144-871C-33R-3 (Piece 3, 112-114 cm)

OBSERVER: DMC

WHERE SAMPLED: Clast in claystone.

ROCK NAME: Nephelinite GRAIN SIZE: Microcrystalline.

TEXTURE: Microporphyritic, intergranular.

Calcite	3	Olivine				***************************************
Chlorite	2	Olivine				Pleochroic olive-green/clear.
Clay	1	Nepheline				Cloudy, amorphous, irregular patches throughou
MINERALOGY	PERCENT	FILLING				COMMENTS
SECONDARY		REPLACING/				
Apatite	5	5	0.1		Needles.	
Biotite	2-3	2-3	0.1		Subhedral.	Associated with cloudy altered nepheline.
Magnetite	15	15	0.01		interstitial. Cubes.	
Nepheline	20	20	0.01-0.5		Poikilitic to	Optic sign confirmed.
Titanaugite	50	50	0.03-0.05		Equant prisms.	
GROUNDMASS	ramen					
Magnetite	<1	<1	0.1		Cubes.	Ilmenite cores.
Titanaugite	1	1	0.2 - 0.5		Elongate prisms.	
Olivine	i	1	<1		Skeletal,	many broken, deformation lamellae.
PHENOCRYSTS Olivine	5	10	1-2		Euhedral.	Xenocrysts?, small spinels, some embayed,
MINERALOGY	PRESENT	ORIGINAL	(mm)	SITION	MORPHOLOGY	COMMENTS
PRIMARY	PERCENT	PERCENT	SIZE	COMPO-		

COMMENTS: Sharp alteration boundary in section; fresh parts show little alteration; good for date, geochemistry.

144-871C-35R-1 (Piece 2C, 44-50 cm)

OBSERVER: DMC

WHERE SAMPLED: Thin flow or dike.

ROCK NAME: Basanite GRAIN SIZE: Microcrystalline.

TEXTURE: Sparsely phyric, intergranular.

PRIMARY	PERCENT	PERCENT	SIZE	COMPO-		
MINERALOGY	PRESENT	ORIGINAL	(mm)	SITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Clinopyroxene	4	5	2		Subhedral.	Titanaugite overgrowths on green diopsidic? cores, Xenocrysts?
Clinopyroxene	0	10	0.5 - 1		Subhedral.	Completely altered.
Spinel	<<1	<<1	1		Anhedral,	Brown translucent cores, opaque rims.
Spinel	<<1	<<1	<<1		Octahedra.	In clinopyroxene cores.
Olivine	0	1-2	1-4		Subhedral.	Completely altered.
GROUNDMASS						
Titanaugite	60	60	0.03		Equant prisms.	
Nepheline	10	10	0.02		Interstitial.	Identification tentative.
Magnetite	15	15	0.01 - 0.1		Cubes.	Larger cubes have ilmenite cores.
Plagioclase	10	10	0.02		Interstitial.	2
Apatite	<1	<1	0.01		Needles.	
SECONDARY		REPLACING/				
MINERALOGY	PERCENT	FILLING				COMMENTS
Chlorite	1-2	Olivine				Colorless.
Clay	<1	Clinopyroxen	e			Dark green, subcircular patches.
Clay	10	Clinopyroxen	ie			Light green/clear.
VESICLES/	***************************************		SIZE			
CAVITIES	PERCENT	LOCATION	(mm)	FILLING	SHAPE	
Vesicles	1	Groundmass	4	Calcite, brown clay	Irregular	

COMMENTS: Unit 1. Note abundant xenocrysts.

144-871C-35R-4 (Piece 5, 42-48 cm) ROCK NAME: Basanitoid

OBSERVER: DMC

WHERE SAMPLED: Clast in volcanic breccia.

GRAIN SIZE: Fine-grained. TEXTURE: Intersertal.

PRIMARY	PERCENT	PERCENT	SIZE	COMPO-		
MINERALOGY	PRESENT	ORIGINAL	(mm)	SITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Olivine	0	5	1-3		Euhedral.	Completely altered.
GROUNDMASS						
Titanaugite	25	50	0.02-0.04		Equant prisms.	Partially altered to green clay.
Magnetite	10	10	0.01-0.02		Subhedral,	
Apatite	2	2	< 0.02		Needles.	
Matrix	40	40	< 0.05		Interstitial.	Colorless, cloudy, after plagioclase
		3.9	40.05		interstent.	and/or nepheline.
SECONDARY		REPLACING/				
MINERALOGY	PERCENT	FILLING				COMMENTS
Iddingsite	<1	Olivine				Narrow rims only.
Calcite	1	Olivine				rantow thiis only.
Light brown clay	4	Olivine				
Light orown clay						
VESICLES/			SIZE			
CAVITIES	PERCENT	LOCATION	(mm)	FILLING	SHAPE	
Vesicles	None					
COMMENTS: Altered. !	Not datable.					
144-871C-36R-1 (Piece			OBSERVER	:: DMC	WHERE SAMPLED	: Top 1 m flow.
144-871C-36R-1 (Piece ROCK NAME: Basanito			OBSERVER	:: DMC	WHERE SAMPLED	Top 1 m flow.
ROCK NAME: Basanito	oid		OBSERVER	:: DMC	WHERE SAMPLED	Top 1 m flow.
[[전기] 전기 전기 [[전기] [[전기] [[전기] [[전기]	id ned.	Ĺ	OBSERVER	:: DMC	WHERE SAMPLED	Top 1 m flow.
ROCK NAME: Basanito GRAIN SIZE: Fine-grain	id ned.	I. PERCENT	OBSERVER	:: DMC	WHERE SAMPLED	Top 1 m flow.
ROCK NAME: Basanite GRAIN SIZE: Fine-grain TEXTURE: Microporpl	oid ned. hyritic, interserta			*************	WHERE SAMPLED	Top 1 m flow.  COMMENTS
ROCK NAME: Basanito GRAIN SIZE: Fine-grain TEXTURE: Microporph 	oid ned. hyritic, interserta PERCENT	PERCENT	SIZE	COMPO-		
ROCK NAME: Basanito GRAIN SIZE: Fine-grain TEXTURE: Microporpl	pid ned. hyritic, interserta PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPO-	MORPHOLOGY	COMMENTS
ROCK NAME: Basanito GRAIN SIZE: Fine-grain TEXTURE: Microporph 	oid ned. hyritic, interserta PERCENT	PERCENT	SIZE	COMPO-		
ROCK NAME: Basanito GRAIN SIZE: Fine-grain TEXTURE: Microporpherent Microporpherent Mineral Mi	pid ned. hyritic, interserta PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPO-	MORPHOLOGY	COMMENTS
ROCK NAME: Basanito GRAIN SIZE: Fine-grain TEXTURE: Microporpherent PRIMARY MINERALOGY PHENOCRYSTS Olivine	pid ned. hyritic, interserta PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPO-	MORPHOLOGY	COMMENTS
ROCK NAME: Basanito GRAIN SIZE: Fine-grain TEXTURE: Microporph PRIMARY MINERALOGY PHENOCRYSTS Olivine GROUNDMASS Titanaugite	percent Percent Percent Percent Percent Percent Percent Percent 0	PERCENT ORIGINAL	SIZE (mm)	COMPO-	MORPHOLOGY  Euhedral.	COMMENTS
ROCK NAME: Basanito GRAIN SIZE: Fine-grain TEXTURE: Microporph PRIMARY MINERALOGY  PHENOCRYSTS Olivine  GROUNDMASS Titanaugite Magnetite	PERCENT PRESENT 0	PERCENT ORIGINAL	SIZE (mm)  1-2  0.02-0.04 0.01-0.02	COMPO-	MORPHOLOGY  Euhedral.  Elongate prisms.	COMMENTS
ROCK NAME: Basanito GRAIN SIZE: Fine-grain TEXTURE: Microporph PRIMARY MINERALOGY  PHENOCRYSTS Olivine  GROUNDMASS Titanaugite Magnetite Apatite	PERCENT PRESENT  0  50 10 1	PERCENT ORIGINAL 15 50 10	SIZE (mm)  1-2  0.02-0.04 0.01-0.02 <0.02	COMPO-	MORPHOLOGY  Euhedral.  Elongate prisms. Subhedral, Needles.	COMMENTS
ROCK NAME: Basanito GRAIN SIZE: Fine-grain TEXTURE: Microporpl PRIMARY MINERALOGY  PHENOCRYSTS Olivine  GROUNDMASS Titanaugite Magnetite Apatite Spinel	PERCENT PRESENT  0  50 10	PERCENT ORIGINAL 15 50 10	SIZE (mm)  1-2  0.02-0.04 0.01-0.02	COMPO-	MORPHOLOGY  Euhedral.  Elongate prisms. Subhedral.	COMMENTS  Completely altered.
ROCK NAME: Basanito GRAIN SIZE: Fine-grain TEXTURE: Microporpl PRIMARY MINERALOGY  PHENOCRYSTS Olivine  GROUNDMASS Titanaugite Magnetite Apatite	percent percent present  0  50 10 1 <<1	PERCENT ORIGINAL 15 50 10 1 <<1	SIZE (mm)  1-2  0.02-0.04 0.01-0.02 <0.02 <0.01	COMPO-	MORPHOLOGY  Euhedral.  Elongate prisms. Subhedral. Needles. In olivine.	COMMENTS
ROCK NAME: Basanito GRAIN SIZE: Fine-grain TEXTURE: Microporpl PRIMARY MINERALOGY PHENOCRYSTS Olivine  GROUNDMASS Titanaugite Magnetite Apatite Spinel Matrix	percent percent present  0  50 10 1 <<1	PERCENT ORIGINAL 15 50 10 1 <<1 40	SIZE (mm)  1-2  0.02-0.04 0.01-0.02 <0.02 <0.01	COMPO-	MORPHOLOGY  Euhedral.  Elongate prisms. Subhedral. Needles. In olivine.	COMMENTS  Completely altered.  Colorless, cloudy, after plagioclase
ROCK NAME: Basanito GRAIN SIZE: Fine-grain TEXTURE: Microporple PRIMARY MINERALOGY PHENOCRYSTS Olivine GROUNDMASS Titanaugite Magnetite Apatite Spinel Matrix SECONDARY	PERCENT PRESENT  0  50 10 1 <<1	PERCENT ORIGINAL  15  50 10 1 <<1 40  REPLACING/	SIZE (mm)  1-2  0.02-0.04 0.01-0.02 <0.02 <0.01	COMPO-	MORPHOLOGY  Euhedral.  Elongate prisms. Subhedral. Needles. In olivine.	COMMENTS  Completely altered.  Colorless, cloudy, after plagioclase and/or nepheline.
ROCK NAME: Basanito GRAIN SIZE: Fine-grain TEXTURE: Microporpl PRIMARY MINERALOGY  PHENOCRYSTS Olivine  GROUNDMASS Titanaugite Magnetite Apatite Spinel Matrix  SECONDARY MINERALOGY	PERCENT  PERCENT  0  50 10 1 <li>40  PERCENT  PRESENT  PRESE</li>	PERCENT ORIGINAL  15  50 10 1 <<1 40  REPLACING/ FILLING	SIZE (mm)  1-2  0.02-0.04 0.01-0.02 <0.02 <0.01	COMPO-	MORPHOLOGY  Euhedral.  Elongate prisms. Subhedral. Needles. In olivine.	COMMENTS  Completely altered.  Colorless, cloudy, after plagioclase and/or nepheline.
ROCK NAME: Basanito GRAIN SIZE: Fine-grain TEXTURE: Microporpl PRIMARY MINERALOGY  PHENOCRYSTS Olivine  GROUNDMASS Titanaugite Magnetite Apatite Spinel Matrix  SECONDARY MINERALOGY Iddingsite	PERCENT  50 10 1	PERCENT ORIGINAL  15  50 10 1 <<1 40  REPLACING/ FILLING Olivine	SIZE (mm)  1-2  0.02-0.04 0.01-0.02 <0.02 <0.01	COMPO-	MORPHOLOGY  Euhedral.  Elongate prisms. Subhedral. Needles. In olivine.	COMMENTS  Completely altered.  Colorless, cloudy, after plagioclase and/or nepheline.
ROCK NAME: Basanito GRAIN SIZE: Fine-grain TEXTURE: Microporpl PRIMARY MINERALOGY  PHENOCRYSTS Olivine  GROUNDMASS Titanaugite Magnetite Apatite Spinel Matrix  SECONDARY MINERALOGY	PERCENT  PERCENT  0  50 10 1 <li>40  PERCENT  PRESENT  PRESE</li>	PERCENT ORIGINAL  15  50 10 1 <<1 40  REPLACING/ FILLING	SIZE (mm)  1-2  0.02-0.04 0.01-0.02 <0.02 <0.01	COMPO-	MORPHOLOGY  Euhedral.  Elongate prisms. Subhedral. Needles. In olivine.	COMMENTS  Completely altered.  Colorless, cloudy, after plagioclase and/or nepheline.
ROCK NAME: Basanito GRAIN SIZE: Fine-grain TEXTURE: Microporpl PRIMARY MINERALOGY PHENOCRYSTS Olivine  GROUNDMASS Titanaugite Magnetite Apatite Spinel Matrix  SECONDARY MINERALOGY Iddingsite Light brown clay Calcite	PERCENT  50 10 1  PERCENT  PRESENT  0  PRESENT  1  7  PERCENT  1  1  1  1  1  1  1  1  1  1  1  1  1	PERCENT ORIGINAL  15  50 10 1 <<1 40  REPLACING/ FILLING Olivine Olivine	SIZE (mm)  1-2  0.02-0.04 0.01-0.02 <0.02 <0.01 <0.05	COMPO-	MORPHOLOGY  Euhedral.  Elongate prisms. Subhedral. Needles. In olivine.	COMMENTS  Completely altered.  Colorless, cloudy, after plagioclase and/or nepheline.
ROCK NAME: Basanito GRAIN SIZE: Fine-grain TEXTURE: Microporple PRIMARY MINERALOGY  PHENOCRYSTS Olivine  GROUNDMASS Titanaugite Magnetite Apatite Spinel Matrix  SECONDARY MINERALOGY Iddingsite Light brown clay Calcite  VESICLES/	percent  Percent  Percent  0  50  10  1  <-1  40  Percent  1  2  3  1  2  3  1  4  1  1  4  1  1  1  1  1  1  1  1	PERCENT ORIGINAL  15  50 10 1 <<1 40  REPLACING/ FILLING Olivine Olivine	SIZE (mm)  1-2  0.02-0.04 0.01-0.02 <0.02 <0.01 <0.05	COMPO- SITION	MORPHOLOGY  Euhedral.  Elongate prisms. Subhedral. Needles. In olivine. Interstitial.	COMMENTS  Completely altered.  Colorless, cloudy, after plagioclase and/or nepheline.
ROCK NAME: Basanito GRAIN SIZE: Fine-grain TEXTURE: Microporpl PRIMARY MINERALOGY PHENOCRYSTS Olivine GROUNDMASS Titanaugite Magnetite Apatite Spinel Matrix  SECONDARY MINERALOGY Iddingsite Light brown clay Calcite	PERCENT  50 10 1  PERCENT  PRESENT  0  PRESENT  1  7  PERCENT  1  1  1  1  1  1  1  1  1  1  1  1  1	PERCENT ORIGINAL  15  50 10 1 <<1 40  REPLACING/ FILLING Olivine Olivine	SIZE (mm)  1-2  0.02-0.04 0.01-0.02 <0.02 <0.01 <0.05	COMPO-	MORPHOLOGY  Euhedral.  Elongate prisms. Subhedral. Needles. In olivine.	COMMENTS  Completely altered.  Colorless, cloudy, after plagioclase and/or nepheline.

144-871C-36R-3 (Piece 2, 25-31 cm)

OBSERVER: DMC

WHERE SAMPLED: Near base 1 m, Unit 13.

ROCK NAME: Basanite GRAIN SIZE: Fine-grained.

TEXTURE: Microporphyritic, intersertal.

PRIMARY	PERCENT	PERCENT	SIZE	COMPO-		
MINERALOGY	PRESENT	ORIGINAL	(mm)	SITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Olivine	Î	15	1-3		Euhedral.	Mostly altered,
Titanaugite	<1	<1	0.5		Elongate prisms.	
GROUNDMASS						
	50	50	0.02.0.04		P1	
Titanaugite	50	50	0.02-0.04		Elongate prisms.	
Plagioclase	10	>10	< 0.1		Poikilitic to	
Magnetite	10	10	0.01.0.02		interstitial.	
Magnetite			0.01-0.02		Subhedral.	
Apatite	1	1	< 0.02		Needles.	Calculate should be be a considered
Matrix	10	10	< 0.05		Interstitial.	Colorless, cloudy, isotropic, altered
						plagioclase and/or nepheline.
SECONDARY		REPLACING/				
MINERALOGY	PERCENT	FILLING				COMMENTS
Light brown clay	15	Olivine				A CONTRACTOR OF THE STATE OF TH
Iddingsite	<1	Olivine				Rims only.
						**************************************
VESICLES/			SIZE			
CAVITIES	PERCENT	LOCATION	(mm)	FILLING	SHAPE	
Vesicles	<1		3-4	Calcite	Irregular	
144-871C-37R-1 (Piece	9 , 84–85 cm)	***************************************	OBSERVER	: DMC	WHERE SAMPLED	: Middle 1 m flow, Unit 15.
144-871C-37R-1 (Piece ROCK NAME: Basanito GRAIN SIZE: Fine-grain	9 , 84–85 cm) id ned,	I.	OBSERVER	: DMC	WHERE SAMPLED	: Middle 1 m flow, Unit 15.
COMMENTS: Very sim  144-871C-37R-1 (Piece ROCK NAME: Basanito GRAIN SIZE: Fine-grain TEXTURE: Microporph PRIMARY	9 , 84–85 cm) id ned, nyritic, interserta	***************************************			WHERE SAMPLED	: Middle 1 m flow, Unit 15.
144-871C-37R-1 (Piece ROCK NAME: Basanito GRAIN SIZE: Fine-grain TEXTURE: Microporph PRIMARY	9 , 84–85 cm) id ned. nyritic, interserta	PERCENT	SIZE	COMPO-		
144-871C-37R-1 (Piece ROCK NAME: Basanito GRAIN SIZE: Fine-grain TEXTURE: Microporph PRIMARY	9 , 84–85 cm) id ned, nyritic, interserta	***************************************			WHERE SAMPLED	: Middle 1 m flow, Unit 15.  COMMENTS
144-871C-37R-1 (Piece ROCK NAME: Basanito GRAIN SIZE: Fine-grain TEXTURE: Microporph PRIMARY MINERALOGY	9 , 84–85 cm) id ned. nyritic, interserta	PERCENT	SIZE	COMPO-		
144-871C-37R-1 (Piece ROCK NAME: Basanito GRAIN SIZE: Fine-grain TEXTURE: Microporph PRIMARY MINERALOGY	9 , 84–85 cm) id ned. nyritic, interserta	PERCENT	SIZE	COMPO-		COMMENTS
144-871C-37R-1 (Piece ROCK NAME: Basanito GRAIN SIZE: Fine-grain TEXTURE: Microporph PRIMARY MINERALOGY	9 , 84–85 cm) id ned. nyritic, interserta PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPO-	MORPHOLOGY	
144-871C-37R-1 (Piece ROCK NAME: Basanito GRAIN SIZE: Fine-grain TEXTURE: Microporph PRIMARY MINERALOGY	9 , 84–85 cm) id ned. nyritic, interserta PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPO-	MORPHOLOGY  Euhedral, some	COMMENTS
144-871C-37R-1 (Piece ROCK NAME: Basanito GRAIN SIZE: Fine-grain TEXTURE: Microporpherson Mineral Control of the Control of th	9 , 84–85 cm) id ned. nyritic, interserta  PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPO-	MORPHOLOGY  Euhedral, some broken.	COMMENTS
144-871C-37R-1 (Piece ROCK NAME: Basanito GRAIN SIZE: Fine-grain TEXTURE: Microporph PRIMARY MINERALOGY PHENOCRYSTS Olivine  Titanaugite GROUNDMASS	9 , 84–85 cm) iid ned. hyritic, interserta PERCENT PRESENT	PERCENT ORIGINAL 20 5	SIZE (mm) 1-3 0.2-0.4	COMPO-	MORPHOLOGY  Euhedral, some broken. Elongate prisms.	COMMENTS  Completely altered.
144-871C-37R-1 (Piece ROCK NAME: Basanito GRAIN SIZE: Fine-grain TEXTURE: Microporph PRIMARY MINERALOGY PHENOCRYSTS Olivine  Titanaugite  GROUNDMASS Titanaugite	9 , 84–85 cm) id ned. hyritic, intersertal PERCENT PRESENT  0 5	PERCENT ORIGINAL 20 5	SIZE (mm)  1-3  0.2-0.4  0.01-0.02	COMPO-	MORPHOLOGY  Euhedral, some broken. Elongate prisms.	COMMENTS
144-871C-37R-1 (Piece ROCK NAME: Basanito GRAIN SIZE: Fine-grain TEXTURE: Microporph PRIMARY MINERALOGY PHENOCRYSTS Olivine  Titanaugite  GROUNDMASS Titanaugite  Magnetite	9 , 84–85 cm) id ned. hyritic, intersertal PERCENT PRESENT  0 5	PERCENT ORIGINAL 20 5	SIZE (mm)  1-3  0.2-0.4  0.01-0.02 0.01	COMPO-	MORPHOLOGY  Euhedral, some broken. Elongate prisms.  Elongate prisms. Cubes.	COMMENTS  Completely altered.  Altered to green clay.
144-871C-37R-1 (Piece ROCK NAME: Basanito GRAIN SIZE: Fine-grain FEXTURE: Microporph PRIMARY MINERALOGY PHENOCRYSTS Olivine  Titanaugite  GROUNDMASS Titanaugite	9 , 84–85 cm) id ned. hyritic, intersertal PERCENT PRESENT  0 5	PERCENT ORIGINAL 20 5	SIZE (mm)  1-3  0.2-0.4  0.01-0.02	COMPO-	MORPHOLOGY  Euhedral, some broken. Elongate prisms.	COMMENTS  Completely altered.  Altered to green clay.  Colorless, cloudy, isotropic, altered
144-871C-37R-1 (Piece ROCK NAME: Basanito GRAIN SIZE: Fine-grain TEXTURE: Microporphysical Primary MINERALOGY PHENOCRYSTS Olivine  Titanaugite GROUNDMASS Titanaugite Magnetite	9 , 84–85 cm) id ned. hyritic, intersertal PERCENT PRESENT  0 5	PERCENT ORIGINAL 20 5	SIZE (mm)  1-3  0.2-0.4  0.01-0.02 0.01	COMPO-	MORPHOLOGY  Euhedral, some broken. Elongate prisms.  Elongate prisms. Cubes.	COMMENTS  Completely altered.  Altered to green clay.
144-871C-37R-1 (Piece ROCK NAME: Basanito GRAIN SIZE: Fine-grain FEXTURE: Microporph PRIMARY MINERALOGY PHENOCRYSTS Olivine  Titanaugite  GROUNDMASS  Titanaugite  Magnetite  Matrix	9 , 84–85 cm) id ned. hyritic, intersertal PERCENT PRESENT  0 5	PERCENT ORIGINAL 20 5 60 10 30	SIZE (mm)  1-3  0.2-0.4  0.01-0.02 0.01	COMPO-	MORPHOLOGY  Euhedral, some broken. Elongate prisms.  Elongate prisms. Cubes.	COMMENTS  Completely altered.  Altered to green clay.  Colorless, cloudy, isotropic, altered
144-871C-37R-1 (Piece ROCK NAME: Basanito GRAIN SIZE: Fine-grain FEXTURE: Microporpheriman Mineral Corporation of the Corporati	9 , 84–85 cm) id ned. hyritic, intersertal PERCENT PRESENT  0 5 30 10 30	PERCENT ORIGINAL  20 5 60 10 30 REPLACING/	SIZE (mm)  1-3  0.2-0.4  0.01-0.02 0.01	COMPO-	MORPHOLOGY  Euhedral, some broken. Elongate prisms.  Elongate prisms. Cubes.	COMMENTS  Completely altered.  Altered to green clay.  Colorless, cloudy, isotropic, altered plagioclase and/or nepheline.
144-871C-37R-1 (Piece ROCK NAME: Basanito GRAIN SIZE: Fine-grain TEXTURE: Microporphysical Primary Mineralogy  PHENOCRYSTS Olivine  Titanaugite  GROUNDMASS Titanaugite  Magnetite  Matrix  SECONDARY  MINERALOGY	9 , 84–85 cm) iid ned. hyritic, interserta PERCENT PRESENT  0 5 30 10 30 PERCENT	PERCENT ORIGINAL  20 5 60 10 30  REPLACING/ FILLING	SIZE (mm)  1-3  0.2-0.4  0.01-0.02 0.01	COMPO-	MORPHOLOGY  Euhedral, some broken. Elongate prisms.  Elongate prisms. Cubes.	COMMENTS  Completely altered.  Altered to green clay.  Colorless, cloudy, isotropic, altered
144-871C-37R-1 (Piece ROCK NAME: Basanito GRAIN SIZE: Fine-grain TEXTURE: Microporphysical PRIMARY MINERALOGY PHENOCRYSTS Olivine  Titanaugite  GROUNDMASS Titanaugite  Magnetite	9 , 84–85 cm) id ned. hyritic, intersertal PERCENT PRESENT  0 5 30 10 30	PERCENT ORIGINAL  20 5 60 10 30 REPLACING/	SIZE (mm)  1-3  0.2-0.4  0.01-0.02 0.01	COMPO-	MORPHOLOGY  Euhedral, some broken. Elongate prisms.  Elongate prisms. Cubes.	COMMENTS  Completely altered.  Altered to green clay.  Colorless, cloudy, isotropic, altered plagioclase and/or nepheline.
144-871C-37R-1 (Piece ROCK NAME: Basanito GRAIN SIZE: Fine-grain TEXTURE: Microporph PRIMARY MINERALOGY PHENOCRYSTS Olivine Titanaugite GROUNDMASS Titanaugite Magnetite Matrix SECONDARY MINERALOGY Green clay Light brown clay	9 , 84–85 cm) id hed. hyritic, intersertal PERCENT PRESENT  0 5 30 10 30 PERCENT 30	PERCENT ORIGINAL  20 5 60 10 30  REPLACING/ FILLING Titanaugite	SIZE (mm)  1-3  0.2-0.4  0.01-0.02 0.01 <0.05	COMPO-	MORPHOLOGY  Euhedral, some broken. Elongate prisms.  Elongate prisms. Cubes.	COMMENTS  Completely altered.  Altered to green clay.  Colorless, cloudy, isotropic, altered plagioclase and/or nepheline.
144-871C-37R-1 (Piece ROCK NAME: Basanito GRAIN SIZE: Fine-grain TEXTURE: Microporph PRIMARY MINERALOGY  PHENOCRYSTS Olivine  Titanaugite  GROUNDMASS Titanaugite  Magnetite  Matrix  SECONDARY  MINERALOGY  Green clay  Light brown clay	9 , 84–85 cm) id hed. hyritic, intersertal PERCENT PRESENT  0 5 30 10 30 PERCENT 30 20	PERCENT ORIGINAL  20  5  60 10 30  REPLACING/FILLING Titanaugite Olivine	SIZE (mm)  1-3  0.2-0.4  0.01-0.02 0.01 <0.05	COMPO- SITION	MORPHOLOGY  Euhedral, some broken. Elongate prisms.  Elongate prisms. Cubes. Interstitial.	COMMENTS  Completely altered.  Altered to green clay.  Colorless, cloudy, isotropic, altered plagioclase and/or nepheline.
144-871C-37R-1 (Piece ROCK NAME: Basanito GRAIN SIZE: Fine-grain TEXTURE: Microporph PRIMARY MINERALOGY PHENOCRYSTS Olivine  Titanaugite  GROUNDMASS Titanaugite Magnetite Matrix  SECONDARY MINERALOGY Green clay Light brown clay	9 , 84–85 cm) id hed. hyritic, intersertal PERCENT PRESENT  0 5 30 10 30 PERCENT 30	PERCENT ORIGINAL  20 5 60 10 30  REPLACING/ FILLING Titanaugite	SIZE (mm)  1-3  0.2-0.4  0.01-0.02 0.01 <0.05	COMPO-	MORPHOLOGY  Euhedral, some broken. Elongate prisms.  Elongate prisms. Cubes.	COMMENTS  Completely altered.  Altered to green clay.  Colorless, cloudy, isotropic, altered plagioclase and/or nepheline.

COMMENTS: Finer than Units 9 and 13, finest at site.

144-871C-38R-1 (Piece 8, 87-88 cm)

OBSERVER: DMC

WHERE SAMPLED: Upper part, thick massive flow.

ROCK NAME: Basanite GRAIN SIZE: Microcrystalline. TEXTURE: Microporphyritic, in

TEXTURE: Micropor				**********	************************	
PRIMARY	PERCENT	PERCENT	SIZE	COMPO-		
MINERALOGY	PRESENT	ORIGINAL	(mm)	SITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Olivine	10	15	0.5-2		Subhedral.	
Titanaugite	10	10	0.5		Elongate prisms.	
GROUNDMASS						
Titanaugite	60	60	0.01 - 0.1		Equant prisms.	
Plagioclase	20	20	<1-5		Poikilitic to	
					interstitial.	
Nepheline	<5	10	< 0.1		Interstitial.	Cloudy where altered, identification is tentative
Magnetite	10	10	0.02		Cubes.	
Apatite	<1	<1	0.05		Needles.	
SECONDARY		REPLACING/				
MINERALOGY	PERCENT	FILLING				COMMENTS
Clay	5	Olivine				Olive green.
	***************************************					
VESICLES/	- 20/20/20/20/20/20		SIZE	100 to 100	644.00	
CAVITIES	PERCENT	LOCATION	(mm)	FILLING	SHAPE	
Vesicles	10	Groundmass	0.5-2	Calcite	Round	
144-871C-38R-3 (Piec ROCK NAME: Basani GRAIN SIZE: Microc	te rystalline.	des	OBSERVER	R: DMC	WHERE SAMPLED	Massive flow.
ROCK NAME: Basani GRAIN SIZE: Microco TEXTURE: Micropor	te rystalline. phyritic, intergranu	***************************************	***********		WHERE SAMPLED	Massive flow.
ROCK NAME: Basani GRAIN SIZE: Microci TEXTURE: Micropor PRIMARY	te rystalline. phyritic, intergranu PERCENT	PERCENT	SIZE	COMPO-		
ROCK NAME: Basani GRAIN SIZE: Microci TEXTURE: Micropor PRIMARY	te rystalline. phyritic, intergranu	***************************************	***********		WHERE SAMPLED  MORPHOLOGY	Massive flow.  COMMENTS
ROCK NAME: Basani GRAIN SIZE: Microc TEXTURE: Micropor PRIMARY MINERALOGY	te rystalline. phyritic, intergranu PERCENT	PERCENT	SIZE	COMPO-		
ROCK NAME: Basani GRAIN SIZE: Microc TEXTURE: Micropor PRIMARY MINERALOGY	te rystalline. phyritic, intergranu PERCENT	PERCENT	SIZE	COMPO-		
ROCK NAME: Basani GRAIN SIZE: Microc TEXTURE: Micropor	te rystalline. phyritic, intergram PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPO-	MORPHOLOGY	COMMENTS
ROCK NAME: Basani GRAIN SIZE: Microer FEXTURE: Micropor PRIMARY MINERALOGY PHENOCRYSTS Olivine Titanaugite	te rystalline. phyritic, intergram PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPO-	MORPHOLOGY Euhedral.	COMMENTS
ROCK NAME: Basani GRAIN SIZE: Microer TEXTURE: Micropor PRIMARY MINERALOGY PHENOCRYSTS Olivine Titanaugite	te rystalline. phyritic, intergram PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPO-	MORPHOLOGY  Euhedral.  Euhedral.	COMMENTS
ROCK NAME: Basani GRAIN SIZE: Microco FEXTURE: Micropor PRIMARY MINERALOGY PHENOCRYSTS Olivine Titanaugite GROUNDMASS	rystalline. phyritic, intergram PERCENT PRESENT  0 5	PERCENT ORIGINAL 10 5	SIZE (mm)  0.1-0.2 0.05-0.1	COMPO-	MORPHOLOGY  Euhedral.  Euhedral.  Equant prisms.  Poikilitic to	COMMENTS
ROCK NAME: Basani GRAIN SIZE: Microco TEXTURE: Micropor PRIMARY MINERALOGY  PHENOCRYSTS Olivine Titanaugite  GROUNDMASS Titanaugite Nepheline	PERCENT PRESENT  0 5 20	PERCENT ORIGINAL 10 5	SIZE (mm)  0.1-0.2 0.05-0.1  0.02 0.01-0.1	COMPO-	MORPHOLOGY  Euhedral.  Euhedral.  Equant prisms.  Poikilitic to interstitial.	COMMENTS  Completely altered.
ROCK NAME: Basani GRAIN SIZE: Microer TEXTURE: Micropor PRIMARY MINERALOGY PHENOCRYSTS Olivine Titanaugite GROUNDMASS Titanaugite Nepheline	phyritic, intergram PERCENT PRESENT  0 5  10	PERCENT ORIGINAL 10 5	SIZE (mm)  0.1-0.2 0.05-0.1  0.02 0.01-0.1  <0.05	COMPO-	MORPHOLOGY  Euhedral.  Euhedral.  Equant prisms.  Poikilitic to interstitial.  Interstitial.	COMMENTS  Completely altered.
ROCK NAME: Basani GRAIN SIZE: Microco TEXTURE: Micropor PRIMARY MINERALOGY  PHENOCRYSTS Olivine Titanaugite  GROUNDMASS Titanaugite Nepheline	PERCENT PRESENT  0 5 20	PERCENT ORIGINAL 10 5	SIZE (mm)  0.1-0.2 0.05-0.1  0.02 0.01-0.1	COMPO-	MORPHOLOGY  Euhedral.  Equant prisms.  Poikilitic to interstitial.  Interstitial.  Ilmenite cores in	COMMENTS  Completely altered.
ROCK NAME: Basani GRAIN SIZE: Microer TEXTURE: Micropor PRIMARY MINERALOGY PHENOCRYSTS Olivine Titanaugite GROUNDMASS Titanaugite Nepheline Plagioclase	phyritic, intergram PERCENT PRESENT  0 5  10	PERCENT ORIGINAL 10 5	SIZE (mm)  0.1-0.2 0.05-0.1  0.02 0.01-0.1  <0.05	COMPO-	MORPHOLOGY  Euhedral.  Euhedral.  Equant prisms.  Poikilitic to interstitial.  Interstitial.	COMMENTS  Completely altered.
ROCK NAME: Basani GRAIN SIZE: Microco TEXTURE: Micropor PRIMARY MINERALOGY PHENOCRYSTS Olivine Titanaugite GROUNDMASS Titanaugite Nepheline Plagioclase Magnetite Apatite	phyritic, intergram PERCENT PRESENT  0 5  10 10	PERCENT ORIGINAL 10 5 50 20 10	SIZE (mm)  0.1-0.2 0.05-0.1  0.02 0.01-0.1  <0.05 0.02	COMPO-	MORPHOLOGY  Euhedral.  Equant prisms.  Poikilitic to interstitial.  Interstitial.  Ilmenite cores in larger grains.	COMMENTS  Completely altered.
ROCK NAME: Basani GRAIN SIZE: Microco FEXTURE: Micropor PRIMARY MINERALOGY  PHENOCRYSTS Olivine Titanaugite GROUNDMASS Titanaugite Nepheline  Plagioclase Magnetite  Apatite  SECONDARY	phyritic, intergram PERCENT PRESENT  0 5  10 10	PERCENT ORIGINAL 10 5 50 20 10 10 2–3	SIZE (mm)  0.1-0.2 0.05-0.1  0.02 0.01-0.1  <0.05 0.02	COMPO-	MORPHOLOGY  Euhedral.  Equant prisms.  Poikilitic to interstitial.  Interstitial.  Ilmenite cores in larger grains.	COMMENTS  Completely altered.
ROCK NAME: Basani GRAIN SIZE: Microco FEXTURE: Micropor PRIMARY MINERALOGY  PHENOCRYSTS Olivine Titanaugite GROUNDMASS Titanaugite Nepheline  Plagioclase Magnetite  Apatite  SECONDARY	phyritic, intergram PERCENT PRESENT  0 5  10 10 10 2-3	PERCENT ORIGINAL  10 5 50 20 10 10 2-3 REPLACING/	SIZE (mm)  0.1-0.2 0.05-0.1  0.02 0.01-0.1  <0.05 0.02	COMPO-	MORPHOLOGY  Euhedral.  Equant prisms.  Poikilitic to interstitial.  Interstitial.  Ilmenite cores in larger grains.	COMMENTS  Completely altered.  Generally fresh, some clouding.
ROCK NAME: Basani GRAIN SIZE: Microc FEXTURE: Micropor PRIMARY MINERALOGY  PHENOCRYSTS Olivine Titanaugite GROUNDMASS Titanaugite Nepheline  Plagioclase Magnetite  Apatite  SECONDARY MINERALOGY	percent percen	PERCENT ORIGINAL  10 5 50 20 10 10 2-3 REPLACING/ FILLING	SIZE (mm)  0.1-0.2 0.05-0.1  0.02 0.01-0.1  <0.05 0.02	COMPO-	MORPHOLOGY  Euhedral.  Equant prisms.  Poikilitic to interstitial.  Interstitial.  Ilmenite cores in larger grains.	COMMENTS  Completely altered.  Generally fresh, some clouding.  COMMENTS
ROCK NAME: Basani GRAIN SIZE: Micropor TEXTURE:	phyritic, intergram  PERCENT  PERCENT  0 5  50 20  10 10 2-3  PERCENT  <	PERCENT ORIGINAL  10 5 50 20 10 10 2-3 REPLACING/ FILLING Olivine	SIZE (mm)  0.1-0.2 0.05-0.1  0.02 0.01-0.1  <0.05 0.02	COMPO-	MORPHOLOGY  Euhedral.  Equant prisms.  Poikilitic to interstitial.  Interstitial.  Ilmenite cores in larger grains.	COMMENTS  Completely altered.  Generally fresh, some clouding.  COMMENTS  Narrow rims.
ROCK NAME: Basani GRAIN SIZE: Micropor FEXTURE: Micropor FRIMARY MINERALOGY PHENOCRYSTS Olivine Titanaugite GROUNDMASS Titanaugite Nepheline Plagioclase Magnetite Apatite SECONDARY MINERALOGY Iddingsite Clay Chlorite	phyritic, intergram  PERCENT  PERCENT  0  5  10 10 2-3  PERCENT  21 5	PERCENT ORIGINAL  10 5 50 20 10 10 2-3 REPLACING/ FILLING Olivine Olivine	SIZE (mm)  0.1-0.2 0.05-0.1  0.02 0.01-0.1  <0.05 0.02 <0.01	COMPO-	MORPHOLOGY  Euhedral.  Equant prisms.  Poikilitic to interstitial.  Interstitial.  Ilmenite cores in larger grains.	COMMENTS  Completely altered.  Generally fresh, some clouding.  COMMENTS Narrow rims. Green/clear.
ROCK NAME: Basani GRAIN SIZE: Micropor TEXTURE: Micropor TITURE: Micropor Titure Titur	phyritic, intergram  PERCENT  PERCENT  0  5  10 10 2-3  PERCENT  21 5	PERCENT ORIGINAL  10 5 50 20 10 10 2-3 REPLACING/ FILLING Olivine Olivine	SIZE (mm)  0.1-0.2 0.05-0.1  0.02 0.01-0.1  <0.05 0.02	COMPO-	MORPHOLOGY  Euhedral.  Equant prisms.  Poikilitic to interstitial.  Interstitial.  Ilmenite cores in larger grains.	COMMENTS  Completely altered.  Generally fresh, some clouding.  COMMENTS  Narrow rims.  Green/clear.

144-871C-38R-6 (Piece 1D, 52-55 cm)

OBSERVER; DMC

WHERE SAMPLED: Massive flow.

ROCK NAME: Basanite GRAIN SIZE: Microcrystalline.

TEXTURE: Olivine phyric, intergranular.

PRIMARY	PERCENT	PERCENT	SIZE	COMPO-		
MINERALOGY	PRESENT	ORIGINAL	(mm)	SITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Olivine	0	15	1-2		Subhedral.	Highly altered.
GROUNDMASS						
Titanaugite	60	60	0.01-0.05		Equant prisms.	
Plagioclase	20	20	<1-5	An <sub>35</sub>	Poikilitic.	Striking texture.
Nepheline	<5	10	<1	175	Interstitial to poikilitic.	Cloudy, altered, identification is tentative.
Magnetite	10	10	0.02-0.05		Cubes.	
Apatite	5	5	0.1		Needles.	
SECONDARY		REPLACING/				
MINERALOGY	PERCENT	FILLING				COMMENTS
Iddingsite	1	Olivine				Thin rims only.
Clay	15	Olivine				Green/brown.
Calcite	1	Olivine				
Clay	5	Nepheline				In cloudy, almost isotropic areas.
VESICLES/	***************************************	***************************************	SIZE			
CAVITIES	PERCENT	LOCATION	(mm)	FILLING	SHAPE	
Vesicles	None		20 20			
44-871C-38R-6 (Piec ROCK NAME: Basani	ce 1F, 99-100 cm) te		OBSERVER	t: DMC	WHERE SAMPLED	: Massive flow.
COMMENTS: Unit 1 144-871C-38R-6 (Piec ROCK NAME: Basani GRAIN SIZE: Microc FEXTURE: Olivine pl	ce 1F, 99–100 cm) te rystalline. hyric, intergranular.			t: DMC	WHERE SAMPLED	: Massive flow.
144-871C-38R-6 (Piec ROCK NAME: Basani GRAIN SIZE: Microc	ce 1F, 99–100 cm) te rystalline. hyric, intergranular.			:: DMC	WHERE SAMPLED	: Massive flow.
144-871C-38R-6 (Piec ROCK NAME: Basani GRAIN SIZE: Microc TEXTURE: Olivine pl	ce 1F, 99–100 cm) te rystalline. hyric, intergranular.		OBSERVER		WHERE SAMPLED  MORPHOLOGY	: Massive flow.  COMMENTS
144-871C-38R-6 (Piec ROCK NAME: Basani GRAIN SIZE: Microc FEXTURE: Olivine pl	te 1F, 99–100 cm) te rystalline. hyric, intergranular	PERCENT	OBSERVER	COMPO-		
144-871C-38R-6 (Piec ROCK NAME: Basani GRAIN SIZE: Microc FEXTURE: Olivine pl PRIMARY MINERALOGY	te 1F, 99–100 cm) te rystalline. hyric, intergranular	PERCENT	OBSERVER	COMPO-		
144-871C-38R-6 (Piec ROCK NAME: Basani GRAIN SIZE: Microc FEXTURE: Olivine pl PRIMARY MINERALOGY PHENOCRYSTS Olivine	pee 1F, 99–100 cm) te rystalline. hyric, intergranular PERCENT PRESENT	PERCENT ORIGINAL	OBSERVER SIZE (mm)	COMPO-	MORPHOLOGY	COMMENTS
44-871C-38R-6 (Piec ROCK NAME: Basani GRAIN SIZE: Microc TEXTURE: Olivine plants PRIMARY MINERALOGY PHENOCRYSTS Olivine	pee 1F, 99–100 cm) te rystalline. hyric, intergranular PERCENT PRESENT	PERCENT ORIGINAL	OBSERVER SIZE (mm)	COMPO-	MORPHOLOGY	COMMENTS
144-871C-38R-6 (Piec ROCK NAME: Basani GRAIN SIZE: Microc FEXTURE: Olivine plants PRIMARY WINERALOGY PHENOCRYSTS Olivine GROUNDMASS	per 1F, 99–100 cm) te rystalline. hyric, intergranular.  PERCENT PRESENT	PERCENT ORIGINAL	OBSERVER SIZE (mm)	COMPO-	MORPHOLOGY Subhedral.	COMMENTS
144-871C-38R-6 (Piec ROCK NAME: Basani GRAIN SIZE: Microc FEXTURE: Olivine pl PRIMARY MINERALOGY PHENOCRYSTS Olivine GROUNDMASS Titanaugite	pee 1F, 99–100 cm) tee rystalline. hyric, intergranular.  PERCENT PRESENT  5	PERCENT ORIGINAL 15	OBSERVER SIZE (mm) 1-2 <0.2	COMPO-	MORPHOLOGY Subhedral. Equant prisms.	COMMENTS
44-871C-38R-6 (Piec ROCK NAME: Basani GRAIN SIZE: Microc TEXTURE: Olivine pl PRIMARY MINERALOGY PHENOCRYSTS Olivine GROUNDMASS Titanaugite Plagioclase	pee 1F, 99–100 cm) tee tee 1F, 99–100 cm) tee tee 1F, 99–100 cm) tee 1F, 99–100 cm] tee 1	PERCENT ORIGINAL 15 60 20	SIZE (mm)  1-2  <0.2 <1-5	COMPO-	MORPHOLOGY  Subhedral.  Equant prisms. Poikilitic.	COMMENTS  Altered.
144-871C-38R-6 (Piec ROCK NAME: Basani GRAIN SIZE: Microc FEXTURE: Olivine pl PRIMARY MINERALOGY PHENOCRYSTS Olivine GROUNDMASS Titanaugite Plagioclase Nepheline	per 1F, 99–100 cm) te rystalline. hyric, intergranular.  PERCENT PRESENT  5  60 20 <5	PERCENT ORIGINAL 15 60 20 10	SIZE (mm)  1-2  <0.2 <1-5 0.1	COMPO-	MORPHOLOGY  Subhedral.  Equant prisms.  Poikilitic.  Interstitial.	COMMENTS  Altered.
144-871C-38R-6 (Piec ROCK NAME: Basani GRAIN SIZE: Microc FEXTURE: Olivine pl PRIMARY MINERALOGY PHENOCRYSTS Olivine GROUNDMASS Titanaugite Plagioclase Nepheline Magnetite	per 1F, 99–100 cm) te rystalline. hyric, intergranular.  PERCENT PRESENT  5  60 20 <5 10	PERCENT ORIGINAL 15 60 20 10	SIZE (mm)  1-2  <0.2 <1-5 0.1 0.02	COMPO-	MORPHOLOGY  Subhedral.  Equant prisms. Poikilitic. Interstitial. Cubes.	COMMENTS  Altered.
A44-871C-38R-6 (Piec ROCK NAME: Basani GRAIN SIZE: Microc FEXTURE: Olivine pl PRIMARY MINERALOGY PHENOCRYSTS Olivine GROUNDMASS Titanaugite Plagioclase Nepheline Magnetite Apatite	per 1F, 99–100 cm) te rystalline. hyric, intergranular.  PERCENT PRESENT  5  60 20 <5 10	PERCENT ORIGINAL 15 60 20 10 10 5	SIZE (mm)  1-2  <0.2 <1-5 0.1 0.02	COMPO-	MORPHOLOGY  Subhedral.  Equant prisms. Poikilitic. Interstitial. Cubes.	COMMENTS  Altered.
144-871C-38R-6 (Piec ROCK NAME: Basani GRAIN SIZE: Microc FEXTURE: Olivine plants PRIMARY MINERALOGY PHENOCRYSTS Olivine GROUNDMASS Titanaugite Plagioclase Nepheline Magnetite Apatite SECONDARY MINERALOGY	per 1F, 99–100 cm) te rystalline. hyric, intergranular.  PERCENT PRESENT  5  60 20 <5 10 5	PERCENT ORIGINAL 15 60 20 10 10 5 REPLACING/	SIZE (mm)  1-2  <0.2 <1-5 0.1 0.02	COMPO-	MORPHOLOGY  Subhedral.  Equant prisms. Poikilitic. Interstitial. Cubes.	COMMENTS  Altered.  Cloudy, altered, identification is uncertain.  COMMENTS
144-871C-38R-6 (Piec ROCK NAME: Basani GRAIN SIZE: Microc FEXTURE: Olivine pl PRIMARY MINERALOGY PHENOCRYSTS Olivine GROUNDMASS Titanaugite Plagioclase Nepheline Magnetite Apatite	per 1F, 99–100 cm) to the prystalline. hyric, intergranular.  PERCENT PRESENT  5  60 20 <5 10 5  PERCENT	PERCENT ORIGINAL  15  60 20 10 10 5  REPLACING/ FILLING	SIZE (mm)  1-2  <0.2 <1-5 0.1 0.02	COMPO-	MORPHOLOGY  Subhedral.  Equant prisms. Poikilitic. Interstitial. Cubes.	COMMENTS  Altered.  Cloudy, altered, identification is uncertain.
144-871C-38R-6 (Piec ROCK NAME: Basani GRAIN SIZE: Microc FEXTURE: Olivine pl PRIMARY MINERALOGY PHENOCRYSTS Olivine GROUNDMASS Titanaugite Plagioclase Nepheline Magnetite Apatite SECONDARY MINERALOGY Iddingsite	per 1F, 99–100 cm) to the prystalline. hyric, intergranular.  PERCENT PRESENT  5  60 20 <5 10 5  PERCENT 5	PERCENT ORIGINAL  15  60 20 10 10 5  REPLACING/ FILLING Olivine	SIZE (mm)  1-2  <0.2 <1-5 0.1 0.02	COMPO-	MORPHOLOGY  Subhedral.  Equant prisms. Poikilitic. Interstitial. Cubes.	COMMENTS  Altered.  Cloudy, altered, identification is uncertain.  COMMENTS Rims only.
144-871C-38R-6 (Piec ROCK NAME: Basani GRAIN SIZE: Microc FEXTURE: Olivine pl PRIMARY MINERALOGY PHENOCRYSTS Olivine GROUNDMASS Titanaugite Plagioclase Nepheline Magnetite Apatite SECONDARY MINERALOGY Iddingsite Chlorite	per 1F, 99–100 cm) te	PERCENT ORIGINAL  15  60 20 10 10 5  REPLACING/ FILLING Olivine Olivine	SIZE (mm)  1-2  <0.2 <1-5 0.1 0.02	COMPO-	MORPHOLOGY  Subhedral.  Equant prisms. Poikilitic. Interstitial. Cubes.	COMMENTS  Altered.  Cloudy, altered, identification is uncertain.  COMMENTS Rims only. Green.
144-871C-38R-6 (Piec ROCK NAME: Basani GRAIN SIZE: Microc FEXTURE: Olivine pl PRIMARY MINERALOGY PHENOCRYSTS Olivine GROUNDMASS Titanaugite Plagioclase Nepheline Magnetite Apatite SECONDARY MINERALOGY Iddingsite Chlorite Clay	per 1F, 99–100 cm) te	PERCENT ORIGINAL  15  60 20 10 10 5  REPLACING/ FILLING Olivine Olivine	SIZE (mm)  1-2  <0.2 <1-5 0.1 0.02 0.01	COMPO-	MORPHOLOGY  Subhedral.  Equant prisms. Poikilitic. Interstitial. Cubes.	COMMENTS  Altered.  Cloudy, altered, identification is uncertain.  COMMENTS Rims only. Green.

COMMENTS: Same as Sample 38R-6, 52-55 cm, slightly less plagioclase. Unit 19.

144-871C-38R-7 (Piece 1C, 17-19 cm)

OBSERVER: DMC

WHERE SAMPLED: Lower part, massive flow, Unit 20,

ROCK NAME: Basanite GRAIN SIZE: Microcrystalline. TEXTURE: Olivine phyric, intergranular.

PRIMARY	PERCENT	PERCENT	SIZE	COMPO-	,	
MINERALOGY	PRESENT	ORIGINAL	(mm)	SITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Olivine	0	15	1-2			
GROUNDMASS						
Titanaugite	60	60	0.01 - 0.1		Equant prisms.	
Plagioclase	20	20	<1-5		Poikilitic to intestitial.	
Nepheline	<5	10	<1		Interstitial.	Cloudy where altered, identification is tentative
Magnetite	10	10	0.02		Cubes.	CONTRACT CONTRACTOR
Apatite	2-3	2-3	< 0.2			
SECONDARY		REPLACING/				
MINERALOGY	PERCENT	FILLING				COMMENTS
Iddingsite	1	Olivine				Narrow rims only.
Clay	5	Olivine				Green/brown.
Calcite	<<1	Olivine				
Clay	5	Nepheline				Cloudy, low RI, very low birefringence.
VESICLES/	***************************************		SIZE			
CAVITIES	PERCENT	LOCATION	(mm)	FILLING	SHAPE	
Vesicles	None					NAT-
COMMENTS: Identic	al to overlying Un	it 19.	******	**************************************		
144-871C-39R-1 (Pie	ce 2, 81-83 cm)		OBSERVE	R: DMC	WHERE SAMPLED	D: Massive flow, Unit 21.
ROCK NAME: Basani						
GRAIN SIZE: Fine-gra						
TEXTURE: Micropor	phyritic, intergrant	ular.				
PRIMARY	PERCENT	PERCENT	SIZE	COMPO-		
MINERALOGY	PRESENT	ORIGINAL	(mm)	SITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Olivine	0	15	1-2		Subhedral.	Completely altered.
GROUNDMASS						
Titanaugite	55	55	< 0.1		Prisms.	Finely zoned.
The	200	2.0	0 4 0 5		Mr. 44 444 4	

PRIMARY	PERCENT	PERCENT	SIZE	COMPO-		
MINERALOGY	PRESENT	ORIGINAL	(mm)	SITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Olivine	0	15	1-2		Subhedral.	Completely altered.
GROUNDMASS						
Titanaugite	55	55	< 0.1		Prisms.	Finely zoned.
Plagioclase	20	20	0.1 - 0.5		Poikilitic.	
Magnetite	10	10	0.03		Cubes.	
Nepheline	15	15	0.02-0.05		Interstitial.	Often cloudy, low RI, birefringence,
						identification is tentative.
Apatite	3	3	< 0.01		Needles.	
SECONDARY		REPLACING/				
MINERALOGY	PERCENT	FILLING				COMMENTS
Clay	1-2	Nepheline				Cloudy.
Chlorite	12	Olivine				Olive green-brown.
Iddingsite	3	Olivine				Rims only.
VESICLES/	***************************************	*****************	SIZE	************		
CAVITIES	PERCENT	LOCATION	(mm)	FILLING	SHAPE	
Vesicles	None.					

COMMENTS: Minor biotite associated with nepheline. Groundmass alteration makes poor for geochemistry or dating.

144-871C-39R-5 (Piece 10, 113-115 cm)

OBSERVER: DMC

WHERE SAMPLED: Lower part, thick flow.

ROCK NAME: Basanite

GRAIN SIZE: Microcrystalline.

TEXTURE: Olivine phyric, intergranular.

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)	COMPO- SITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Olivine	0	10	1-2		Subhedral.	Completely altered, iddingsite rims, colorless chlorite.
GROUNDMASS						
Titanaugite	60	60	0.01 - 0.05		Equant prisms.	
Plagioclase	15	15	<0.1	An <sub>35</sub>	Poikilitic to interstitial.	Composition not robust,
Nepheline	15	15	< 0.05		Interstitial.	Low RI, cloudy, ID not confirmed.
Magnetite	10	10	0.01-0.03		Cubes.	3 2.0
Spinel	<<1	<<1	0.05		Anhedral.	Embayed.
SECONDARY		REPLACING/				
MINERALOGY	PERCENT	FILLING				COMMENTS
Iddingsite	2	Olivine				Replaces phenocryst rims.
Chlorite	10	Olivine				Colorless, replaces cores.
Clay	10	Nepheline				Colorless, causes clouding.
VESICLES/	***************************************	*******************************	SIZE	***************	***************************************	
CAVITIES	PERCENT	LOCATION	(mm)	FILLING	SHAPE	
Vesicles	None					

COMMENTS: Also <1% apatite needles. Sample too altered to be a good dating prospect.

144-871C-39R-6 (Piece 6, 118-120 cm)

ROCK NAME: Basanite

GRAIN SIZE: Microcrystalline. TEXTURE: Olivine phyric, intergranular. OBSERVER: DMC

WHERE SAMPLED: Upper part, thick flow.

PRIMARY	PERCENT	PERCENT	SIZE	COMPO-		
MINERALOGY	PRESENT	ORIGINAL	(mm)	SITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Olivine	0	15	1-3		Subhedral.	Completely altered.
Clinopyroxene	<1	5	1-2		Subhedral prisms.	Green, titanaugite rims.
GROUNDMASS						
Titanaugite	50	50	0.05-0.1		Equant prisms.	
Plagioclase	15	15	0.01-0.1		Poikilitic to	
					intersertal.	
Nepheline	1.5	1.5	0.01 - 0.1		Intersertal.	Altered cloudy, some with mottled extinction.
Magnetite	10	10	0.01-0.02		Cubes.	
Apatite	<<1	<<1	0.01		Needles.	
SECONDARY		REPLACING/				
MINERALOGY	PERCENT	FILLING				COMMENTS
Iddingsite	1	Olivine/clino	pyroxene			Replaces rims.
Chlorite	5	Olivine				Colorless/light brown, low birefringence, replaces
						cores.
Clay	5	Clinopyroxer	ie			Green/brown, higher birefringence.
Clay	15	Nepheline				Colorless, mottled extinction in some cases.
VESICLES/	*****************		SIZE	***************************************		
CAVITIES	PERCENT	LOCATION	(mm)	FILLING	SHAPE	
Vesicles	None		2000000	Centry McG-20	AND THE PROPERTY OF	

COMMENTS: Unit 22.

144-871C-40R-4 (Piece 3C, 62-64 cm)

OBSERVER: DMC

WHERE SAMPLED: Near base thick flow, Unit 22.

ROCK NAME: Basanite GRAIN SIZE: Microcrystalline. TEXTURE: Microphyric, intersertal.

PRIMARY	PERCEN	PERCENT	SIZE	COMPO-		
MINERALOGY	PRESENT	ORIGINAL	(mm)	SITION	MORPHOLOGY	COMMENTS
PHENOCRYSTS						
Olivine	0	20	1-3		Euhedral.	Completely altered.
GROUNDMASS						
Titanaugite	60	60	0.02 - 0.1		Elongate prisms.	
Magnetite	51	15	0.01		Anhedral.	
Apatite	<1	<1	0.02		Needles.	
Unresolved matrix.	25	25	< 0.1		Interstitial.	Cloudy, colorless, after plagioclase
						and/or nepheline.
SECONDARY		REPLACING/				
MINERALOGY	PERCENT	FILLING				COMMENTS
Iddingsite	1	Olivine				Thin rims only.
Light brown clay	20	Olivine				
VESICLES/		*****************	SIZE	****************		
CAVITIES	PERCENT	LOCATION	(mm)	FILLING	SHAPE	
Vesicles	1	1-3		Brown clay,	Irregular	
				calcite		

COMMENTS: Finer and more altered than overlying section.