. Euhedral to subhedral, equant. Euhedral to subhedral, equant.	MPLED: Unit 271 COMMENTS In plagioclase. Large grains are oikocrysts. COMMENTS
148-304B-239K-1 ROCK NAME: M GRAIN SIZE: Fine TEXTURE: Porph PRIMARY MINERALOGY PHENOCRYSTS Olivine Plagioclase Spinel GROUNDMASS Plagioclase Clinopyroxene Olivine Magnetite SECONDARY MINERALOGY Chlorite Albire	PERCENT 3 PERCENT 3 PERCENT 0 3 Tr 39 11 0 2 PERCENT 3	-51 cm) ric plagioclase itic. PERCENT ORIGINAL 1 3 Tr 42 43 4 4 REPLACINC FILLING Olivine, cra	-olivine diabase. SIZE (mm) 0.4–1.5 0.4–1.8 0.06 0.1–0.4 0.1–2.0 0.1–0.2 0.03–0.25 S/ cks in plagioclase.	OBSERVER: IMS COMPO- SITION Iron rich.	WHERE SA MORPHOLOGY Euhedral, equant. Euhedral to subhedral laths. Anhedral, equant. Euhedral-anhedral. Anhedral. Euhedral to subhedral, equant. Euhedral to subhedral, equant.	MPLED: Unit 271 COMMENTS In plagioclase. Large grains are oikocrysts. COMMENTS Associated with minor quartz and in alteration halos. In placenting halos. In placenting halos.
148-304B-239K-1 ROCK NAME: M GRAIN SIZE: Fine TEXTURE: Porph PRIMARY MINERALOGY PHENOCRYSTS Olivine Plagioclase Spinel GROUNDMASS Plagioclase Clinopyroxene Olivine Magnetite SECONDARY MINERALOGY Chlorite Albite Actinolicy	PERCENT 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 11 0 2 9 9 9 9 11 0 2 9 9 11 0 2 9 9 11 0 2 9 9 11 0 1 2 9 9 11 1 0 9 11 1 9 9 9 11 9 9 9 9 9 9	-51 cm) ric plagioclase itic. PERCENT ORIGINAL 1 3 Tr 42 43 4 4 8 REPLACINC FILLING Olivine, crai Cracks in p	-olivine diabase. SIZE (mm) 0.4-1.5 0.4-1.8 0.06 0.1-0.4 0.1-2.0 0.1-0.2 0.03-0.25 i/ cks in plagioclase. lagioclase.	OBSERVER: IMS COMPO- SITION Iron rich.	WHERE SA MORPHOLOGY Euhedral, equant. Euhedral to subhedral laths. Anhedral, equant. Euhedral-anhedral. Anhedral. Euhedral to subhedral, equant. Euhedral to subhedral, equant.	MPLED: Unit 271 COMMENTS In plagioclase. Large grains are oikocrysts. COMMENTS Associated with minor quartz and in alteration halos. In alteration halos. In alteration halos.
148-304B-239K-1 ROCK NAME: M GRAIN SIZE: Fine TEXTURE: Porph PRIMARY MINERALOGY PHENOCRYSTS Olivine Plagioclase Spinel GROUNDMASS Plagioclase Clinopyroxene Olivine Magnetite SECONDARY MINERALOGY Chlorite Albite Actinolite	PERCENT PERCENT 0 3 Tr 39 11 0 2 PERCENT 3 1 41	-51 cm) ric plagioclase itic. PERCENT ORIGINAL 1 3 Tr 42 43 4 4 REPLACINC FILLING Olivine, cra Cracks in pi Clinopyroxe	-olivine diabase. SIZE (mm) 0.4–1.5 0.4–1.8 0.06 0.1–0.4 0.1–2.0 0.1–0.2 0.03–0.25 3/ cks in plagioclase. lagioclase. ne, rarely olivine.	OBSERVER: IMS COMPO- SITION Iron rich.	WHERE SA MORPHOLOGY Euhedral, equant. Euhedral to subhedral laths. Anhedral, equant. Euhedral-anhedral. Anhedral. Euhedral to subhedral, equant. Euhedral to subhedral, equant.	MPLED: Unit 271 COMMENTS In plagioclase. Large grains are oikocrysts. COMMENTS Associated with minor quartz and in alteration halos. In alteration halos. In alteration halos adjacent to vein, associated with quartz and chlorite.
148-304B-239K-1 ROCK NAME: M GRAIN SIZE: Fine TEXTURE: Porph PRIMARY MINERALOGY PHENOCRYSTS Olivine Plagioclase Spinel GROUNDMASS Plagioclase Clinopyroxene Olivine Magnetite SECONDARY MINERALOGY Chlorite Albite Actinolite Quartz	PERCENT 3 PERCENT 3 PERCENT 0 3 Tr 39 11 0 2 PERCENT 3 1 4 1 Tr	-51 cm) ric plagioclase itic. PERCENT ORIGINAL 1 3 Tr 42 43 4 4 REPLACINC FILLING Olivine, cra Cracks in p Clinopyroxe Olivine.	-olivine diabase. SIZE (mm) 0.4–1.5 0.4–1.8 0.06 0.1–0.4 0.1–2.0 0.1–0.2 0.03–0.25 S/ cks in plagioclase. lagioclase. ne, rarely olivine.	OBSERVER: IMS COMPO- SITION Iron rich.	WHERE SA MORPHOLOGY Euhedral, equant. Euhedral to subhedral laths. Anhedral, equant. Euhedral-anhedral. Anhedral. Euhedral to subhedral, equant. Euhedral to subhedral, equant.	MPLED: Unit 271 COMMENTS In plagioclase. Large grains are oikocrysts. COMMENTS Associated with minor quartz and in alteration halos. In alteration halos. In alteration halo adjacent to vein, associated with quartz and chlorite. Associated with chlorite.
148-504B-239K-1 ROCK NAME: M ROCK NAME: M ROCK NAME: M ROCK NAME: M PRIMARY MINERALOGY PHENOCRYSTS Olivine Plagioclase Olivine Magnetite SECONDARY MINERALOGY Chlorite Albite Actinolite Quartz Prehnite	PERCENT PERCENT 0 3 Tr 39 11 0 2 PERCENT 3 1 41 Tr Tr Tr	-51 cm) ric plagioclase itic. PERCENT ORIGINAL 1 3 Tr 42 43 4 4 8 REPLACINC FILLING Olivine, crai Cracks in pi Clinopyroxe Olivine. Plagioclase.	-olivine diabase. SIZE (mm) 0.4-1.5 0.4-1.8 0.06 0.1-0.4 0.1-2.0 0.1-0.2 0.03-0.25 // cks in plagioclase. lagioclase. me, rarely olivine.	OBSERVER: IMS COMPO- SITION Iron rich.	WHERE SA MORPHOLOGY Euhedral, equant. Euhedral to subhedral laths. Anhedral, equant. Euhedral-anhedral. Anhedral. Euhedral to subhedral, equant. Euhedral to subhedral, equant.	MPLED: Unit 271 COMMENTS In plagioclase. Large grains are oikocrysts. COMMENTS Associated with minor quartz and in alteration halos. In alteration halos. In alteration halo adjacent to vein, associated with quartz and chlorite. Associated with chlorite. In alteration halo.
148-304B-239K-1 ROCK NAME: M GRAIN SIZE: Fine TEXTURE: Porph PRIMARY MINERALOGY PHENOCRYSTS Olivine Plagioclase Spinel GROUNDMASS Plagioclase Clinopyroxene Olivine Magnetite SECONDARY MINERALOGY Chlorite Albite Actinolite Quartz Prehnite Laumontite	PERCENT 3 PERCENT 3 PERCENT 3 PERCENT 3 1 4 1 Tr Tr Tr Tr Tr Tr	-51 cm) ric plagioclase itic. PERCENT ORIGINAL 1 3 Tr 42 43 4 4 REPLACINC FILLING Olivine, cra Cracks in p Clinopyroxe Olivine. Plagioclase. Vein.	-olivine diabase. SIZE (mm) 0.4–1.5 0.4–1.8 0.06 0.1–0.4 0.1–2.0 0.1–0.2 0.03–0.25 S/ cks in plagioclase. lagioclase. ne, rarely olivine.	OBSERVER: IMS COMPO- SITION Iron rich.	WHERE SA MORPHOLOGY Euhedral, equant. Euhedral to subhedral laths. Anhedral, equant. Euhedral-anhedral. Anhedral. Euhedral to subhedral, equant. Euhedral to subhedral, equant.	MPLED: Unit 271 COMMENTS In plagioclase. Large grains are oikocrysts. COMMENTS Associated with minor quartz and in alteration halos. In alteration halos. In alteration halo adjacent to vein, associated with quartz and chlorite. Associated with chlorite. In alteration halo. Interstitial to actinolite in vein.
148-304B-239K-1 ROCK NAME: M GRAIN SIZE: Fine TEXTURE: Porph PRIMARY MINERALOGY PHENOCRYSTS Olivine Plagioclase Spinel GROUNDMASS Plagioclase Clinopyroxene Olivine Magnetite SECONDARY MINERALOGY Chlorite Albite Actinolite Quartz Prehnite Laumontite VESICLES/	PERCENT PERCENT 0 3 Tr 39 11 0 2 PERCENT 3 1 41 Tr Tr Tr Tr Tr	-51 cm) ric plagioclase itic. PERCENT ORIGINAL 1 3 Tr 42 43 4 4 REPLACINC FILLING Olivine, cra Cracks in pl Clinopyroxe Olivine. Plagioclase. Vein.	-olivine diabase. SIZE (mm) 0.4–1.5 0.4–1.8 0.06 0.1–0.4 0.1–2.0 0.1–0.2 0.03–0.25 SIZE	OBSERVER: IMS COMPO- SITION Iron rich.	WHERE SA MORPHOLOGY Euhedral, equant. Euhedral to subhedral laths. Anhedral, equant. Euhedral-anhedral. Anhedral. Euhedral to subhedral, equant. Euhedral to subhedral, equant.	MPLED: Unit 271 COMMENTS In plagioclase. Large grains are oikocrysts. COMMENTS Associated with minor quartz and in alteration halos. In alteration halos. In alteration halo adjacent to vein, associated with quartz and chlorite. Associated with chlorite. In alteration halo. Interstitial to actinolite in vein.
148-304B-239K-1 ROCK NAME: M GRAIN SIZE: Fine TEXTURE: Porph PRIMARY MINERALOGY PHENOCRYSTS Olivine Plagioclase Spinel GROUNDMASS Plagioclase Clinopyroxene Olivine Magnetite SECONDARY MINERALOGY Chlorite Albite Actinolite Quartz Prehnite Laumontite 	PERCENT 3 PERCENT 3 PERCENT 0 3 Tr 39 11 0 2 PERCENT 3 1 4 1 Tr Tr Tr Tr Tr PERCENT	-51 cm) ric plagioclase itic. PERCENT ORIGINAL 1 3 Tr 42 43 4 4 REPLACINC FILLING Olivine, cra Cracks in p Clinopyroxe Olivine. Plagioclase. Vein.	-olivine diabase. SIZE (mm) 0.4–1.5 0.4–1.8 0.06 0.1–0.4 0.1–2.0 0.1–0.2 0.03–0.25 SIZE (mm)	OBSERVER: IMS COMPO- SITION Iron rich. FILLING	WHERE SA MORPHOLOGY Euhedral, equant. Euhedral to subhedral laths. Anhedral, equant. Euhedral-anhedral. Anhedral, equant. Euhedral to subhedral, equant. Euhedral to subhedral, equant.	MPLED: Unit 271 COMMENTS In plagioclase. Large grains are oikocrysts. COMMENTS Associated with minor quartz and in alteration halos. In alteration halos. In alteration halo adjacent to vein, associated with quartz and chlorite. Associated with chlorite. In alteration halo. Interstitial to actinolite in vein.

COMMENTS: One actinolite vein (2 to 3 mm wide), bifurcated in two places, contains interstitial laumontite. Alteration halo (5 mm wide) adjacent to this vein, where clinopyroxene is extensively replaced by actinolite and magnetite(?) dust. Large phenocryst cut by the main branch of the actinolite vein shows that the vein is extensional. Offset crystals indicate 0.5-mm offset on branch of large vein. Large actinolite vein appears to have reopened and filled with finer grained contorted actinolite. Mineral abundance in vein halo: 35% primary magmatic, 60% amphibole, 2% chlorite, 2% albite, 1% secondary opaque minerals. Outside of vein halo: 67% primary magmatic minerals, 28% amphibole, 5% chlorite.

148-504B-240R-1 (Piece 6, 16	5–27 cm)
ROCK NAME: Moderately ph	yric plagioclase-olivine diabase.
GRAIN SIZE: Fine-grained.	
TEXTURE: Intergranular.	

L (mm) 0.4–1.0 0.5–1.3 0.1 0.05–0.50 0.1–1.0 0.03–0.25 0.2	SITION Chrome-rich.	MORPHOLOGY Euhedral to subhedral, equant. Euhedral to subhedral. Anhedral, equant. Euhedral, anhedral laths. Anhedral. Euhedral to anhedral, equant.	COMMENTS Partially altered to talc. Inclusions in plagioclase phenocrysts, red-brown. Large grains are oikocrysts.
0.4-1.0 0.5-1.3 0.1 0.05-0.50 0.1-1.0 0.03-0.25 0.2	Chrome-rich.	Euhedral to subhedral, equant. Euhedral to subhedral. Anhedral, equant. Euhedral, anhedral laths. Anhedral. Euhedral to anhedral, equant.	Partially altered to talc. Inclusions in plagioclase phenocrysts, red-brown. Large grains are oikocrysts.
0.4-1.0 0.5-1.3 0.1 0.05-0.50 0.1-1.0 0.03-0.25 0.2	Chrome-rich.	Euhedral to subhedral, equant. Euhedral to subhedral. Anhedral, equant. Euhedral, anhedral laths. Anhedral. Euhedral to anhedral, equant.	Partially altered to talc. Inclusions in plagioclase phenocrysts, red-brown. Large grains are oikocrysts.
0.5-1.3 0.1 0.05-0.50 0.1-1.0 0.03-0.25 0.2	Chrome-rich.	subhedral, equant. Euhedral to subhedral. Anhedral, equant. Euhedral, anhedral laths. Anhedral. Euhedral to anhedral, equant.	Inclusions in plagioclase phenocrysts, red-brown. Large grains are oikocrysts.
0.5-1.3 0.1 0.05-0.50 0.1-1.0 0.03-0.25 0.2	Chrome-rich.	Euhedral to subhedral. Anhedral, equant. Euhedral, anhedral laths. Anhedral. Euhedral to anhedral, equant.	Inclusions in plagioclase phenocrysts, red-brown. Large grains are oikocrysts.
0.1 0.05-0.50 0.1-1.0 0.03-0.25 0.2	Chrome-rich.	subhedral. Anhedral, equant. Euhedral, anhedral laths. Anhedral. Euhedral to anhedral, equant.	Inclusions in plagioclase phenocrysts, red-brown. Large grains are oikocrysts.
0.1 0.05-0.50 0.1-1.0 0.03-0.25 0.2	Chrome-rich.	Anhedral, equant. Euhedral, anhedral laths. Anhedral. Euhedral to anhedral, equant.	Inclusions in plagioclase phenocrysts, red-brown. Large grains are oikocrysts.
0.05-0.50 0.1-1.0 0.03-0.25 0.2		Euhedral, anhedral laths. Anhedral. Euhedral to anhedral, equant.	Large grains are oikocrysts.
0.1-1.0 0.03-0.25 0.2		laths. Anhedral. Euhedral to anhedral, equant.	Large grains are oikocrysts.
0.1-1.0 0.03-0.25 0.2		Anhedral. Euhedral to anhedral, equant.	Large grains are oikocrysts.
0.03-0.25		Euhedral to anhedral, equant.	
0.2		anhedral, equant.	
0.2			
NG/			
			COMMENTS
			Magnetite also present.
al.			Glass in plagioclase.
			With talc.
SIZE			
N (mm)	FILLING	SHAPE	
	al. SIZE N (mm) use diabase.	al. SIZE N (mm) FILLING OBSERVER: IM use diabase.	al. SIZE IN (mm) FILLING SHAPE OBSERVER: IMS WHERE SA

WHERE SAMPLED: Unit 272

OBSERVER: IMS

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PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPO- SITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Plagioclase	7	7	0.4-0.8		Euhedral, subhedral.	Zoned.
Olivine	0	Tr	Less than 0.2%.			
GROUNDMASS						
Plagioclase	41	44	0.05 - 0.40		Euhedral to	
					anhedral.	
Clinopyroxene	21	47	0.1-1.0		Anhedral.	
Oxides	Tr	Tr	0.02 - 0.28		Euhedral to	
					anhedral, equant.	
SECONDARY		REPLACING	3/			
MINERALOGY	PERCENT	FILLING				COMMENTS
Albite	1					
Actinolite	30	Clinopyrox	ene.			
Talc	Tr	Olivine.				With secondary magnetite and chlorite.
Ilmenite	Tr					With titanomagnetite.
Pyrite	Tr	Titanomagne	etite and silicates.			Also interstitial.
Chalcopyrite	Tr	Titanomagne	etite and silicates.			Also interstitial.
Pyrrhotite	Tr	Inclusions in	n plagioclase, inter	stitial with magne	tite, 2-10 µm.	
VESICLES/			SIZE			
CAVITIES	PERCENT	LOCATION	(mm)	FILLING	SHAPE	
Vesicles	0		16 - St			

COMMENTS: Relatively abundant sulfides.

148-504B-240R-1 (Piece 14, 52–63 cm) OBSERVER: IMS ROCK NAME: Moderately phyric olivine-plagioclase diabase. GRAIN SIZE: Fine-grained. TEXTURE: Porphyritic.

Pyrite

Tr

Interstitial.

WITCDD	CAMDI	ED.	T Tania	272
WHERE	SAMPL	ED:	Unit	213

PRIMARY	PERCENT	PERCENT	SIZE	COMPO		
MINERALOGY	PRESENT	ORIGINAL	SIZE (mm)	SITION	MORPHOI OCV	COMMENTS
PHENOCRYSTS	TREBLAT	ORIGINAL	(mm)	SILION	MORTHOLOGI	COMMENTO
Olivine	0	6	0 4-3 0		Fuhedral equant	
Plagioclase	2	2	0.6-3.3		Euhedral subhedral	
Spinel	Tr	Tr	0.03-0.13	Chrome-rich	Euhedral to	Fresh to symplectic replacement by magnetite
opiner			0.05 0.15	emonic-rien.	subhedral, equant.	Trost to sympletic replacement by magnetic.
GROUNDMASS						
Plagioclase	42	43	0.1-0.6		Euhedral to	
					anhedral.	
Clinopyroxene	19	36	0.1 - 2.0		Enhedral.	Equant oikocrysts.
Opaque minerals	3	3	0.08-0.32		Euhedral to	
SECONDARY		DEDI ACINI	7/		anhedral, equant.	
MINEDALOGY	DEDCENT	FILLING	3/			COMMENTS
Chlorite	2	Oliving pl	nicolara clinon	UFOYADA		Associated with quartz, purite
Albite	3	Plagioclass	igiociase, ennop	yroxene.		Along gracks
Actinolite	23	Interetitial	clinopyrovona			With chlorite
Purite	Tr	Olivine inc	lusions in plagi	aclace		Also interstitial 1-300 µm
Chalconvrite	Tr	Olivine, Inc	matona in piago	semac.		Un to 0.3 mm
					****	of the site man
VESICLES/			SIZE			
CAVITIES	PERCENT	LOCATION	(mm)	FILLING	SHAPE	
Vesicles	0					
148-504B-240R-1 ROCK NAME: Mo GRAIN SIZE: Fine TEXTURE: Ophiti	(Piece 21, 82 oderately phys- grained.	–90 cm) ric plagioclase	e-olivine diabase.	OBSERVER: IM	S WHERE SAM	MPLED: Unit 274
148-504B-240R-1 ROCK NAME: Mo GRAIN SIZE: Fine TEXTURE: Ophiti	(Piece 21, 82 oderately phys- grained. c, subophitic.	–90 cm) ric plagioclase	e-olivine diabase.	OBSERVER: IM	S WHERE SAM	MPLED: Unit 274
148-504B-240R-1 ROCK NAME: Ma GRAIN SIZE: Fine TEXTURE: Ophiti 'RIMARY	(Piece 21, 82 oderately phyr- grained. c, subophitic. PERCENT	–90 cm) ric plagioclase PERCENT	e-olivine diabase. SIZE	OBSERVER: IM: COMPO-	S WHERE SAM	MPLED: Unit 274
148-504B-240R-1 ROCK NAME: Ma GRAIN SIZE: Fine TEXTURE: Ophiti PRIMARY MINERALOGY	(Piece 21, 82 oderately phys- grained. c, subophitic. PERCENT PRESENT	–90 cm) ric plagioclase PERCENT ORIGINAL	e-olivine diabase. SIZE (mm)	OBSERVER: IM COMPO- SITION	S WHERE SAM	MPLED: Unit 274
148-504B-240R-1 ROCK NAME: Mo GRAIN SIZE: Fine TEXTURE: Ophiti RIMARY MINERALOGY HENOCRYSTS	(Piece 21, 82 oderately phyr- grained. c, subophitic. PERCENT PRESENT	–90 cm) ric plagioclase PERCENT ORIGINAL	e-olivine diabase. SIZE (mm)	OBSERVER: IM COMPO- SITION	S WHERE SAM	MPLED: Unit 274
148-504B-240R-1 ROCK NAME: Mo GRAIN SIZE: Fine TEXTURE: Ophiti WINERALOGY MINERALOGY HENOCRYSTS Dilvine	(Piece 21, 82 oderately phyr- grained. c, subophitic. PERCENT PRESENT 0	–90 cm) ric plagioclase PERCENT ORIGINAL 1	size (mm) 0.3-3.0	OBSERVER: IM COMPO- SITION	S WHERE SAM MORPHOLOGY Euhedral, equant.	MPLED: Unit 274
148-504B-240R-1 ROCK NAME: MG GRAIN SIZE: Fine TEXTURE: Ophiti WINERALOGY HENOCRYSTS Divine Plagioclase	(Piece 21, 82 oderately phyr- grained. c, subophitic. PERCENT PRESENT 0 4	90 cm) ric plagioclase PERCENT ORIGINAL 1 4	SIZE (mm) 0.3-3.0 0.4-1.6	OBSERVER: IM COMPO- SITION	S WHERE SAM MORPHOLOGY Euhedral, equant. Euhedral, subhedral.	MPLED: Unit 274
148-504B-240R-1 ROCK NAME: Mo GRAIN SIZE: Fine TEXTURE: Ophiti RIMARY MINERALOGY MENOCRYSTS Divine Plagioclase Spinel	(Piece 21, 82 oderately phys- grained. c, subophitic. PERCENT PRESENT 0 4 Tr	–90 cm) ric plagioclase PERCENT ORIGINAL I 4 Tr	SIZE (mm) 0.3-3.0 0.4-1.6 0.12	OBSERVER: IM COMPO- SITION Iron-chrome- rich	S WHERE SAM MORPHOLOGY Euhedral, equant. Euhedral, subhedral. Euhedral, equant.	MPLED: Unit 274 COMMENTS Altered to magnetite in groundmass.
148-504B-240R-1 ROCK NAME: Mo GRAIN SIZE: Fine TEXTURE: Ophiti MINERALOGY MINERALOGY HENOCRYSTS Divine lagioclase spinel ROUNDMASS	(Piece 21, 82 oderately phys- grained. c, subophitic. PERCENT PRESENT 0 4 Tr	–90 cm) ric plagioclase PERCENT ORIGINAL I 4 Tr	SIZE (mm) 0.3-3.0 0.4-1.6 0.12	OBSERVER: IM COMPO- SITION Iron-chrome- rich.	S WHERE SAM MORPHOLOGY Euhedral, equant. Euhedral, subhedral. Euhedral, equant.	MPLED: Unit 274 COMMENTS Altered to magnetite in groundmass.
148-504B-240R-1 ROCK NAME: M GRAIN SIZE: Fine TEXTURE: Ophiti TRIMARY MINERALOGY HENOCRYSTS Divine Plagioclase ipinel SROUNDMASS Divine	(Piece 21, 82 oderately phyr- -grained. c, subophitic. PERCENT PRESENT 0 4 Tr	-90 cm) ric plagioclase PERCENT ORIGINAL 1 4 Tr 4	SIZE (mm) 0.3-3.0 0.4-1.6 0.12 0.2-0.3	OBSERVER: IM COMPO- SITION Iron-chrome- rich.	S WHERE SAM MORPHOLOGY Euhedral, equant. Euhedral, subhedral. Euhedral, equant.	MPLED: Unit 274 COMMENTS Altered to magnetite in groundmass.
148-504B-240R-1 ROCK NAME: Ma GRAIN SIZE: Fine TEXTURE: Ophiti 'RIMARY MINERALOGY HENOCRYSTS Divine 'lagioclase jpinel BROUNDMASS Divine 'lagioclase	(Piece 21, 82 oderately phyr- grained. c, subophitic. PERCENT PRESENT 0 4 Tr 0 45	-90 cm) ric plagioclase PERCENT ORIGINAL 1 4 Tr 4 4 7	SIZE (mm) 0.3-3.0 0.4-1.6 0.12 0.2-0.3 0.1-0.4	OBSERVER: IM COMPO- SITION Iron-chrome- rich.	S WHERE SAM MORPHOLOGY Euhedral, equant. Euhedral, equant. Euhedral, equant. Euhedral, equant. Euhedral, anhedral.	MPLED: Unit 274 COMMENTS Altered to magnetite in groundmass.
148-504B-240R-1 ROCK NAME: MG GRAIN SIZE: Fine TEXTURE: Ophiti "RIMARY MINERALOGY "HENOCRYSTS Divine Plagioclase Spinel GROUNDMASS Divine Plagioclase Clinopyroxene	(Piece 21, 82 oderately phyr- grained. c, subophitic. PERCENT PRESENT 0 4 Tr 0 45 1	90 cm) ric plagioclase PERCENT ORIGINAL 1 4 Tr 4 4 4 4 4 4 4	SIZE (mm) 0.3-3.0 0.4-1.6 0.12 0.2-0.3 0.1-0.4 0.1-0.2	OBSERVER: IM COMPO- SITION Iron-chrome- rich.	S WHERE SAM MORPHOLOGY Euhedral, equant. Euhedral, equant. Euhedral, equant. Euhedral, equant. Euhedral, anhedral.	MPLED: Unit 274 COMMENTS Altered to magnetite in groundmass.
148-504B-240R-1 ROCK NAME: MG GRAIN SIZE: Fine TEXTURE: Ophiti 'RIMARY MINERALOGY 'HENOCRYSTS Divine 'lagioclase ipine1 ROUNDMASS Divine 'lagioclase linopyroxene Aagnetite	(Piece 21, 82 oderately phyr- grained. c, subophitic. PERCENT PRESENT 0 4 Tr 0 45 1 1	-90 cm) ric plagioclase PERCENT ORIGINAL 1 4 Tr 4 4 47 44 2	SIZE (mm) 0.3-3.0 0.4-1.6 0.12 0.2-0.3 0.1-0.4 0.1-0.2 0.03-0.36	OBSERVER: IM COMPO- SITION Iron-chrome- rich.	MORPHOLOGY Euhedral, equant. Euhedral, subhedral. Euhedral, equant. Euhedral, equant. Euhedral, anhedral. Anhedral. Euhedral, anhedral.	MPLED: Unit 274 COMMENTS Altered to magnetite in groundmass.
148-504B-240R-1 ROCK NAME: Ma GRAIN SIZE: Fine TEXTURE: Ophiti PRIMARY MINERALOGY HENOCRYSTS Divine Plagioclase Spinel BROUNDMASS Divine Plagioclase Clinopyroxene Magnetite	(Piece 21, 82 oderately phyr- grained. c, subophitic. PERCENT PRESENT 0 4 Tr 0 45 1 1	-90 cm) ric plagioclase PERCENT ORIGINAL 1 4 Tr 4 4 47 44 2 PEPLACING	SIZE (mm) 0.3-3.0 0.4-1.6 0.12 0.2-0.3 0.1-0.4 0.1-0.2 0.03-0.36	OBSERVER: IM COMPO- SITION Iron-chrome- rich.	S WHERE SAM MORPHOLOGY Euhedral, equant. Euhedral, subhedral. Euhedral, equant. Euhedral, equant. Euhedral, anhedral. Anhedral. Euhedral, anhedral, equant.	MPLED: Unit 274 COMMENTS Altered to magnetite in groundmass.
148-504B-240R-1 ROCK NAME: MG GRAIN SIZE: Fine TEXTURE: Ophiti PRIMARY MINERALOGY HENOCRYSTS Divine Plagioclase Spinel SROUNDMASS Divine Plagioclase Clinopyroxene Magnetite SECONDARY MINERALOGY	(Piece 21, 82 oderately phyr- grained. c, subophitic. PERCENT PRESENT 0 4 5 1 1 1	-90 cm) ric plagioclase PERCENT ORIGINAL 1 4 Tr 4 4 4 4 2 REPLACING	SIZE (mm) 0.3-3.0 0.4-1.6 0.12 0.2-0.3 0.1-0.4 0.1-0.2 0.03-0.36	OBSERVER: IM COMPO- SITION Iron-chrome- rich.	S WHERE SAM MORPHOLOGY Euhedral, equant. Euhedral, subhedral. Euhedral, equant. Euhedral, anhedral. Anhedral. Euhedral, anhedral, equant.	MPLED: Unit 274 COMMENTS Altered to magnetite in groundmass.
148-504B-240R-1 ROCK NAME: Mo GRAIN SIZE: Fine TEXTURE: Ophiti TEXTURE: Ophiti TEXTURE: Ophiti TEXTURE: Ophiti TEXTURE: Ophitic TEXTURE: Ophit	(Piece 21, 82 oderately phyr- grained. c, subophitic. PERCENT PRESENT 0 4 Tr 0 4 5 1 1 PERCENT 9	-90 cm) ric plagioclase PERCENT ORIGINAL 1 4 Tr 4 4 7 44 2 REPLACING FILLING Oliving clii	SIZE (mm) 0.3-3.0 0.4-1.6 0.12 0.2-0.3 0.1-0.4 0.1-0.2 0.03-0.36	OBSERVER: IM COMPO- SITION Iron-chrome- rich.	S WHERE SAM MORPHOLOGY Euhedral, equant. Euhedral, equant. Euhedral, equant. Euhedral, anhedral. Anhedral. Euhedral, anhedral. equant.	MPLED: Unit 274 COMMENTS Altered to magnetite in groundmass. COMMENTS
148-504B-240R-1 ROCK NAME: MG GRAIN SIZE: Fine TEXTURE: Ophiti "RIMARY MINERALOGY "HENOCRYSTS Divine Plagioclase Spinel GROUNDMASS Divine Plagioclase Clinopyroxene Magnetite SECONDARY MINERALOGY Chlorite	(Piece 21, 82 oderately phys- grained. c, subophitic. PERCENT PRESENT 0 4 Tr 0 4 5 1 1 PERCENT 9	-90 cm) ric plagioclase PERCENT ORIGINAL 1 4 Tr 4 47 44 2 REPLACING FILLING Olivine, clin	SIZE (mm) 0.3-3.0 0.4-1.6 0.12 0.2-0.3 0.1-0.4 0.1-0.2 0.03-0.36	OBSERVER: IM COMPO- SITION Iron-chrome- rich.	S WHERE SAM MORPHOLOGY Euhedral, equant. Euhedral, equant. Euhedral, equant. Euhedral, equant. Euhedral, anhedral. Anhedral. Euhedral, anhedral, equant.	MPLED: Unit 274 COMMENTS Altered to magnetite in groundmass. COMMENTS Also in cracks in plagioclase. Associated with opaque minerals ar actinolite in altered olivine.
148-504B-240R-1 ROCK NAME: Ma GRAIN SIZE: Fine TEXTURE: Ophiti "RIMARY MINERALOGY HENOCRYSTS Dlivine Plagioclase ipinel BROUNDMASS Dlivine Plagioclase Zinopyroxene Magnetite SECONDARY MINERALOGY Chlorite Nibite	(Piece 21, 82 oderately phyr- grained. c, subophitic. PERCENT PRESENT 0 4 Tr 0 45 1 1 PERCENT 9 Tr	-90 cm) ric plagioclase PERCENT ORIGINAL 1 4 Tr 4 4 7 44 2 REPLACING FILLING Olivine, clir Plagioclase.	SIZE (mm) 0.3-3.0 0.4-1.6 0.12 0.2-0.3 0.1-0.4 0.1-0.2 0.03-0.36	OBSERVER: IM COMPO- SITION Iron-chrome- rich.	MORPHOLOGY Euhedral, equant. Euhedral, subhedral. Euhedral, equant. Euhedral, anhedral. Anhedral. Euhedral, anhedral. Anhedral. Euhedral, anhedral.	MPLED: Unit 274 COMMENTS Altered to magnetite in groundmass. COMMENTS Also in cracks in plagioclase. Associated with opaque minerals ar actinolite in altered olivine. Fine crosscutting veinlets in plagioclase. Associated with
148-504B-240R-1 ROCK NAME: Ma GRAIN SIZE: Fine TEXTURE: Ophiti RIMARY MINERALOGY HENOCRYSTS Dilvine 'lagioclase jpinel SROUNDMASS Dilvine 'lagioclase Zinopyroxene Aagnetite SECONDARY MINERALOGY Chlorite	(Piece 21, 82 oderately phyr- grained. c, subophitic. PERCENT PRESENT 0 4 5 1 1 1 PERCENT 9 Tr Tr	-90 cm) ric plagioclase PERCENT ORIGINAL 1 4 Tr 4 4 47 44 2 REPLACING FILLING Olivine, clin Plagioclase.	SIZE (mm) 0.3-3.0 0.4-1.6 0.12 0.2-0.3 0.1-0.4 0.1-0.2 0.03-0.36	OBSERVER: IM COMPO- SITION Iron-chrome- rich.	S WHERE SAM MORPHOLOGY Euhedral, equant. Euhedral, equant. Euhedral, equant. Euhedral, equant. Euhedral, anhedral. Anhedral. Euhedral, anhedral, equant.	MPLED: Unit 274 COMMENTS Altered to magnetite in groundmass. COMMENTS Also in cracks in plagioclase. Associated with opaque minerals at actinolite in altered olivine. Fine crosscutting veinlets in plagioclase. Associated with magnetite.
148-504B-240R-1 ROCK NAME: MG GRAIN SIZE: Fine TEXTURE: Ophiti TEXTURE: Ophiti TEXTURE: Ophiti TEXTURE: Ophiti TEXTURE: Ophiti TEXTURE: Ophitic TEXTURE: Ophiti	(Piece 21, 82 oderately phyr- grained. c, subophitic. PERCENT PRESENT 0 4 Tr 0 4 5 1 1 PERCENT 9 Tr Tr 7 20	90 cm) ric plagioclase PERCENT ORIGINAL 1 4 Tr 4 4 7 44 2 REPLACING FILLING Olivine, clin Plagioclase. Cline Cline	SIZE (mm) 0.3-3.0 0.4-1.6 0.12 0.2-0.3 0.1-0.4 0.1-0.2 0.03-0.36	OBSERVER: IM COMPO- SITION Iron-chrome- rich.	S WHERE SAM MORPHOLOGY Euhedral, equant. Euhedral, equant. Euhedral, equant. Euhedral, equant. Euhedral, anhedral. Anhedral. Euhedral, anhedral, equant.	MPLED: Unit 274 COMMENTS Altered to magnetite in groundmass. COMMENTS Also in cracks in plagioclase. Associated with opaque minerals at actinolite in altered olivine. Fine crosscutting veinlets in plagioclase. Associated with magnetite. Miner plagioclase employment and place precise in plagioclase.
148-504B-240R-1 ROCK NAME: Mo GRAIN SIZE: Fine TEXTURE: Ophiti TEXTURE: Ophiti PRIMARY MINERALOGY PHENOCRYSTS Divine Plagioclase Spinel SROUNDMASS Divine Plagioclase Clinopyroxene Magnetite SECONDARY MINERALOGY Chlorite Albite Epidote Actinolite Fitnaico	(Piece 21, 82 oderately phyr- -grained. c, subophitic. PERCENT PRESENT 0 4 Tr 0 45 1 1 PERCENT 9 Tr Tr 39	2–90 cm) ric plagioclase PERCENT ORIGINAL 1 4 Tr 4 4 7 44 2 REPLACING FILLING Olivine, clin Plagioclase. Clinopyroxee	SIZE (mm) 0.3-3.0 0.4-1.6 0.12 0.2-0.3 0.1-0.4 0.1-0.2 0.03-0.36	OBSERVER: IM COMPO- SITION Iron-chrome- rich.	S WHERE SAM MORPHOLOGY Euhedral, equant. Euhedral, subhedral. Euhedral, equant. Euhedral, equant. Euhedral, anhedral. Anhedral. Euhedral, anhedral, equant.	MPLED: Unit 274 COMMENTS Altered to magnetite in groundmass. COMMENTS Also in cracks in plagioclase. Associated with opaque minerals ar actinolite in altered olivine. Fine crosscutting veinlets in plagioclase. Associated with magnetite. Minor plagioclase replacement and along cracks in plagioclase.
148-504B-240R-1 ROCK NAME: MG GRAIN SIZE: Fine TEXTURE: Ophiti "RIMARY MINERALOGY "HENOCRYSTS Divine 'lagioclase Divine 'linopyroxene Alorette Divine 'linopyroxene CONDARY Divine 'linopyroxene Condory Chlorite 'linopyroxene Condory Chlorite 'linopyroxene Condory Chlorite 'linopyroxene Condory Chlorite 'itanite	(Piece 21, 82 oderately phyr- grained. c, subophitic. PERCENT PRESENT 0 4 5 1 1 PERCENT 9 Tr Tr Tr 39 1	90 cm) ric plagioclase PERCENT ORIGINAL 1 4 4 Tr 4 4 7 44 2 REPLACING FILLING Olivine, clin Plagioclase. Clinopyroxet Olivine, clin	SIZE (mm) 0.3-3.0 0.4-1.6 0.12 0.2-0.3 0.1-0.4 0.1-0.2 0.03-0.36	OBSERVER: IM COMPO- SITION Iron-chrome- rich.	S WHERE SAM MORPHOLOGY Euhedral, equant. Euhedral, equant. Euhedral, equant. Euhedral, equant. Euhedral, anhedral. Anhedral. Euhedral, anhedral, equant.	MPLED: Unit 274 COMMENTS Altered to magnetite in groundmass. COMMENTS Also in cracks in plagioclase. Associated with opaque minerals ar actinolite in altered olivine. Fine crosscutting veinlets in plagioclase. Associated with magnetite. Minor plagioclase replacement and along cracks in plagioclase. With chlorite after olivine and clinopyroxene and as microgranul clusters with magnetite.
148-504B-240R-1 ROCK NAME: Mo GRAIN SIZE: Fine TEXTURE: Ophiti PRIMARY MINERALOGY PHENOCRYSTS Divine Plagioclase Spinel GROUNDMASS Divine Plagioclase Clinopyroxene Magnetite SECONDARY MINERALOGY Chlorite Albite Epidote Actinolite Fitanite Hematite	(Piece 21, 82 oderately phyr- -grained. c, subophitic. PERCENT PRESENT 0 4 Tr 0 45 1 1 PERCENT 9 Tr Tr 39 1 Tr	2-90 cm) ric plagioclase PERCENT ORIGINAL 1 4 Tr 4 4 7 44 2 REPLACING FILLING Olivine, clin Plagioclase. Clinopyroxet Olivine, clin Titanomagne	SIZE (mm) 0.3-3.0 0.4-1.6 0.12 0.2-0.3 0.1-0.4 0.1-0.2 0.03-0.36	OBSERVER: IM COMPO- SITION Iron-chrome- rich. ned plagioclase. titanomagnetite.	S WHERE SAM MORPHOLOGY Euhedral, equant. Euhedral, equant. Euhedral, equant. Euhedral, anhedral. Anhedral. Euhedral, anhedral. equant.	MPLED: Unit 274 COMMENTS Altered to magnetite in groundmass. COMMENTS Also in cracks in plagioclase. Associated with opaque minerals ar actinolite in altered olivine. Fine crosscutting veinlets in plagioclase. Associated with magnetite. Minor plagioclase replacement and along cracks in plagioclase. With chlorite after olivine and clinopyroxene and as microgranul clusters with magnetite. Imenite also replaces magnetite.

 Prehnite
 Tr
 Plagioclase.
 Associated with epidote.

 VESICLES/
 SIZE

 CAVITIES
 PERCENT
 LOCATION (mm)

 FILLING
 SHAPE

 Vesicles
 0

COMMENTS: Two veins of fine actinolite fibers and large actinolitic homblende. Clinopyroxene is replaced by fine actinolite fibers in the halos around veins. Mineral abundances in the halos are 47% primary silicate minerals, 48% actinolite, 4% chlorite, and 1% titanite. Outside of halos the mineral abundances are 59% primary silicate minerals, 27% actinolite, 13% chlorite, 1% of pyrite plus pyrite, and no titanite. Plagioclase and clinopyroxene contain numerous cracks, some filled with secondary minerals. Actinolite veins have large actinolitic homblende crystals oriented normal or oblique to vein walls, but fine actinolite needles are randomly oriented and appear to overprint the actinolitic homblende. Offset crystals across veins indicate pure extension.

GROUNDMASS

Clinopyroxene

47

5

50

42

0.1-5

0.1 - 1

Plagioclase

148-504B-241R-1 (Piece 1, 0-4 cm) ROCK NAME: Highly phyric plagioclase-olivine diabase. GRAIN SIZE: Fine-grained. TEXTURE: Subophitic.

WHERE SAMPLED: Unit 275.

Research and the Research and Research						
PRIMARY	PERCENT	PERCENT	SIZE	COMPO-		
MINERALOGY PHENOCRYSTS	PRESENT	ORIGINAL	(mm)	SITION	MORPHOLOGY	COMMENTS
Olivine	1	3	0.2 - 1		Euhedral.	
Plagioclase GROUNDMASS	8	9	0.4-1.6		Euhedral to subhedral.	
Plagioclase	41	43	0.1-4		Euhedral to anhedral.	
Pyroxene	25	42	0.05-0.8		Anhedral.	
Opaque minerals	2	2	0.03-0.25		Euhedral to anhedral.	
SECONDARY		REPLACING	3/			
MINERALOGY	PERCENT	FILLING				COMMENTS
Clavs(?)	< 0.1	Glass				Included in large plagioclase.
Chlorite	1	Olivine, cli	nopyroxene.			
Actinolite	17	Olivine, cli	inopyroxene.			Fibrous crystals replace clinopyroxene, prismatic to acicular crystals replace olivine.
Quartz	Tr	Olivine (mi	nor).			
Talc	2	Olivine, pa	rtially.			
Magnetite	1	Olivine, pa	rtially.			
Sulfide	2					Pyrite (5-100 µm) replaces silicates, with chalcopyrite inclusion Plagioclase contains inclusions of pyrrhotite and chalcopyrite.
VESICLES/			SIZE			
CAVITIES	PERCENT	LOCATION	(mm)	FILLING	SHAPE	COMMENTS
Vesicles	None.					
COMMENTS: Fre	sh olivine is s	till preserved.	, but is partly alt	ered to talc and magne	tite. Glass inclusion in J	plagioclase is altered to amphibole and clay(?) mineral.
148-504B-241R-1 ROCK NAME: Mc GRAIN SIZE: Fine TEXTURE: Subopt	(Piece 5, 16– oderately phyr -grained. hitic.	19 cm) ic plagioclase	diabase.	OBSERVER: IMS	WHERE SAM	MPLED: Unit 276
PRIMARY	PERCENT	PERCENT	SIZE	COMPO-		
MINERALOGY PHENOCRYSTS	PRESENT	ORIGINAL	(mm)	SITION	MORPHOLOGY	COMMENTS
Plagioclase	5	5	0.5-5		Euhedral to subhedral.	
Spinel	Tr	Tr	0.04-0.08	Cr-Fe-rich.	Euhedral.	Symplectic replacement and alteration to magnetite.

OBSERVER: IMS

Euhedral to anhedral. At least 3% of plagioclase is altered. Subhedral to anhedral. At least 37% of clinopyroxene is altered. 0 Euhedral to anhedral. At least 0.4% of magnetite is altered. Magnetite 0.03-0.28 1 SECONDARY REPLACING/ MINERALOGY PERCENT COMMENTS FILLING Albite Tr Plagioclase cracks. Local. Actinolite 43 Clinopyroxene. Pervasive alteration of clinopyroxene. Plagioclase replaced in cracks. Anorthite Tr Plagioclase. Very localized partial replacement of plagioclase laths near vein/cataclastic zone. Pyrrhotite Tr Inclusions in plagioclase. Chlacopyrite Tr Inclusions in plagioclase, interstitial. Pyrite Tr Inclusions in plagioclase, interstitial, replacing silicate. VESICLES/ SIZE CAVITIES PERCENT LOCATION (mm) FILLING SHAPE COMMENTS Vesicles None.

COMMENTS: Altered plagioclase, clinopyroxene, and magnetite comprise 8% of the rock; unspecified alteration products make up 8%. A network of thin (<0.07 mm) actinolite veins (irregular) cuts all minerals. One cataclastic zone (0.15 mm wide) occurs, and contains actinolite, hornblende, and plagioclase. Plagioclase grains are fresh to slightly altered. Vein actinolite is fine-grained and fibrous. Offset crystals indicate pure extension.

148-504B-241R-1 (Piece 6, 32–36 cm) ROCK NAME: Moderately phyric plagioclase diabase. GRAIN SIZE: Fine-grained. TEXTURE: Subophitic.

PRIMARY	PERCENT	PERCENT	SIZE	COMPO-		
MINERALOGY	PRESENT	ORIGINAL	(mm)	SITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Plagioclase	5	5	0.4-2		Euhedral to subhedral.	
Spinel	Tr	Tr	0.02-0.15	Cr to Fe rich.	Euhedral to anhedral.	
GROUNDMASS						
Plagioclase	37	42	0.1-0.4		Euhedral to anhedral.	
Clinopyroxene	3	41	0.1 - 1.5		Anhedral.	
Opaque minerals	0	0.8				
SECONDARY		REPLACING	3/			
MINERALOGY	PERCENT	FILLING				COMMENTS
Chlorite	1	Olivine.				
Albite	2	Plagioclase	cracks.			Locally.
Epidote	Tr	Plagioclase	•			Subhedral epidote in cores of plagioclase (uncommon) and as veins in plagioclase.
Actinolite	52	Clinopyrox	ene.			Clinopyroxene is pervasively altered to actinolite; some clinopyroxene remains.
Pyrite	Tr	Inclusions i	n plagioclase.			
Chalcopyrite	Tr	Inclusions i	in plagioclase,	interstitial.		
VESICLES/		*************	SIZE			***************************************
CAVITIES	PERCENT	LOCATION	(mm)	FILLING	SHAPE	COMMENTS
Vesicles	None.					

WHERE SAMPLED: Unit 276.

OBSERVER: IMS

COMMENTS: One elongated cataclastic zone (1.6 mm wide) contains all mineral "clasts." The zone grades into an actinolite vein and shows <1 mm displacement. Large actinolite crystals are bent near the zone. One actinolite veinlet (0.5 mm) parallels the cataclastic zone. The veinlet does not have a constant width and bifurcates into several veinlets that cross host minerals. Crystals offset by vein indicate no appreciable displacement along vein.

OBSERVER: IMS WHERE SAMPLED: Unit 276 148-504B-241R-1 (Piece 15, 78-81 cm) ROCK NAME: Moderately phyric olivine-plagioclase diabase. GRAIN SIZE: Fine-grained. TEXTURE: Seriate porphyritic. PRIMARY PERCENT PERCENT SIZE COMPO-MINERALOGY MORPHOLOGY COMMENTS PRESENT ORIGINAL SITION (mm) PHENOCRYSTS Olivine 0 1 0.7 Euhedral. Euhedral to subhedral. Plagioclase is often broken and slightly altered along cracks. Plagioclase 4 4 1.0 Spinel Tr Tr 0.15 Iron rich. Euhedral. Rims altered to magnetite. GROUNDMASS Olivine 0 5 Plagioclase 0.1 - 0.842 45 Anhedral. Clinopyroxene 6 44 0.2 - 2.0Euhedral to anhedral. Magnetite 0 1 0.02 - 0.28SECONDARY REPLACING/ COMMENTS MINERALOGY PERCENT FILLING Chlorite Along plagioclase cracks; associated with actinolite; occurs out of 7 Olivine, plagioclase, interstitial. the patch. Complete replacement of clinopyroxene in the patch; occurs along Actinolite 41 Clinopyroxene, interstitial. cracks in plagioclase. Associated with chlorite. Quartz Tr Olivine. Associated with chlorite. Pyrite Tr Olivine. Incomplete rims on plagioclase laths in vein halo. Anorthite Tr Plagioclase. VESICLES/ SIZE CAVITIES PERCENT LOCATION (mm) FILLING SHAPE Vesicles 0

COMMENTS: Host rock: 62% magmatic minerals, 25% amphibole, 13% chlorite. Patch: 38% magmatic minerals, 58% amphibole, 1% opaque minerals, 2% anorthite chlorite. Veinlets (0.01 mm wide) in the dikelet are perpendicular or oblique to the dikelet edge. Actinolite vein (up to 1 mm wide) has some cataclasis and <1 mm displacement. Dikelet appears to have intruded into microfault.

148-504B-241R-1 (Piece 19, 105-108 cm)	
ROCK NAME: Moderately phyric plagioclase diabase	ŝ,
GRAIN SIZE: Fine-grained.	
TEXTURE: Porphyritic.	

PRIMARY	PERCENT	PERCENT	SIZE	COMPO-		
MINERALOGY PHENOCRYSTS	PRESENT	ORIGINAL	(mm)	SITION	MORPHOLOGY	COMMENTS
Olivine	0	Tr	0.6-1.2		Equant.	
Plagioclase	7	8	0.8-1.2		Euhedral to subhedral, equant, laths and plates.	
Spinel GROUNDMASS	Tr	Tr	0.02-0.13	Cr to Fe rich	Euhedral.	Mostly replaced by magnetite.
Plagioclase	37	41	0.1-0.6		Euhedral to subhedral, laths and needles.	
Clinopyroxene	7	44	0.2-1.0		Subhedral to anhedral.	
Opaque minerals	1	1	0.02-0.35	Magnetite, Ilmenite.	Euhedral to anhedral.	
SECONDARY		REPLACING	3/			
MINERALOGY	PERCENT	FILLING	5			COMMENTS
Chlorite	2	Olivine.				With actinolite/hornblende.
Actinolite	45	Clinopyrox	ene, interstitial.			Most abundant secondary mineral. It grades into actinolitic hornblende.
Titanite	1	Magnetite.				With ilmenite lamellae.
Albite	Tr	Plagioclase	8			Occurs as veinlets in plagioclase.
Pyrite	Tr	Magnetite.				Inclusions in plagioclase.
Chalcopyrite	Tr	Replacing s	ilicates.			
VESICLES/			SIZE			
CAVITIES	PERCENT	LOCATION	(mm)	FILLING	SHAPE	
Vesicles	0					

WHERE SAMPLED: Unit 277.

148-504B-242R-1 (Piece 4, 12–16 cm) ROCK NAME: Moderately phyric plagioclase-olivie diabase. GRAIN SIZE: Fine-grained. TEXTURE: Subophitic.

PRIMARY PERCENT PERCENT COMPO-SIZE MINERALOGY COMMENTS PRESENT ORIGINAL (mm) SITION MORPHOLOGY PHENOCRYSTS Olivine 0 0.2-1.0 Euhedral. 1 Plagioclase 2 0.6-1.6 Euhedral-subhedral. 2 GROUNDMASS Plagioclase 41 43 0.1 - 0.6Euhedral-subhedral laths to needles. Clinopyroxene 23 46 0.2 - 1.0Anhedral. Subophitic. Opaque minerals 0 0.02-0.27 Euhedral-anhedral. SECONDARY REPLACING/ MINERALOGY PERCENT FILLING COMMENTS Chlorite 2 Olivine, plagioclase. Replaces olivine in association with quartz and minor actinolite. Two generations (orientations) of chlorite observed after olivine: an earlier rim and later altered relict core. Minor chlorite developed along cracks within plagiolcase. Actinolite 32 Clinopyroxene, interstitial. Zones of intense alteration are delineated by the pervasive development of actinolite. Talc Tr Olivine. Commonly in association with fine-grained secondary magnetite. Anorthite Tr Plagiolcase. Very localized replacement of plagioclase rims within the more heavily altered portions of the section. VESICLES/ SIZE CAVITIES PERCENT LOCATION FILLING (mm) SHAPE Vesicles

OBSERVER: IMS

COMMENTS: Actinolite-rich veinlets occur both along grain margins and crosscut the wall rock minerals.

 148-504B-242R-1 (Piece 9, 28–33 cm)
 OBSERVER: IMS

 ROCK NAME: Moderately phyric olivine-plagioclase diabase.
 GRAIN SIZE: Fine-grained.

 TEXTURE: Seriate porphyritic.
 TEXTURE

PRIMARY	PERCENT	PERCENT	SIZE	COMPO-		
MINERALOGY PHENOCRYSTS	PRESENT	ORIGINAL	(mm)	SITION	MORPHOLOGY	COMMENTS
Olivine	0	2	0.7-2.0		Euhedral.	
Plagioclase	1	1	0.2-0.5		Subhedral, plates to laths	
GROUNDMASS					to min.	
Plagioclase	47	48	0.05-0.2		Subhedral, laths to needles,	
Clinopyroxene	16	46	0.2-1.5		Anhedral.	
Olivine	0	1	0.1			
Magnetite	2	2	0.02-0.33		Euhedral to anhedral.	
SECONDARY		REPLACING	3/			
MINERALOGY	PERCENT	FILLING				COMMENTS
Chlorite	2	Olivine, pla	agioclase, inters	stitial.		Associated with minor actinolite.
Actinolite	29	Olivine, cli	nopyroxene.			Clinopyroxene completely replaced in vein halo. Elsewhere, actinolite replaces interstitial material.
Talc	2	Olivine.				
Anorthite	Tr	Plagioclase				Partial replacement of plagioclase in vein halo.
Albite	Tr	Plagioclase				
Sulfides	Tr	Interstitial,	inclusions in p	lagioclase.		Pyrite, pyrrhotite, chalcopyrite.
VESICLES/			SIZE		***************************************	
CAVITIES	PERCENT	LOCATION	(mm)	FILLING	SHAPE	
Vesicles	0					

WHERE SAMPLED: Unit 277

COMMENTS: Vein (1 mm wide) of coarse actinolite with an alteration halo (2 to 3 mm wide) crosscuts thin section. The coarse-grained actinolite within the vein has grown with a fibrous habit both normal to and oblique to the vein margins. No secondary plagioclase developed outside the vein halo. Vein development appears to be purely extensional. Slickensided surfaces have poorly developed steps. No offset or minerals visible on these surfaces.

148-504B-244R-1 (Piece 2, 3–8 cm) ROCK NAME: Moderately phyric plagioclase-olivine diabase. GRAIN SIZE: Fine-grained. TEXTURE: Hypidiomorphic granular to subophitic.			OBSERVER: IMS	WHERE SAMPLED: Unit 279		
PRIMARY	PERCENT	PERCENT	SIZE	COMPO-		
MINERALOGY PHENOCRYSTS	PRESENT	ORIGINAL	(mm)	SITION	MORPHOLOGY	COMMENTS
Olivine	0	1	0.4-0.8		Euhedral.	Partly with fresh core.
Plagioclase	2	2	0.5-0.75		Subhedral, equant to laths.	
GROUNDMASS						
Plagioclase	43	43	0.1-0.5		Subhedral, laths and needles.	
Clinopyroxene	21	51	0.02-0.1		Anhedral.	Sometimes in a branching fashion.
Magnetite	5	5	0.02-0.2		Euhedral to anhedral.	
SECONDARY		REPLACING	3/			
MINERALOGY	PERCENT	FILLING				COMMENTS
Actinolite	28	Clinopyrox	ene, interstitial.			
Talc	1	Olivine.				Associated with magnetite.
Anorthite	Tr	Plagioclase	8			Incomplete rims of plagioclase near veinlets.
Pyrite	Tr					Inclusions in plagioclase, replacing silicates and magnetite.
Chalcopyrite	Tr					Inclusions in plagioclase, replacing silicates and magnetite.
VESICLES/			SIZE			
CAVITIES	PERCENT	LOCATION	(mm)	FILLING	SHAPE	
Vesicles	0					

COMMENTS: Multiple parallel actinolite veinlets (0 to 0.4 mm wide) are spaced 3 to 4 mm apart and have diffuse edges. Veinlets have formed by replacement of clinopyroxene, not along fractures.

SITE 504

148-504B-245R-1 (Piece 8, 21-24 cm)	
ROCK NAME: Sparsely phyric plagioclase diabat	se.
GRAIN SIZE: Fine-grained.	
TEXTURE: Subophitic.	

WHERE SAMPLED: Unit 280

WHERE SAMPLED: Unit 281

PRIMARY	PERCENT	PERCENT	SIZE	COMPO-				
MINERALOGY	PRESENT	ORIGINAL	(mm)	SITION	MORPHOLOGY	COMMENTS		
PHENOCRYSTS								
Plagioclase	1	1	0.5-0.7		Subhedral, equant.			
GROUNDMASS								
Plagioclase	40	40	0.1-0.5		Subhedral laths			
					to needles.			
Clinopyroxene	13	48	0.1-0.6		Equant euhedral			
					oikocrysts.			
Magnetite	3	7	0.02-0.34		5.5			
SECONDARY		REPLACING	3/					
MINERALOGY	PERCENT	FILLING				COMMENTS		
Chlorite	Tr	Vein.				In thin amphibole-chlorite-titanite veins.		
Actinolite	42	Vein and cl	inopyroxene.			30%-40% of clinopyroxene is altered to amphibole. Amphibole is		
						also found in plagioclase cracks.		
Titanite	1	Vein.				Abundant very fine veinlets (0.1 mm) with chlorite and amphibole.		
Pyrite	Tr	Interstitial,	inclusions in p	lagiocalse replaces	silicates.			
Pyrrhotite	Tr	Interstitial,	inclusions in	plagioclase.				
Magnetite	Tr					With actinolite in altered clinopyroxene.		
VESICLES/			SIZE					
CAVITIES	PERCENT	LOCATION	(mm)	FILLING	SHAPE	COMMENTS		
Vesicles	None.							

COMMENTS: Point count did not include veins. Amphibole + chlorite + titanite veins crosscut thicker (1 mm wide) amphibole vein. Section contains titanite lenses ranging from 0.02 mm to 0.08 mm in width and from 0.13 to 0.30 mm in length.

OBSERVER: IMS

148-504B-245R-1 (Piece 13, 36-39 cm) ROCK NAME: Sparsely phyric plagioclase diabase. GRAIN SIZE: Fine-grained. TEXTURE: Subophitic.

PRIMARY PERCENT PERCENT SIZE COMPO-MINERALOGY MORPHOLOGY COMMENTS PRESENT ORIGINAL (mm) SITION PHENOCRYSTS 3% in chilled margin. Grain size in chilled margin is 0.05-0.55 1 0.3-0.5 Anhedral, equant. Plagioclase 1 mm. GROUNDMASS 0.05-0.25 Subhedral laths Plagioclase 37 41 to needles. Clinopyroxene 53 0.1-0.4 Anhedral, equant 13 oikocrysts. Olivine 3 1.2 0.02-0.2 Euhedral to Magnetite 2 anhedral. REPLACING/ SECONDARY MINERALOGY PERCENT FILLING COMMENTS Chlorite Tr Olivine(?) or interstitial. Clinopyroxene. Actinolite 47 Very rare. Also in plagioclase cracks and after interstitial material. Clinopyroxene. Magnetite Tr Anorthite With actinolite. Particularly near chilled margin. Tr Plagioclase. VESICLES/ SIZE COMMENTS CAVITIES PERCENT LOCATION FILLING SHAPE (mm) Vesicles None.

COMMENTS: Point count does not include chilled margin. The contact between chilled margin and host diabase is marked by a 0.04-mm-wide vein of actinolite. The chilled margin also hosts nine 0.04-mm-wide actinolite veins with alteration halos wide (0.05 mm), which are in turn cut by three thinner actinolite veins without halos. A 0.16-mm-wide actinolite vein the chilled margin.

148-504B-245R-1 (Piece 14, 39-46 cm) ROCK NAME: Highly phyric plagioclase-olivine diabase. GRAIN SIZE: Fine-grained. TEXTURE: Subophitic.

PRIMARY	PERCENT	PERCENT	SIZE	COMPO-		***************************************		
MINERALOGY	PRESENT	ORIGINAL	(mm)	SITION	MORPHOLOGY	COMMENTS		
PHENOCRYSTS			1080000050					
Olivine	Tr	4	0.6-3.0		Euhedral.	Some relict cores.		
Plagioclase	6	6	0.3-0.75		Subhedral-anhedral.	Equant to platy shapes.		
GROUNDMASS								
Plagioclase	31	38	0.05-0.25		Subhedral laths			
					to needles.			
Clinopyroxene	0	50	0.03-0.1		Anhedral.			
Magnetite	2	2	0.01 - 0.08		Euhedral-anhedral.			
SECONDARY		REPLACING	3/					
MINERALOGY	PERCENT	FILLING				COMMENTS		
Chlorite	Tr	Olivine.			Associated with actinolite.			
Actinolite	52	Clinopyroxe	ene, olivine.					
Magnetite	9	Clinopyrox	ene.					
Titanite	Tr	Alteration p	oatch.			With actinolite.		
VESICLES/			SIZE					
CAVITIES	PERCENT	LOCATION	(mm)	FILLING	SHAPE	COMMENTS		
Vesicles	None.		0.00					

WHERE SAMPLED: Unit 281

WHERE SAMPLED: Unit 283.

OBSERVER: IMS

COMMENTS: Network of 0.1-mm-wide actinolite veins crosscuts some phenocrysts. Little or no extension is evident in these veins suggesting formation by replacement. Alteration patches made up of actinolite with minor titanite. One 1.2-mm-wide fracture near a large clinopyroxene at one edge of the thin section dies out rapidly. This and other fractures form the slickensided surfaces.

OBSERVER: IMS

148-504B-246R-1 (Piece 8, 21–25 cm) ROCK NAME: Sparsely phyric plagioclase-olivine diabase. GRAIN SIZE: Fine-grained.

TEXTURE: Seriate porphyritic, subophitic, intergranular.

PRIMARY	PERCENT	PERCENT	SIZE	COMPO-					
MINERALOGY PHENOCRYSTS	PRESENT	ORIGINAL	(mm)	SITION	MORPHOLOGY	COMMENTS			
Olivine	0	2	0.4-0.8		Subhedral to anhedral	Completely altered.			
Plagioclase	2	2	0.5-0.7		Subhedral, equant or laths.				
Spinel GROUNDMASS	Tr	Tr	0.05	Fe Cr rich.	Anhedral.	Altered to magnetite on rims.			
Plagioclase	40	46	0.6-0.7		Subhedral, laths to needles.				
Clinopyroxene	Tr	48	*		Anhedral.	Relict outside vein alteration halo.			
Magnetite	2	2	0.02-0.25		Euhedral-anhedral.				
SECONDARY		REPLACING	3/						
MINERALOGY	PERCENT	FILLING				COMMENTS			
Chlorite	Tr	Olivine and	plagioclase.			Also in plagioclase cracks with or without epidote.			
Albite	Tr	Plagioclase.				In cracks close to veins.			
Epidote	Tr	Plagioclase,	interstitial.			In cracks as small grains.			
Actinolite	55	Clinopyroxe	ene and olivine.			Also in plagioclase cracks.			
Anorhtite	Tr	Plagioclase.				On rims of grains.			
Titanite	1	Titanomagn	etite.						
VESICLES/			SIZE						
CAVITIES Vesicles	PERCENT None.	LOCATION	(mm)	FILLING	SHAPE	COMMENTS			

COMMENTS: Almost the entire thin section is an alteration halo. Three actinolite veins (0.2 to 0.8 mm wide) occur with 6-mm-wide alteration halos. Veins consist of very finegrained fibrous actinolite that define a "foliation" subparallel to the vein. Veins end at "T" and "L" intersections.

SITE 504

148-504B-246R-1 (Piece 26, 91-94 cm) ROCK NAME: Sparsely phyric plagioclase-olivine diabase. GRAIN SIZE: Fine-grained. TEXTURE: Seriate porphyritic, subophitic.

OBSERVER: IMS

WHERE SAMPLED: Unit 284.

PRIMARY	PERCENT	PERCENT	SIZE	COMPO-					
PHENOCRYSTS	PRESENT	ORIGINAL	(mm)	SITION	MORPHOLOGY	COMMENTS			
Olivine	0	1	0.6-1.5		Euhedral, equant.	Completely altered.			
Plagioclase	1	1			Subhedral, equant to platy.				
Spinel GROUNDMASS	Tr	Tr	0.06-0.1	Cr rich	Euhedral.	In plagioclase.			
Plagioclase	49	49	0.1-0.7		Subhedral, plates to laths.				
Clinopyroxene	4	44	0.3-1.0		Anhedral oikocrysts.				
Olivine	0	5			14-4-00 BAR BAR 2010 BAR 800 BAR 80				
Magnetite	2	2	0.02 - 0.28		Euhedral-anhedral.				
SECONDARY		REPLACING	G/						
MINERALOGY	PERCENT	FILLING	~			COMMENTS			
Chlorite	2	Olivine and	clinopyroxene.			Also rarely in plagioclase.			
Albite	1	Plagioclase.				On fractures.			
Actinolite	41	Clinopyroxe	ene, interstitial.						
Titanite	Tr	Olivine.				With chlorite and quartz.			
Quartz	Tr	Olivine.				With chlorite and titanite.			
VESICLES/			SIZE						
CAVITIES	PERCENT	LOCATI	(mm)	FILLING	SHAPE COMMENTS				
Vesicles	None.		22 - 52						

COMMENTS: An actinolite vein (0.7-0.8 mm wide), with 8-mm-wide halos, is cut by two later actinolite veins (0.4 mm wide) that merge. Several branching 0.02-mm-wide, veinlets also occur in this thin section. The actinolite veins crosscut actinolite replacement of pyroxene in the groundmass. Fiber orientations within the veins suggest that the wider vein is purely extensional whereas the thinner vein probably has a small shear component.

148-504B-246R-1 (Piece 32, 111–115 cm) ROCK NAME: Moderately phyric plagioclase-olivine diabase. GRAIN SIZE: Fine-grained. TEXTURE: Subophitic.			OBSERVER: IMS	WHERE SA	MPLED: Unit 284.	
PRIMARY MINERALOGY PHENOCRYSTS	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPO- SITION	MORPHOLOGY	COMMENTS
Olivine	0	1	0.6-1.0		Euhedral, equant.	
Plagioclase	2	2	0.6-1.8		Euhedral-subhedral, equant.	
Spinel	Tr	Tr	0.03-0.12	Cr rich to Fe rich.	Subhedral-anhedral. magnetite.	In plagioclase and olivine. Altered to magnetite on rims.
GROUNDMASS					0	
Plagioclase	49	49	0.1-0.6		Subhedral, laths to needles.	
Clinopyroxene	3	44	0.2-2.0		Anhedral, oikocrysts.	
Olivine	0	2	0.15		Subhedral.	
Magnetite SECONDARY	2	2 REPLACING	0.02-0.45 3/		Euhedral-anhedral.	
MINERALOGY	PERCENT	FILLING				COMMENTS
Chlorite	3	Olivine.				In plagioclase cracks. In alteration halo is associated with prehnite.
Albite	2	Plagioclase				Minor replacement but widespread.
Actinolite	39	Clinopyrox	ene, interstitial.			Also minor after plagioclase.
Titanite	Tr	Plagioclase				With actinolite and chlorite. Also as subhedral grains in groundmass.
Prehnite	Tr	Plagioclase				With chlorite and titanite(/) in a highly altered plagioclase.
VESICLES/			SIZE			
CAVITIES	PERCENT	LOCATION	(mm)	FILLING	SHAPE	COMMENTS
Vesicles	None.					

COMMENTS: Thin section includes one actinolite vein (1.3 to 0.7 mm wide) with intensely altered halos, 5 to 8 mm wide. Large actinolite fibers in the vein are normal to the vein walls, but very fine fibrous actinolite occurs elsewhere in the vein. Vein is purely extensional based on offset crystals. Point count in alteration halo: magmatic 43%, amphibole 51%, chlorite 1.2%, and albite 4.4%. Point count outside of halo: magmatic phases 68%, amphibole 27%, and chlorite 5%.

148-504B-247R-1 (Piece 12, 46-50 cm) ROCK NAME: Sparsely phyric plagioclase-olivine diabase. GRAIN SIZE: Fine-grained. TEXTURE: Subophitic.

PRIMARY	PERCENT	PERCENT	SIZE	COMPO-					
MINERALOGY PHENOCRYSTS	PRESENT	ORIGINAL	(mm)	SITION	MORPHOLOGY	COMMENTS			
Olivine	0	1	0.4~1.0		Euhedral, equant.				
Plagioclase	1	1	1.5-2.0		Euhedral to				
					subhedral, equant.				
Spinel GROUNDMASS	Tr	Tr	0.04-0.06		Anhedral.	In plagioclase.			
Plagioclase	48	48	0.1-0.5		Subhedral, laths.				
Clinopyroxene	4	38	1		Anhedral, oikocrysts.				
Magnetite	1	2	0.02-0.42		Anhedral to euhedral, equant.				
Unspecified		9			200 0 (1999 199	Probably replacing olivine.			
SECONDARY		REPLACING	3/		COMMENTS				
MINERALOGY	PERCENT	FILLING							
Actinolite	45	Clinopyroxe	ene, olivine, veins.						
Chlorite	Tr	Olivine, int	erstitial.						
Albite	Tr	Cracks in p	lagioclase.			Filling cracks in plagioclase in halos or reaction zone.			
Titanite	Tr	Interstitial.				Filling interstitial material as tiny crystals.			
Oxide	1	Interstitial.							
VESICLES/			SIZE						
CAVITIES	PERCENT	LOCATION	(mm)	FILLING	SHAPE				
Vesicles	0								

WHERE SAMPLED: Unit 285

WHERE SAMPLED: Unit 285

OBSERVER: IMS

COMMENTS: Plagioclase in halos cracked and filled with amphibole. At least two generations of amphibole veinlets are present. Two subparallel 0.2-mm-wide veins crosscut a 0.8 mm vein; numerous veinlets (<0.2 mm) partly cut other veins. Alteration halos around all these veins merge together (more or less).

OBSERVER: IMS

148-504B-247R-1 (Piece 15, 64-68 cm) ROCK NAME: Moderately phyric olivine-plagioclase diabase. GRAIN SIZE: Fine-grained.

TEXTURE: Subophitic.

PRIMARY	PERCENT	PERCENT	SIZE	COMPO-					
MINERALOGY PHENOCRYSTS	PRESENT	ORIGINAL	(mm)	SITION	MORPHOLOGY	COMMENTS			
Olivine	0	8	0.4-1.2		Euhedral, equant.	Traces of fresh olivine.			
Plagioclase	1	1	0.7-2.9		Subhadral, equant.	One 2-mm grain with dense area of glass inclusions.			
Spinel	Tr	Tr	0.03-0.10		Euhedral to				
					subhedral, equant.				
GROUNDMASS									
Plagioclase	46	46	0.09-0.49		Subhedral, laths				
					to needles.				
Clinopyroxene	19	39	0.2-2.2		Anhedral, equant.	Oikocrysts.			
Magnetite	3	3	0.02-0.34		Euhedral to				
					subhedral, equant.				
Unspecified						12% probably replacing olivine.			
SECONDARY		REPLACING	3/						
MINERALOGY	PERCENT	FILLING			COMMENTS				
Actinolite	25	Interstitial,	clinopyroxene,	olivine.					
Chlorite	2	Interstitial,	olivine.						
Albite	Tr	Plagioclase.				Minor in cracks in plagioclase.			
Quartz	Tr	Olivine.				In olivine pseudomorphs.			
Talc	4	Interstitial,	olivine.			Together with actinolite and magnetite. Includes magnetite and pyrite replacing olivine.			
Magnetite	Tr	Olivine.							
Pyrite	Tr	Olivine.							
VESICLES/			SIZE			***************************************			
CAVITIES	PERCENT	LOCATION	(mm)	FILLING	SHAPE				
Vesicles	0		1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 -						

COMMENTS: Two patches or vugs are filled by altered clinopyroxene and interstitial material in which some plagioclases are cracked and filled by amphibole.

SITE 504

148-504B-247R-1 (Piece 17, 72-76 cm) OBSERVER: IMS ROCK NAME: Moderately phyric plagioclase-olivine-clinopyroxene diabase. GRAIN SIZE: Fine-grained. TEXTURE: Intergranular, subophitic.

PRIMARY PERCENT PERCENT SIZE COMPO-MORPHOLOGY MINERALOGY PRESENT ORIGINAL (mm) SITION COMMENTS PHENOCRYSTS Euhedral, equant. Olivine Tr 0.2 - 1.0Fresh olivine in core. 1 Plagioclase 6 6 0.4 - 0.6Euhedral to anhedral, equant to tabular. Clinopyroxene Tr Tr 0.5-1.5 Anhedral, equant. GROUNDMASS Plagioclase 40 40 0.05-0.3 Subhedral, laths. Anhedral, equant. Clinopyroxene 0.02-0.1 38 54 0.02-0.13 Magnetite 4 4 Euhedral to anhedral, equant. SECONDARY REPLACING/ COMMENTS MINERALOGY PERCENT FILLING Actinolite 9 Clinopyroxene rims, interstitial. Chlorite With quartz and magnetite. 1 Olivine. Talc Olivine. With magnetite. 1 Titanite Scattered in interstitial material. Interstitial. Tr Magnetite 1 Olivine. SIZE

WHERE SAMPLED: Unit 286

WHERE SAMPLED: Unit 286.

VESICLES/ CAVITIES PERCENT LOCATION (mm) FILLING SHAPE Vesicles 0

COMMENTS: Actinolite, chlorite, talc, and magnetite sometimes replace olivine. The rock is relatively fresh.

148-504B-247R-1 (Piece 19, 79-83 cm) **OBSERVER: IMS** ROCK NAME: Moderately phyric plagioclase-olivine diabase. GRAIN SIZE: Fine-grained. TEXTURE: Intergranular.

DDD/ADV	DEDOFNE	DED OF PT	OFT	001/00	***************************************				
PRIMAR I	PERCENT	PERCENT	SIZE	COMPO-	MORPHOLOCY	COMMENTS			
DUENOCDVSTS	PRESENT	ORIGINAL.	(mm)	SITION	MORPHOLOGI	COMMENTS			
Plagioclase	6	7	0.54-2.2		Subhedral, equant to	laths.			
Olivine	õ	1	0.1-1		Equant				
Clinonyroxene	Tr	Tr	0.4-0.8		Anhedral equant				
Spinel GROUNDMASS	Tr	Tr	0.04		Equant.				
Plagioclase	38	41	0.05-0.45		Subhedral to anhedral, laths and needles				
Clinopyroxene	3	49	0.02-0.15		Anhedral, equant.				
Opaque minerals	3	3	0.02- 0.4		Subhedral to anhedral.				
SECONDARY		REPLACING	3/		ra-Materia				
MINERALOGY	PERCENT	FILLING			COMMENTS				
Laumontite	Tr	Plagioclase							
Chlorite	3	Olivine and	plagioclase.			Filling cracks in plagioclase. Associated with actinolite, after olivine, in alteration halo.			
Actinolite	47	Clinopyroxe	ene and interst	itial material.		Also after olivine in vein halo.			
Titanite	Tr	Interstitial r	material.						
Quartz	Tr	Olivine.							
Pyrite	Tr	Olivine.				Associated with Fe-Ti oxide lamellae. Also in interstitial space.			
Chalcopyrite	Tr	Ilmenite and	i interstitial m	aterial.					
Ilmenite	Tr	Fe-Ti oxide	minerals.						
VESICLES/		************************	SIZE						
CAVITIES	PERCENT	LOCATION	(mm)	FILLING	SHAPE	COMMENTS			
Vesicles			V-2			None			

COMMENTS: Vein approximately 2.0-mm wide comprises 3 layers; central fine-grained chlorite and actinolite (with fibers parallel to vein walls), an intermediate layer of fine fibrous actinolite, and outer layer of "bladed" actinolite, oriented normal to the vein wall. The halo associated with the vein contains olivine completely altered to actinolite, near the vein, and actinolite and chlorite further from the vein.

TEATORE: Interg	ranular, suboj	mue.					
PRIMARY	PERCENT	PERCENT	SIZE	COMPO-			
MINERALOGY	PRESENT	ORIGINAL	(mm)	SITION	MORPHOLOGY	COMMENTS	
Olivine	0	5	0.2 - 1.2		Euhedral, equant.		
Plagioclase	8	8	0.60-1.54		Euhedral, equant	Sometimes overgrown by chlorite.	
Clinopyroyene	Tr	Tr	0 75-1 5		Subbedral equant		
Spinel	Tr	Tr	0.05		Anhedral	In clipopyroyene	
GROUNDMASS			0.05		Anneurai.	in ennopyioxene.	
Plagioclase	44	44	0.06-0.46		Subhedral, laths.		
Clinopyroxene	11	35	0.05-0.20		Anhedral, equant.		
Magnetite	1	3	0.02 - 0.14		Anhedral to euhedral	l, equant.	
Olivine	0	4	0.2		Subhedral, equant.		
SECONDARY		REPLACING	3/				
MINERALOGY	PERCENT	FILLING				COMMENTS	
Actinolite	28	Interstitial,	clinopyroxene, o	olivine.			
Chlorite	6	Olivine, int	terstitial, plagioci	lase.		Filling cracks in plagioclase.	
Albite	Tr	Plagioclase				In cracks.	
Titanite	Tr	Interstitial.				Scattered in interstitial material, replacing olivine?	
Sulfide minerals	Tr	Olivine.				R1 - 394	
VESICLES/			SIZE	1000 B 100 C 100	and a summit		
CAVITIES	PERCENT	LOCATION	(mm)	FILLING	SHAPE		
Vesicles	0						
DEDMARY	brocevr	DEDCENT	OFTE	CONTRO			
MINERALOCY	PERCENT	OPICINIAL	SIZE	STTION	MODDUOLOGY	COMMENTS	
PHENOCDVSTS	FRESENT	OKIOINAL	(mm)	SITION	MORPHOLOGI	COMMENTS	
Olivine	0	2	0.6-1.4		Equant		
Planioclase	2	2	0.5-1.66		Equant.	Crustale are often gracked	
riagiociase	2	2	0.5-1.00		subhedral, equant	Crystals are often cracked.	
Clinesus	T-	T -	0715		to tabular.		
GROUNDMASS	Ir	Ir	0.7-1.5		Annedral, equant.		
Plagioclase	52	52	0.05-0.45		Subhedral to	Crystals are often cracked.	
					anhedral, plates		
Clinopurovera		24	0105		to needles.		
Chnopyroxene	1	34	0.1-0.5		Anhedral, equant.		
magnetite	1	3	0.02-0.12		anhedral.		
Unspecified						8% probably replacing olivine.	
SECONDARY		REPLACING	3/				
MINERALOGY	PERCENT	FILLING				COMMENTS	
Actinolite	42	Interstitial,	clinopyroxene.				
Chlorite	1	Olivine, clin	nopyroxene, inte	rstitial.			
Carbonate	Tr	Olivine.	na na presidente de la construction de la 1939 440.			Tiny crystals.	
Albite	Tr	Plagioclase.				Filling plagioclase cracks.	
Titanite	1	Interstitial.				Tiny interstitial crystals.	
Prehnite	Tr	Plagioclase.	8			50 (C	
Pumpellyite	Tr	Plagioclase.	2			Occuring near sulfide minerals.	
Anorthite	Tr	Plagioclase.				Incomplete rim on plagioclase near vein.	
VESICI ESI			OP7E				
VESICLES/	DEDCEMPT	LOCATION	SIZE	FILLING	OLIADE		
Vasiclas	O	LUCATION	(mm)	FILLING	SHAPE		
v csicles	0						

OBSERVER: IMS

WHERE SAMPLED: Unit 288

COMMENTS: Fibrous amphibole fills 2.5-mm-wide vein. Most of the thin section is the alteration halo adjacent to the vein. Pumpellyite occurrence is questionable.

SITE 504

148-504B-249R-1 (Piece 28, 92–98 cm) OBSERVER: IMS ROCK NAME: Highly phyric plagioclase-olivine-clinopyroxene diabase. GRAIN SIZE: Fine-grained. TEXTURE: Subophitic, glomerophyric.

PRIMARY	PERCENT	PERCENT	SIZE	COMPO-					
MINERALOGY PHENOCRYSTS	PRESENT	ORIGINAL	(mm)	SITION	MORPHOLOGY	COMMENTS			
Olivine	0	2	0.4-0.6		Equant.				
Plagioclase GROUNDMASS	7	7	0.54-1.47		Equant, subhedral.	Also plates.			
Plagioclase	38	38	0.07-0.5		Subhedral plates, laths				
Clinopyroxene	8	40	0.1-04		Equant, anhedral.				
Magnetite	2	2	0.02-0.32		Euhedral, anhedral,				
					equant.				
Unspecified					2	7% unspecified, most probably olivine replacement.			
SECONDARY		REPLACING	3/						
MINERALOGY	PERCENT	FILLING				COMMENTS			
Talc	Tr	Olivine, par	rtly.			In chilled margin, with magnetite and pyrite.			
Chlorite	3	Olivine.				With actinolite, quartz, and titanite(?). Possibly also interstitia			
Actinolite	41	Clinopyrox	ene.		In vugs, cracks in plagioclase. Some actinolitic hornblende h clear 60°-120° cleavages.				
Titanite	Tr	Magnetite a	nd ilmenite.			Microgranular in groundmass after magnetite. Very local replacement. Much magnetite remaining with ilmenite exsolution lamellae.			
Quartz	Tr	Olivine.				With chlorite and actinolite.			
Laumontite	Tr	Plagioclase	vugs.			With chlorite and actinolite in "vugs"; in veinlets in plagioclase.			
VESICLES/			SIZE						
CAVITIES	PERCENT	LOCATION	(mm)	FILLING	SHAPE				
Vesicles	0								

WHERE SAMPLED: Unit 290

WHERE SAMPLED: Unit 291.

COMMENTS: No alteration is apparent in host rock near chilled margin contact. In the chilled margin, olivine (1.4% present, 1.4% original) is 0.1–0.7 mm, equant subhedral, and locally altered. Plagioclase (5% present, 5% original) is 0.1–0.05 mm, euhedral equant to plates to needles. Clinopyroxene (2% present, 2% original) is 0.4–0.6 mm, equant to plates, euhedral to subhedral. Spinel occurs in trace amounts in 0.02 mm anhedral grains. Unspecified minerals comprise 92% of the chilled margin. In the margin, olivine is altered to talc only when near or cut by thin (0.08 mm) actinnolite veinlet. Clinopyroxene and plagioclase refersh in the margin groundmass is replaced possibly by very fine-grained actinolite. Pyrite occurs frequently along fissures and disseminated throughoùt rock.

148-504B-249R-1 (Piece 35, 119–123 cm) OBSERVER: IMS ROCK NAME: Moderately phyric plagioclase-olivine-clinopyroxene diabase. GRAIN SIZE: Fine-grained. TEXTURE: Glomerophyric, subophitic to intergranular.

PRIMARY PERCENT PERCENT COMPO-SIZE MINERALOGY COMMENTS PRESENT ORIGINAL MORPHOLOGY SITION (mm) PHENOCRYSTS Olivine 0 3 0.4 - 1.0Equant. Plagioclase 6 6 0.43-1.45 Euhedral to subhedral, equant to tubular. Clinopyroxene Tr Tr 0.5-5.0 Subhedral to anhedral, equant. GROUNDMASS Plagioclase Euhedral to subhedral, equant 47 47 0.06-0.58 to needles. Clinopyroxene 0.05 - 0.425 45 Anhedral, equant. Olivine 0 0.2 - 0.4Equant. Magnetite 2 0.02 - 0.21Euhedral to anhedral. SECONDARY REPLACING/ MINERALOGY PERCENT FILLING COMMENTS Talc With magnetite and minor pyrite. Tr Olivine. Plagioclase cracks, olivine and in vein. With quartz, titanite, and minor actinolite. Chlorite 5 Albite Plagioclase. 1 Actinolite 14 Clinopyroxene and interstitial material. Replacement of clinopyroxene is very patchy. Also in vein. Titanite Tr Olivine and interstitial material. Also in vein. Quartz Tr Olivine and vein. With chlorite and talc when replacing olivine. With chlorite in vein. Magnetite Tr Olivine. Tr Olivine. Pyrite VESICLES/ SIZE CAVITIES PERCENT LOCATION FILLING SHAPE COMMENTS (mm) Vesicles None.

COMMENTS: One 0.08-mm-wide chlorite, titanite, and quartz veinlet, with central single fiber of actinolite that parallels selvages, and contains actinolite when cutting clinopyroxene. The vein has no alteration halo and crosses olivines replaced by chlorite, indicating two generations of chlorite. In crossed polar light, the chlorite is blue-gray in the vein and in the altered olivine cut by the vein and anomalous brown and blue when replacing olivine elsewhere.

148-504B-249R-1 (Piece 40, 134-138 cm) OBSERVER: IMS ROCK NAME: Highly phyric plagioclase-olivine-clinopyroxene diabase. GRAIN SIZE: Fine-grained. TEXTURE: Glomerophyric, subophitic to intergranular.

PRIMARY	PERCENT	PERCENT	SIZE	COMPO-		
MINERALOGY	PRESENT	ORIGINAL	(mm)	SITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Olivine	0	4	0.2-3.3		Equant.	
Plagioclase	5	6	0.57-1.05		Euhedral to	
					subhedral, equant to	plates.
Clinopyroxene	1	1	1.0-5.0		Subhedral plates.	
Spinel	Tr	Tr	0.02		Anhedral, equant.	
GROUNDMASS						
Plagioclase	38	45	0.06-0.47		Subhedral to	
					anhedral laths.	
Clinopyroxene	6	43	0.05-0.2		Anhedral, equant.	2000 - 200 -
Opaque minerals	1	1	0.02-0.52		Euhedral to	Magnetite and pyrite.
					anhedral.	
SECONDARY		REPLACING	3/			
MINERALOGY	PERCENT	FILLING				COMMENTS
Chlorite	7	Olivine and	plagioclase cra	cks.		Replaces olivine with actinolite in the vein halo and with no, or
						only minor, actinolite outside the halo.
Albite	1	Plagioclase				Minor, along cracks.
Actinolite	40	Clinopyroxe	ene and intersti	tial material.		Also olivine, close to vein, and plagioclase along cracks.
Titanite	Tr	Olivine.				With chlorite and actinolite.
Quartz	1	Olivine.				With chlorite.
Pyrite	Tr	Olivine.				With chlorite.
VESICLES/			SIZE			
CAVITIES	PERCENT	LOCATION	(mm)	FILLING	SHAPE	COMMENTS
Vesicles						None.

WHERE SAMPLED: Unit 291

COMMENTS: The section is cut by one 1.6- to 2-mm-wide actinolite and magnetite vein, with a 7- to 9-mm-wide alteration halo, and a 0.08-mm-wide actinolite vein included in the alteration halo and parallel to the wider vein. The modal abundance listed above is a combination of host rock and alteration halo abundances. Point count in alteration halo: Primary phases: 38%, actinolite: 58%, chlorite: 1%, and albite 2%. Point count in host rock: Primary phases: 62%, actinolite: 24%, chlorite: 12%, albite: Tr, quartz: 2%, and sulfide: Tr.

148-504B-249R-2 (Piece 6, 19–24 cm) ROCK NAME: Moderately phyric plagioclase-olivine diabase. GRAIN SIZE: Fine-grained. TEXTURE: Glomerophyric, subophitic.			OBSERVER: IMS	WHERE SAMPLED: Unit 291		
PRIMARY MINERALOGY PHENOCRYSTS	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPO- SITION	MORPHOLOGY	COMMENTS
Olivine	0	1	0.15-1.2		Equant.	
Plagioclase	4	4	0.4-1.4		Euhedral to anhedral, equant to plates.	
Spinel GROUNDMASS	Tr	Tr	0.05		Equant.	In olivine,
Plagioclase	47	49	0.14-0.4		Subhedral to anhedral, laths to needles.	
Clinopyroxene	25	44	0.1-1.2		Anhedral, equant.	Large grains are oikocrysts.
Opaque minerals	3	3	0.02-0.18		Euhedral to anhedral, equant.	
SECONDARY		REPLACING	3/		254 ALOS 186-185 AL	
MINERALOGY	PERCENT	FILLING				COMMENTS
Talc	1	Olivine.				With magnetite and talc/chlorite.
Chlorite	Tr	Olivine and	plagioclase.			
Actinolite	20	Clinopyroxe	ne and interstitia	d material.		
Quartz	Tr	Olivine.				With chlorite and magnetite.
Magnetite	Tr	Olivine.				With talc.
Pyrite	Tr	Olivine.				
VESICLES/			SIZE			
CAVITIES Vesicles	PERCENT	LOCATION	(mm)	FILLING	SHAPE	COMMENTS None.

COMMENTS: Some actinolite is very deep green in color, Fe + Cl rich? Olivine replacement is often strongly zoned. Talc/anthophyllite may be present in a plagioclase phenocryst.

148-504B-250R-1 (Piece 16, 57-60 cm) ROCK NAME: Moderately phyric plagioclase-olivine diabase. GRAIN SIZE: Fine-grained. TEXTURE: Ophitic to subophitic.

PRIMARY PERCENT PERCENT COMPO-SIZE MINERALOGY PRESENT ORIGINAL MORPHOLOGY COMMENTS (mm) SITION PHENOCRYSTS Olivine 0 0.5-3.5 Equant. 1 Plagioclase 3 4 0.5-1.68 Subhedral plates and laths. GROUNDMASS Plagioclase 39 45 0.07-0.5 Subhedral to anhedral laths and needles. Clinopyroxene 5 46 0.1 - 1.0Anhedral, equant. Opaque minerals 3 0.02-0.23 Euhedral to 1 anhedral. SECONDARY REPLACING/ MINERALOGY PERCENT COMMENTS FILLING Chlorite Olivine and plagioclase. With actinolite when replacing olivine. 2 Albite Tr Plagioclase. In cracks and crystals. Actinolite Clinopyroxene and interstitial material. Complete replacement in alteration halos, partial in remainder. 48 Minor after plagioclase. Titanite Tr Groundmass. Quartz Tr Olivine. With chlorite. Talc Tr Very rare, with magnetite. Epidote Tr Plagioclase. VESICLES/ SIZE COMMENTS CAVITIES PERCENT LOCATION (mm) FILLING SHAPE Vesicles None.

OBSERVER: IMS

COMMENTS: Modal values are for the alteration halo, outside halo alteration is approximately 20%. Section is cut by one 0.8-mm-wide actinolite vein with 5-mm-thick alteration halo, a 0.1-mm-thick actinolite vein parallel to the vein, and numerous 0.05-mm-thick actinolite veinlets. The widest vein hosts small plagioclase clasts in its core. One grain of a translucent blue, isotropic, reflective mineral (spinel?) was seen associated with titanite.

148-504B-250R-1 (Piece 22, 77-81 cm) OBSERVER: IMS ROCK NAME: Moderately phyric plagioclase-olivine-clinopyroxene diabase. GRAIN SIZE: Fine-grained. TEXTURE: Glomerophyric, onbitic to subophitic. WHERE SAMPLED: Unit 291

WHERE SAMPLED: Unit 291.

TEXTURE: Glome	erophyric, opt	ntic to subop	hitic.			
PRIMARY	PERCENT	PERCENT	SIZE	COMPO-		
MINERALOGY PHENOCRYSTS	PRESENT	ORIGINAL	(mm)	SITION	MORPHOLOGY	COMMENTS
Olivine	0	3	0.4-1.2		Equant.	
Plagioclase	4	4	0.87-3.77		Euhedral to	
					subhedral, equant	
					to plates.	
Clinopyroxene	1	1	0.75-1.5		Anhedral, equant.	
Spinel	Tr	Tr	0.1		Euhedral, equant.	Symplectic.
Plagioclase	36	41	0 12-0 55		Subhedral to	
Taglociase	50	71	0.12-0.55		anhedral laths	
Clinopyroxene	9	47	0.15-0.5		Anhedral equant	
Olivine	0	Tr	0.2-0.4		Equant.	
Opaque minerals	1	1	0.02-0.3		Euhedral to	
					anhedral.	
SECONDARY		REPLACING	3/			
MINERALOGY	PERCENT	FILLING				COMMENTS
Chlorite	6	Olivine and	plagioclase.			With quartz and actinolite when after olivine.
			•			In cracks in plagioclase.
Albite	1	Plagioclase	•			Extensively in one part of the section.
Actinolite	42	Clinopyroxe	ene and interstit	ial material.		Also after olivine (minor).
Quartz	Tr	Olivine.				With chlorite.
Epidote	Tr	Plagioclase	£2			In albitized plagioclase.
Chalcopyrite	Tr	Olivine.				
Titanite	Tr	Olivine.				In albite and titanite veins, after magnetite.
VESICLES/			SIZE			
CAVITIES	PERCENT	LOCATION	(mm)	FILLING	SHAPE	COMMENTS
Vesicles						None

COMMENTS: Section is cut by a 0.35-mm-thick actinolite vein, with 3- to 4-mm-thick alteration halo, that cuts a 4-mm-diameter actinolite alteration patch. Outside the vein, alteration halos are "patchy altered" areas with more intense alteration. Several 0.01-mm-thick subparallel chlorite + titanite veinlets were also noted. Where these veins cut pyroxene or groundmass amphibole they contain amphibole.

148-504B-250R-1 (Piece 32, 112–117 cm) OBSERVER: IMS ROCK NAME: Moderately phyric plagioclase-olivine-clinopyroxene diabase. GRAIN SIZE: Fine-grained. TEXTURE: Subophitic, intergranular.

PRIMARY MINERALOGY PHENOCRYSTS	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPO- SITION	MORPHOLOGY	COMMENTS
Olivine	0	1	0.4 - 0.8		Equant	
Plagioclase	3	3	0.52 - 1.48		Subhedral to	
lugioenuse			010.0 1110		anhedral equant	
					to laths	
linonyroyene	313	1	0.4-1.5		Anhedral equant	
CROUNDMASS		1	0.4-1.5		Anneorai, equant.	
Disciplina	15	4.0	0.07.0.47		Subbadeal to	
lagiociase	45	40	0.07-0.47		subledial interes	
					anneural, plates	
N .	26	14	0100		and latins.	
Innopyroxene	20	40	0.1-0.2		Anneoral, equant.	
Jpaque minerais	2	2	0.02-0.25		Eunedral to	
FOONDARY			vi.		annedral.	
SECONDARY		REPLACINC	\$/			COLOUTE
MINERALOGY	PERCENT	FILLING	40.05			COMMENTS
Chlorite	5	Olivine and	plagioclase.	0.000		With very minor actinolite when replacing olivine.
Actinolite	18	Clinopyroxe	ne and interstitial n	naterial.		
Fitanite	Tr	?				2207 NO. 9
Quartz	Tr	Olivine.		// We = 11		With chlorite.
VESICLES/			SIZE			
CAVITIES	PERCENT	LOCATION	(mm)	FILLING	SHAPE	COMMENTS
Vesicles						None.
TEXTURE: Intergr	ranular.					
PRIMARY	PERCENT	PERCENT	SIZE	COMPO-		
MINERALOGY	PRESENT	ORIGINAL	(mm)	SITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Olivine	0	1.2	0.3-0.8		Equant.	
Plagioclase	5	6.8	0.4 - 1.29		Subhedral laths.	
Clinopyroxene	2	2	0.2 - 1.0		Subhedral to	
					anhedral, equant	
					to laths.	
Spinel	Tr	Tr	0.04		Equant.	
GROUNDMASS						
Plagioclase	40	47	0.05-0.34		Subhedral, laths	
					to needles.	
Clinopyroxene	21	40	0.05-0.2		Anhedral, equant.	
Opaque minerals	3	3	0.02-0.22		Euhedral to	
SECONDARY		REPLACING	7/		annoural.	
MINERALOGY	PERCENT	FILLING				COMMENTS
Zeolites	1	Plagioclasa				In vein halo with chlorite and titanite
Chlorite	6	Olivine and	nlagioclase			in your nato, what enterine and thannes
Actinolite	21	Clinonyroy	and olivine			
Titanite	1	Interstitial	mace and vois			
Pyrite	Tr	Interstitial s	pace and vem.			Also associated with excolution lamellae of ilmenite
Chalconvita	Tr.	Olivina	interestitie! moto-!-!			Also associated with exsolution famenae of infieline.
Umenite	Tr	Ea Ti ovido	minarale material	• :-		Forming excelution lamellas
innenne	11	re-11 oxide	minerais.			rommig exsolution famenae.
VESICLES/			SIZE			
CAVITIES	PERCENT	LOCATION	(mm)	FILLING	SHAPE	COMMENTS
Vesicles						None.

WHERE SAMPLED: Unit 292

COMMENTS: Vein, approximately 1.0 mm wide, is composed of chlorite, quartz, acicular actinolite, and very fine-grained titanite and pyrite. Secondary Na-Ti diopside occurs as a thin, <5-µm, green "layer" altering magmatic augite in contact with the vein.

148-504B-251R-1 (Piece 4, 18-20 cm) ROCK NAME: Moderately phyric plagioclase-olivine diabase. GRAIN SIZE: Fine-grained. TEXTURE: Subophitic.

WHERE SAMPLED: Unit 293

PRIMARY	PERCENT	PERCENT	SIZE	COMPO-		
MINERALOGY PHENOCRYSTS	PRESENT	ORIGINAL	(mm)	SITION	MORPHOLOGY	COMMENTS
Olivine	0	1	0.5		Euhedral-equant.	
Plagioclase	2	3	0.5-2.56		Euhedral, equant to plates.	
Spinel	Tr	Tr	0.04-0.2		Euhedral-subhedral, equant.	Symplectic replacement in placioclase.
GROUNDMASS						
Plagioclase	14	37	0.09-0.48		Euhedral-subhedral laths and needles.	
Clinopyroxene		46				
Opaque minerals	1	1	0.7		Anhedral.	
SECONDARY		REPLACING	3/			
MINERALOGY	PERCENT	FILLING				COMMENTS
Chlorite	1	Plagioclase.				Veinlets crosscut plagioclase and secondary anorthitic rims.
Albite	5	Plagioclase.				Veinlets through plagioclase laths; crosscut the secondary anorthitic rims.
Actinolite	72	Groundmass	clinopyroxene.			Coarse fibrous crystals after clinopyroxene. Fine-bladed crystals in mats, with an interstitial low order birefringence mineral.
Titanite	Tr	Groundmass				
Anorthite	5	Plagioclase.	(Rims, complete or incomplete, charged with inclusions.
VESICLES/			SIZE	***************	***************************************	
CAVITIES Vesicles	PERCENT 0	LOCATION	(mm)	FILLING	SHAPE	

OBSERVER: IMS

COMMENTS: Amphibole is coarse and fibrous after clinopyroxene and present as fine-bladed crystals altering the unidentified groundmass material. Secondary anorthite is very well developed at an early stage in the alteration history and is crosscut by albite and chlorite. A thin section was made of a large (5-cm) well-developed alteration patch.

148-504B-251R-1 ROCK NAME: M GRAIN SIZE: Fine TEXTURE: Ophit	(Piece 5, 28– oderately physe- grained. ic-subophitic.	-30 cm) ric plagioclase	e-olivine diaba	OBSERVER: IMS se.	WHERE SAMPLED: Unit 293		
PRIMARY	PERCENT	PERCENT	SIZE	COMPO-			
MINERALOGY PHENOCRYSTS	PRESENT	ORIGINAL	(mm)	SITION	MORPHOLOGY	COMMENTS	
Olivine	1		0.4-0.6		Euhedral, equant.		
Plagioclase	2	2	0.5-2.15		Subhedral-anhedral, equant.		
Spinel	Tr	Tr	0.04-0.1		Euhedral-anhedral, equant.		
GROUNDMASS							
Plagioclase	34	46	0.06-0.49		Subhedral, laths to needles.		
Clinopyroxene	3	46	0.4-2.0		Anhedral, equant.	Large grains are oikocrysts.	
Opaque minerals	2	2	0.02-0.35		Euhedral-anhedral, equant.		
SECONDARY		REPLACING	G/		61 8 0075500.0		
MINERALOGY	PERCENT	FILLING				COMMENTS	
Chlorite	3	Plagioclase,	olivine, and	groundmass.		Replaces plagioclase along cracks, and olivine in association with magnetite. Interstitial material replaced by chlorite with actinolite, titanite, and very minor epidote. Some clinopyroxene altered to chlorite with actinolite.	
Albite	4	Plagioclase	e.			Localized replacement along veins.	
Actinolite	47	Plagioclase,	clinopyroxen	e, groundmass.			
Anorthite	5	Plagioclase				Incomplete rims, strongly developed near veins.	
Prehnite	Tr	Plagioclase	and interstitia	l material.			
Epidote	Tr	Plagioclase,	, interstitial m	aterial.		Associated with prehnite within plagioclase grains and within a 0.07-mm chlorite vug.	
Titanite	Tr	Magnetite, i chlorite.	ilmenite. Also	in vug with			
Chalcopyrite	Tr	- 2016-100006					
VESICLES/			SIZE				
CAVITIES	PERCENT	LOCATION	(mm)	FILLING	SHAPE		
Vesicles	0						

COMMENTS: Network of subparallel veinlets (<0.1-mm thick), and one 0.8-mm-thick actinolite-chlorite vein is associated with a vague halo ($\leq 10 \text{ mm}$ half-width). One area contains brecciated and very altered plagioclase (into chlorite and quartz \pm laumontite).

148-504B-251R-1 (Piece 7, 49-51 cm) ROCK NAME: Moderately phyric plagioclase-olivine diabase. GRAIN SIZE: Fine-grained. TEXTURE: Ophitic-subophitic.

PRIMARY PERCENT PERCENT COMPO-SIZE MINERALOGY COMMENTS PRESENT ORIGINAL (mm) SITION MORPHOLOGY PHENOCRYSTS Olivine 0 0.4-1.5 Euhedral, equant. Plagioclase 5 5 0.54-1.87 Euhedral-subhedral, equant to platy. GROUNDMASS Plagioclase 37 42 0.07-0.5 Subhedral, equant to needles. Clinopyroxene 11 48 0.2-2.0 Anhedral, equant oikocrysts. Opaque minerals 3 0.02-0.27 Euhedral-anhedral 3 SECONDARY REPLACING/ MINERALOGY PERCENT FILLING COMMENTS Chlorite Replacing olivine with actinolite and minor magnetite, pyrite, and 6 Olivine, clinopyroxene, and groundmass. titanite. Within fine veins in plagioclase. Cores of pyroxene grains pseudomorphed by fibrous mats of Actinolite 33 Clinopyroxene and groundmass. amphibole. Titanite Magnetite, olivine, and clinopyroxene. 1 Quartz Tr **Olivine** Calcic rims with abundant inclusions and albitic cracks developed Plagioclase 4 Plagioclase through igneous plagioclase. ?Anorthite Pyrite/ Tr Subhedral grains. Chalopyrite Ilmentite Tr Magnetite. Trellis of ilmentite after magnetite with associated fine-grained titanite. VESICLES/ SIZE CAVITIES PERCENT LOCATION FILLING (mm) SHAPE Vesicles 0 COMMENTS: Very distinct calcic plagioclase (probably anorthite) rims incompletely replace the plagioclase laths that are located in a cm-scale alteration patch. 148-504B-252R-1 (Piece 4, 12-15 cm) **OBSERVER: IMS** WHERE SAMPLED: Unit 293 ROCK NAME: Moderately phyric clino-plagioclase-olivine diabase. GRAIN SIZE: Fine-grained. TEXTURE: Ophitic, glomerophyric. PRIMARY PERCENT PERCENT SIZE COMPO-MINERALOGY PRESENT ORIGINAL (mm) SITION MORPHOLOGY COMMENTS PHENOCRYSTS Olivine 0.2 Equant Plagioclase 3 4 0.5 - 1.4Euhedral-subhedral, equant to platy. Spinel Tr Tr 0.02-0.1 Euhedral-anhedral. Inclusions within plagioclase. equant. GROUNDMASS Plagioclase 29 43 0.06-0.48 Anhedral-subhedral,

OBSERVER: IMS

WHERE SAMPLED: Unit 293.

Clinopyroxene Tr 41 0.3-1.0 Anhedral, equant. Opaque minerals 2 0.02-0.34 Euhedral-anhedral. 2 SECONDARY REPLACING/ MINERALOGY PERCENT FILLING COMMENTS Chlorite Olivine, groundmass, Albite Tr Plagioclase. Fine veinlets through plagioclase. Actinolite 51 Clinopyroxene, plagioclase, groundmass. Almost total replacement of the original pyroxene by large crystals of actinolite. Interstitial material replaced by a mat of fine needles of amphibole. Minor actinolite along cracks within plagioclase. Titanite 1 Titanomagnetite. Microclusters of titanite between trellis of ilmenite. Anorthite 13 Plagioclase rims. Abundant replacement of plagioclase rims by a more calcic composition. Small plagioclase grains can be totally replaced by anorthite. Ilmenite Tr Titanomagnetite. Trellis of ilmetite with associated titanite. VESICLES/ SIZE CAVITIES PERCENT LOCATION FILLING (mm) SHAPE Vesicles 0

equant to laths.

COMMENTS: One 0.12-mm-thick actinolite vein merges with a several subparallel actinolite (0.05-mm) veinlets.

148-504B-252R-1 (Piece 5, 15-20 cm) ROCK NAME: Moderately phyric plagioclase-olivine diabase. GRAIN SIZE: Fine-grained. TEXTURE: Subophitic, glomerophyric.

PRIMARY	PERCENT	PERCENT	SIZE	COMPO-		
MINERALOGY	PRESENT	ORIGINAL	(mm)	SITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Olivine	0	1	0.4 - 1.5		Equant.	
Plagioclase	3	3	0.5 - 1.44		Subhedral, equant.	
Spinel	Tr	Tr	0.05		Anhedral, equant.	
GROUNDMASS						
Plagioclase	20	32	0.06-0.48		Subhedral, laths	
150					to needles.	
Clinopyroxene	0	40	0.4 - 1.0		Anhedral, equant.	Oikocrysts.
Oxide minerals	Tr	1	0.02-0.21		Euhedral to	
					anhedral.	
SECONDARY		REPLACING	G/			
MINERALOGY	PERCENT	FILLING				COMMENTS
Actinolite	72	Olivine, cli	nopyroxene, i	nterstitial.		Also fills cracks in plagioclase.
Albite	8	Plagioclase				Partly replacing plagioclase.
Laumontite	Tr	Plagioclase				Laumontite and coarse epidote after plagioclase.
Epidote	Tr	Plagioclase				
Anorthite	Tr	Plagioclase				Replacement of small plagioclase laths and rims of larger grains.
VESICLES/			SIZE	**********		
CAVITIES	PERCENT	LOCATION	(mm)	FILLING	SHAPE	
Vesicles	0		2) II.(S			

WHERE SAMPLED: Unit 293

WHERE SAMPLED: Unit 294

COMMENTS: 23% of groundmass is altered such that previous mineralogy is not obvious. Very little ilmenite is left, all the magnetite has been replaced.

OBSERVER: IMS

PRIMARY	PERCENT	PERCENT	SIZE	COMPO-		
MINERALOGY PHENOCRYSTS	PRESENT	ORIGINAL	(mm)	SITION	MORPHOLOGY	COMMENTS
Olivine	0	1	0.4-1.0		Equant.	
Plagioclase	3	3	1.2		Euhedral to subhedral, equant.	
Clinopyroxene	1	1	0.5-2.0		Anhedral, equant.	Oikocrysts.
Spinel GROUNDMASS	Tr	Tr	0.02		Round.	In plagioclase glomerocryst.
Plagioclase	41	43	0.07-0.49		Subhedral to anhedral, needles to laths.	
Clinopyroxene	27	48	0.1 - 0.2		Anhedral, equant.	
Opaque minerals	2	2	0.02-0.25		Euhedral to anhedral, equant,	
SECONDARY		REPLACING	3/			
MINERALOGY	PERCENT	FILLING				COMMENTS
Actinolite	23	Interstitial 1	naterial, clinop	yroxene.		
Talc	Tr	Olivine.				Together with pyrite (more abundant than magnetite), surrounded by chlorite at rim of replacement.
Chlorite	Tr	Olivine.				Together with quartz and talc.
Albite	Tr	Plagioclase.				Very rare.
Titanite	Tr	Interstitial.				
Quartz	Tr	Olivine.				Together with talc.
Pyrite	3	Olivine.				In olivine replacement, in actinolite.
Chalcopyrite	Tr					Minor.
VESICLES/			SIZE			
CAVITIES Vesicles	PERCENT 0	LOCATION	(mm)	FILLING	SHAPE	

COMMENTS: The section contains no secondary Ca-plagioclase.

¹⁴⁸⁻⁵⁰⁴B-253R-1 (Piece 1, 0-4 cm) OBSERVER: IMS ROCK NAME: Moderately phyric plagioclase-olivine-clinopyroxene diabase. GRAIN SIZE: Fine-grained. TEXTURE: Subophitic, glomerophyric, intergranular.

WHERE SAMPLED: Junk basket

PRIMARY	PERCENT	PERCENT	SIZE	COMPO-		
MINERALOGY PHENOCRYSTS	PRESENT	ORIGINAL	(mm)	SITION	MORPHOLOGY	COMMENTS
Olivine	0	3	0.8 - 2.0		Equant, rounded.	
Plagioclase	60		0.2-4.0		Lath, subhedral to anhedral.	Bimodal size distribution, porphyritic.
Clinopyroxene GROUNDMASS	30		0.2-3.2		Equant, anhedral.	Bimodal size distribution, porphyritic.
Magnetite	1		0.06-0.2		Anhedral.	Interstitial, altered in some places.
SECONDARY		REPLACING	3/			•
MINERALOGY	PERCENT	FILLING				COMMENTS
Clays	3	Olivine.				Mixed-laver chlorite-smectite(?).
Talc	Tr	Olivine.				Minor compared to mixed-layer clays.
Chlorite	2	Plagioclase,	interstitial.			
Albite	Tr	Plagioclase.				
Actinolite	4	Interstitial,	clinopyroxene.			
Fitanite	Tr	Magnetite.				Associated with actinolite replacing clinopyroxene or in groundmass.
Pyrite	Tr	Interstitial,	olivine.			
Chalocopyrite	Tr	Pyrite, inter	rstitial.			Small grains inside pyrite and interstitial.
VESICLES/		************	SIZE	*****	*********	
CAVITIES	PERCENT	LOCATION	(mm)	FILLING	SHAPE	COMMENTS
Vesicles						None.

COMMENTS: Trace of magnetite with talc replaces olivine. Tiny crystals of zircon in trace amounts occur in actinolite is in actinolitic patch. Sample location is not well constrained. Modal estimates were performed visually. Interstitial patches of alteration minerals (actinolite and chlorite), several mm across, are developed in some parts of the thin section.