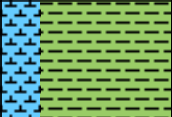


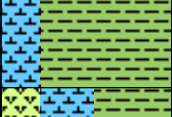






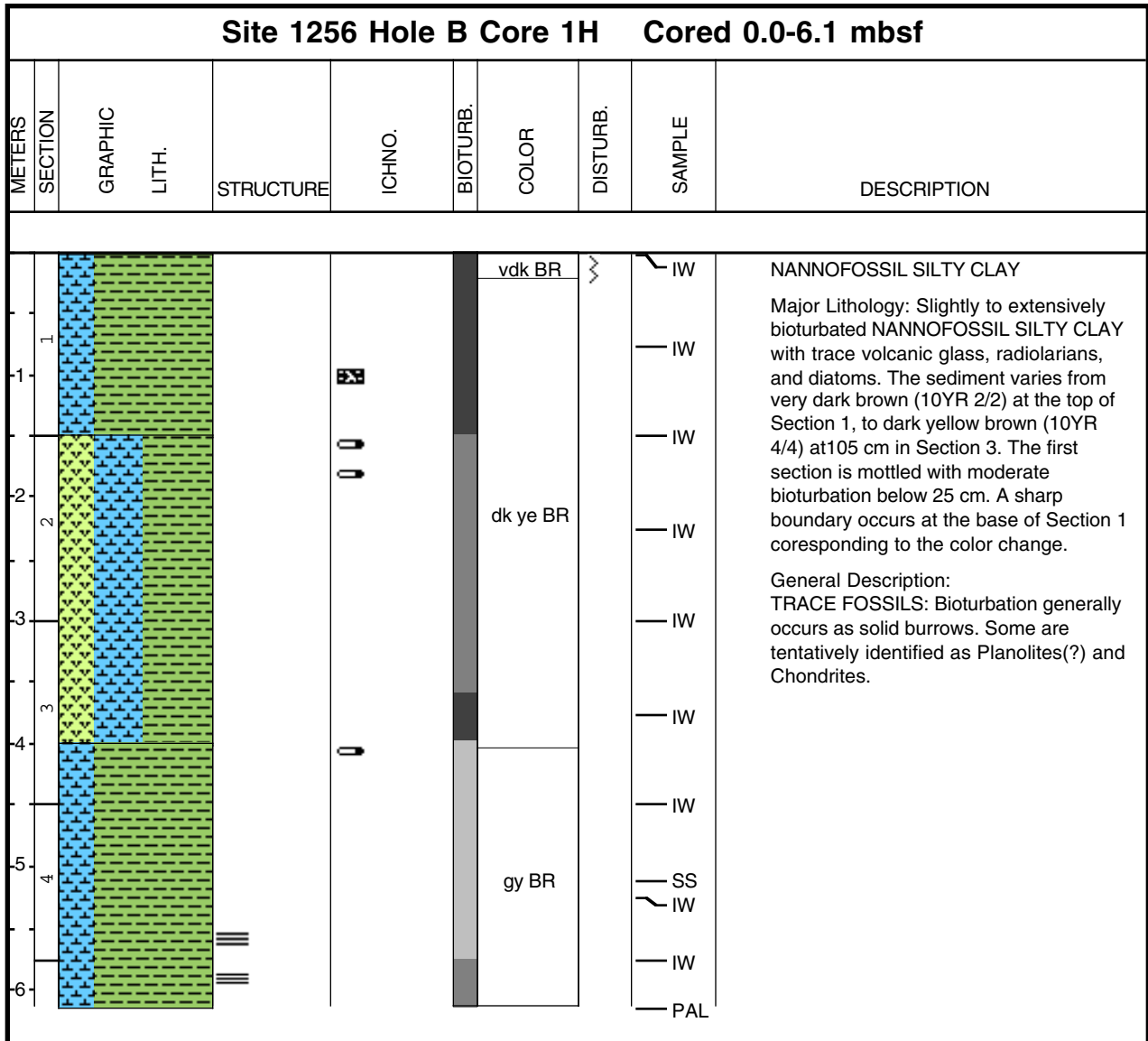



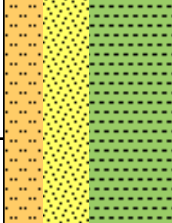
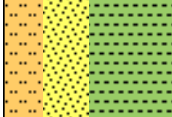

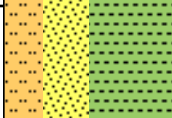
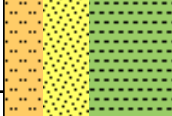
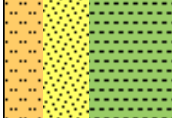

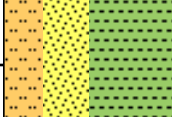
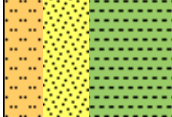


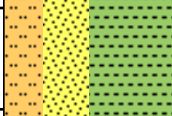



Core Photo

Site 1256 Hole A Core 1H Cored 0.0-2.3 mbsf										
METERS	SECTION	GRAPHIC	LITH.	STRUCTURE	ICHNO.	BIOTURB.	COLOR	DISTURB.	SAMPLE	DESCRIPTION
1							vdk BR			NANNOFOSSIL SILTY CLAY WITH DIATOMS
1							dk mo BR		SS	Major Lithology: Slightly to extensively bioturbated NANNOFOSSIL SILTY CLAY WITH DIATOMS with trace volcanic glass and radiolarians. The sediment varies from dark brown (7.5YR 2.5/2) at the top to light olive brown (2.5Y 5/4) at the base. The first section is mottled with moderate bioturbation below 25 cm. A sharp boundary occurs at the top of Section 2 where the color changes.
							dk ye BR			
							mdk BR			
2							lt ol BR		SS	General Description: TRACE FOSSILS: Bioturbation generally occurs as solid burrows. Some are tentatively identified as Planolites(?). A concentration of burrows occurs in the upper 20 cm of Section 2.

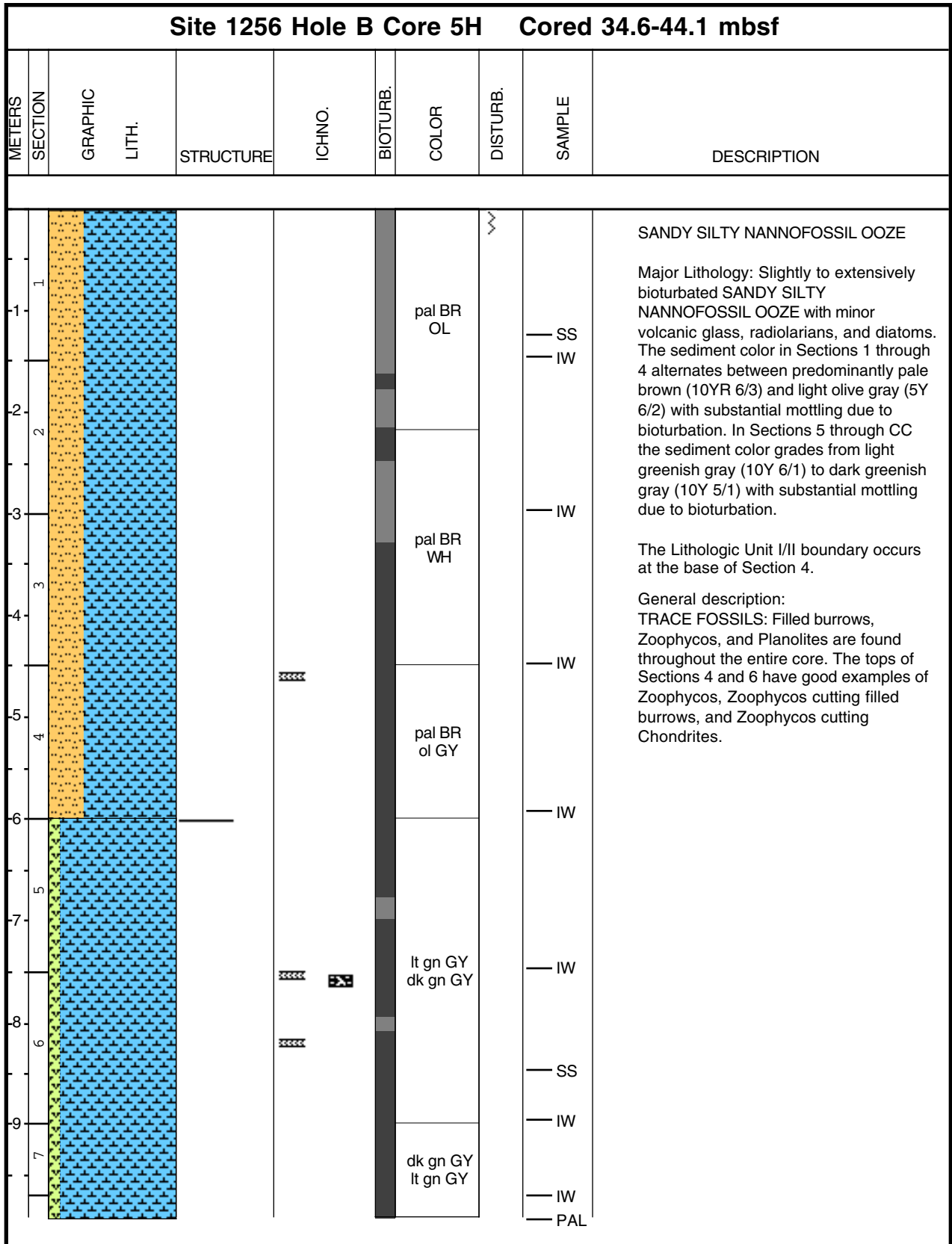
Core Photo



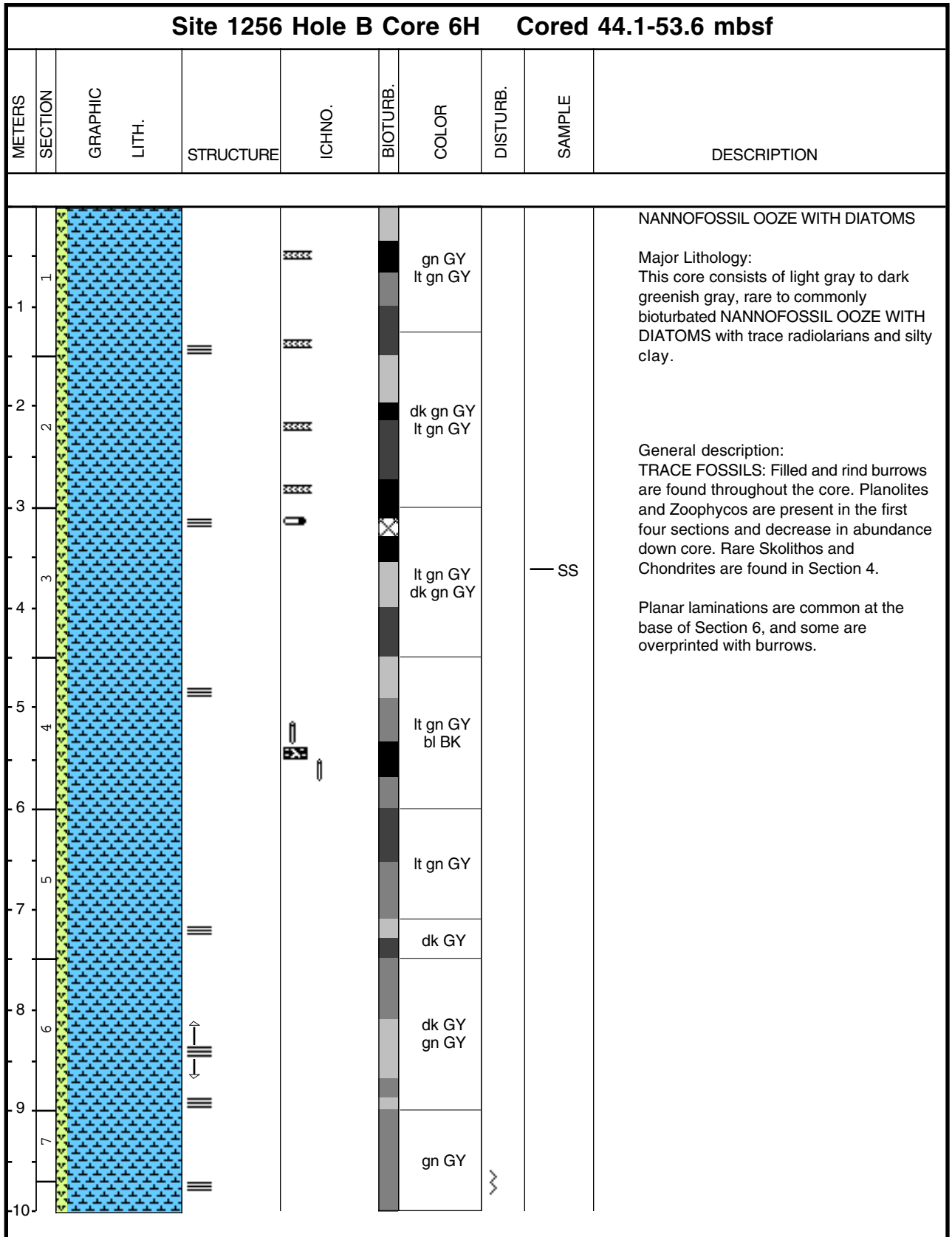
Core Photo

Site 1256 Hole B Core 4H Cored 25.1-34.6 mbsf										
METERS	SECTION	GRAPHIC LITH.	STRUCTURE	ICHNO.	BIOTURB.	COLOR	DISTURB.	SAMPLE	DESCRIPTION	
1	1					ye BR	~		SANDY SILTY CLAY	
1						ol GY		IW	Major Lithology: Slightly to extensively bioturbated SANDY SILTY CLAY with minor volcanic glass, radiolarians, and diatoms. The sediment color alternates between predominantly olive gray (5Y 5/2) and yellowish brown (10YR 5/4) with substantial mottling due to bioturbation. A 4-cm diameter calcified burrow intersects the split-core surface at 15, 35, and 43 cm in Section 1.	
2	2					lt ol GY			General Description: TRACE FOSSILS: Bioturbation generally occurs as solid burrows, some are tentatively identified as Planolites.	
3						ye BR		IW	Carbonate concretions occur in Section 1 at 43 cm.	
3	3					ol GN			Olive (5Y 4/3) colored bands with gradational boundaries occur in the intervals: 4H-2, 130-136 cm; 4H-4, 26-37 cm, 55-71 cm, 112-119 cm, and 139-150 cm; 4H-5, 0-6 cm and 143-145 cm; 4H-6, 0-6 cm and 39-42 cm; 4H-7, 34-41; and 4H-CC, 0-9 cm.	
4						ye BR		IW		
5	4					ol GN		SS		
6						ye BR		IW		
6	5					ol GN				
7						ye BR		IW		
8	6					ol GN				
9						ye BR		IW		
9	7					ye BR		IW		
10						ye BR		IW		
	7					ye BR		PAL		

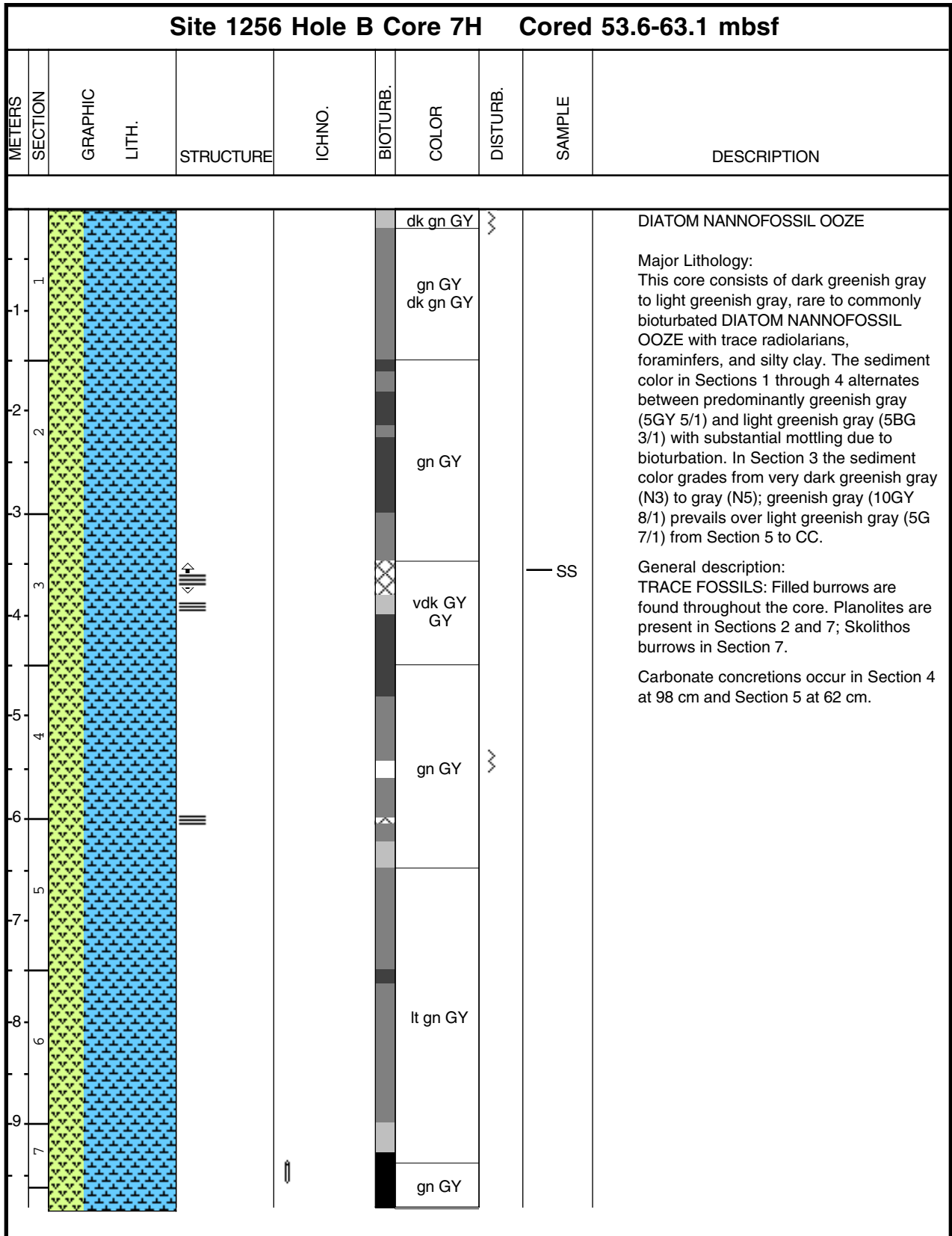
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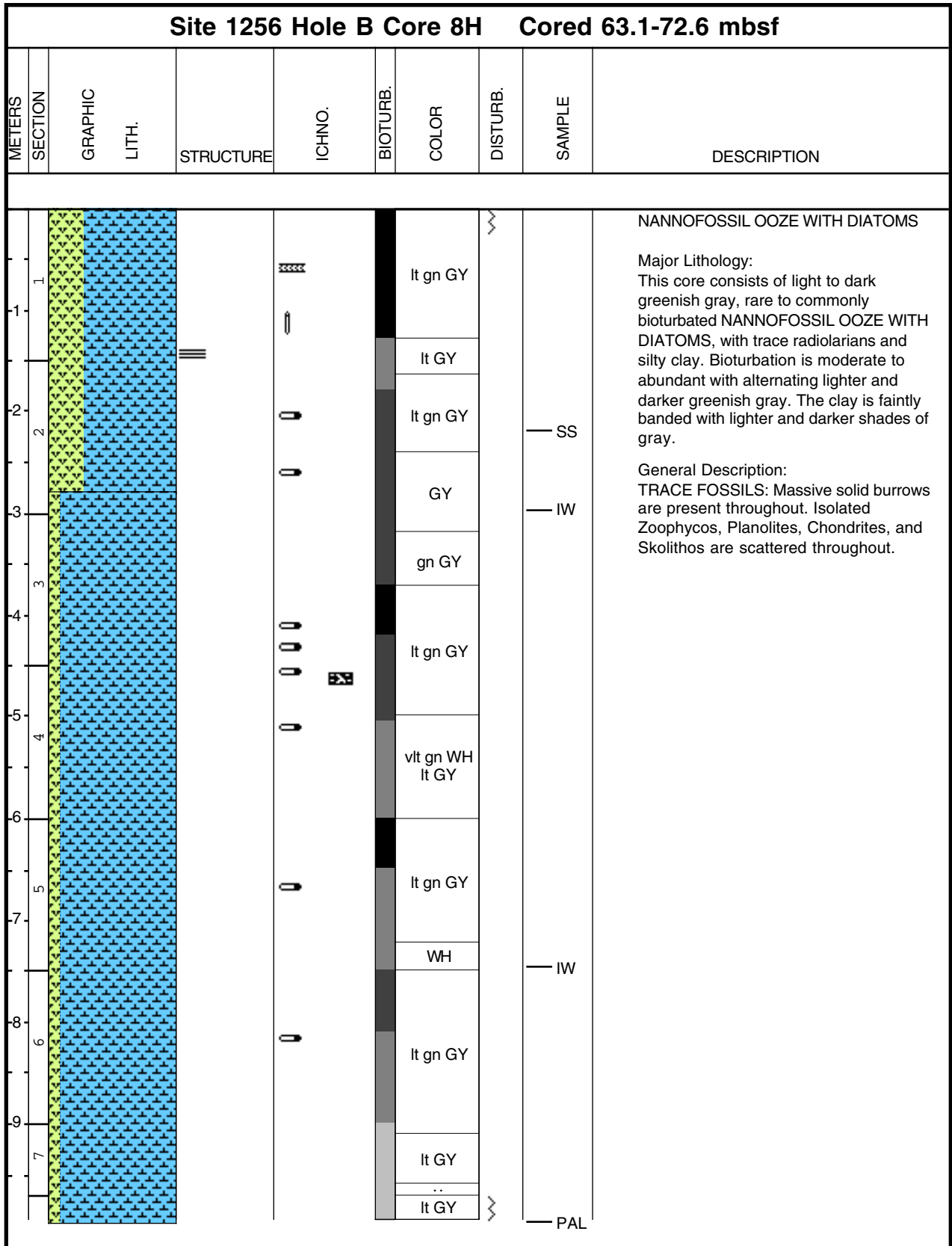
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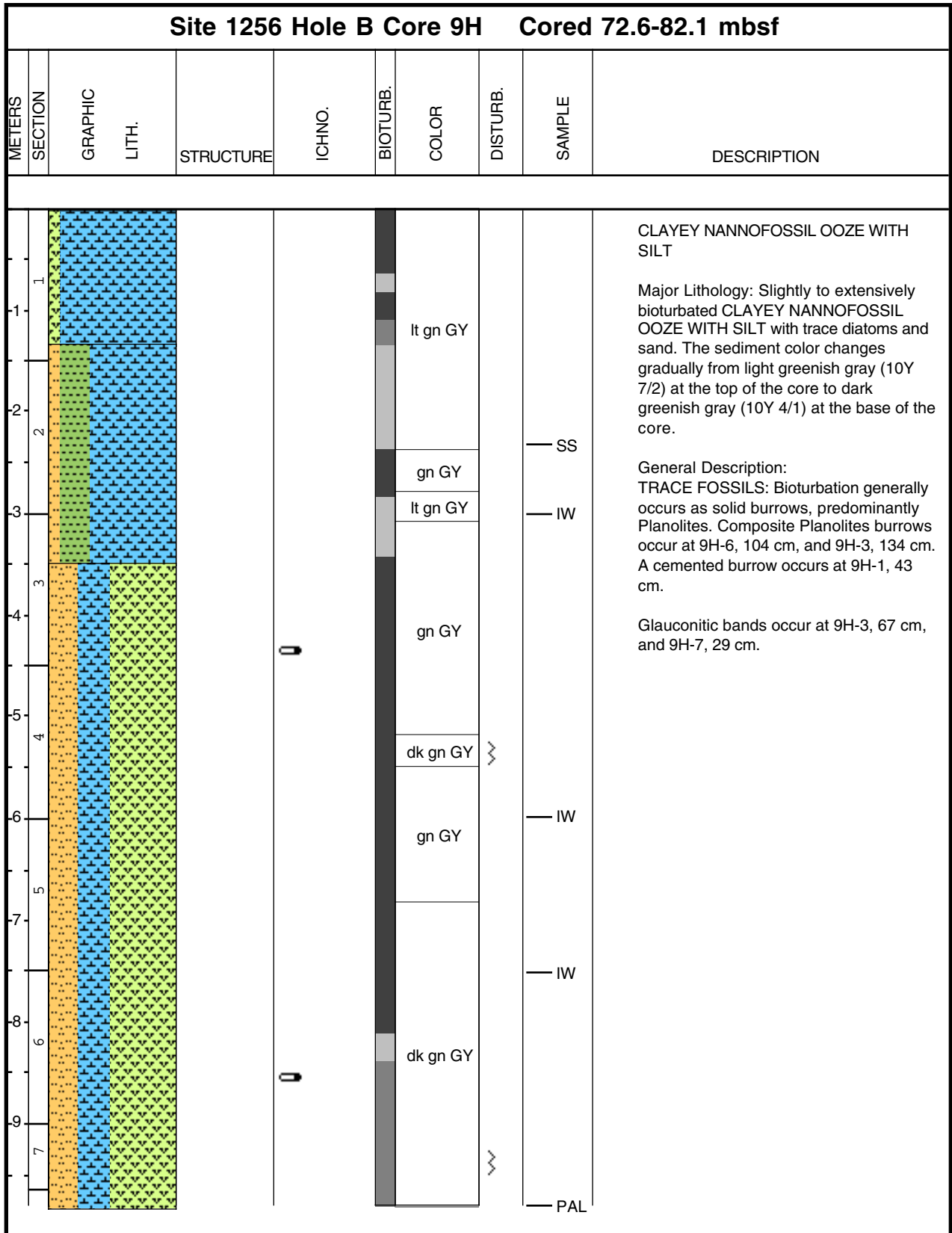
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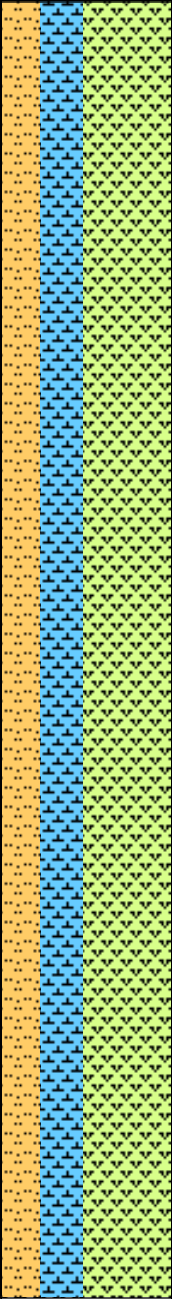
















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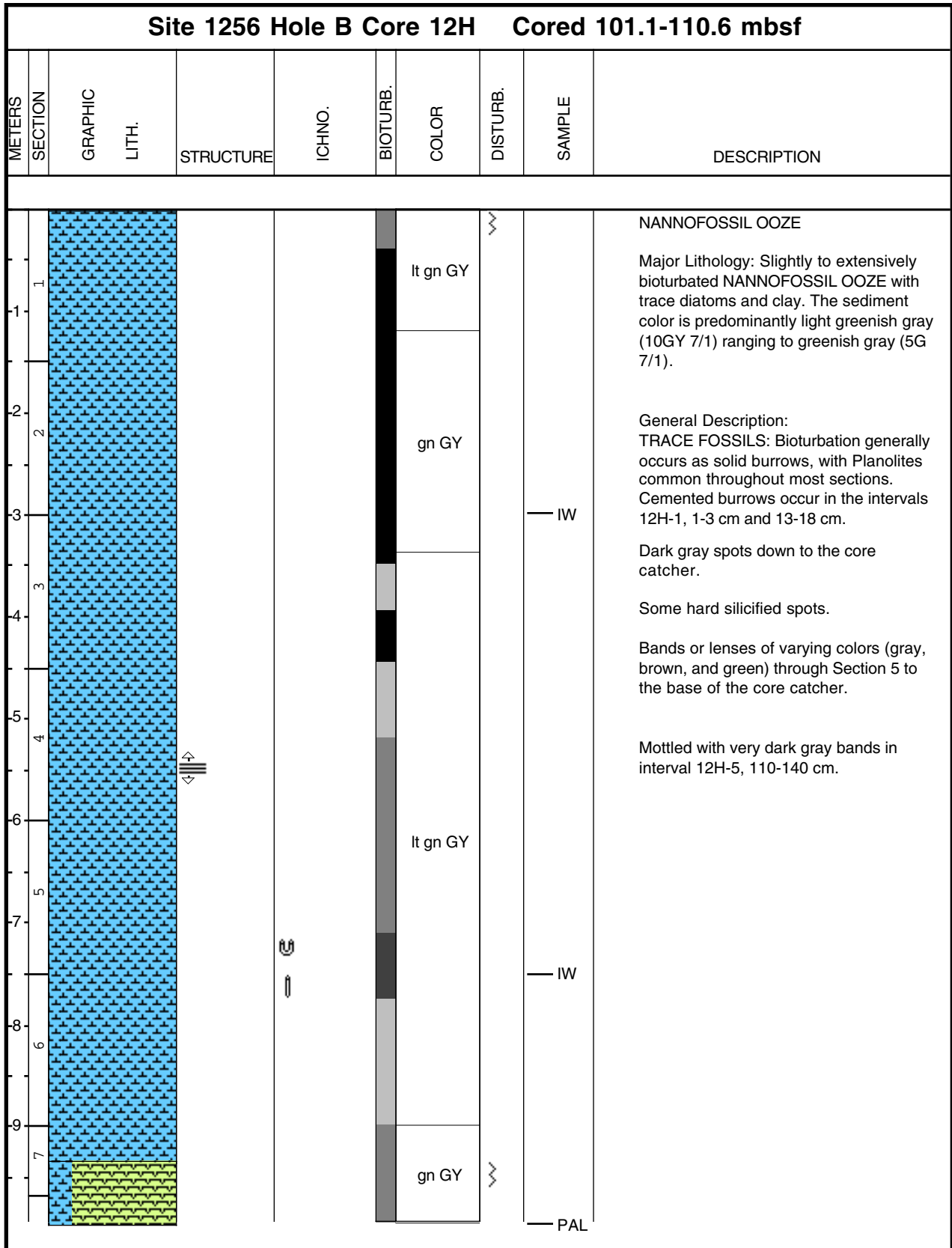
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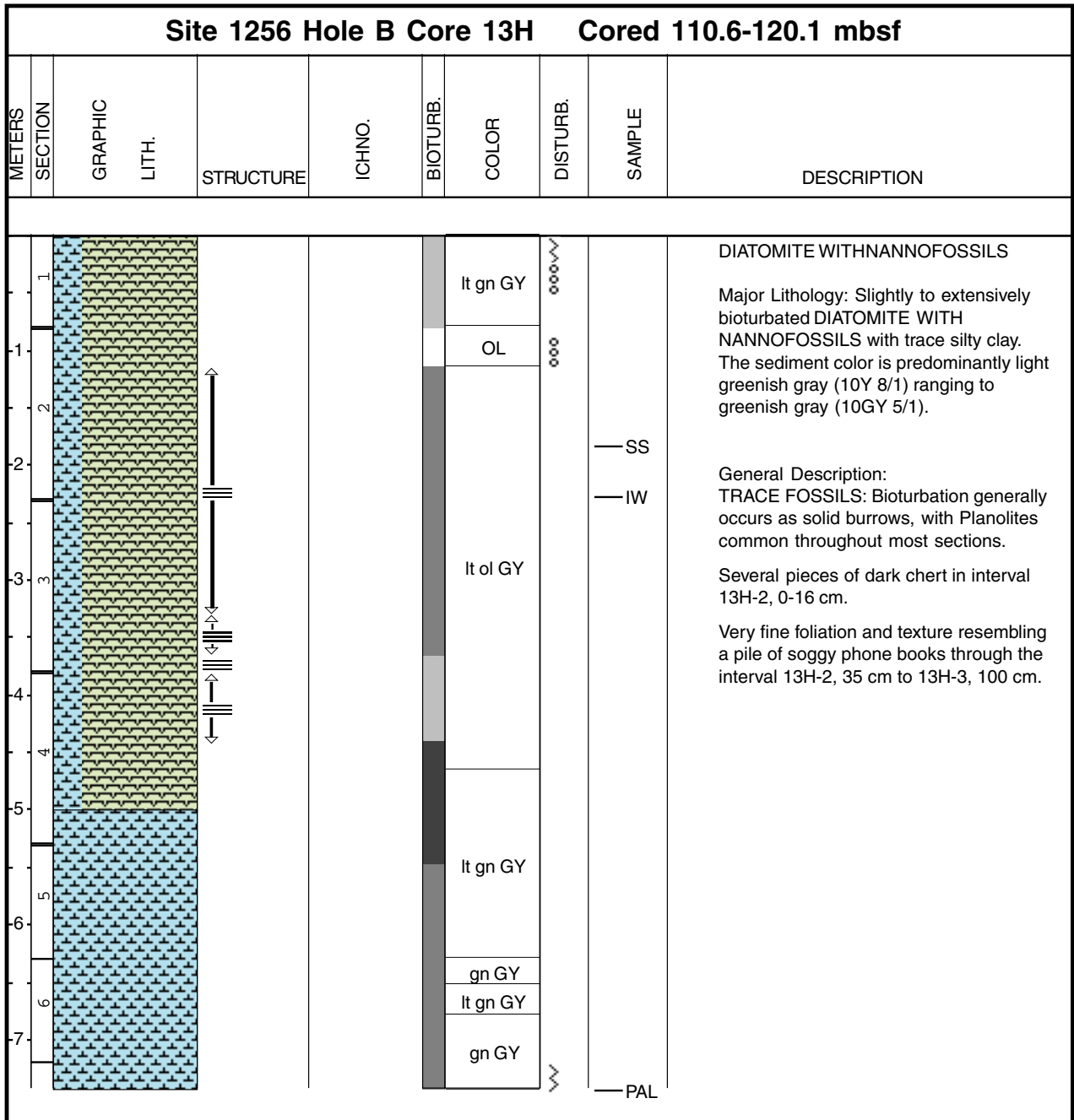
Core Photo

Site 1256 Hole B Core 10H Cored 82.1-91.6 mbsf									
METERS	SECTION	GRAPHIC LITH.	STRUCTURE	ICHO.	BIOTURB.	COLOR	DISTURB.	SAMPLE	DESCRIPTION
1						gn GY			SANDY SILTY NANNOFOSSIL DIATOM OOZE Major Lithology: Slightly to extensively bioturbated SANDY SILTY NANNOFOSSIL DIATOM OOZE with trace radiolarians. The sediment color is predominantly greenish gray (5GY 6/1) ranging to light greenish gray (5GY 8/1) and dark greenish gray (10Y 5/1). General Description: TRACE FOSSILS: Bioturbation generally occurs as solid burrows, predominantly Planolites. Composite Planolites burrows occur at 10H-5, 58 cm and 118 cm, (filled with asicular zeolite?). Cemented burrows occur at 10H-1, 20 cm and 10H-7, 57 cm.
2				  		lt gn GY		IW	
3						gn GY		SS	
4				  				IW	
5				 				PAL	


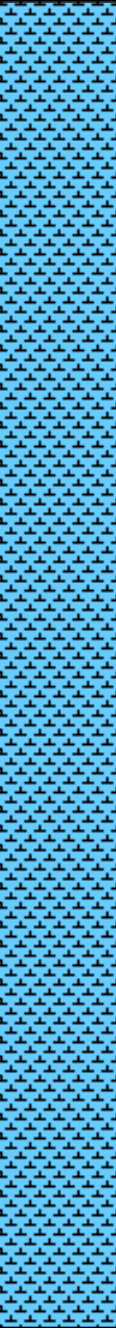
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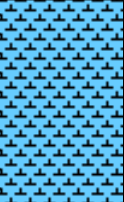

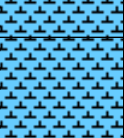



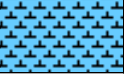
Core Photo



Core Photo

Site 1256 Hole B Core 16H Cored 139.1-148.6 mbsf									
METERS	SECTION	GRAPHIC LITH.	STRUCTURE	ICHNO.	BIOTURB.	COLOR	DISTURB.	SAMPLE	DESCRIPTION
1	1								<p>CLAYEY NANNOFOSSIL OOZE</p> <p>Major Lithology: Slightly to moderately bioturbated CLAYEY NANNOFOSSIL OOZE with diatoms. The sediment color is predominantly light greenish gray (10GY 8/1), with light brownish gray (2.5Y 7/2) and gray (2.5Y 5/) mottling.</p> <p>General Description: Sediment color alternates between light greenish gray (10Y 8/1), light gray (N 7/1), and bluish gray (5PB 6/1) in faint parallel laminations throughout the core.</p> <p>TRACE FOSSILS: Bioturbation generally occurs as solid burrows and rind burrows, with Planolites throughout the core.</p> <p>In Section 1 (6-12 cm) a dark greenish gray (10Y 3/1) chert nodule and a light greenish gray (10Y 8/1) carbonate nodule occur.</p>
1									
2	2								
3	3								
4	4					lt gn GY		SS	
5	5								
6	6								
7	7							PAL	

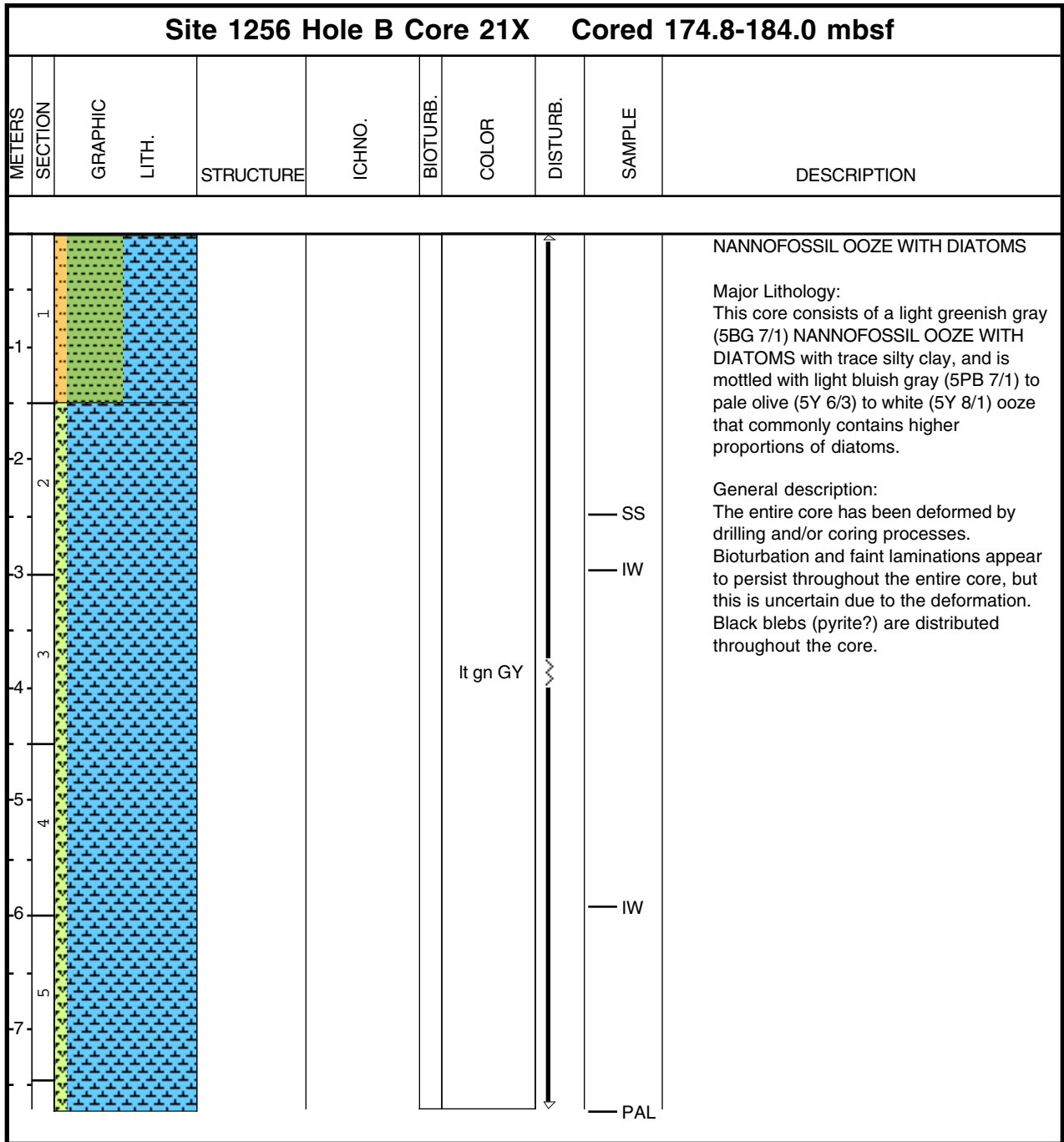
Core Photo

Site 1256 Hole B Core 19X Cored 160.1-165.2 mbsf									
METERS	SECTION	GRAPHIC LITH.	STRUCTURE	ICHNO.	BIOTURB.	COLOR	DISTURB.	SAMPLE	DESCRIPTION
1						lt gn GY	~		<p>NANNOFOSSIL OOZE WITH DIATOMS AND SILTY CLAY</p> <p>Major Lithology: Slightly to moderately bioturbated NANNOFOSSIL OOZE WITH DIATOMS AND SILTY CLAY. The sediment color is predominantly light greenish gray (10GY 8/1), with light greenish gray (5G 8/1 and 10Y 7/1) and minor dark bluish gray (5PB 4/1) mottling and laminations.</p> <p>General Description: Sediment color alternates between light greenish gray (10GY 8/1) and dark bluish gray (5PB 4/1) in faint parallel laminations occurring throughout the core.</p> <p>TRACE FOSSILS: The bioturbation is generally abundant throughout the core with filled burrows, rind burrows, and Planolites (?) throughout the core.</p> <p>In interval 19X-1, 0-23 cm, very dark grey (5Y 2.5/1) cherts and pale yellow (5Y 8/2) small carbonate concretions occur.</p>
1								IW	
2						lt ol GY		SS	
2									
3						lt gn GY		IW	
3									
4								PAL	
4									

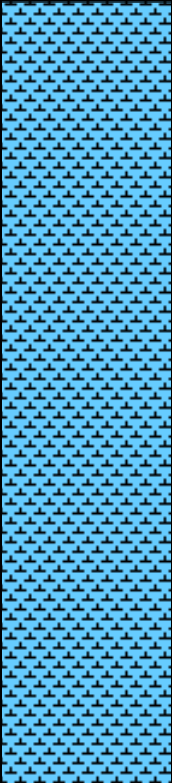





Core Photo

Site 1256 Hole B Core 20X Cored 165.2-174.8 mbsf									
METERS	SECTION	GRAPHIC LITH.	STRUCTURE	ICHNO.	BIOTURB.	COLOR	DISTURB.	SAMPLE	DESCRIPTION
1									<p>CLAYEY NANNOFOSSIL OOZE WITH SILT</p> <p>Major Lithology: Slightly to moderately bioturbated CLAYEY NANNOFOSSIL OOZE WITH SILT with trace glass. The sediment color is predominantly white (5Y 8/1), with light greenish gray (5G 8/1 and 10Y 7/1) and minor dark bluish gray (5PB 4/1) mottling and laminations.</p> <p>General Description: Sediment color alternates between white (5Y 8/1) and dark bluish gray (5PB 4/1) in faint parallel lamination occurring throughout the core.</p> <p>TRACE FOSSILS: The bioturbation is generally moderate throughout the core with filled burrows, rind burrows, and Planolites (?) throughout the core.</p> <p>In interval 20X-1, 0-10 cm, small pebbles of very dark gray (5Y 2.5/1) cherts and pale yellow (5Y 8/2) carbonate concretions occur.</p> <p>In Section 6, below 10 cm, and in the CC the main color is light olive gray (5Y 7/2).</p>
1									
2									
2									
3								IW	
3									
4									
4						WH			
5									
5									
6									
6									
7								SS	
7									
8								IW	
8									
8						lt ol GY			
8								PAL	


Core Photo



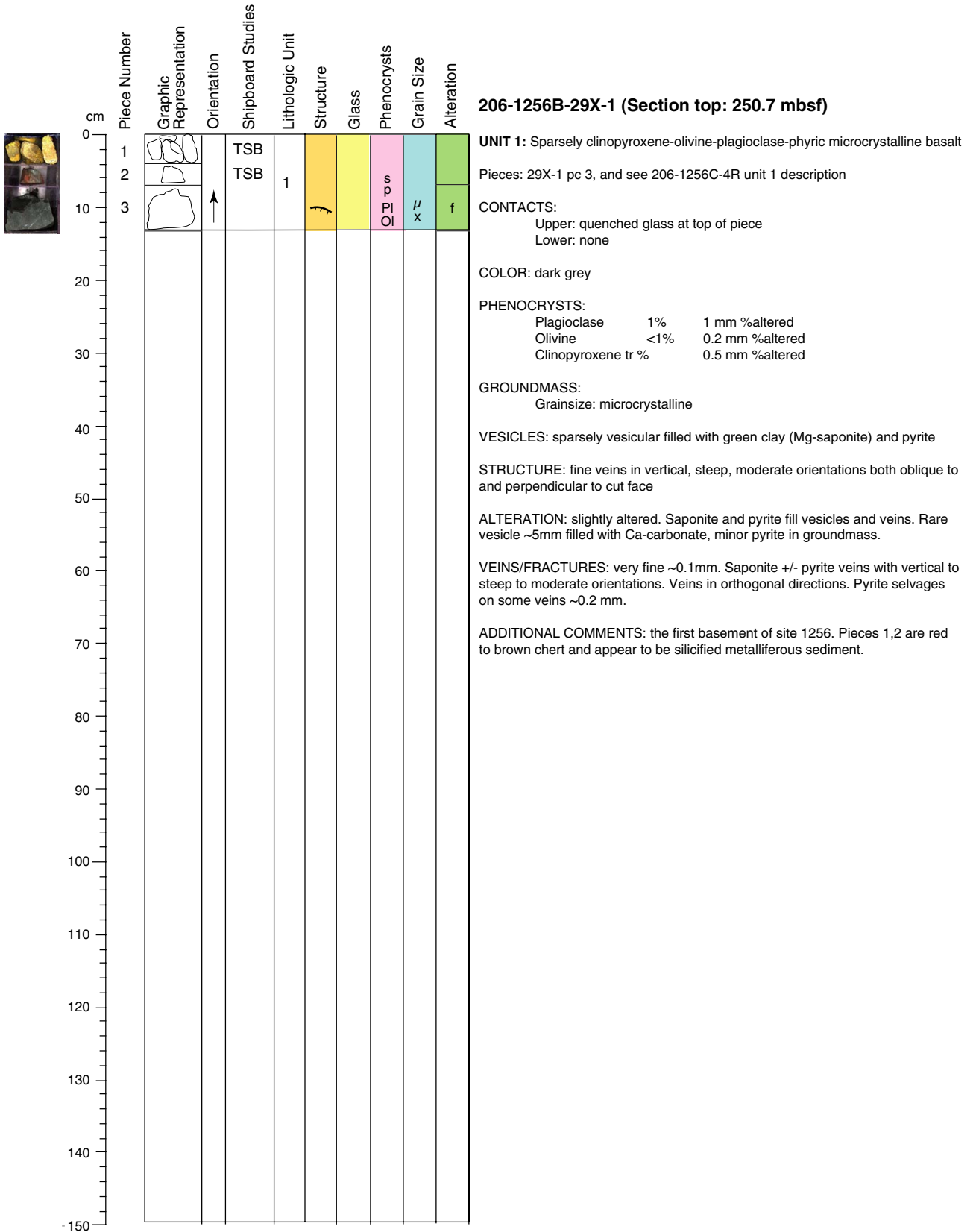
Core Photo

Site 1256 Hole B Core 25X Cored 213.0-222.7 mbsf									
METERS	SECTION	GRAPHIC LITH.	STRUCTURE	ICHNO.	BIOTURB.	COLOR	DISTURB.	SAMPLE	DESCRIPTION
1						lt gn GY			<p>NANNOFOSSIL OOZE</p> <p>Major Lithology: This core consists of a light greenish gray (10BG 7/1 - 5BG 8/1) NANNOFOSSIL OOZE with trace diatoms and clay.</p> <p>General Description: TRACE FOSSILS: The bioturbation generally consists of burrows filled with light gray (2.5Y 7/2) ooze.</p> <p>Greenish gray (10Y 3/1) chert fragments occur in the intervals 25X-1, 0-6 cm and 35-37 cm; 25X-2, 10-26 cm; 25X-3, 72-76 cm; and 25X-4, 56-69 cm.</p> <p>A glauconite band occurs in interval 25X-4, 8-10 cm.</p> <p>There are local dark pyrite spots in Section 25X-1.</p>
1								SS	
2								IW	
3									
4								PAL	


Core Photo

Site 1256 Hole B Core 27X Cored 232.0-241.6 mbsf									
METERS	SECTION	GRAPHIC LITH.	STRUCTURE	ICHNO.	BIOTURB.	COLOR	DISTURB.	SAMPLE	DESCRIPTION
1						dk gn GY	W	PAL	<p>CHERT NODULES IN NANNOFOSSIL OOZE</p> <p>Major Lithology: Dark greenish gray (10Y 3/1) chert nodules. Light greenish gray nannofossil ooze adhering to nodules.</p>

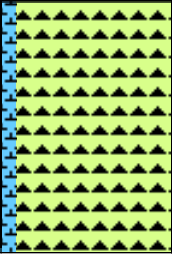
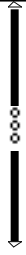
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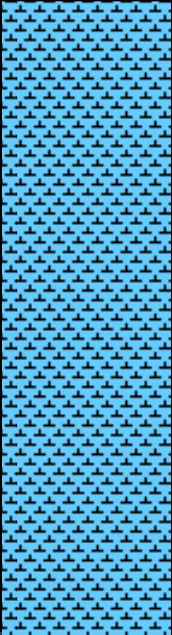
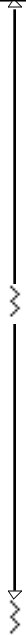
Core Photo

Site 1256 Hole C Core 1R Cored 220.1-229.5 mbsf									
METERS	SECTION	GRAPHIC LITH.	STRUCTURE	ICHNO.	BIOTURB.	COLOR	DISTURB.	SAMPLE	DESCRIPTION
									CHERT 5Y 3/1 with 5Y 4/2

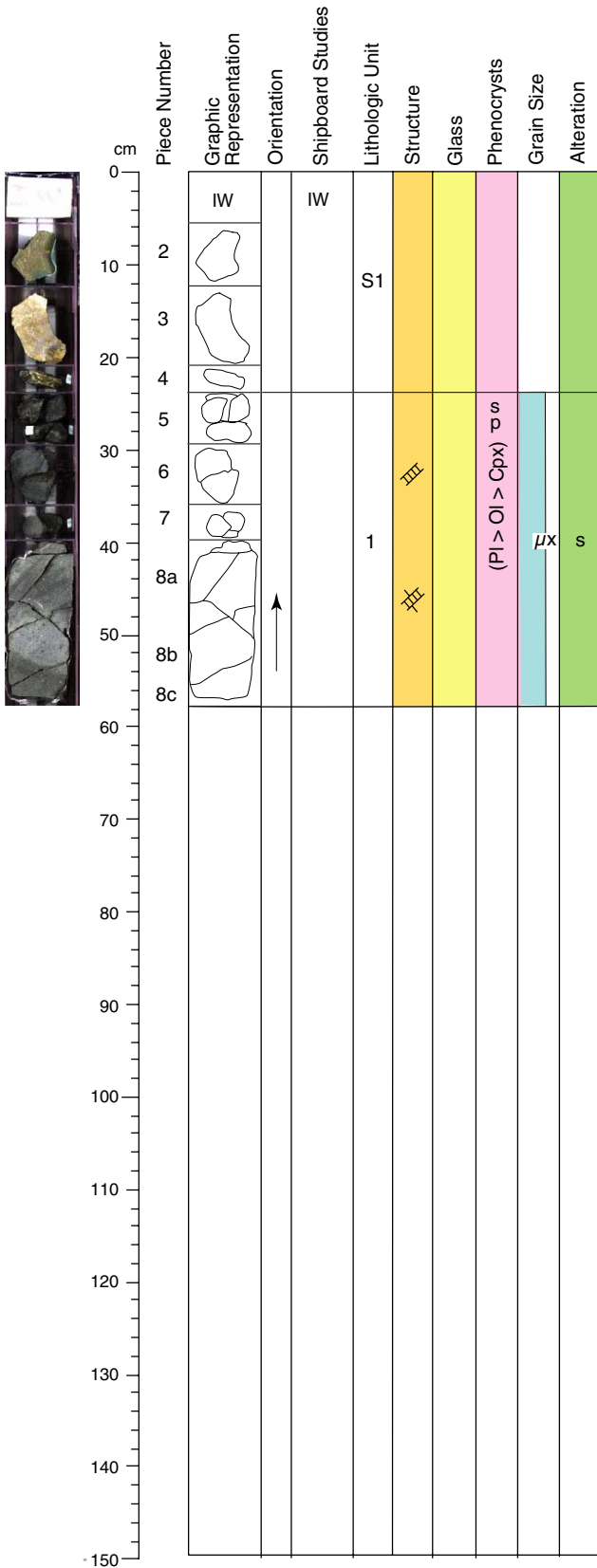
Core Photo

Site 1256 Hole C Core 2R Cored 229.5-239.0 mbsf									
METERS	SECTION	GRAPHIC LITH.	STRUCTURE	ICHNO.	BIOTURB.	COLOR	DISTURB.	SAMPLE	DESCRIPTION
1						lt gn GY dk BR			<p>CHERT NODULES IN NANNOFOSSIL OOZE</p> <p>Major Lithology: CHERT NODULES. Centimeter-sized fragments of chert in a light greenish gray (10GY 8/1) soupy-clay matrix of NANNOFOSSIL OOZE. The entire recovered core is catastrophically disturbed by drilling.</p> <p>A 6 cm-sized piece of chert occurs at 54 cm in Section 2.</p> <p>The chert is dark brown (7.5YR 3/2) with millimeter-size white (10YR 8/2) filled elliptical vugs and coated with a pale green (5G 6/2) millimeter thick clay- and carbonate-rich layer.</p> <p>Two pieces of dark brown (7.5YR 3/2) chert, about 4 cm and 7 cm in diameter, occur at the top of the core catcher.</p>

Core Photo

Site 1256 Hole C Core 3R Cored 239.0-245.0 mbsf										
METERS	SECTION	GRAPHIC LITH.	STRUCTURE	ICHNO.	BIOTURB.	COLOR	DISTURB.	SAMPLE	DESCRIPTION	
1						lt gn GY			IW SS IW IW PAL	<p>NANNOFOSSIL OOZE WITH RADIOLARIANS AND DIATOMS</p> <p>Major Lithology: This core consists of a light greenish gray (10GY 8/1) NANNOFOSSIL OOZE WITH RADIOLARIANS AND DIATOMS with minor amounts of foraminifers.</p> <p>General description: The entire core shows slight disturbance related to coring processes. Faint laminations appear to persist throughout the entire core and range in color between white (10YR 8/1) to light greenish gray (5G 7/1).</p> <p>A piece of very dark grayish brown (10YR 3/2) chert occurs in interval 3R-1, 2-7 cm.</p>

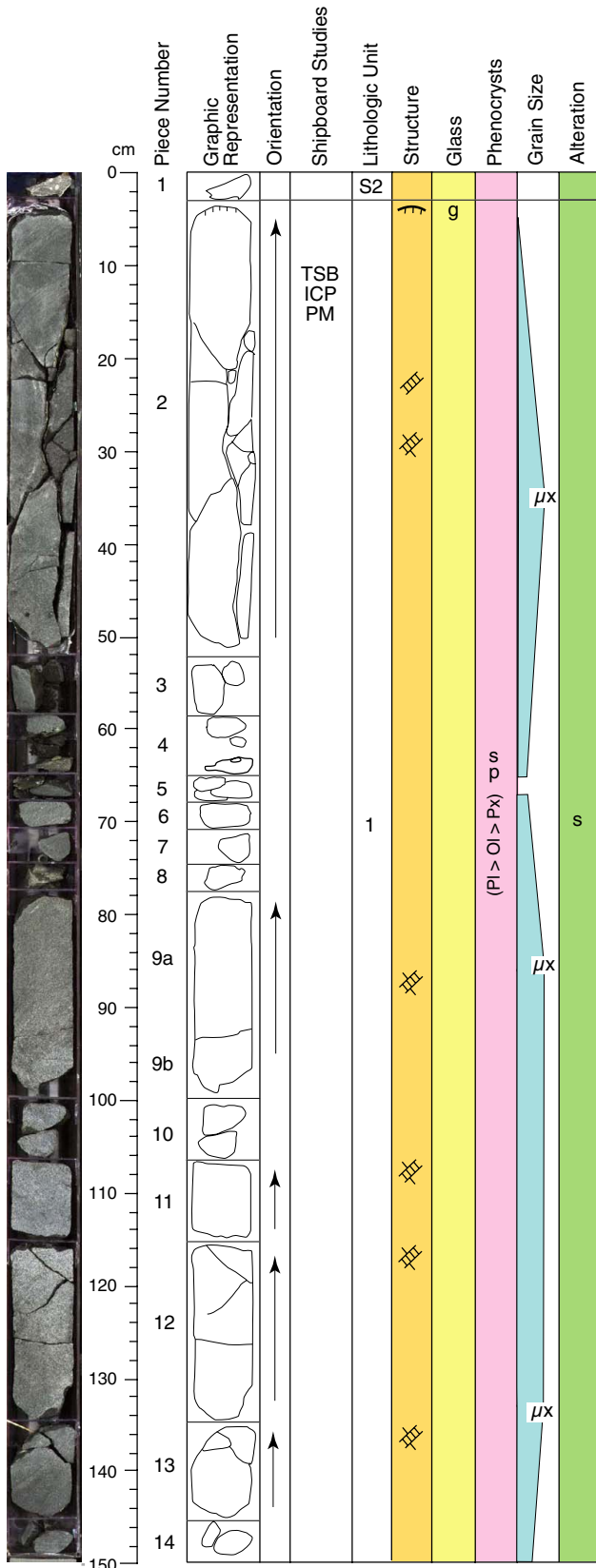
Core Photo



206-1256C-4R-1 (Section top: 245.0 mbsf)

UNIT 1:
 ROCK NAME: Sparsely clinopyroxene-olivine-plagioclase-phyric microcrystalline basalt
 SUMMARY DESCRIPTION: Sparsely phyric microcrystalline basalt sheet flow with chert pebbles above (unit S1).
 PIECES: 5-8 (continues next core)
 CONTACTS:
 Upper: not recovered.
 Lower: glass in 5R-3 Piece 4
 COLOR: very dark gray (N2.5/)
 PHENOCRYSTS
 Plagioclase 1 % 1.0 mm
 Olivine <1 % 0.5 mm 100 % altered to saponite
 Clinopyroxene <<1 % 0.3 mm
 GROUNDMASS:
 Grain size: microcrystalline
 Texture: intergranular
 VESICLES: Sparsely vesicular filled with saponite and pyrite.
 ALTERATION: Slightly altered dark gray basalt.
 VEINS: 0.1-2.0 mm wide veins of saponite plus minor pyrite and rare carbonate and silica.
 STRUCTURE: Thin blocky and fibrous veins occur in conjugate systems. Piece 8 has shallowly- to moderately-dipping planar veins (from 9° to 38°); two curved veins are steeply dipping.
 ADDITIONAL COMMENTS: Grain size coarsens downward. In Piece 8 plagioclase-bearing glomerocrysts (2-4%) are present. Pieces 2-4 are chert (basement sedimentary unit S1). Piece 1 consisted of sediment and the whole round was sampled for shipboard IW analysis.

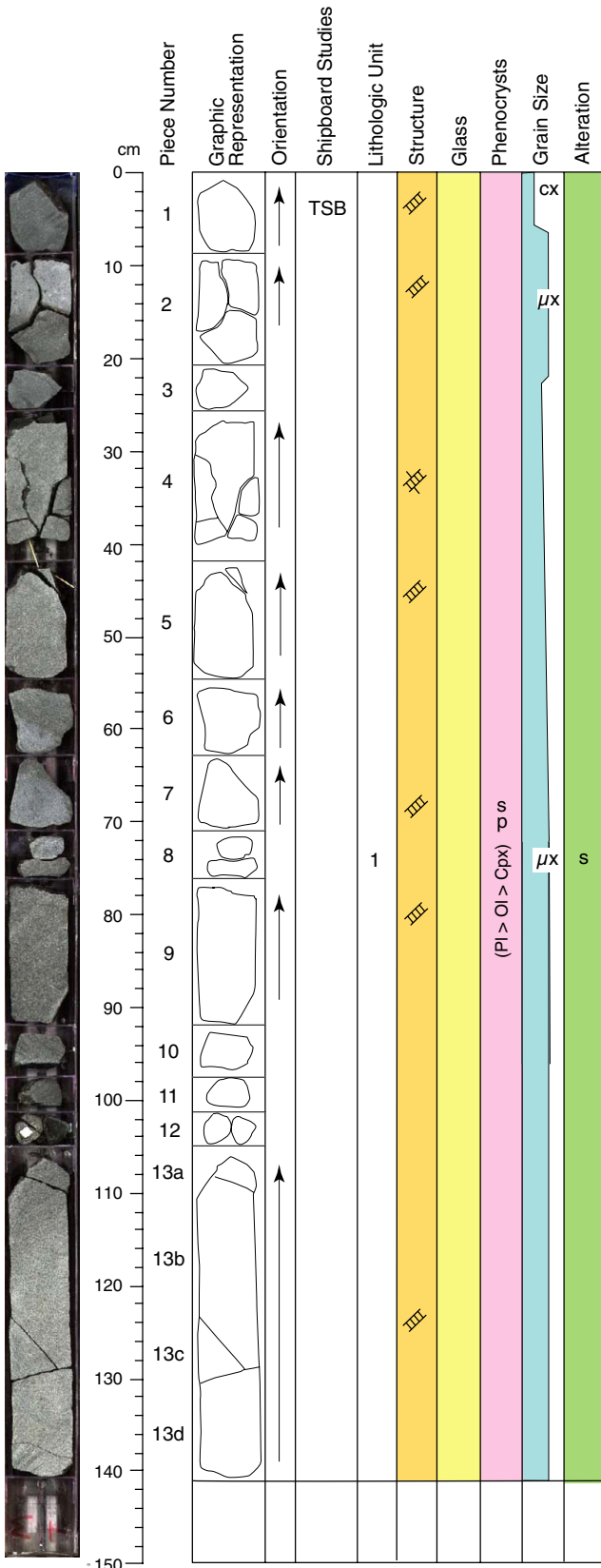
Core Photo



206-1256C-5R-1 (Section top: 252.4 mbsf)

UNIT: 1
 ROCK NAME: Sparsely clinopyroxene-olivine-plagioclase-phyric microcrystalline basalt.
 SUMMARY DESCRIPTION: Sparsely-phyric microcrystalline basalt sheet flow with glassy chilled margin at the top of Piece 2.
 PIECES: 2-14 (continues next section)
 CONTACTS:
 Upper: not observed.
 Lower: glass in 5R-3 Piece 4
 COLOR: very dark gray (N2.5/)
PHENOCRYSTS
 Plagioclase 1 % 1.0 mm
 Olivine <1 % 0.5 mm 100 % altered to saponite
 Clinopyroxene <<1 % 0.3 mm
GROUNDMASS:
 Grain size: microcrystalline
 Texture: intergranular
VESICLES: Sparsely vesicular filled with saponite and pyrite.
ALTERATION: Slightly altered dark gray basalt.
VEINS: 0.1-2.0 mm wide veins of saponite plus minor pyrite, and rare carbonate and silica.
STRUCTURE: High density of thin, nearly planar and curved veins in the upper part of the section. Blocky and fibrous veins are in conjugate sets. A splayed, composite, fibrous vein cuts across Piece 2 with nearly vertical dip. Moderately-to steeply-dipping veins are in conjugate sets in Pieces 2, 9, 11, 12, and 13.
ADDITIONAL COMMENTS: 5R-1, Piece 1 is chert (green to brown) and may not be in place: basement sedimentary unit S2.

Core Photo



206-1256C-5R-2 (Section top: 253.89 mbsf)

UNIT: 1

ROCK NAME: Sparsely clinopyroxene-olivine-plagioclase-phyric microcrystalline basalt

SUMMARY DESCRIPTION: Sparsely-phyric microcrystalline to cryptocrystalline basalt sheet flows.

PIECES: 1-13 (continues next section)

CONTACTS:

Upper: not recovered

Lower: glass in 5R-3 Piece 4

COLOR: very dark gray (N2.5/)

PHENOCRYSTS:

Plagioclase 1% 1.0 mm

Olivine <1% 0.5 mm 100% altered to saponite

Clinopyroxene <<1% 0.3 mm

GROUNDMASS:

Grain size: microcrystalline to cryptocrystalline

Texture: intergranular

VESICLES: Sparsely vesicular filled with saponite and pyrite.

ALTERATION: Slightly altered dark gray basalt.

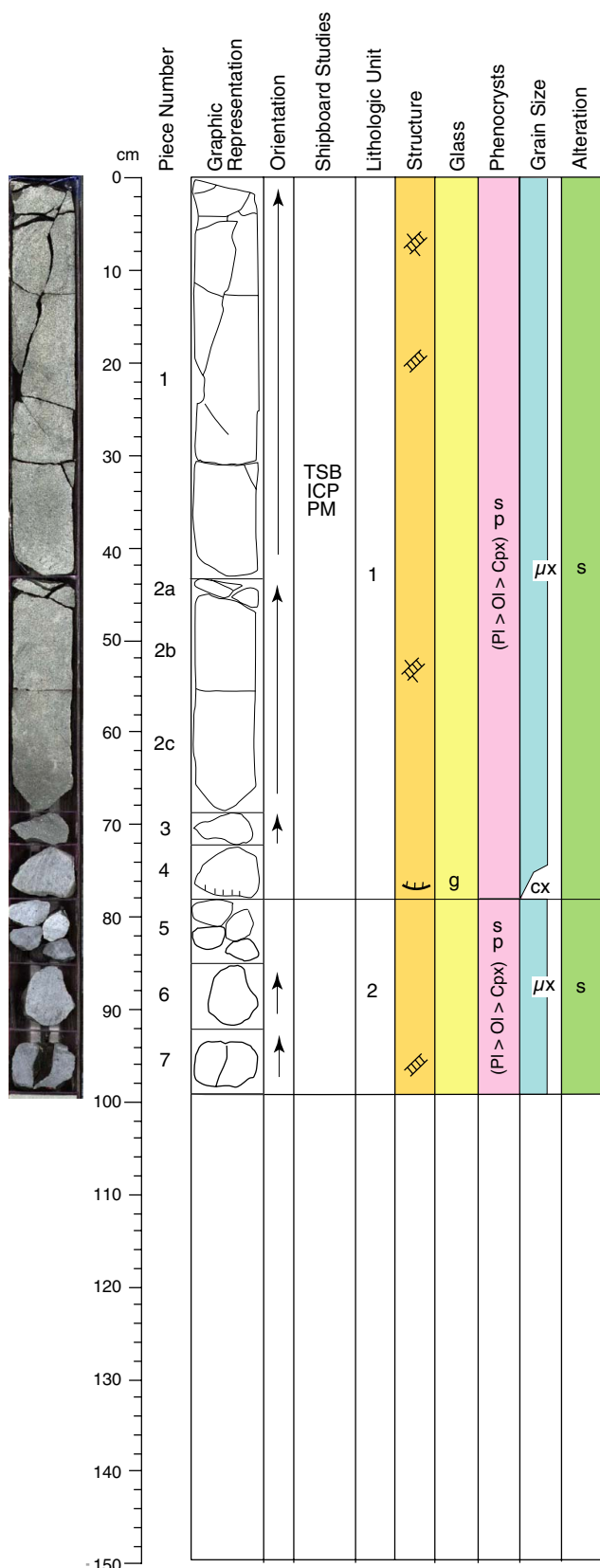
VEINS: 0.1-2.0 mm wide veins of saponite plus minor pyrite, and rare carbonate and silica.

STRUCTURE: Moderate veining with Y-shaped intersections and conjugate systems. Y-shaped intersection of veins in Piece 2, conjugate set in Piece 4.

Steeply-dipping veins in Pieces 2, 4, and 7; shallowly-dipping veins in Pieces 4 and 13.

ADDITIONAL COMMENTS: Plagioclase-bearing glomerocrysts (2-5%) in Pieces 1, 2, 3, 4, and 5.

Core Photo

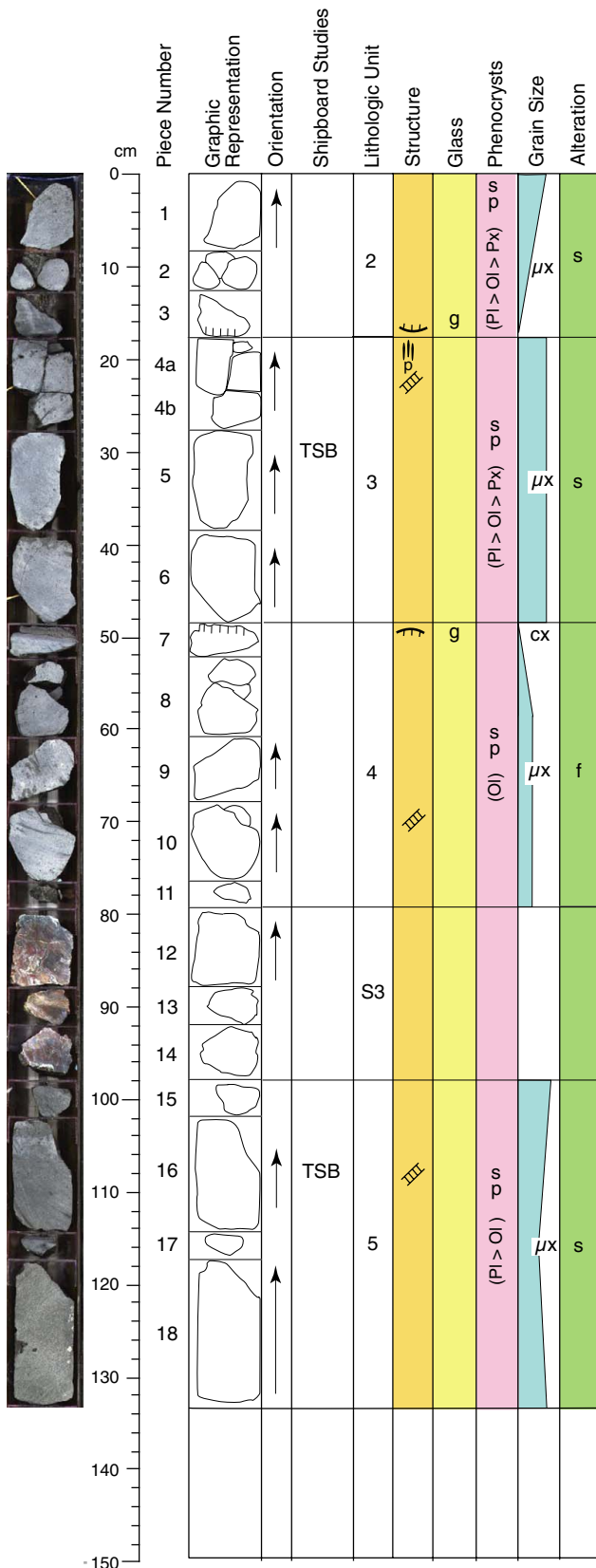


206-1256C-5R-3 (Section top: 255.3 mbsf)

UNIT: 1
 ROCK NAME: Sparsely clinopyroxene-olivine-plagioclase-phyric microcrystalline basalt
 SUMMARY DESCRIPTION: Sparsely phyric microcrystalline basalt sheet flows with glassy chilled margin at the base of Piece 4.
 PIECES: 1-4
 CONTACTS:
 Upper: not recovered.
 Lower: glass in 5R-3 Piece 4
 COLOR: very dark gray (N2.5/)
 PHENOCRYSTS:
 Plagioclase 1 % 1.0 mm
 Olivine <1 % 0.5 mm 100 % altered to saponite
 Clinopyroxene <<1 % 0.3 mm
 GROUNDMASS:
 Grain size: microcrystalline to glassy
 Texture: intergranular
 VESICLES: Sparsely vesicular filled with saponite and pyrite.
 ALTERATION: Slightly altered dark gray basalt.
 VEINS: 0.1-2.0 mm wide veins of saponite plus minor pyrite, and rare carbonate and silica.
 STRUCTURE: Moderate veining with conjugate features or clear crosscutting relationship. Steeply dipping fibrous composite veins in Piece 1. In Pieces 1, 2, and 3 vein dips are bimodally distributed between shallow (5°-29°) and steep (55°-82°) sets.

UNIT: 2
 ROCK NAME: Sparsely olivine-plagioclase-phyric microcrystalline basalt
 SUMMARY DESCRIPTION: Sparsely-phyric microcrystalline basalt sheet flows.
 PIECES: 5-7, (continues next core; Igneous description based on 6R-1, Piece 1)
 CONTACTS:
 Upper: not recovered
 Lower: chilled margin at the lower bottom of Piece 3, 6R-1
 COLOR: bluish black (5PB 2.5/1)
 PHENOCRYSTS:
 Plagioclase <1 % 0.5 mm
 Olivine <1% 0.5 mm 100 % altered to saponite
 Clinopyroxene tr 0.1-0.2 mm
 GROUNDMASS:
 Grain size: microcrystalline
 Texture: intergranular
 VESICLES: Sparsely vesicular filled with saponite and carbonate.
 ALTERATION: Slightly altered dark gray basalt. Rare 1 mm wide black alteration halos along veins.
 VEINS: 0.1-1.0 mm veins of saponite with minor pyrite.
 STRUCTURE: Rare oriented veins. Oriented veins are in Pieces 6 and 7 with predominantly shallow dips. One pyrite-bearing vein in Piece 7 is nearly vertical.
 ADDITIONAL COMMENTS: Glomerocrysts of plagioclase plus clinopyroxene plus olivine.

Core Photo



206-1256C- 6R-1 (Section top: 257.1 mbsf)

UNIT: 2

ROCK NAME: Sparsely olivine-plagioclase-phyric microcrystalline basalt.
SUMMARY DESCRIPTION: Sparsely-phyric microcrystalline basalt sheet flows with glassy margin at base of unit.

PIECES: 1-3 (Igneous description based on Piece 1)

CONTACTS:

Upper: not preserved

Lower: chilled margin at the lower bottom of Piece 3, 6R-1

COLOR: bluish black (5PB 2.5/1)

PHENOCRYSTS:

Plagioclase	<1 %	0.5 mm	
Olivine	<1%	0.5 mm	100 % altered to saponite
Clinopyroxene	tr	0.1-0.2 mm	

GROUNDMASS:

Grain size: microcrystalline to glassy

Texture: intergranular

VESICLES: Sparsely vesicular filled with saponite and carbonate.

ALTERATION: Slightly altered dark gray basalt. Rare 1 mm wide black alteration halos along veins.

VEINS: 0.1-1.0 mm veins of saponite with minor pyrite.

STRUCTURE: Rare veins, none oriented.

ADDITIONAL COMMENTS: Glomerocrysts of plagioclase plus clinopyroxene plus olivine.

UNIT: 3

ROCK NAME: Sparsely olivine-plagioclase-phyric microcrystalline basalt
SUMMARY DESCRIPTION: Sparsely-phyric microcrystalline basalt sheet flows with glassy margin at bottom of Unit 2 and top of Unit 4.

PIECES: 4-6 (Igneous description based on Piece 5)

CONTACTS:

Upper: glassy margin above in Piece 3

Lower: glassy margin below in Piece 7

COLOR: bluish black (10B 2.5/1)

PHENOCRYSTS:

Plagioclase	<1 %	0.5 mm	
Olivine	<1%	0.2-0.3 mm	100 % altered to saponite
Clinopyroxene	tr	0.3 mm	

GROUNDMASS:

Grain size: microcrystalline

Texture: intergranular

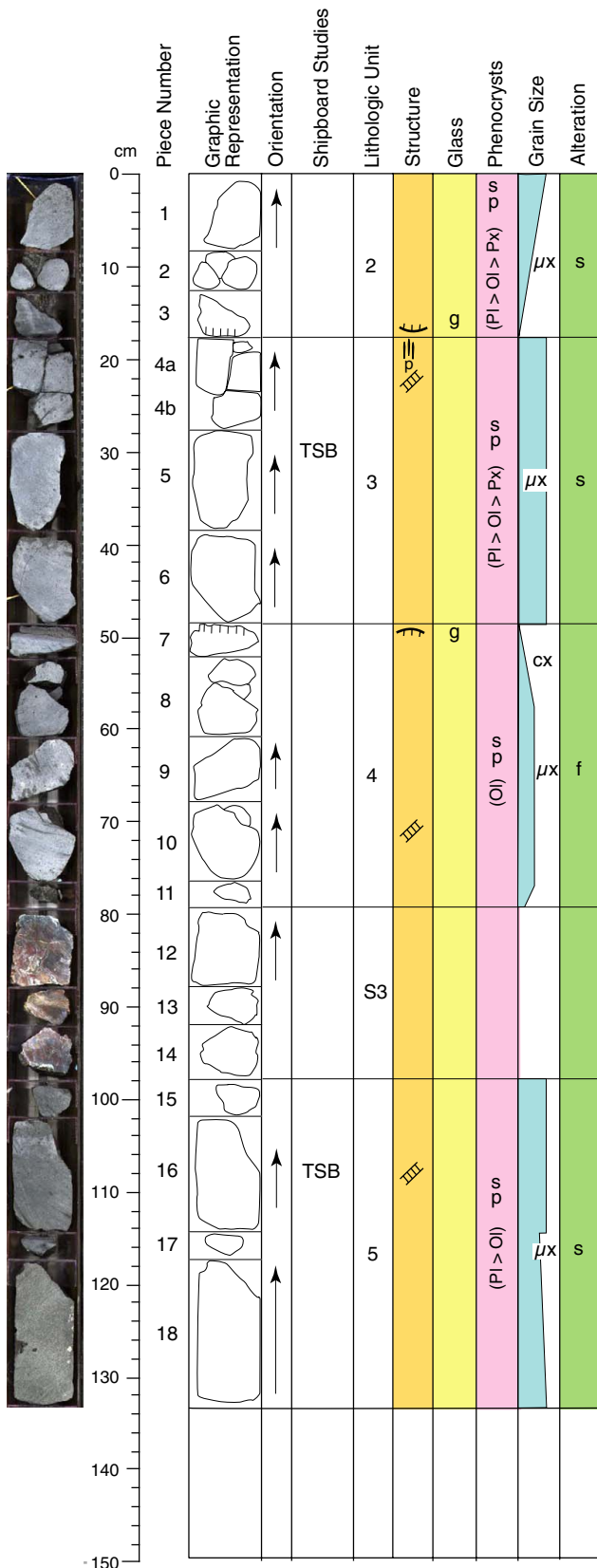
VESICLES: Sparsely vesicular filled with saponite and carbonate. Pipe vesicles at top of Piece 4.

ALTERATION: Dark gray slightly altered basalt. Rare 1 mm wide black alteration halos along veins.

VEINS: 0.1-0.2 mm veins of saponite plus minor pyrite.

STRUCTURE: Curved thin veins with dark alteration halos. Veins are slightly curved. Veins are bimodally oriented: steeply dipping (74°-90°) and nearly horizontal (0°-25°).

Core Photo



206-1256C- 6R-1 continued (Section top: 257.1 mbsf)

UNIT: 4

ROCK NAME: Sparsely olivine-phyric microcrystalline basalt
SUMMARY DESCRIPTION: Sparsely phyric microcrystalline basalt sheet flows with glassy margin at top of unit.
PIECES: 7-11 (Igneous description based on Piece 9)
CONTACTS:

Upper: glassy margin at top of Piece 7
Lower: not recovered

COLOR: dark bluish gray (5PG 3/2)

PHENOCRYSTS:

Olivine 2% 0.2 mm 100% altered to saponite

GROUNDMASS:

Grain size: microcrystalline
Texture: intergranular

VESICLES: Sparsely vesicular filled with saponite and pyrite.

ALTERATION: Rare 1 mm wide black alteration halos along veins.

VEINS: 0.1-0.5 mm veins of saponite plus minor pyrite.

STRUCTURE: Rare veins. Two oriented veins in Piece 10 (dipping 40° and 80°).
ADDITIONAL COMMENTS: Equant euhedral olivine phenocrysts present either discretely or forming clusters. Recrystallized siliceous interflow sediment in Pieces 12 to 14 (basement sedimentary Unit S3).

UNIT: 5

ROCK NAME: Sparsely olivine-plagioclase-phyric microcrystalline basalt
SUMMARY DESCRIPTION: Sparsely phyric microcrystalline basalt sheet flows.
PIECES: 15-18 (continues next section; igneous description based on 6R-2 Piece 1)

CONTACTS:

Upper: not recovered
Lower: glass in 6R-2 Piece 11 (Unit 6)

COLOR: very dark gray (N3/)

PHENOCRYSTS:

Plagioclase <1% 1 mm
Olivine <1% 0.3-0.5mm 100% altered to saponite
Clinopyroxene tr 0.2 mm

GROUNDMASS:

Grain size: microcrystalline
Texture: intergranular

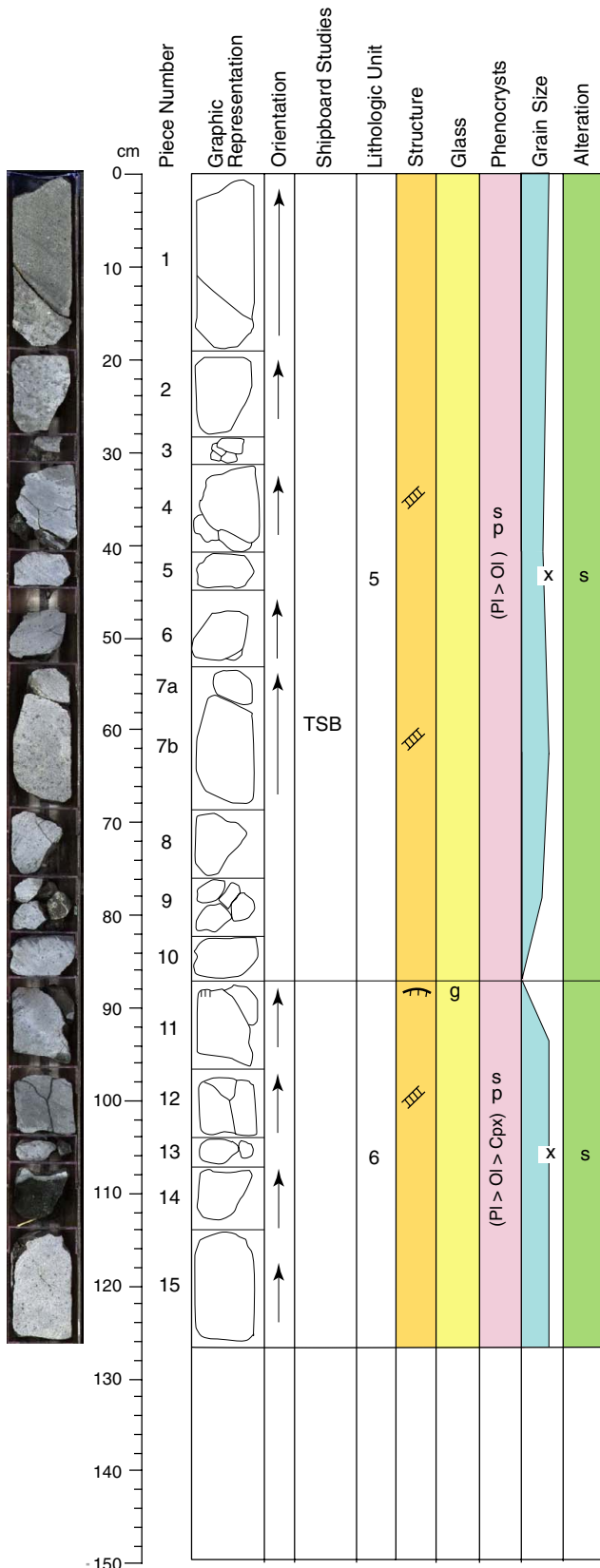
VESICLES: Sparsely to moderately vesicular filled with saponite, pyrite, and carbonate.

ALTERATION: Dark gray slightly altered basalt. Rare 1 mm wide black alteration halos along veins.

VEINS: 0.1-0.5 mm veins of saponite plus minor pyrite.

STRUCTURE: Rare veins with dark halos. Moderate to steeply dipping veins in Pieces 16 and 18.

Core Photo



206-1256C-6R-2 (Section top: 258.43 mbsf)

UNIT: 5

ROCK NAME: Sparsely olivine-plagioclase-phyric microcrystalline basalt
SUMMARY DESCRIPTION: Sparsely phyric microcrystalline basalt sheet flows
PIECES: 1-10 (igneous description Piece 1)

CONTACTS:
Upper: not recovered
Lower: glass in 6R-2 Piece 11 (Unit 6)

COLOR: very dark gray (N3/)

PHENOCRYSTS:
Plagioclase <1 % 1 mm
Olivine <1 % 0.3-0.5mm 100 % altered to saponite
Clinopyroxene tr % 0.2 mm

GROUNDMASS:
Grain size: microcrystalline
Texture: intergranular

VESICLES: Sparsely to moderately vesicular filled with saponite, pyrite, and carbonate.
ALTERATION: Dark gray slightly altered basalt. Rare 1 mm wide black alteration halos along veins.
VEINS: 0.1-0.5 mm veins of saponite plus minor pyrite.
STRUCTURE: Moderate veining mostly with curved and irregular morphology. Oriented veins in Pieces 1, 2, 4, and 7 dip 50j-90j.

UNIT: 6

ROCK NAME: Sparsely clinopyroxene-olivine-plagioclase phyric microcrystalline basalt
SUMMARY DESCRIPTION: Sparsely phyric microcrystalline basalt sheet flows with glassy margin at top and base of unit.
PIECES: 11-15 (continues next section)

CONTACTS:
Upper: glassy margin at top (6R-2 Piece 11)
Lower: glassy margin at base (6R-5 Piece 1)

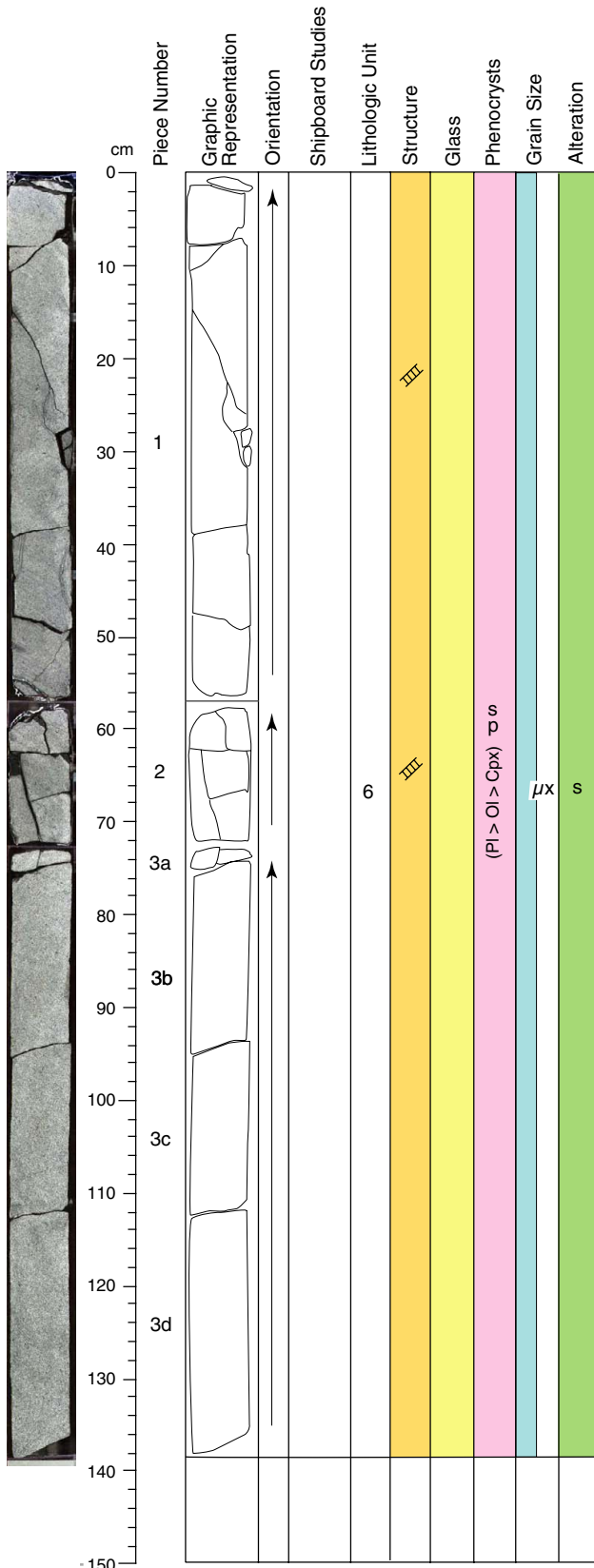
COLOR: gray (2.5Y N5/)

PHENOCRYSTS:
Plagioclase 1 % 0.5 mm
Olivine <1 % 1.0 mm 100 % altered to saponite
Clinopyroxene <1 % 0.4 mm

GROUNDMASS:
Grain size: microcrystalline
Texture: intergranular

VESICLES: Sparsely to moderately vesicular filled with saponite, pyrite, and carbonate.
ALTERATION: Dark gray slightly altered basalt. Rare 1 mm wide black alteration halos along veins.
VEINS: 0.1-0.5 mm veins of saponite plus minor pyrite, and rare carbonate and silica.
STRUCTURE: Moderate veining with irregular morphology. Nearly vertical splayed vein in Piece 12. Stepped veins in Piece 15.

Core Photo



206-1256C-6R-3 (Section top: 259.69 mbsf)

UNIT: 6

ROCK NAME: Sparsely clinopyroxene-olivine-plagioclase-phyric microcrystalline basalt

ROCK TYPE: Sparsely phyric microcrystalline basalt sheet flows with glassy margins at top and base of unit.

PIECES: 1-3 (continues next section)

CONTACTS:

Upper: glassy margin at top (6R-2 Piece 11)

Lower: glassy margin at base (6R-5 Piece 1)

COLOR: gray (2.5Y N5/)

PHENOCRYSTS:

Plagioclase 1 % 0.5 mm

Olivine <1 % 1.0 mm 100 % altered to saponite

Clinopyroxene <1 % 0.4 mm

GROUNDMASS:

Grain size: microcrystalline

Texture: intergranular

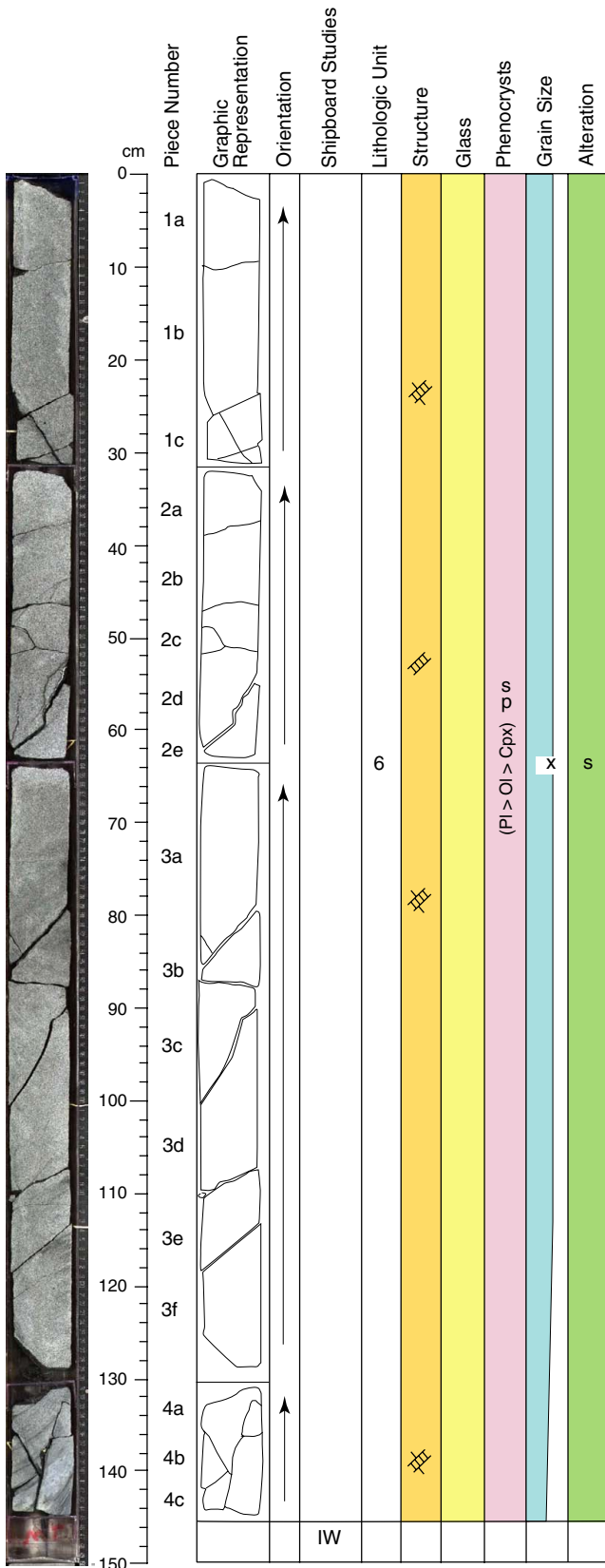
VESICLES: Sparsely to moderately vesicular filled with saponite, pyrite, and carbonate.

ALTERATION: Dark gray slightly altered basalt. Rare 1 mm wide black alteration halos along veins.

VEINS: 0.1-0.5 mm veins of saponite plus minor pyrite, and rare carbonate and silica.

STRUCTURE: Diffuse veining in the upper part of the section, moderate veining in the lower part. Quartz-bearing, splayed, stair-stepped vein in Piece 1 with nearly vertical dip. Vein dips are bimodally distributed between 18°-30° and 60°-90° in Pieces 1 and 2. Veins dip shallowly in Piece 3.

Core Photo



206-1256C-6R-4 (Section top: 259.69 mbsf)

UNIT: 6

ROCK NAME: Sparsely clinopyroxene-olivine-plagioclase-phyric microcrystalline basalt

SUMMARY DESCRIPTION: Sparsely-phyric microcrystalline basalt sheet flows with glassy margins at top and base of unit.

PIECES: 1-4 (continues next section)

CONTACTS:

Upper: glassy margin at top (6R-2 Piece 11)

Lower: glassy margin at base (6R-5 Piece 1)

COLOR: gray (2.5Y N5/)

PHENOCRYSTS:

Plagioclase 1 % 0.5 mm

Olivine <1 % 1.0 mm 100% altered to saponite

Clinopyroxene <1 % 0.4 mm

GROUNDMASS:

Grain size: microcrystalline

Texture: intergranular

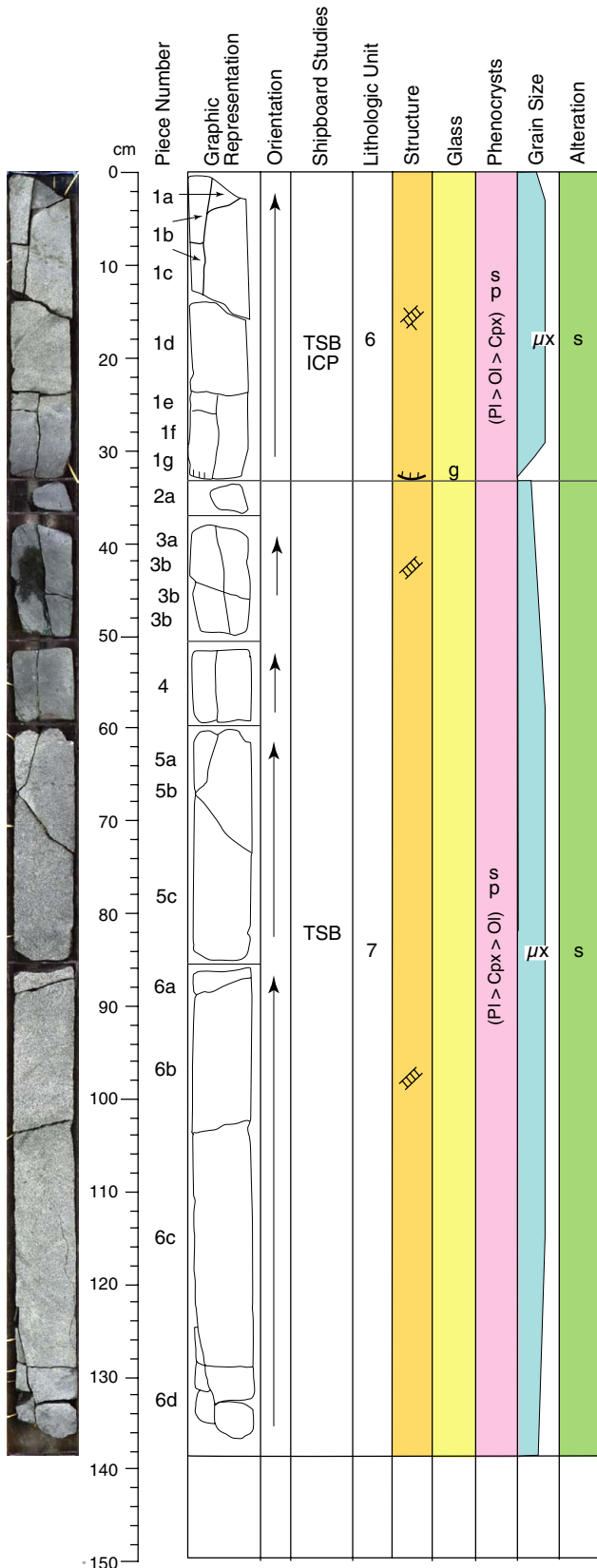
VESICLES: Sparsely to moderately vesicular filled with saponite, pyrite, and carbonate.

ALTERATION: Dark gray slightly altered basalt. Rare 1 mm wide black alteration halos along veins.

VEINS: 0.1-0.5 mm veins of saponite plus minor pyrite, and rare carbonate and silica.

STRUCTURE: Silica-bearing, splayed, stair-stepped vein in Piece 2. Most veins are arranged in conjugate sets with dips distributed between 25j-45j and 55j-80j. Four oriented veins dip from 8j-12j.

Core Photo



206-1256C-6R-5 (Section top: 262.51 mbsf)

UNIT: 6

ROCK NAME: Sparsely clinopyroxene-olivine-plagioclase-phyric microcrystalline basalt

SUMMARY DESCRIPTION: Sparsely-phyric microcrystalline basalt sheet flows with glassy margins at top and base of unit.

PIECES: 1

CONTACTS:

Upper: glassy margin at top (6R-2 Piece 11)

Lower: glassy margin at base (6R-5 Piece 1)

COLOR: gray (2.5Y N5/)

PHENOCRYSTS:

Plagioclase 1 % 0.5 mm

Olivine <1 % 1.0 mm 100 % altered to saponite

Clinopyroxene <1 % 0.4 mm

GROUNDMASS:

Grain size: microcrystalline

Texture: intergranular

VESICLES: Sparsely to moderately vesicular filled with saponite, pyrite, and carbonate.

ALTERATION: Dark gray slightly altered basalt. Rare 1 mm wide black alteration halos along veins.

VEINS: 0.1-0.5 mm veins of saponite plus minor pyrite, and rare carbonate and silica.

STRUCTURE: Diffuse veins in conjugate sets, shallowly- and steeply-dipping.

UNIT: 7

ROCK NAME: Sparsely olivine-clinopyroxene-plagioclase-phyric microcrystalline basalt

SUMMARY DESCRIPTION: Sparsely-phyric microcrystalline basalt sheet flows with glass at base of unit.

PIECES: 2-6

CONTACTS:

Upper: not recovered

Lower: glassy margin at base (7R-1 Piece 1)

COLOR: gray (2.5Y N5/)

PHENOCRYSTS:

Plagioclase 1 % 0.2 mm

Olivine <<1 % 1.0 mm 100 % altered to saponite

Clinopyroxene 1 % 0.2-0.8 mm

GROUNDMASS:

Grain size: microcrystalline

Texture: intergranular

VESICLES: Sparsely vesicular filled with saponite and pyrite.

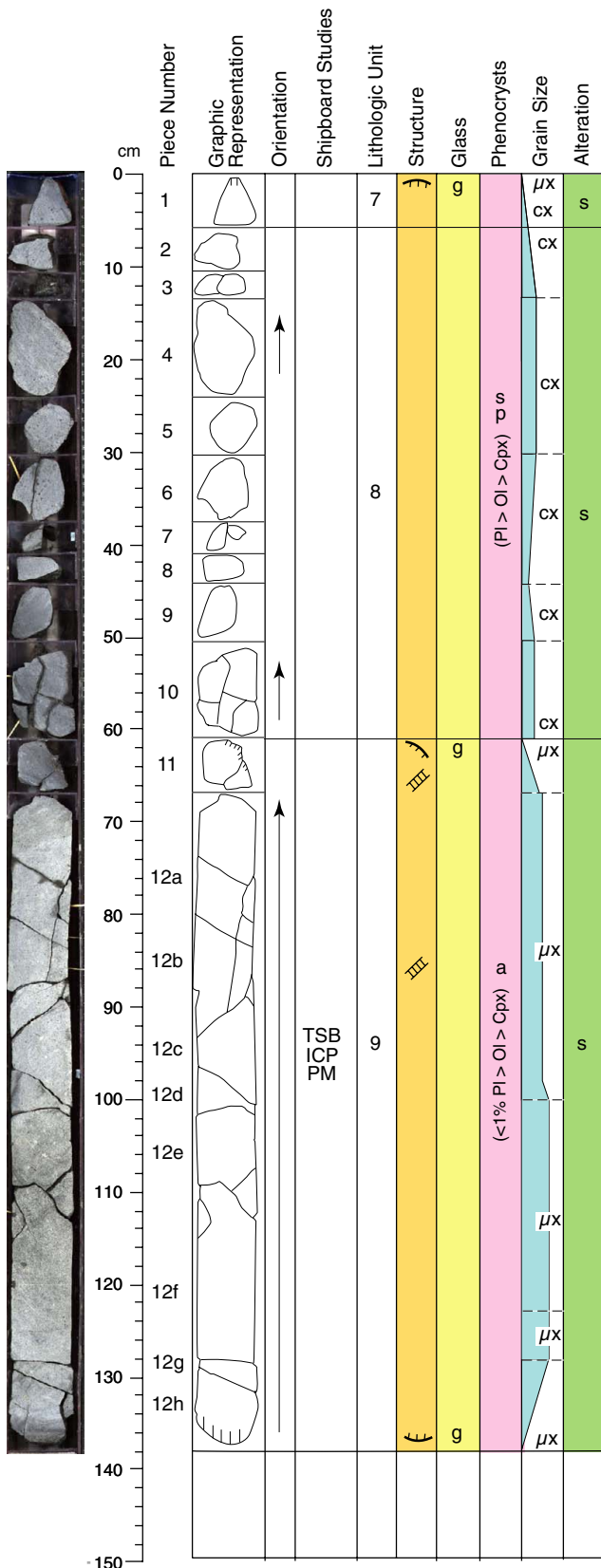
ALTERATION: Dark gray slightly altered basalt.

VEINS: 0.1-0.5 mm veins of saponite plus minor pyrite.

STRUCTURE: Vein dips are bimodally distributed between 57°-90° and 6°-20°.

Nearly vertical veins cut shallowly-dipping veins in Pieces 3 and 6C.

Core Photo

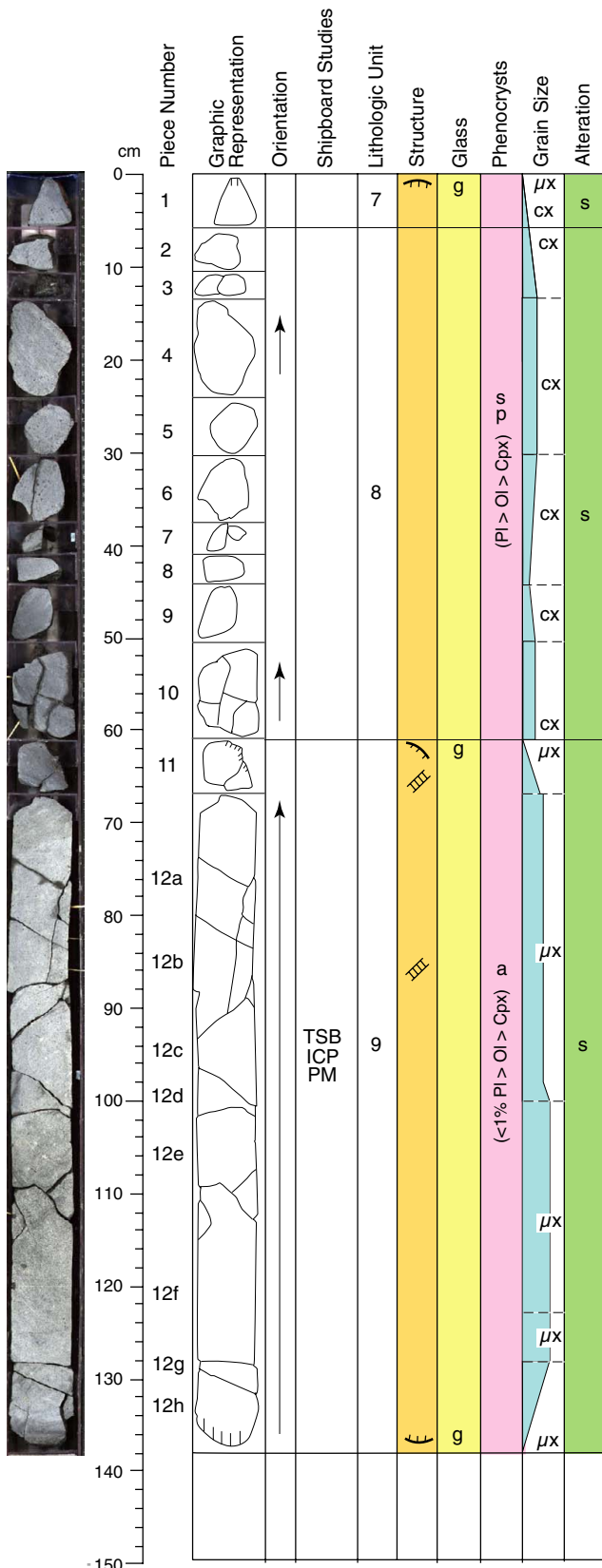


206-1256C- 7R-1 (Section top: 266.4 mbsf)

UNIT: 7
ROCK NAME: Sparsely olivine-clinopyroxene-plagioclase-phyric microcrystalline basalt
SUMMARY DESCRIPTION: Sparsely-phyric microcrystalline basalt sheet flows with glass at base of unit.
PIECES: 1
CONTACTS:
 Upper: not recovered
 Lower: glassy margin at base (Piece 1)
COLOR: gray (2.5Y N5)
PHENOCRYSTS:
 Plagioclase 1 % 0.2 mm
 Olivine <<1 % 1.0 mm 100 % altered to saponite
 Clinopyroxene 1 % 0.2-0.8 mm
GROUNDMASS:
 Grain size: microcrystalline
 Texture: intergranular
VESICLES: Sparsely vesicular filled with saponite and pyrite.
ALTERATION: Dark gray slightly altered basalt.
VEINS: 0.1-0.5 mm veins of saponite plus minor pyrite.
ADDITIONAL COMMENTS: Glassy margin in Piece 1 is not oriented, but mineralogy is more similar to 6R-5 Piece 6d than to 7R-1 Piece 2.

UNIT: 8
ROCK NAME: Aphyric cryptocrystalline basalt
SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows.
PIECES: 2-10 (Igneous description based on Piece 4)
CONTACTS:
 Upper: not recovered
 Lower: not recovered
COLOR: black (N2.5)
PHENOCRYSTS:
 Plagioclase <1 % 1.0 m
 Olivine <1 % 0.4 mm 100 % altered to saponite
 Clinopyroxene <1 % 0.3 mm
GROUNDMASS:
 Grain size: cryptocrystalline
 Texture: intergranular
VESICLES: Sparsely vesicular filled with saponite.
ALTERATION: Dark gray slightly altered basalt. Rare 1 mm wide black alteration halos along veins.
VEINS: 0.1-0.5 mm veins of saponite plus minor pyrite.
STRUCTURE: Rare curved and splayed veins. Curved veins with Y-shaped intersections in Piece 10.
ADDITIONAL COMMENTS: Sparse glomerocrysts of plagioclase plus clinopyroxene.

Core Photo



206-1256C- 7R-1 continued (Section top: 266.4 mbsf)

UNIT: 9

ROCK NAME: Aphyric microcrystalline basalt

SUMMARY DESCRIPTION: Aphyric microcrystalline basalt sheet flows with glass at top and base of unit.

PIECES: 11-12 (Igneous description based on Piece 12e)

CONTACTS:

Upper: glassy margin (Piece 11)

Lower: glassy margin (Piece 12h)

COLOR: Very dark gray (N3/)

PHENOCRYSTS:

Plagioclase < 1 % 0.5 mm

Olivine < 1 % 0.4 mm 100 % altered to saponite

Clinopyroxene < 1 % 0.3-0.4 mm

GROUNDMASS:

Grain size: microcrystalline

Texture: intergranular

VESICLES: Sparsely vesicular filled with saponite.

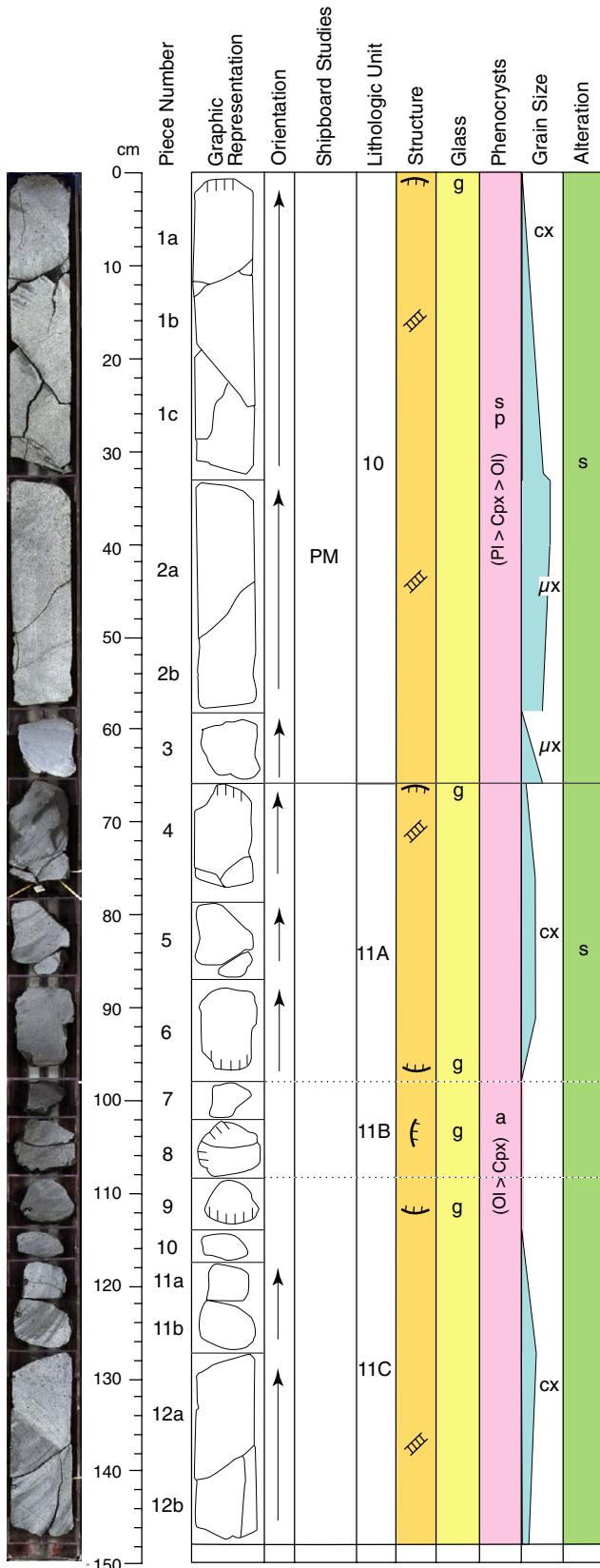
ALTERATION: Dark gray slightly altered basalt.

VEINS: 0.1-0.5 mm veins of saponite plus minor pyrite and rare carbonate.

STRUCTURE: Curved veins with Y-shaped intersections in Piece 11. Two steeply-dipping composite veins in Piece 12. Vein dips are distributed between moderately- (32°-46°) and steeply-dipping (66°-87°).

ADDITIONAL COMMENTS: Glomerocrysts of plagioclase plus clinopyroxene.

Core Photo



206-1256C-7R-2 (Section top: 267.8 mbsf)

UNIT: 10

ROCK NAME: Sparsely olivine-clinopyroxene-plagioclase-phyric microcrystalline basalt

SUMMARY DESCRIPTION: Sparsely-phyric microcrystalline to cryptocrystalline basalt sheet flows with glassy margin at top of unit.

PIECES: 1-3 (Igneous description based on Piece 1a)

CONTACTS:

Upper: glassy margin (Piece 1)

Lower: not recovered

COLOR: very dark gray (N 2.5/)

PHENOCRYSTS:

Plagioclase 1% 0.2 mm

Olivine <<1% 0.1 mm

Clinopyroxene <1% <0.2 mm

GROUNDMASS:

Grain size: microcrystalline to cryptocrystalline

Texture: intergranular

VESICLES: Sparsely vesicular filled with saponite.

ALTERATION: Dark gray slightly altered basalt.

VEINS: 0.1-0.5 mm veins of saponite plus minor pyrite.

STRUCTURE: Diffuse veins with splayed and irregular morphology. Curved veins with Y-shaped intersection in Piece 1. Splayed veins in Pieces 1 and 2. Vein dips are distributed between moderately- (37°-43°) and steeply-dipping (76°-90°).

ADDITIONAL COMMENTS: Glomerocrystic plagioclase up to 2.0 mm, clinopyroxene ~0.4 mm

UNIT: 11

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows with glassy margins in Pieces 4, 6, 8, 9, and 7R-3 Piece 5.

PIECES: 4-12 (continues next section; igneous description based on 7R-3 Piece 3a)

CONTACTS:

Upper: glassy margin (Piece 4)

Lower: glassy margin (7R-3 Piece 5)

COLOR: very dark gray (N 2.5/)

PHENOCRYSTS:

Olivine 0.5% 0.2 mm 100% altered to saponite

Clinopyroxene tr% 0.4 mm

GROUNDMASS:

Grain size: cryptocrystalline

Texture: intergranular

VESICLES: Sparsely vesicular filled with saponite and pyrite.

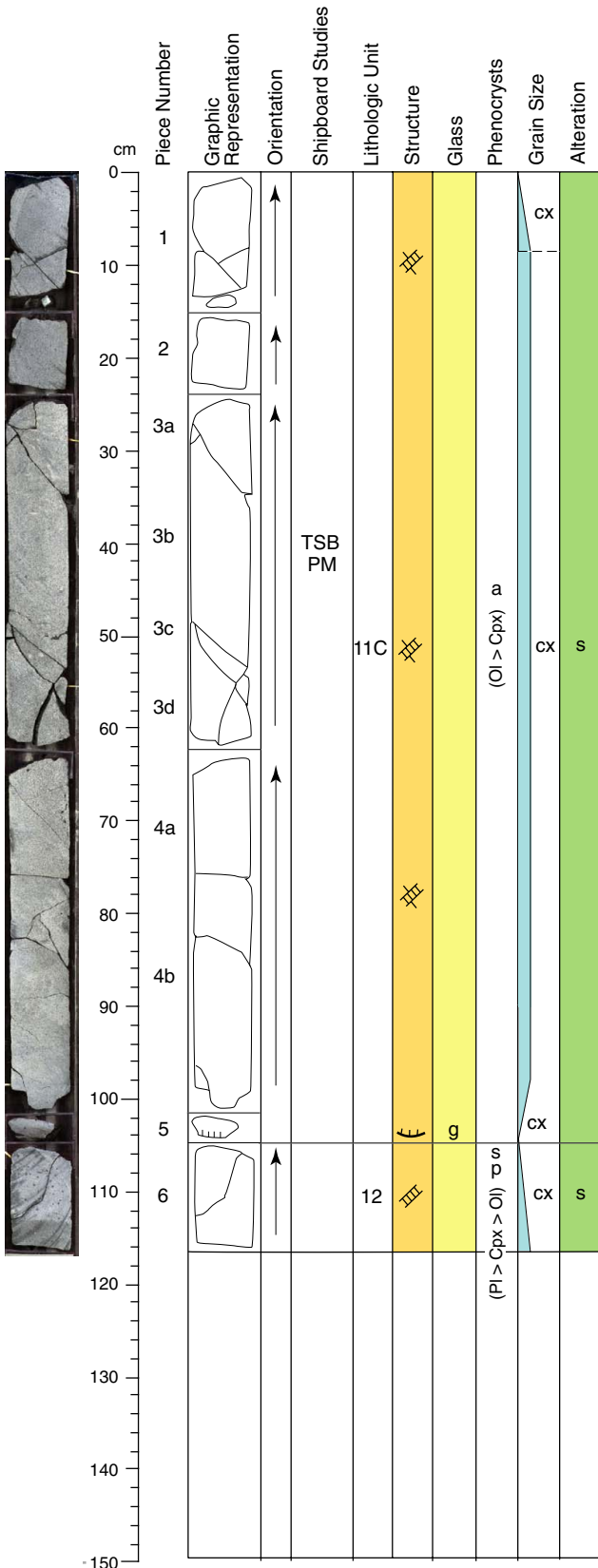
ALTERATION: Dark gray slightly altered basalt. Rare 1 mm wide black alteration halos along veins.

VEINS: 0.1-0.5 mm veins of saponite plus minor pyrite and local carbonate.

STRUCTURE: Diffuse veins with splayed and irregular morphology. Curved veins with Y-shaped intersections in Piece 4. Irregular veins in Piece 6. Two sets of curved veins in Pieces 8 and 9 are subparallel and perpendicular to the glassy margins.

ADDITIONAL COMMENTS: Lower boundary of glassy margin in 7R-3 (next section) Piece 5 is not oriented, but 7R-3 Piece 5 is more similar to Piece 4b than to Piece 6.

Core Photo



206-1256C-7R-3 continued (Section top: 269.3 mbsf)

UNIT: 11

ROCK NAME: Aphyric cryptocrystalline basalt
SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows with glassy margins in 7R-2 Pieces 4, 6, 8, 9, and 7R-3 Piece 5.
PIECES: 1-5 (igneous description based on Piece 3a)
CONTACTS:

Upper: glass at top of 7R-2 Piece 4
Lower: glass in 7R-3 Piece 5.

COLOR: very dark gray (N 2.5/)

PHENOCRYSTS:

Olivine 0.5 % 0.2 mm 100 % altered to saponite
Clinopyroxene tr % 0.4 mm

GROUNDMASS:

Grain size: cryptocrystalline
Texture: intergranular

VESICLES: Sparsely vesicular filled with saponite and pyrite.

ALTERATION: Dark gray slightly altered basalt. Rare 1 mm wide black alteration halos along veins.

VEINS: 0.1-0.5 mm veins of saponite plus minor pyrite, and local carbonate.

STRUCTURE: Diffuse veins with planar, irregular, and curved morphologies.

Vein dips are bimodally distributed between 32°-50° and 60°-90°.

ADDITIONAL COMMENTS: Glassy margin in 7R-3 Piece 5 is not oriented, but Piece 5 is more similar to Piece 4b than to Piece 6.

UNIT: 12

ROCK NAME: Sparsely clinopyroxene-olivine-plagioclase-phyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Sparsely-phyric cryptocrystalline basalt sheet flows with glassy margin at base of unit.

PIECES: 6 (continues next section; igneous description based on 7R-4 Piece 1a)

CONTACTS:

Upper: not recovered
Lower: glassy margin (7R-4 Piece 2)

COLOR: very dark gray (N2.5/)

PHENOCRYSTS:

Plagioclase 1 % 0.2 mm
Olivine <1 % 0.1 mm 100 % altered to saponite
Clinopyroxene <1 % 0.1 mm

GROUNDMASS:

Grain size: cryptocrystalline
Texture: intergranular

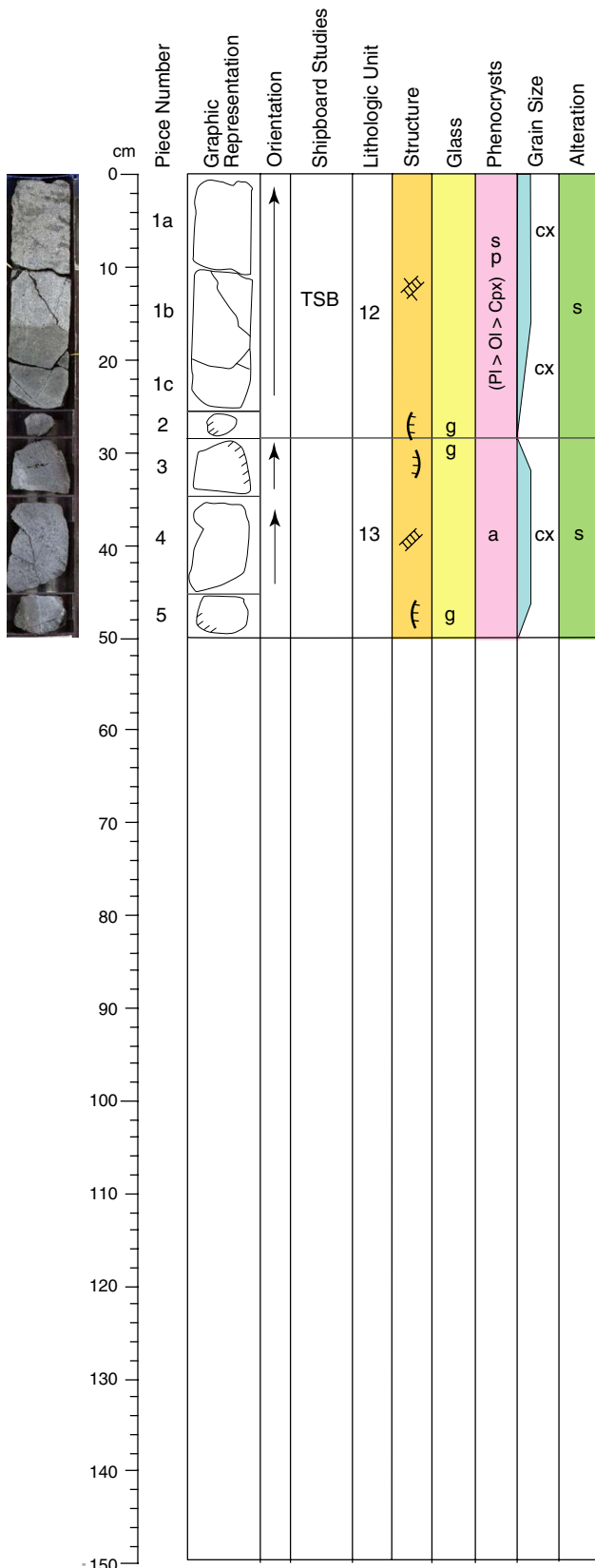
VESICLES: Sparsely vesicular filled with saponite and pyrite

ALTERATION: Dark gray slightly altered basalt. Rare 1 mm wide black alteration halos along veins.

VEINS: 0.1-0.5 mm veins of saponite plus minor pyrite and carbonate.

STRUCTURE: One steeply-dipping curved vein.

Core Photo

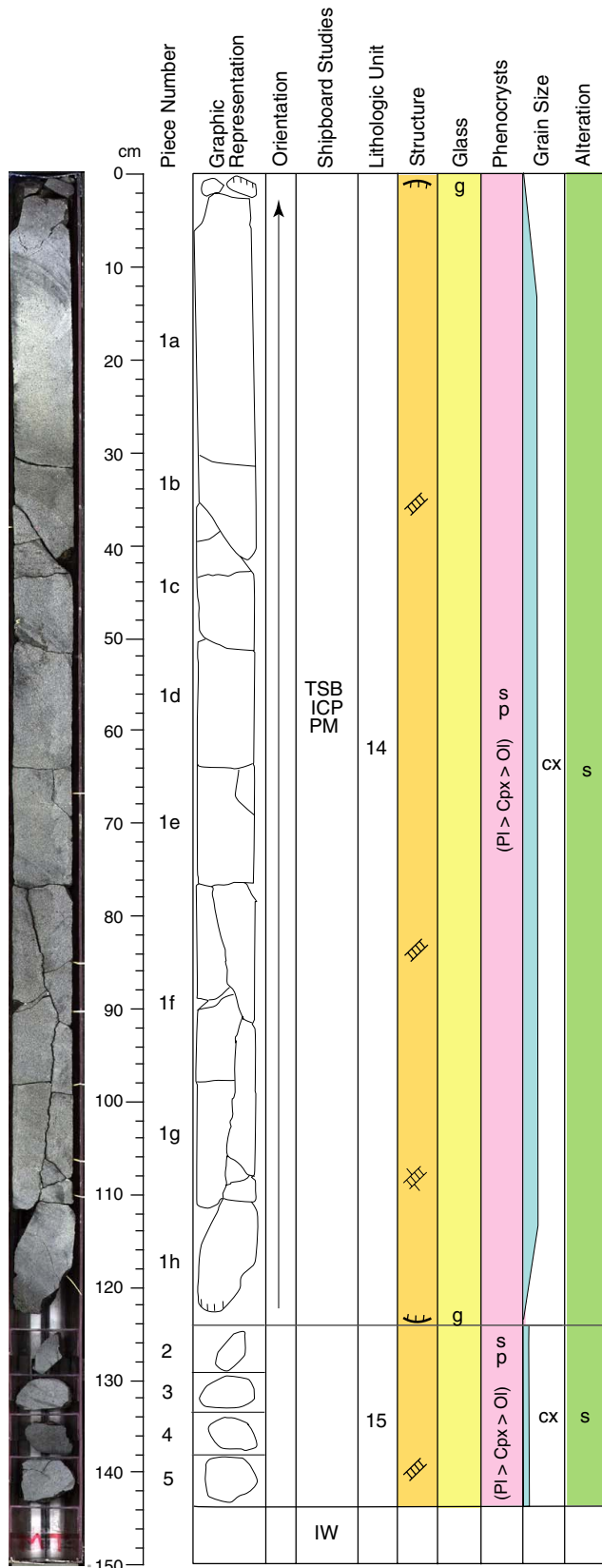


206-1256C-7R-4 (Section top: 270.4 mbsf)

UNIT: 12
 ROCK NAME: Sparsely clinopyroxene-olivine-plagioclase-phyric cryptocrystalline basalt
 SUMMARY DESCRIPTION: Sparsely-phyric cryptocrystalline basalt sheet flows with glassy margin at base of unit.
 PIECES: 1-2 (igneous description based on 7R-4 Piece 1a)
 CONTACTS:
 Upper: not recovered
 Lower: glassy margin at bottom of Piece 2
 COLOR: very dark gray (N2.5/)
 PHENOCRYSTS:
 Plagioclase 1 % 0.2 mm
 Olivine <1 % 0.1 mm 100 % altered to saponite
 Clinopyroxene <1 % 0.1 mm
 GROUNDMASS:
 Grain size: cryptocrystalline
 Texture: intergranular
 VESICLES: Sparsely vesicular filled with saponite and pyrite.
 ALTERATION: Dark gray slightly altered basalt. Rare 1 mm wide black alteration halos along veins.
 VEINS: 0.1-0.5 mm veins of saponite plus minor pyrite and carbonate.
 STRUCTURE: Diffuse veins in conjugate sets. Composite veins in Piece 1b. Conjugate veins have dips between 30°-39° and 61°-85°.
 ADDITIONAL COMMENTS: Fine-grained, dark, irregular patches and banding in Piece 1.

UNIT: 13
 ROCK NAME: Aphyric cryptocrystalline basalt
 SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows with glassy margins at top and base of unit.
 PIECES: 3-5 (igneous description based on Piece 4)
 CONTACTS:
 Upper: curved glassy margin
 Lower: curved glassy margin
 COLOR: dark bluish gray (5PG 4/2)
 PHENOCRYSTS:
 Plagioclase 0.1 % 0.4 mm
 Olivine 0.5 % 0.2 mm 100 % altered to saponite
 Clinopyroxene tr % 0.2 mm
 GROUNDMASS:
 Grain size: cryptocrystalline
 Texture: intergranular
 VESICLES: Sparsely vesicular filled with saponite and pyrite.
 ALTERATION: Dark gray slightly altered basalt.
 VEINS: 0.1-0.2 mm veins of saponite plus minor pyrite.
 STRUCTURE: Diffuse curved veins with Y-shaped intersections. One curved steeply dipping splayed vein in Piece 4.
 ADDITIONAL COMMENTS: 1-2 mm cryptocrystalline microgabbroic inclusions consisting of anhedral clinopyroxene plus plagioclase aggregates in Piece 4.

Core Photo



206-1256C-7R-5 (Section top: 270.9 mbsf)

UNIT: 14

ROCK NAME: Sparsely olivine-clinopyroxene-plagioclase-phyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Sparsely-phyric cryptocrystalline basalt sheet flows with glassy margins at top and base of unit.

PIECES: 1 (igneous description based on Piece 1e)

CONTACTS:

Upper: glassy margin (top of Piece 1)

Lower: glassy margin (bottom of Piece 1)

COLOR: very dark gray (N2.5/)

PHENOCRYSTS:

Plagioclase 1-2 % 0.4 mm

Olivine <1 % 0.1 mm

Clinopyroxene 1 % 0.2 mm

GROUNDMASS:

Grain size: cryptocrystalline

Texture: intergranular

VESICLES: Sparsely vesicular filled with saponite and pyrite.

ALTERATION: Dark gray slightly altered basalt. 0.1-0.5 mm veins of saponite plus minor pyrite.

VEINS: 0.1-0.3 mm veins of saponite plus minor pyrite.

STRUCTURE: Diffuse veins with splayed and conjugate systems. Veins with Y-shaped intersections in Pieces 1e to 1g. Vein dips are distributed between 8°-15°, 21°-46°, and 61-87°. Conjugate veins dip between 50°-60°. One vertical vein in Pieces 1f and 1g.

ADDITIONAL COMMENTS: Glomerocrysts (<1%) up to 6 mm diameter of plagioclase plus clinopyroxene plus or minus olivine.

UNIT: 15

ROCK NAME: Sparsely olivine-clinopyroxene-plagioclase-phyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Sparsely-phyric cryptocrystalline basalt sheet flows with altered glassy margin at base of unit (8R-2 Piece 2).

PIECES: 2-5 (continues next section; igneous description based on 7R-6 Piece 2)

CONTACTS:

Upper: not recovered

Lower: altered glass at base (8R-2 Piece 2)

COLOR: very dark gray (N2.5/)

PHENOCRYSTS:

Plagioclase 1 % 0.1 mm

Olivine <1 % 0.1 mm

Clinopyroxene <1 % 0.1 mm

GROUNDMASS:

Grain size: cryptocrystalline

Texture: intergranular

VESICLES: Sparsely vesicular filled with saponite and pyrite.

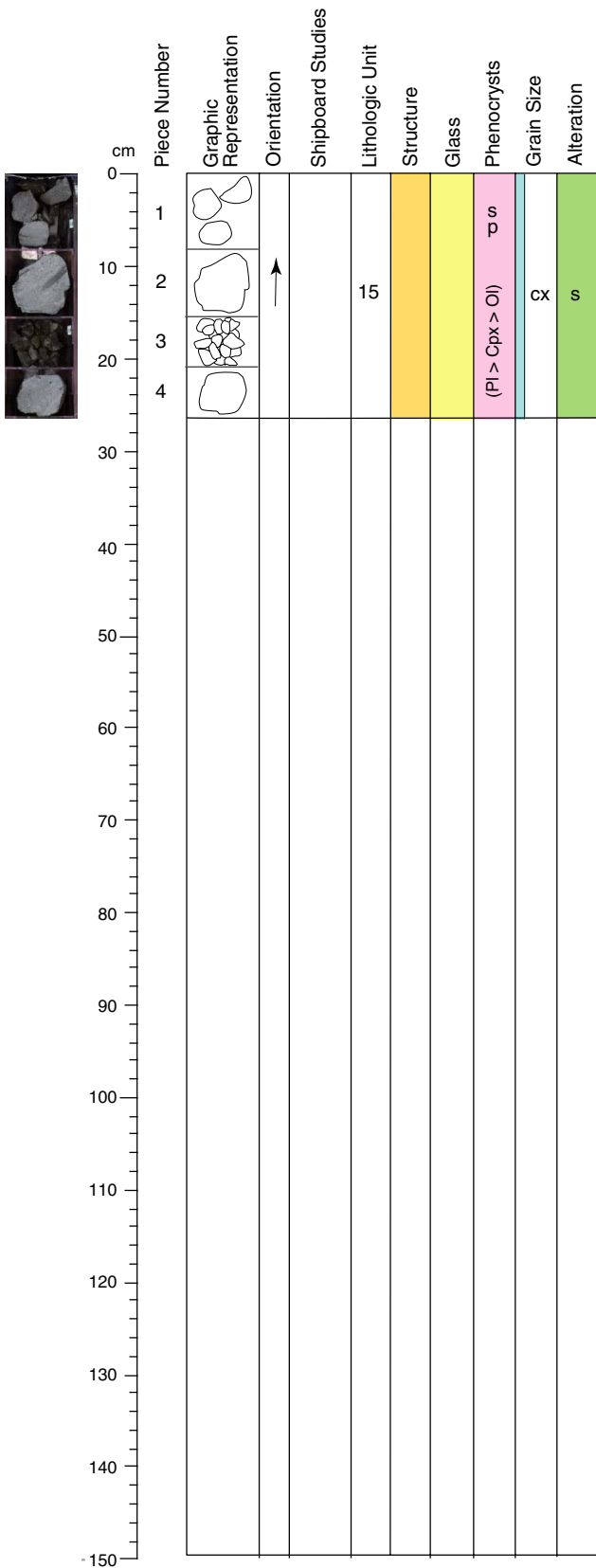
ALTERATION: Dark gray slightly altered basalt. Rare 1 mm wide black alteration halos along veins.

VEINS: 0.1-0.5 mm veins of saponite plus minor pyrite and local carbonate and silica.

STRUCTURE: Rare veins. Y-shaped intersection of veins in Piece 5.

ADDITIONAL COMMENTS: Glomerocrysts (<1%) of plagioclase plus clinopyroxene plus olivine (<5 mm diameter).

Core Photo



206-1256C-7R-6 (Section top: 272.34 mbsf)

UNIT: 15

ROCK NAME: Sparsely olivine-clinopyroxene-plagioclase-phyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Sparsely-phyric cryptocrystalline basalt sheet flows with altered glassy margin at base of unit (8R-2 Piece 2).

PIECES: 1-4 (continues next section; igneous description based on 7R-6 Piece 2)

CONTACTS:

Upper: not recovered

Lower: altered glass (8R-2 Piece 2)

COLOR: very dark gray (N2.5/)

PHENOCRYSTS:

Plagioclase 1 % 0.1 mm

Olivine <1 % 0.1 mm

Clinopyroxene <1 % 0.1 mm

GROUNDMASS:

Grain size: cryptocrystalline

Texture: intergranular

VESICLES: Sparsely vesicular filled with saponite and pyrite.

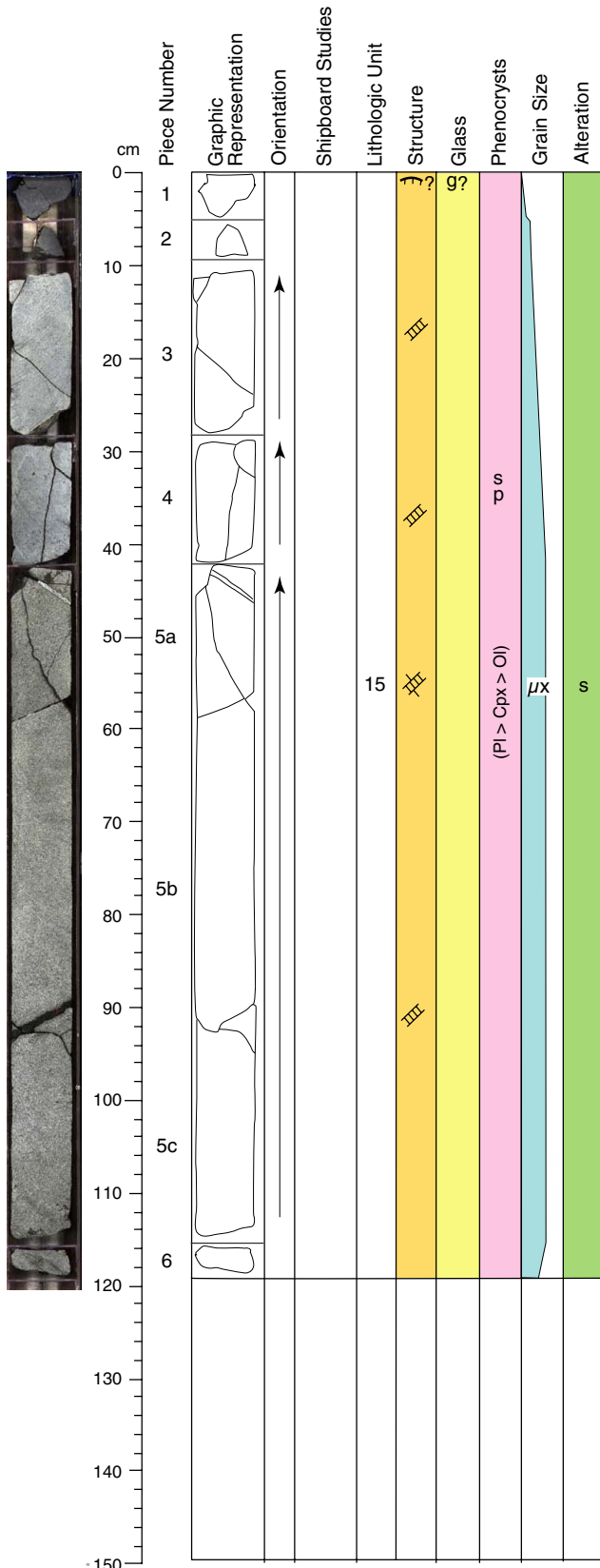
ALTERATION: Dark gray slightly altered basalt. Rare 1 mm wide black alteration halos along veins.

VEINS: 0.1-0.5 mm veins of saponite plus minor pyrite and local carbonate and silica.

STRUCTURE: Rare veins. No oriented structures.

ADDITIONAL COMMENTS: Glomerocrysts (<1%) of plagioclase plus clinopyroxene plus olivine (<5 mm diameter).

Core Photo



206-1256C-8R-1 (Section top: 275.5 mbsf)

UNIT: 15

ROCK NAME: Sparsely olivine-clinopyroxene-plagioclase-phyric microcrystalline basalt

SUMMARY DESCRIPTION: Sparsely-phyric microcrystalline to cryptocrystalline basalt sheet flows with altered glassy margin at base of unit (8R-2 Piece 2).

PIECES: 1-6 (continues next section; igneous description based on 7R-6 Piece 2)

CONTACTS:

Upper: not recovered

Lower: altered glass (8R-2 Piece 2)

COLOR: very dark gray (N2.5/)

PHENOCRYSTS:

Plagioclase 1 % 0.1 mm

Olivine <1 % 0.1 mm

Clinopyroxene <1 % 0.1 mm

GROUNDMASS:

Grain size: microcrystalline to cryptocrystalline

Texture: intergranular

VESICLES: Sparsely vesicular filled with saponite and pyrite.

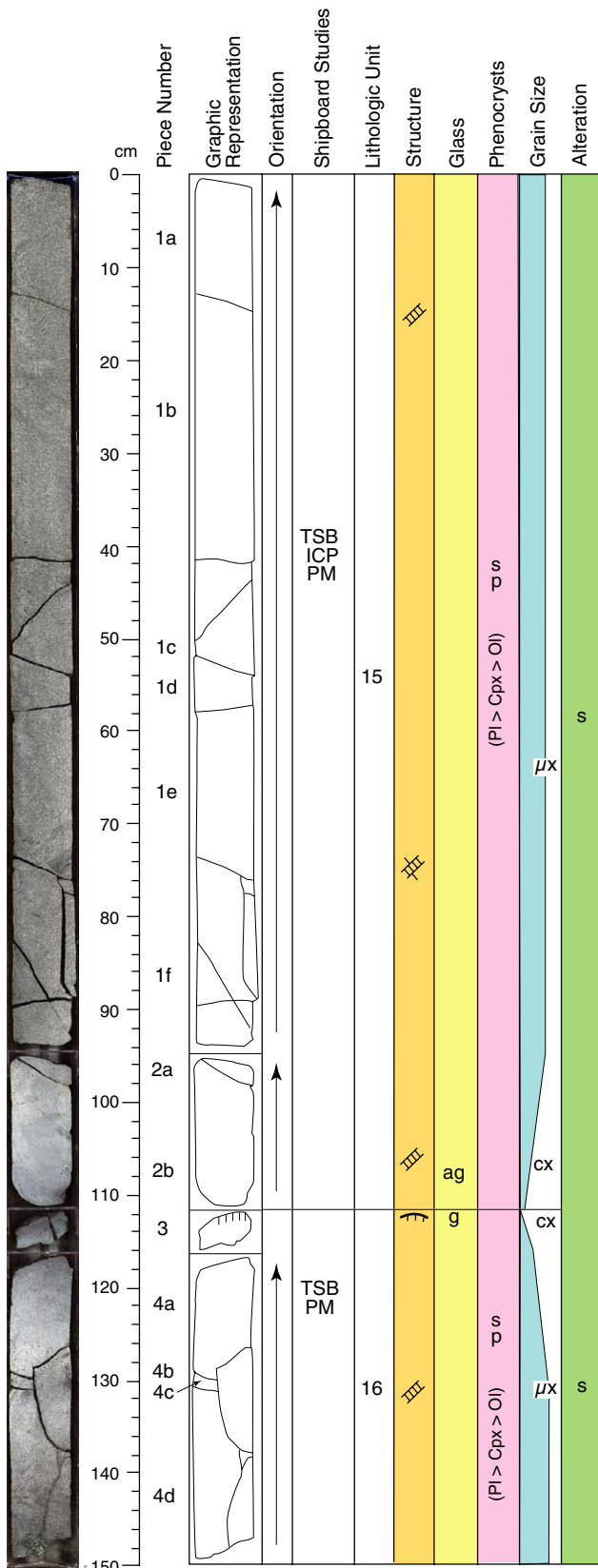
ALTERATION: Dark gray slightly altered basalt. Rare 1 mm wide black alteration halos along veins.

VEINS: 0.1-0.5 mm veins of saponite plus minor pyrite and local carbonate and silica. Composite carbonate and silica-bearing vein at the top of Piece 5.

STRUCTURE: Moderate veining, generally with splayed and Y-shaped intersections. Vein dips are bimodally distributed with moderate (30°-47°) or steep (60°-80°) dips. Two oriented veins are nearly horizontal. Conjugate system in Piece 5.

ADDITIONAL COMMENTS: Glomerocrysts (<1%) of plagioclase plus clinopyroxene plus olivine (<5 mm diameter).

Core Photo

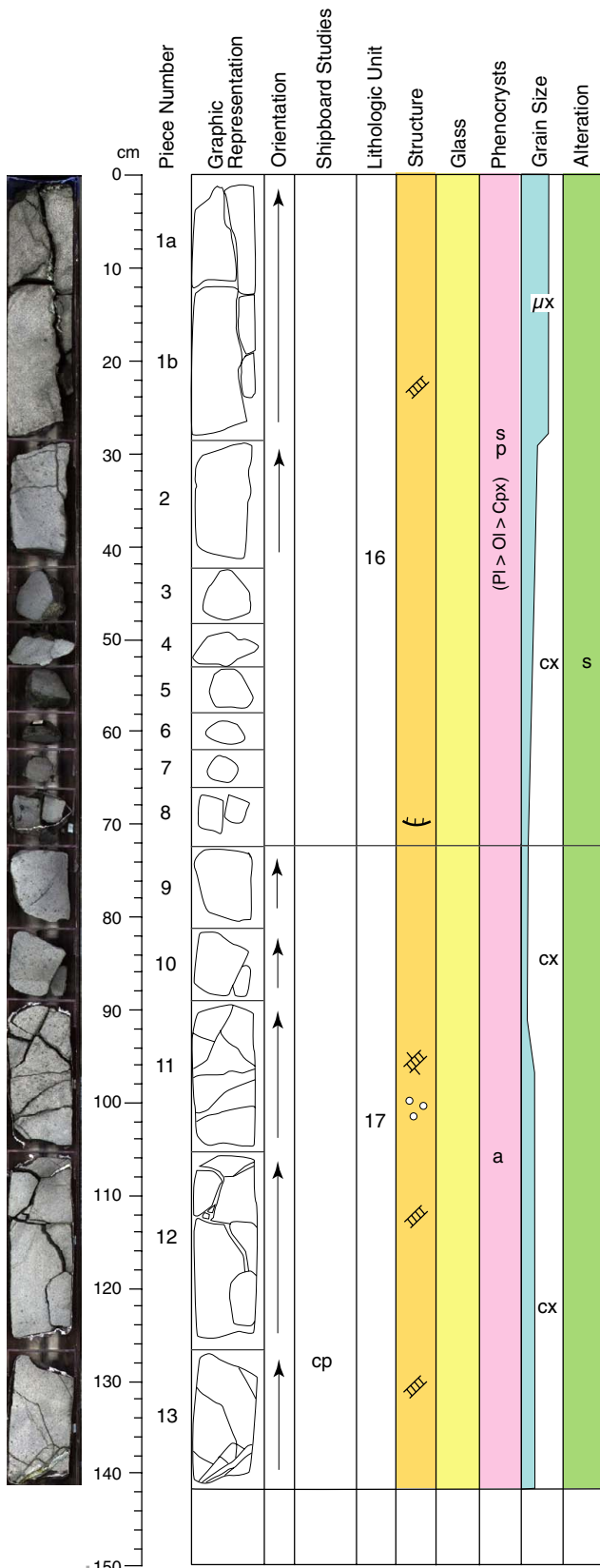


206-1256C-8R-2 (Section top: 272.34 mbsf)

UNIT: 15 ROCK NAME: Sparsely olivine-clinopyroxene-plagioclase-phyric microcrystalline basalt
 SUMMARY DESCRIPTION: Sparsely-phyric microcrystalline to cryptocrystalline basalt sheet flows with altered glassy margin at base of unit (Piece 2).
 PIECES: 1 and 2 (igneous description based on 7R-6 Piece 2)
 CONTACTS:
 Upper: not recovered
 Lower: altered glass (Piece 2)
 COLOR: very dark gray (N2.5/)
 PHENOCRYSTS:
 Plagioclase 1 % 0.1 mm
 Olivine <1 % 0.1 mm
 Clinopyroxene <1 % 0.1 mm
 GROUNDMASS:
 Grain size: microcrystalline to cryptocrystalline
 Texture: intergranular
 VESICLES: Sparsely vesicular filled with saponite and pyrite.
 ALTERATION: Dark gray slightly altered basalt. Rare 1 mm wide black alteration halos along veins.
 VEINS: 0.1-0.5 mm veins of saponite plus minor pyrite and local carbonate and silica.
 STRUCTURE: Diffuse veins with dips ranging from 19°-30° and 59°-90°. Two horizontal veins occur in Piece 1. Conjugate systems are steeply dipping. One stair-stepped steeply dipping vein in Piece 1.
 ADDITIONAL COMMENTS: Glomerocrysts (<1%) of plagioclase plus clinopyroxene plus olivine (<5 mm diameter).

UNIT: 16
 ROCK NAME: Sparsely olivine-clinopyroxene-plagioclase phyric microcrystalline basalt
 SUMMARY DESCRIPTION: Sparsely-phyric microcrystalline basalt sheet flows with glassy margin at top of unit (Piece 3).
 PIECES: 3-4 (continues next section; igneous description based on 8R-3 Piece 1b)
 CONTACTS:
 Upper: glassy margin (Piece 3)
 Lower: chilled margin (8R-3 Piece 8)
 COLOR: black (N 2.5/)
 PHENOCRYSTS:
 Plagioclase 1 % 0.2 mm
 Olivine <<1% 0.1 mm
 Clinopyroxene <1% 0.1 mm
 GROUNDMASS:
 Grain size: microcrystalline
 Texture: intergranular
 VESICLES: Sparsely vesicular filled with saponite and pyrite.
 ALTERATION: Dark gray slightly altered basalt. Rare 1 mm wide black alteration halos along veins.
 VEINS: 0.1-0.5 mm veins of saponite plus minor pyrite.
 STRUCTURE: Diffuse veining with curved and splayed morphology. Veins with Y-shaped intersections and splayed veins in Piece 4.
 ADDITIONAL COMMENTS: Rare glomerocrysts of plagioclase plus clinopyroxene plus altered olivine. Piece 3 is not oriented and may represent base of Unit 15 or top of Unit 16.

Core Photo



206-1256C-8R-3 (Section top: 278.19 mbsf)

UNIT: 16

ROCK NAME: Sparsely olivine-clinopyroxene-plagioclase phyric microcrystalline basalt

SUMMARY DESCRIPTION: Sparsely-phyric microcrystalline to cryptocrystalline basalt sheet flows with glassy margin at top of unit and chilled margin at base of unit.

PIECES: 1-8 (igneous description based on Piece 1b)

CONTACTS:

Upper: glassy margin

Lower: chilled margin (Piece 8)

COLOR: black (N 2.5/)

PHENOCRYSTS:

Plagioclase 1% 0.2 mm

Olivine <<1% 0.1 mm

Clinopyroxene <1% 0.1 mm

GROUNDMASS:

Grain size: microcrystalline to cryptocrystalline

Texture: intergranular

VESICLES: Sparsely vesicular filled with saponite and pyrite.

ALTERATION: Dark gray slightly altered basalt. Rare 1 mm wide black alteration halos along veins.

VEINS: 0.1-0.5 mm veins of saponite plus minor pyrite.

STRUCTURE: Diffuse veins have splayed morphology and/or occur in conjugate sets. Veins dip both shallowly (0°-12°) and steeply (78°-90°).

ADDITIONAL COMMENTS: Rare glomerocrysts of plagioclase plus clinopyroxene plus olivine (now altered).

UNIT: 17

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows.

PIECES: 9-13 (continues next section; igneous description based on 8R-4 Piece 2)

CONTACTS:

Upper: not recovered

Lower: not recovered

COLOR: dark greenish gray (10Y 3/1)

PHENOCRYSTS:

Olivine <1% 0.5 mm 100% altered to saponite

Clinopyroxene <1% 0.3 mm

GROUNDMASS:

Grain size: cryptocrystalline

Texture: intergranular

VESICLES: Sparsely vesicular filled with saponite.

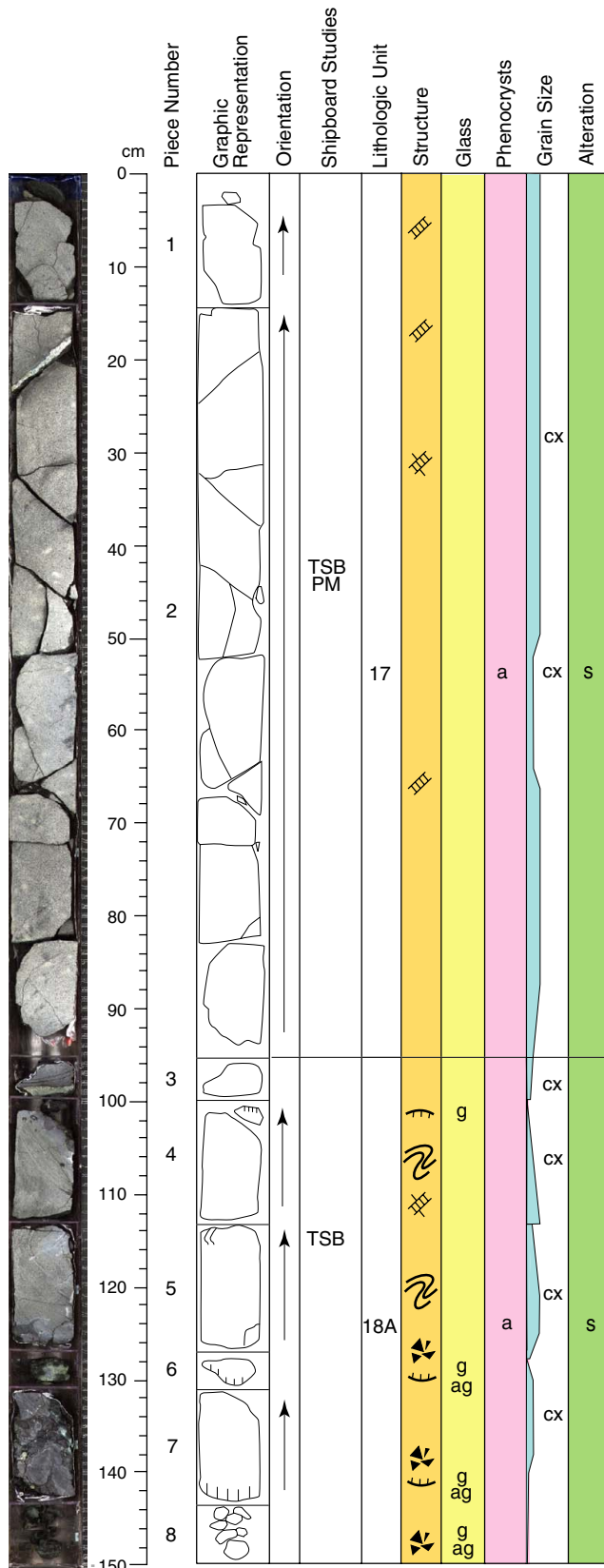
ALTERATION: Dark gray slightly altered basalt. Rare 1 mm wide black alteration halos along veins.

VEINS: 0.1-1.0 mm veins of saponite plus minor pyrite and local carbonate and silica. Carbonate locally occurs as prismatic crystals of aragonite.

STRUCTURE: Magmatic flow banding defined by dark oriented vesicles. Veins dips are bimodally distributed between 40°-50° and 57°-90°. Conjugate vein system in Piece 11. Veins with Y-shaped intersection in Piece 12; one of which is a composite silica-bearing vein. Stair-stepped composite vein in Piece 13.

ADDITIONAL COMMENTS: Plagioclase occurs only in glomerocrysts with clinopyroxene.

Core Photo



206-1256C-8R-4 (Section top: 279.59 mbsf)

UNIT: 17

ROCK NAME: Aphyric cryptocrystalline basalt
SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows.
PIECES: 1-2 (igneous description based on Piece 2)
CONTACTS:

Upper: not recovered
Lower: not recovered

COLOR: dark greenish gray (10Y 3/1)

PHENOCRYSTS:

Olivine <1% 0.5 mm 100% altered to saponite
Clinopyroxene <1% 0.3 mm

GROUNDMASS:

Grain size: cryptocrystalline
Texture: intergranular

VESICLES: Sparsely vesicular filled with saponite.

ALTERATION: Dark gray slightly altered basalt. Rare 1 mm wide black alteration halos along veins.

VEINS: 0.1-1.0 mm veins of saponite plus minor pyrite and local carbonate and silica. Carbonate locally occurs as prismatic crystals of aragonite.

STRUCTURE: Diffuse veins with splayed morphologies. Conjugate vein systems and Y-shaped intersections. Vein dips range from 20°-45° and from 55°-82°. Composite silica-bearing vein in Piece 2 dipping 54°. Y-shaped intersection of veins in Piece 1. Splayed veins in Pieces 1 and 2.

ADDITIONAL COMMENTS: Plagioclase occurs only in glomerocrysts with clinopyroxene.

UNIT: 18A

ROCK NAME: Aphyric cryptocrystalline basalt
SUMMARY DESCRIPTION: Aphyric cryptocrystalline to glassy basalt flow margin with hyaloclastite breccia.
PIECES: 3-8 (continues next section; igneous description based on Piece 7)
CONTACTS:

Upper: glassy margin
Lower: gradational change in grain size to next subunit

COLOR: bluish black (5PB 2.5/1)

PHENOCRYSTS:

Plagioclase tr % 0.4 mm
Olivine 0.1 % 0.4 mm 100 % altered to saponite
Clinopyroxene tr % 0.05 mm

GROUNDMASS:

Grain size: cryptocrystalline
Texture: intergranular to granular

VESICLES: Sparsely vesicular filled with saponite and rare pyrite.

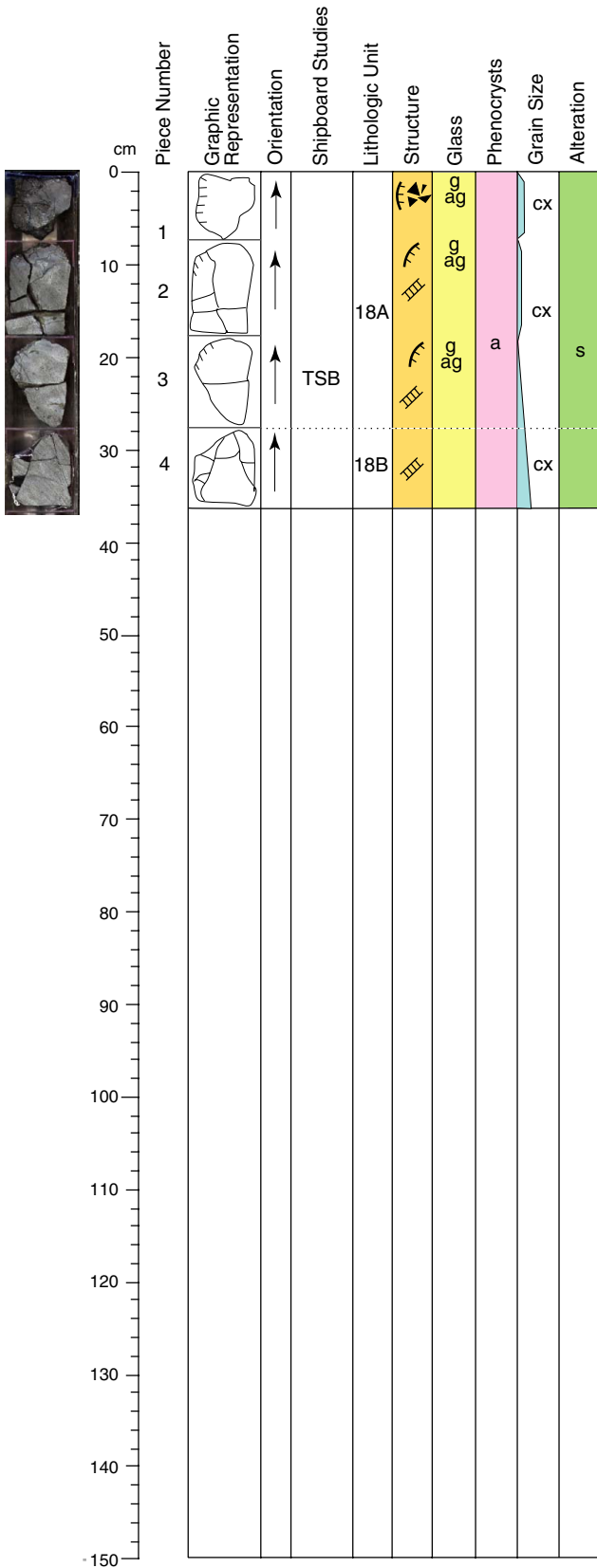
ALTERATION: Dark gray slightly altered basalt.

VEINS: 0.1-0.2 mm veins of saponite plus minor pyrite.

STRUCTURE: Hyaloclastite breccia in Pieces 6 and 7. Millimeter-scale magmatic flow banding in Pieces 4 and 5 affected by multiple folding and shearing events. Conjugate vein system in Piece 4 with veins dipping 15° and 50°.

ADDITIONAL COMMENTS: Glomerocrysts of clinopyroxene plus plagioclase. One-centimeter-thick interval of recrystallized siliceous interflow sediment in Piece 3.

Core Photo

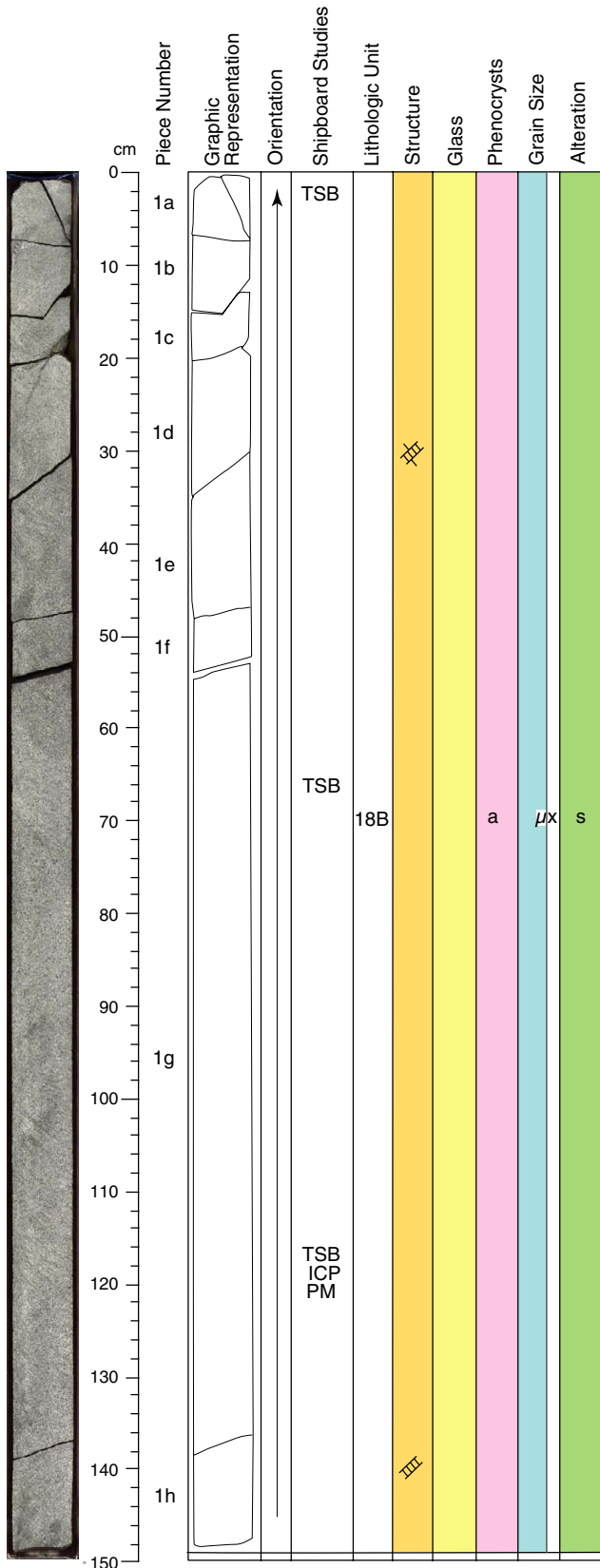


206-1256C-8R-5 (Section top: 281.09 mbsf)

UNIT: 18A
 ROCK NAME: Aphyric cryptocrystalline basalt
 SUMMARY DESCRIPTION: Aphyric cryptocrystalline to glassy basalt flow margin with hyaloclastite breccia.
 PIECES: 1-3 (igneous description based on 8R-4 Piece 7)
 CONTACTS:
 Upper: glassy margin
 Lower: gradational change in grain size
 COLOR: bluish black (5PB 2.5/1)
 PHENOCRYSTS:
 Plagioclase tr % 0.4 mm
 Olivine 0.1 % 0.4 mm 100 % altered to saponite
 Clinopyroxene tr % 0.05 mm
 GROUNDMASS:
 Grain size: cryptocrystalline to glassy
 Texture: intergranular to granular
 VESICLES: Sparsely vesicular filled with saponite and rare pyrite.
 ALTERATION: Dark gray slightly altered basalt.
 VEINS: 0.1-0.2 mm veins of saponite plus minor pyrite.
 STRUCTURE: Hyaloclastite breccia in Piece 1. Diffuse veins have Y-shaped intersections. Veins dip either shallowly or steeply.
 ADDITIONAL COMMENTS: Glomerocrysts of clinopyroxene plus plagioclase.

UNIT: 18B
 ROCK NAME: Aphyric microcrystalline basalt
 SUMMARY DESCRIPTION: Massive aphyric microcrystalline basalt.
 PIECES: 4 (continues next section; igneous description based on 9R-1 Piece 5b)
 CONTACTS:
 Upper: gradational change in grain size
 Lower: gradational change in grain size
 COLOR: very dark gray (N2.5/)
 PHENOCRYSTS: None apparent
 GROUNDMASS:
 Grain size: cryptocrystalline to microcrystalline
 Texture: intergranular
 VESICLES: Sparsely vesicular filled with saponite.
 ALTERATION: Dark gray slightly altered basalt.
 VEINS: 0.1-0.5 mm veins of saponite plus minor pyrite. Veins dip either shallowly or steeply.
 STRUCTURE: Diffuse veins

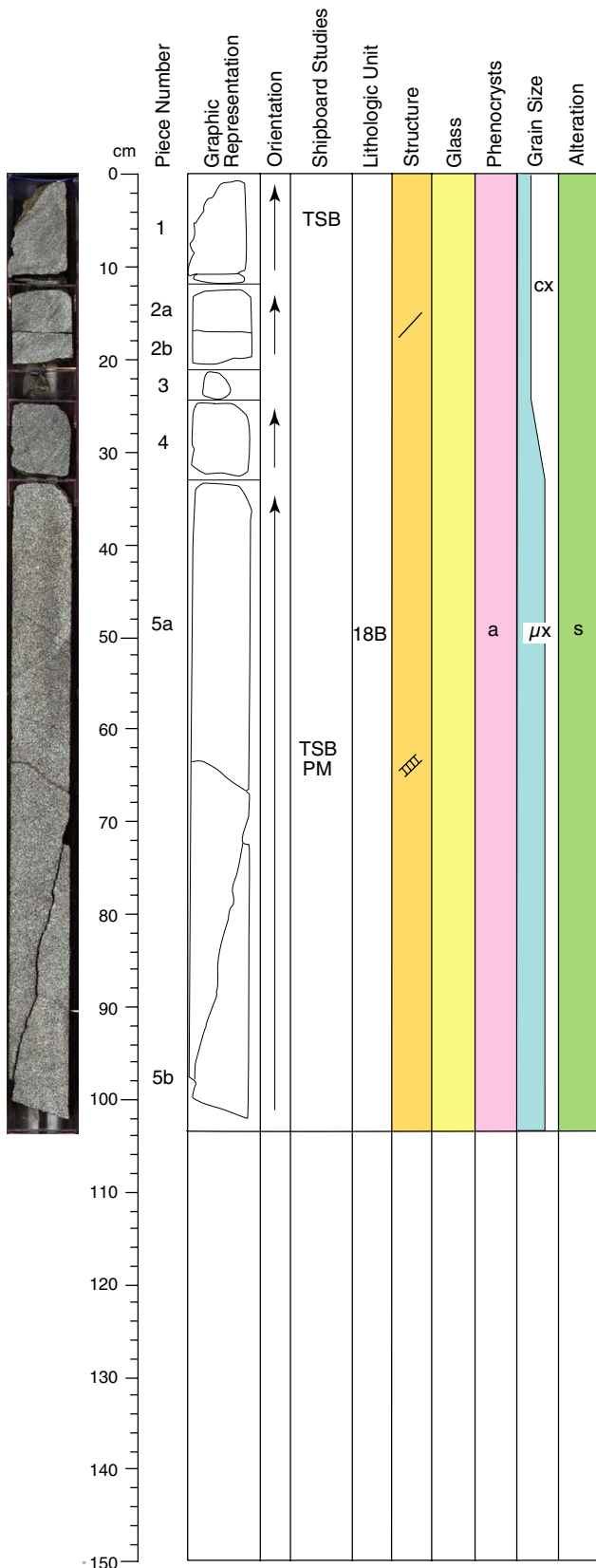
Core Photo



206-1256C-8R-6 (Section top: 281.46 mbsf)

UNIT: 18B
ROCK NAME: Aphyric microcrystalline basalt
SUMMARY DESCRIPTION: Massive microcrystalline basalt.
PIECES: 1 (continues next core; igneous description based on 9R-1 Piece 5b)
CONTACTS:
 Upper: gradational change in grain size
 Lower: gradational change in grain size
COLOR: Very dark gray (N2.5/)
PHENOCRYSTS: none apparent
GROUNDMASS:
 Grain size: microcrystalline
 Texture: intergranular
VESICLES: Sparsely vesicular filled with saponite.
ALTERATION: Dark gray slightly altered basalt.
VEINS: 0.1-0.5 mm veins of saponite plus minor pyrite.
STRUCTURE: Diffuse veins in the upper half of the section, rare veins in the lower half. Mostly planar veins. Conjugate vein system in Pieces 1a to 1e. Veins dip from 14°-24° and 50°-70°. Three nearly horizontal veins in Pieces 1a to 1c.

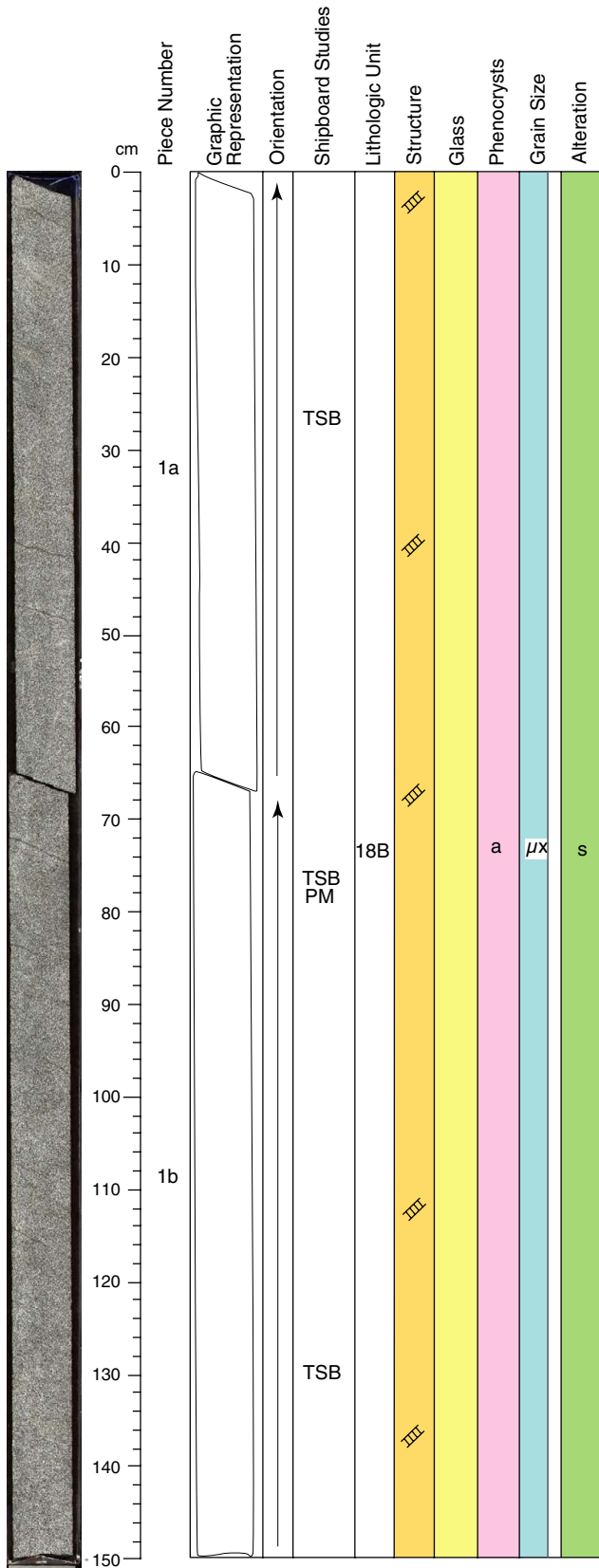
Core Photo



206-1256C-9R-1 (Section top: 284.7 mbsf)

UNIT: 18B
ROCK NAME: Aphyric microcrystalline basalt
SUMMARY DESCRIPTION: Massive microcrystalline basalt.
PIECES: 1-5 (continues next section; igneous description based on 9R-1 Piece 5b)
CONTACTS:
 Upper: gradational change in grain size
 Lower: gradational change in grain size
COLOR: Very dark gray (N2.5/)
PHENOCRYSTS: none apparent
GROUNDMASS:
 Grain size: cryptocrystalline to microcrystalline
 Texture: intergranular
VESICLES: Sparsely vesicular filled with saponite.
ALTERATION: Dark gray slightly altered basalt.
VEINS: 0.1-0.5 mm veins of saponite plus minor pyrite.
STRUCTURE: Stair-shaped steeply dipping vein in Piece 5. Splayed vein in Pieces 1 and 5. Most veins dip 28°-38°; others range between 6°-15° and 72°-78°. One gently-dipping joint in Piece 2.

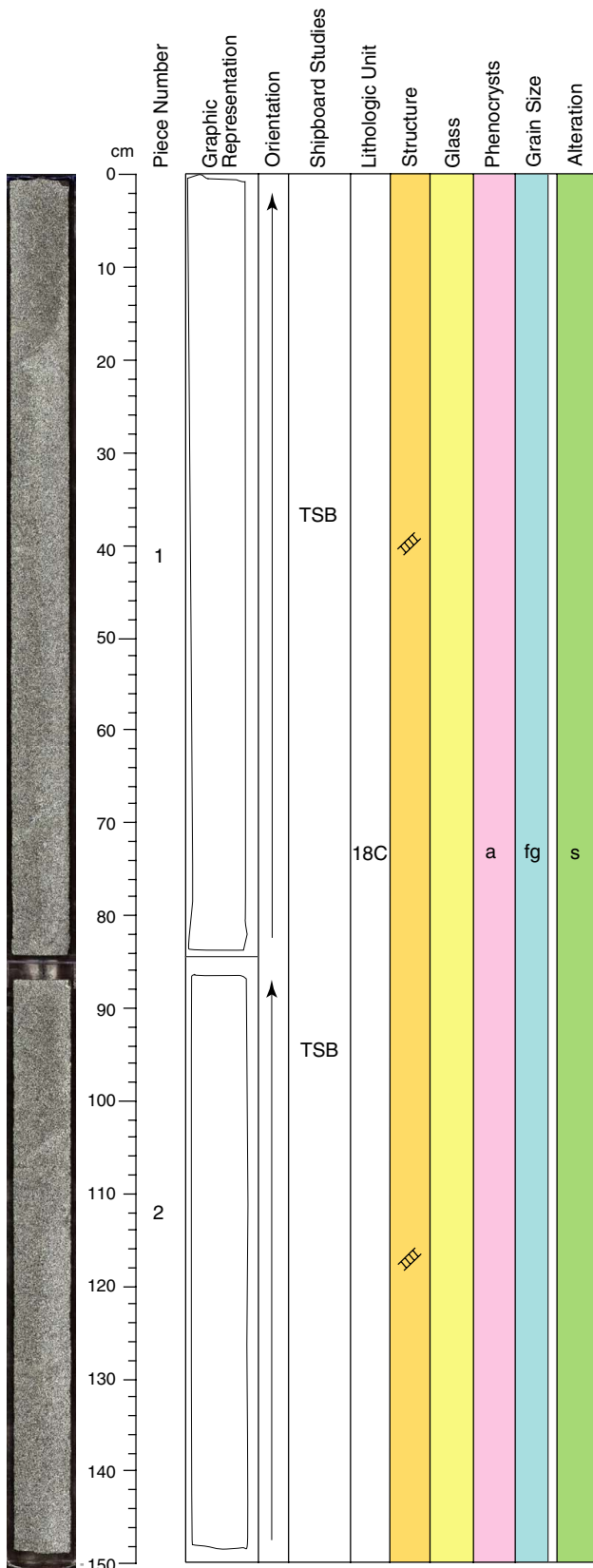
Core Photo



206-1256C-9R-2 (Section top: 285.73 mbsf)

UNIT: 18B
ROCK NAME: Aphyric microcrystalline basalt
SUMMARY DESCRIPTION: Massive microcrystalline basalt.
PIECES: 1 (igneous description based on 9R-1 Piece 5b)
CONTACTS:
 Upper: gradational change in grain size
 Lower: gradational change in grain size
COLOR: very dark gray (N2.5/)
PHENOCRYSTS: none apparent
GROUNDMASS:
 Grain size: microcrystalline
 Texture: intergranular
VESICLES: Sparsely vesicular filled with saponite.
ALTERATION: Dark gray slightly altered basalt.
VEINS: 0.1-0.5 mm veins of saponite plus minor pyrite.
STRUCTURE: Gently dipping (15°-30°) nearly parallel diffuse veins, homogeneously distributed throughout the section.

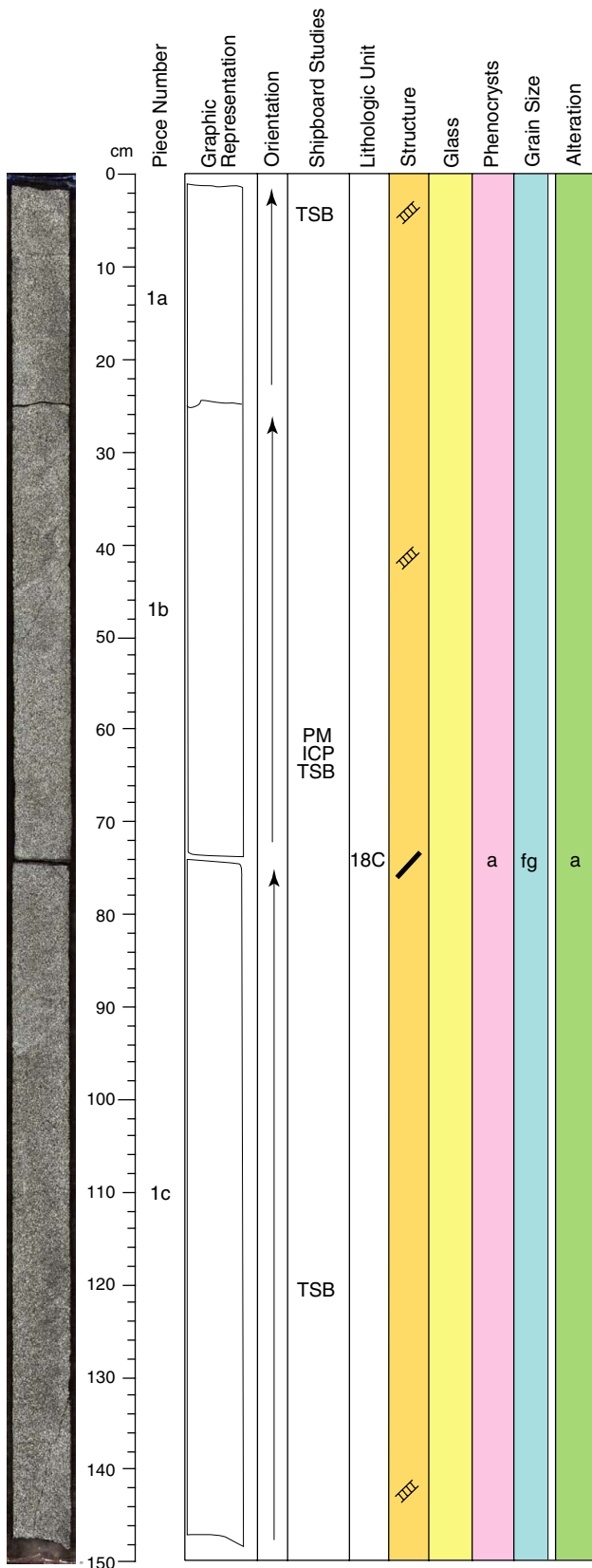
Core Photo



206-1256C-9R-3 (Section top: 287.23 mbsf)

UNIT: 18C
 ROCK NAME: Fine-grained basalt
 SUMMARY DESCRIPTION: Massive fine-grained basalt
 PIECES: 1-2 (continues next section; igneous description based on 9R-5 Piece 1)
 CONTACTS:
 Upper: gradational change in grain size
 Lower: gradational change in grain size
 COLOR: bluish black (5PB 2.5/1)
 PHENOCRYSTS: none apparent
 GROUNDMASS:
 Grain size: fine grained
 Texture: intergranular
 VESICLES: none
 ALTERATION: Dark gray slightly altered basalt.
 VEINS: 0.1-1.0 mm veins of saponite plus minor pyrite.
 STRUCTURE: Planar moderately-dipping veins (22°-38°). Stair-stepped vein in Piece 1 dips 54°.

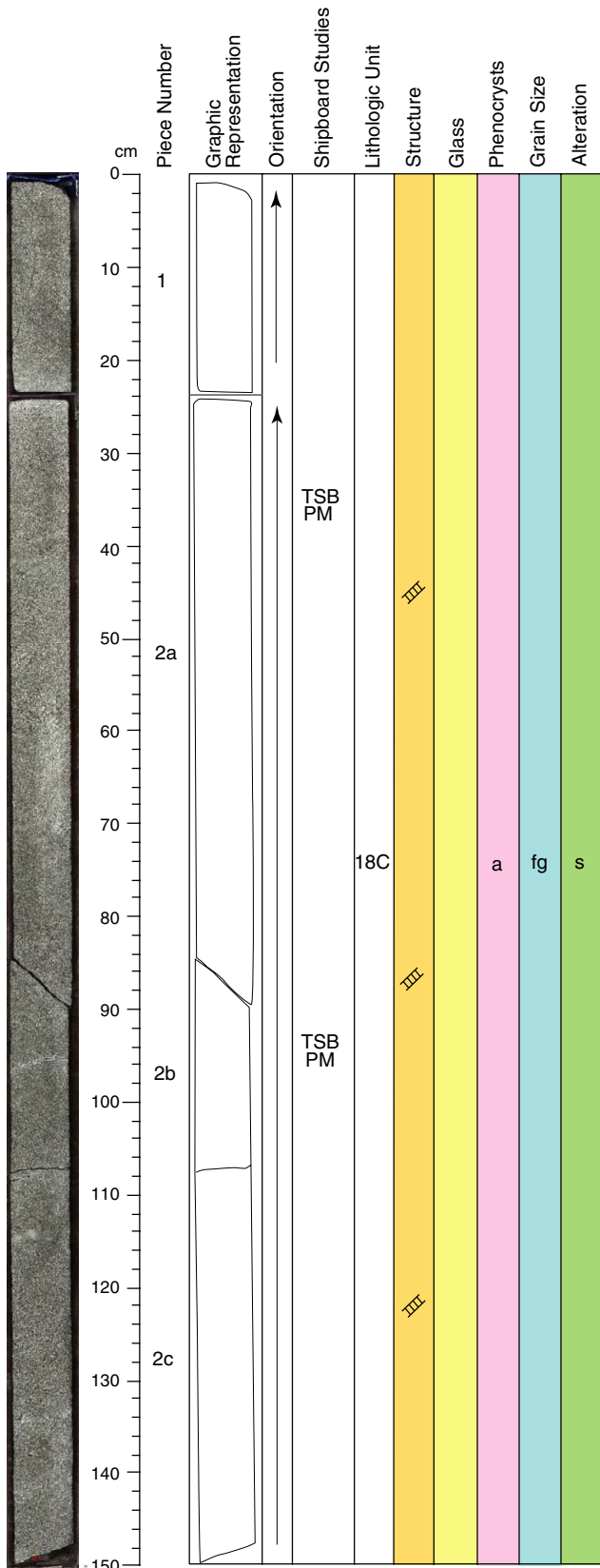
Core Photo



206-1256C-9R-4 (Section top: 288.7 mbsf)

UNIT: 18C
 ROCK NAME: Fine-grained basalt
 SUMMARY DESCRIPTION: Massive fine-grained basalt.
 PIECES: 1 (continues next section; igneous description based on 9R-5 Piece 1)
 CONTACTS:
 Upper: gradational change in grain size
 Lower: gradational change in grain size
 COLOR: bluish black (5PB 2.5/1)
 PHENOCRYSTS: none apparent
 GROUNDMASS:
 Grain size: fine-grained
 Texture: intergranular
 VESICLES: none
 ALTERATION: Dark gray slightly altered basalt. Rare 10 mm wide light gray alteration halos along veins.
 VEINS: 0.1-1.0 mm veins of saponite plus minor pyrite.
 STRUCTURE: Planar, gently-dipping veins (4°-15°). Three steeply-dipping oriented veins in Pieces 1b and 1c. One microfault with a thin band of cataclaste containing fibrous saponite in Pieces 1b and 1c.

Core Photo



206-1256C-9R-5 (Section top: 290.17 mbsf)

UNIT: 18C

ROCK NAME: Fine-grained basalt

SUMMARY DESCRIPTION: Massive fine-grained basalt.

PIECES: 1-2 (continues next section; igneous description based on 9R-5 Piece 1)

CONTACTS:

Upper: gradational change in grain size

Lower: gradational change in grain size

COLOR: bluish black (5PB 2.5/1)

PHENOCRYSTS: none apparent

GROUNDMASS:

Grain size: fine-grained

Texture: intergranular

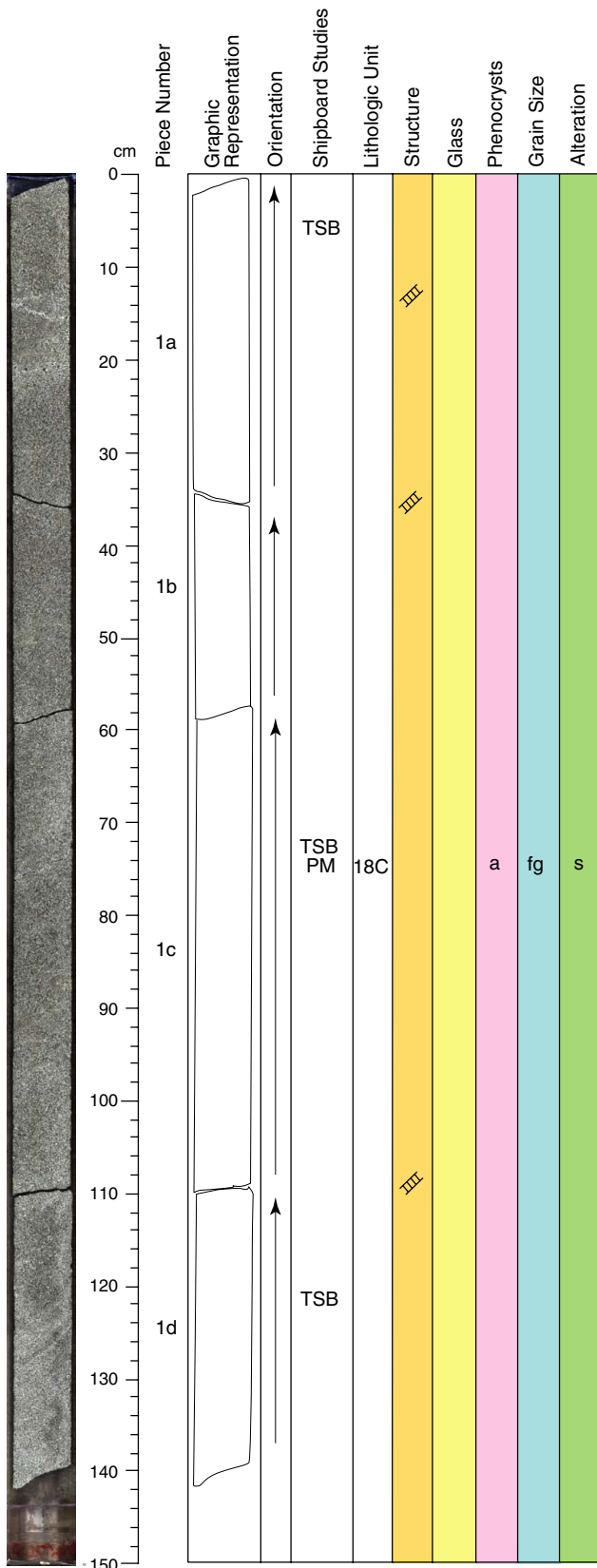
VESICLES: none

ALTERATION: Dark gray slightly altered basalt.

VEINS: 0.1-1.0 mm veins of saponite plus minor pyrite. Local 0.5-2.5 mm wide late magmatic veins contain intergrowths of quartz and albite plus late phyllosilicates and pyrite.

STRUCTURE: Veins have mostly planar morphology. Vein dips distributed between 6°-13° and 20°-28°. Two steeply-dipping oriented veins in Pieces 2a and 2b. Late magmatic veins dip gently from 7°-28°.

Core Photo



206-1256C-9R-6 (Section top: 291.66 mbsf)

UNIT: 18C

ROCK NAME: Fine-grained basalt

SUMMARY DESCRIPTION: Massive fine-grained basalt.

PIECES: 1 (igneous description based on 9R-5 Piece 1)

CONTACTS:

Upper: gradational change in grain size

Lower: gradational change in grain size

COLOR: bluish black (5PB 2.5/1)

PHENOCRYSTS: none apparent

GROUNDMASS:

Grain size: fine grained

Texture: intergranular

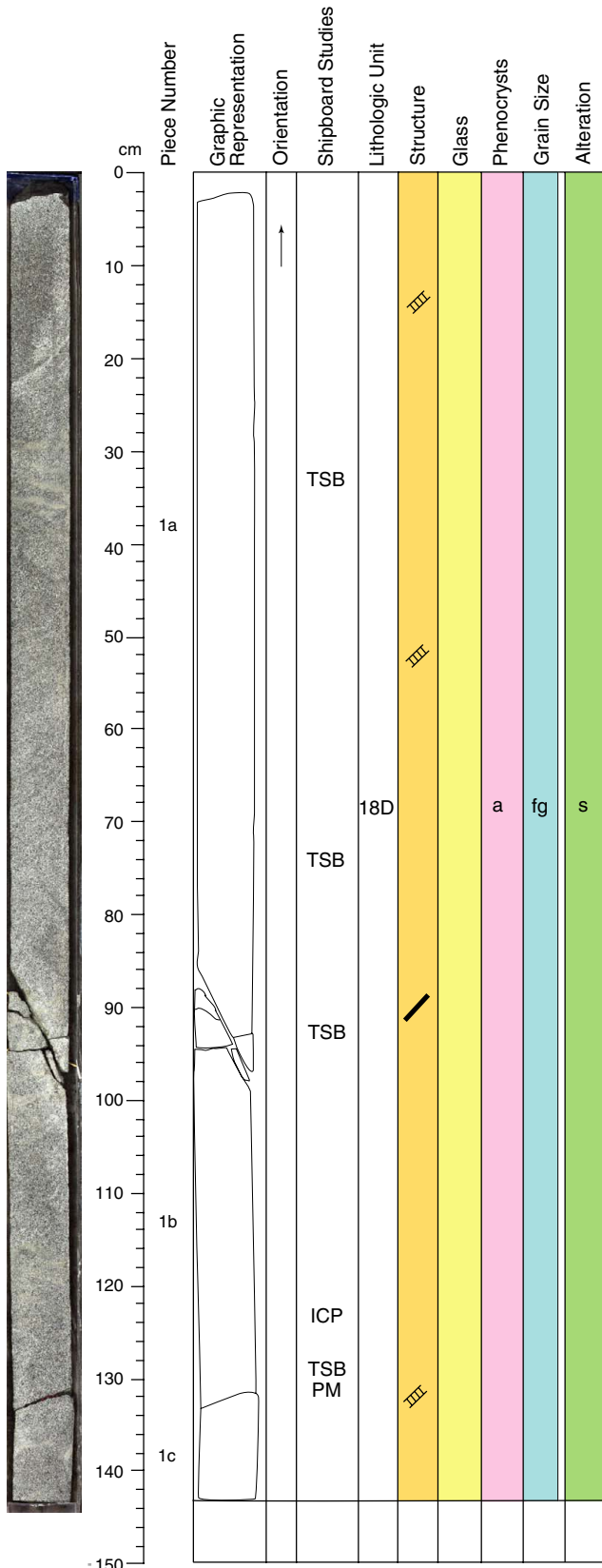
VESICLES: none

ALTERATION: Dark gray slightly altered basalt.

VEINS: 0.1-1.0 mm veins of saponite plus minor pyrite. Local 0.5-2.5 mm wide late magmatic veins contain intergrowths of quartz and albite plus late phyllosilicates and pyrite.

STRUCTURE: Veins have mostly planar morphology. Stair-stepped vein in Pieces 1a and 1c. Vein dips are distributed between 13°-24° and 40°-50°. One nearly horizontal oriented vein between Pieces 1c and 1d. Late magmatic veins dip gently from 13°-22°.

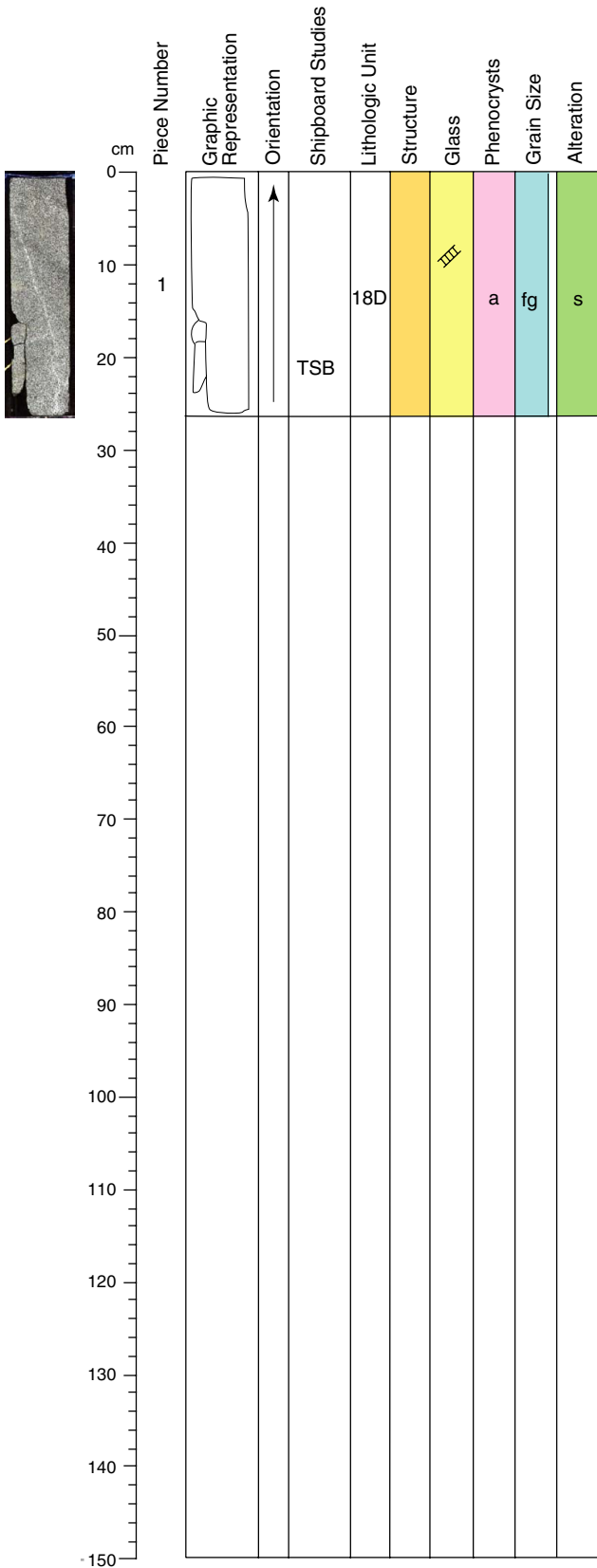
Core Photo



206-1256C-9R-7 (Section top: 293.08 mbsf)

UNIT: 18D
 ROCK NAME: Fine-grained basalt
 SUMMARY DESCRIPTION: Massive fine-grained basalt
 PIECES: 1 (continues next section; igneous description based on Piece 1c)
 CONTACTS:
 Upper: gradational change in grain size
 Lower: gradational change in grain size
 COLOR: bluish gray (5PB 3/1)
 PHENOCRYSTS: none apparent
 GROUNDMASS:
 Grain size: fine-grained
 Texture: intergranular
 VESICLES: none
 ALTERATION: Dark gray slightly altered basalt. Rare 10 mm wide light gray alteration halos along veins.
 VEINS: 0.1-1.0 mm veins of saponite plus minor pyrite.
 STRUCTURE: One microfault with a thin band of cataclasite and fibrous saponite in Piece 1b. Microfault dips 66° with a splayed morphology. Vein dips are bimodally distributed between 8°-15° and 25°-40°.

Core Photo



206-1256C-9R-8 (Section top: 294.51 mbsf)

UNIT: 18D

ROCK NAME: Fine-grained basalt

SUMMARY DESCRIPTION: Massive fine-grained basalt

PIECES: 1 (igneous description based on 9R-7 Piece 1c)

CONTACTS:

Upper: gradational change in grain size

Lower: gradational change in grain size

COLOR: bluish gray (5PB 3/1)

PHENOCRYSTS: none apparent

GROUNDMASS:

Grain size: fine-grained

Texture: intergranular

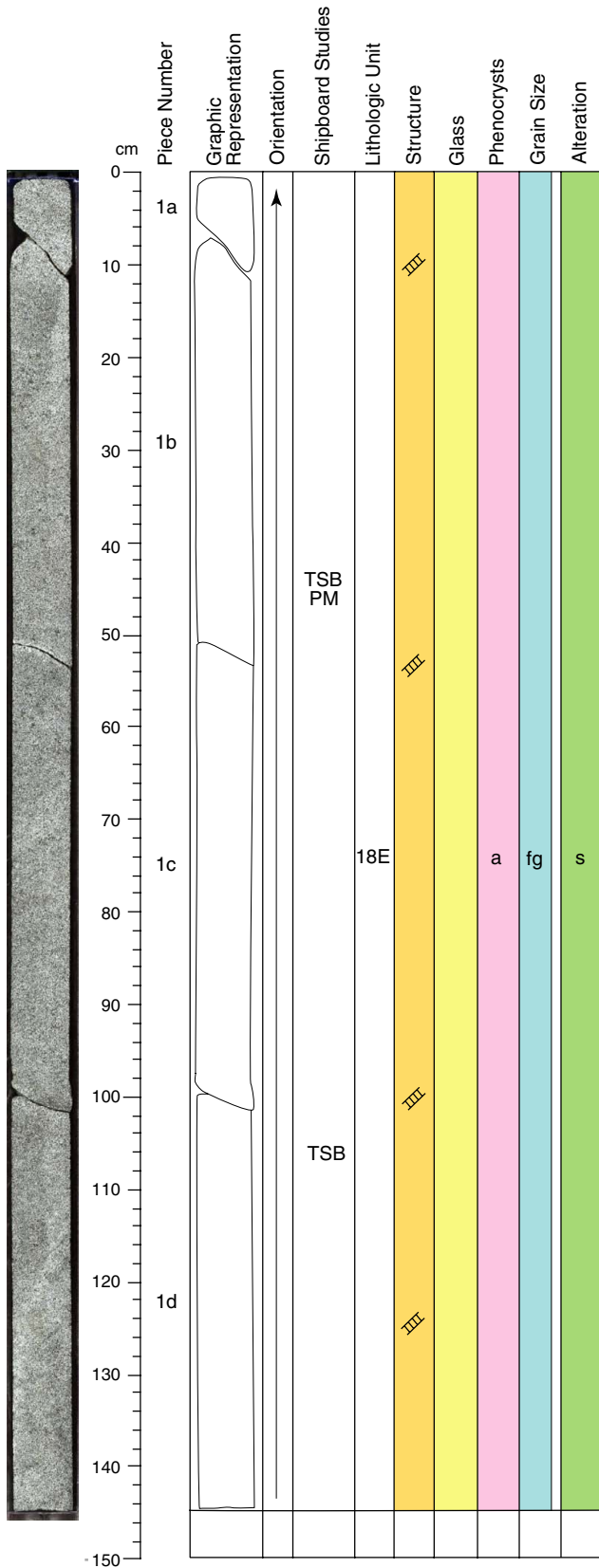
VESICLES: none

ALTERATION: Dark gray slightly altered basalt.

VEINS: 0.1-1.0 mm veins of saponite plus minor pyrite. Local 0.3-1.0 mm wide late magmatic veins contain intergrowths of quartz and albite plus late phyllosilicates and pyrite.

STRUCTURE: Late magmatic vein dips steeply (73°). Oriented veins dip 19° and 67°.

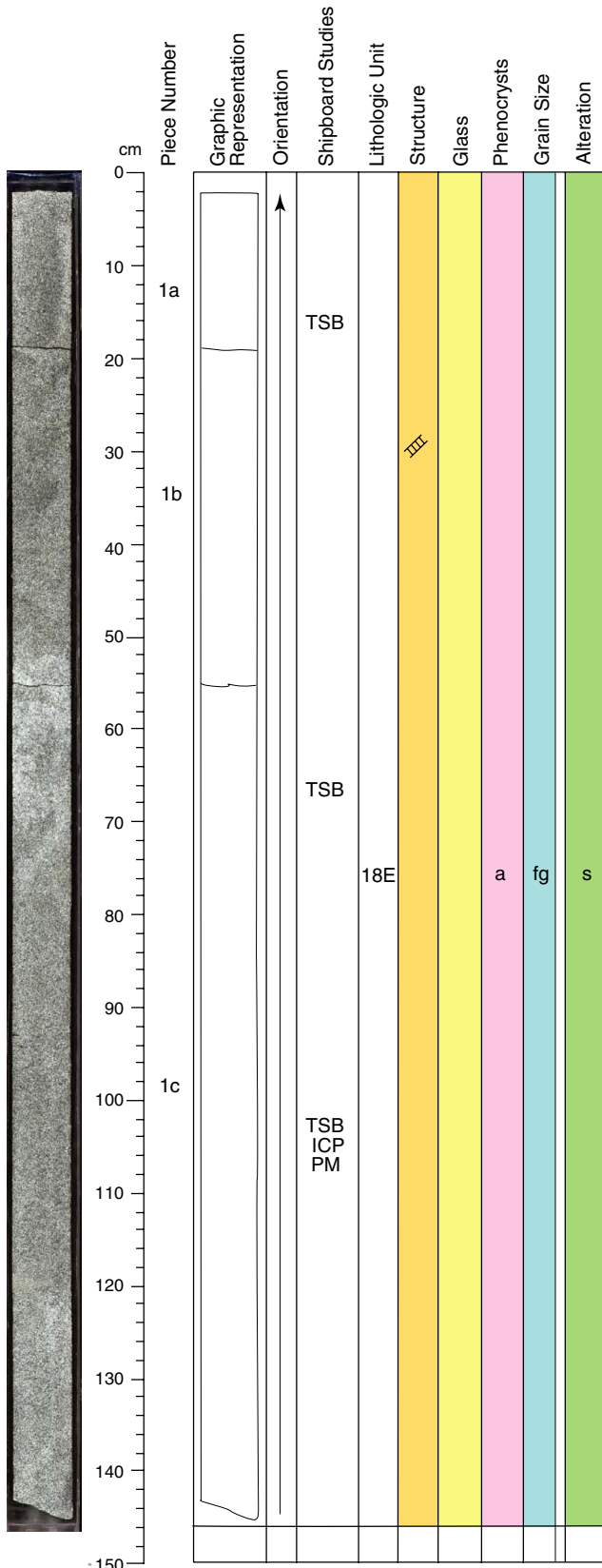
Core Photo



206-1256C-10R-1 (Section top: 293.9 mbsf)

UNIT: 18E
 ROCK NAME: Fine-grained basalt
 SUMMARY DESCRIPTION: Massive fine-grained basalt.
 PIECES: 1 (continues next section; igneous description based on Piece 1)
 CONTACTS:
 Upper: gradational change in grain size
 Lower: gradational change in grain size
 COLOR: bluish black (10B 2.5/1)
 PHENOCRYSTS: none apparent
 GROUNDMASS:
 Grain size: fine-grained
 Texture: intergranular
 VESICLES: none
 ALTERATION: Slightly altered, dark gray basalt. 4-6 mm wide light gray alteration halos along some veins.
 VEINS: 0.1-0.4 mm rare veins of saponite and trace pyrite.
 STRUCTURE: Veins have mostly planar morphology. Vein dips are bimodally distributed between 14°-35° and 48°-54°. Two oriented late magmatic veins dip 24° and 81°.
 ADDITIONAL COMMENTS: Rare glomerocrysts up to 0.8 mm across consisting of plagioclase plus clinopyroxene plus or minus olivine.

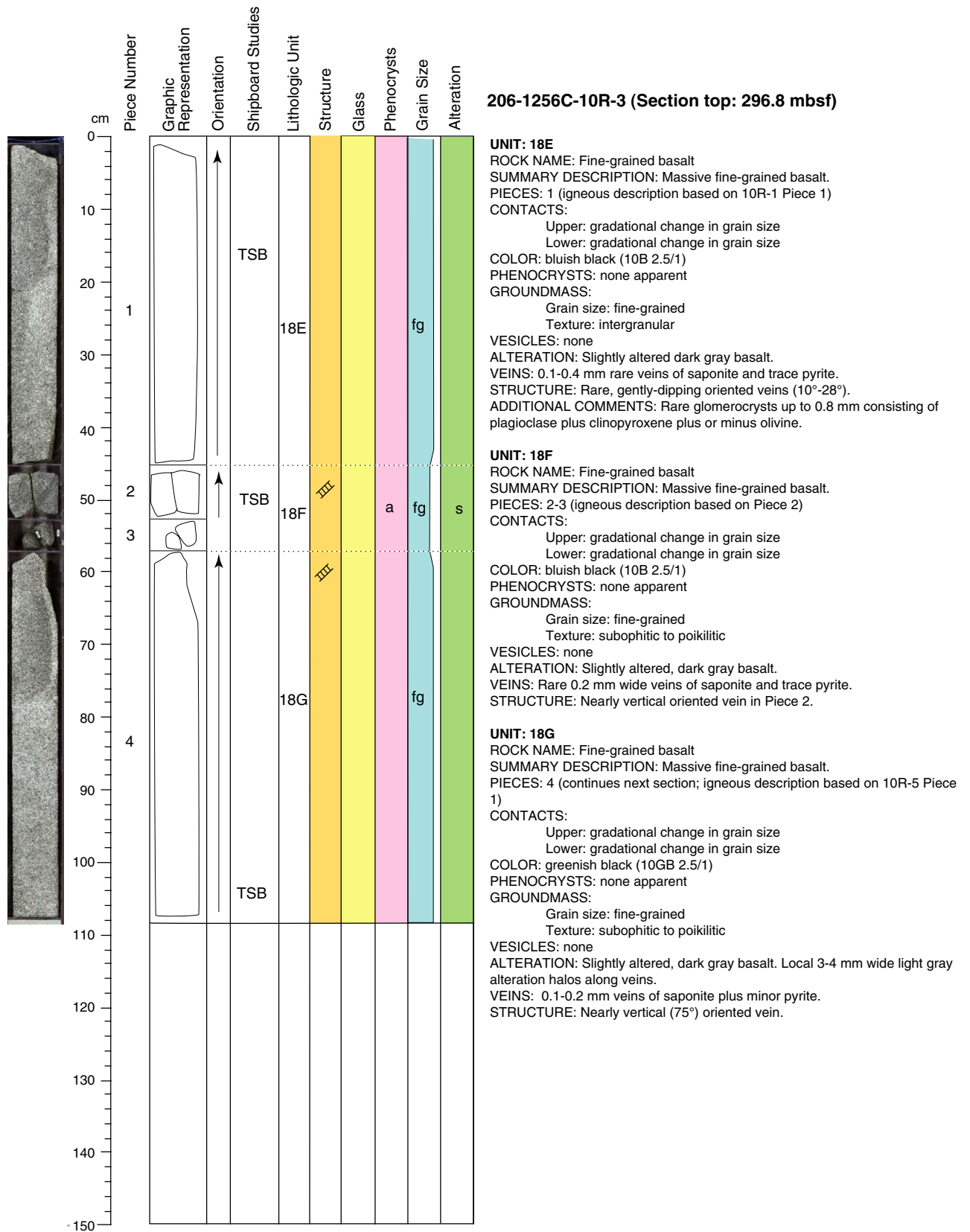
Core Photo



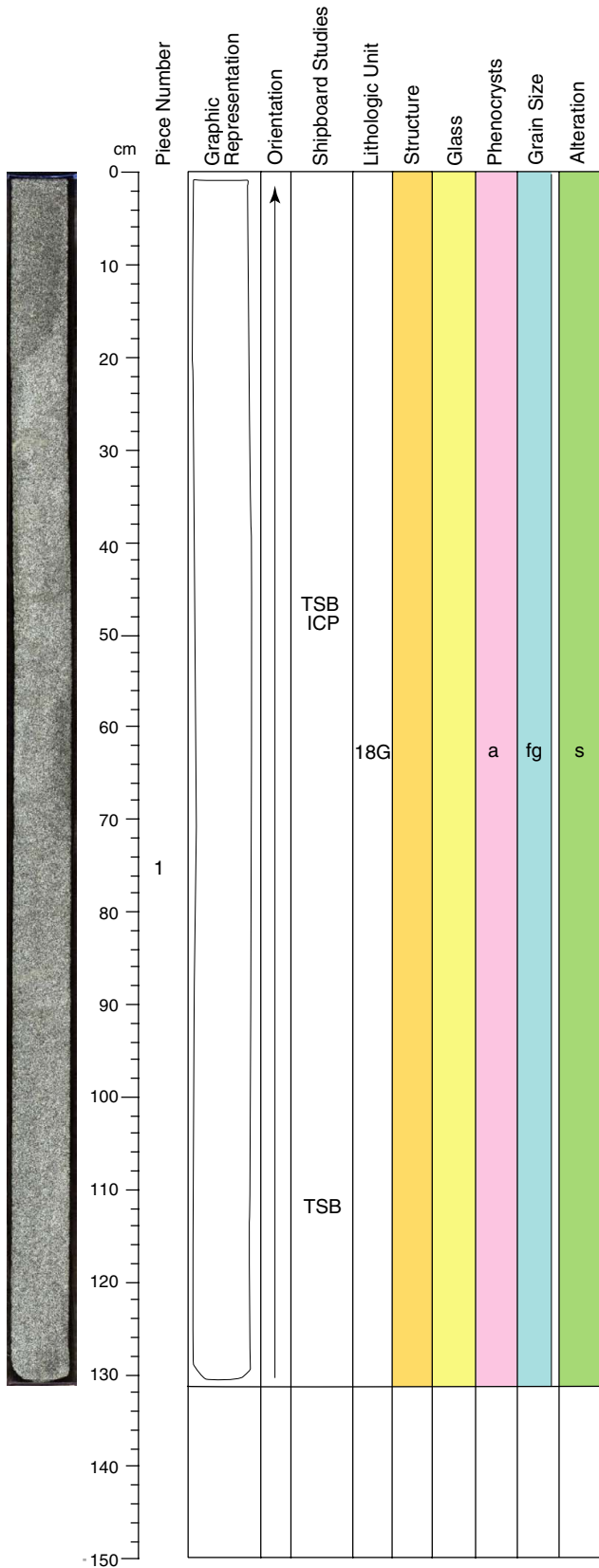
206-1256C-10R-2 (Section top: 295.35 mbsf)

UNIT: 18E
 ROCK NAME: Fine-grained basalt
 SUMMARY DESCRIPTION: Massive fine-grained basalt.
 PIECES: 1 (continues next section; igneous description based on 10R-1 Piece 1)
 CONTACTS:
 Upper: gradational change in grain size
 Lower: gradational change in grain size
 COLOR: bluish black (10B 2.5/1)
 PHENOCRYSTS: none apparent
 GROUNDMASS:
 Grain size: fine-grained
 Texture: intergranular
 VESICLES: none
 ALTERATION: Slightly altered, dark gray basalt.
 VEINS: 0.1-0.4 mm rare veins of saponite and trace pyrite.
 STRUCTURE: Rare veins have mostly with planar morphology. Vein dips range between 7°-27°.
 ADDITIONAL COMMENTS: Rare glomerocrysts up to 0.8 mm consisting of plagioclase plus clinopyroxene plus or minus olivine.

Core Photo



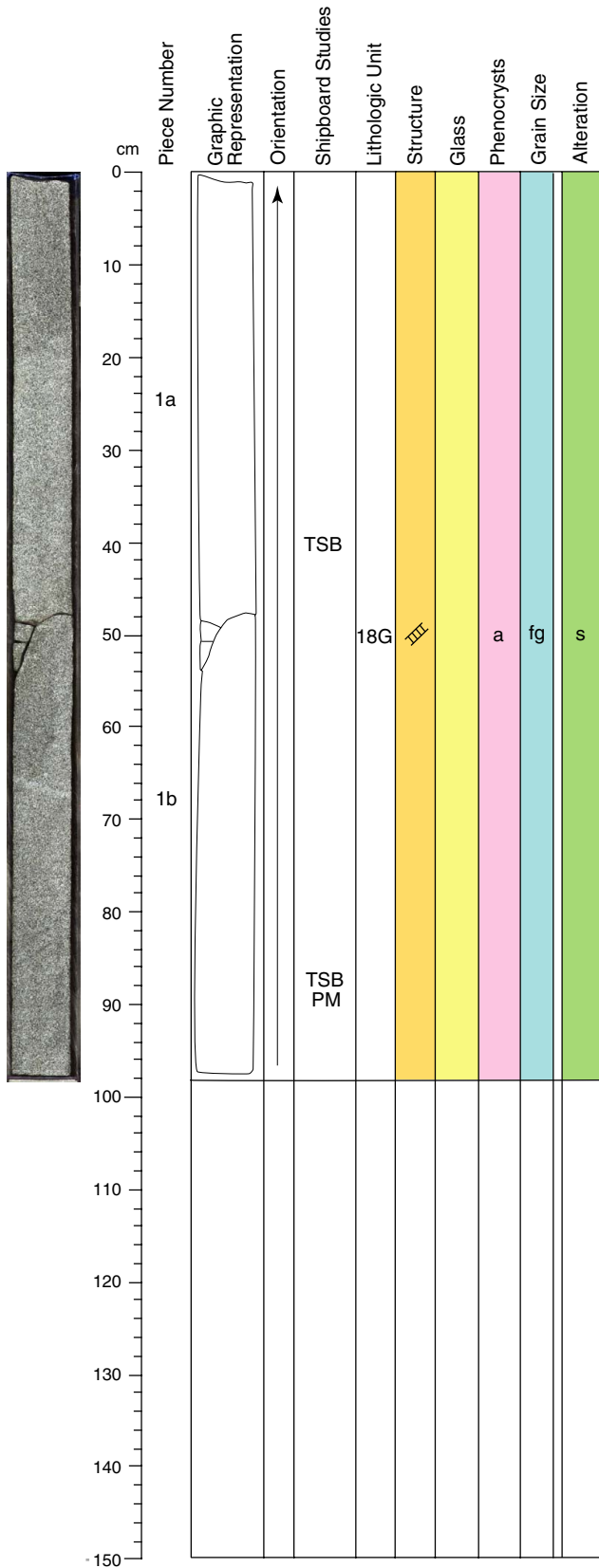
Core Photo



206-1256C-10R-4 (Section top: 297.86 mbsf)

UNIT: 18G
 ROCK NAME: Fine-grained basalt
 SUMMARY DESCRIPTION: Massive fine-grained basalt.
 PIECES: 1 (continues next section; igneous description based on 10R-5 Piece 1)
 CONTACTS:
 Upper: gradational change in grain size
 Lower: gradational change in grain size
 COLOR: greenish black (10GB 2.5/1)
 PHENOCRYSTS: none apparent
 GROUNDMASS:
 Grain size: fine-grained
 Texture: subophitic to poikilitic
 VESICLES: none
 ALTERATION: Slightly altered, dark gray basalt. Local 3-4 mm wide light gray alteration halos along veins.
 VEINS: 0.1-0.2 mm veins of saponite plus minor pyrite.
 STRUCTURE: No oriented veins.

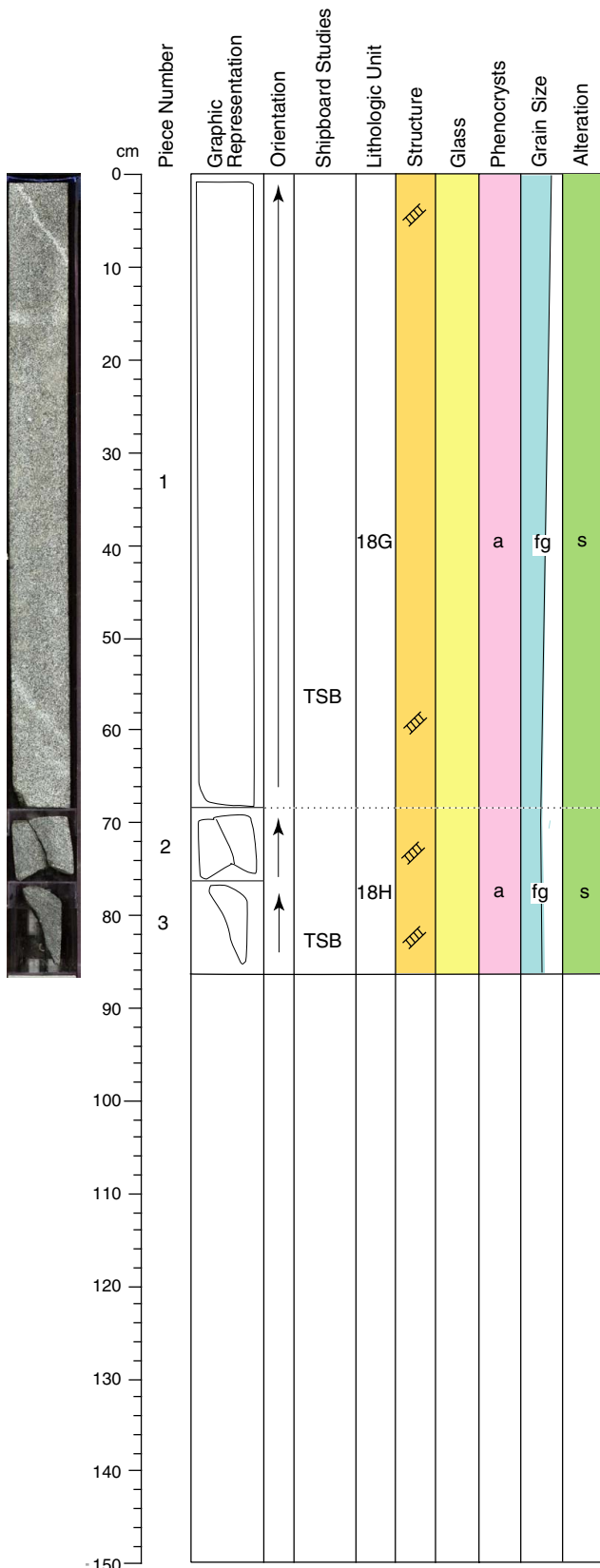
Core Photo



206-1256C-10R-5 (Section top: 299.16 mbsf)

UNIT: 18G
 ROCK NAME: Fine-grained basalt
 SUMMARY DESCRIPTION: Massive fine-grained basalt.
 PIECES: 1 (continues next section; igneous description based on Piece 1)
 CONTACTS:
 Upper: gradational change in grain size
 Lower: gradational change in grain size
 COLOR: greenish black (10GB 2.5/1)
 PHENOCRYSTS: none apparent
 GROUNDMASS:
 Grain size: fine-grained
 Texture: subophitic to poikilitic
 VESICLES: none
 ALTERATION: Slightly altered, dark gray basalt. Local 3-4 mm wide light gray alteration halos along veins.
 VEINS: 0.1-0.2 mm veins of saponite plus minor pyrite.
 STRUCTURE: Rare Y-shaped vein intersections.

Core Photo



206-1256C-10R-6 (Section top: 300.13 mbsf)

UNIT: 18G

ROCK NAME: Fine-grained basalt
 SUMMARY DESCRIPTION: Massive fine-grained basalt.
 PIECES: 1 (igneous description based on 10R-5 Piece 1)
 CONTACTS:
 Upper: gradational change in grain size
 Lower: gradational change in grain size
 COLOR: greenish black (10GB 2.5/1)
 PHENOCRYSTS: none apparent
 GROUNDMASS:
 Grain size: fine-grained
 Texture: subophitic to poikilitic

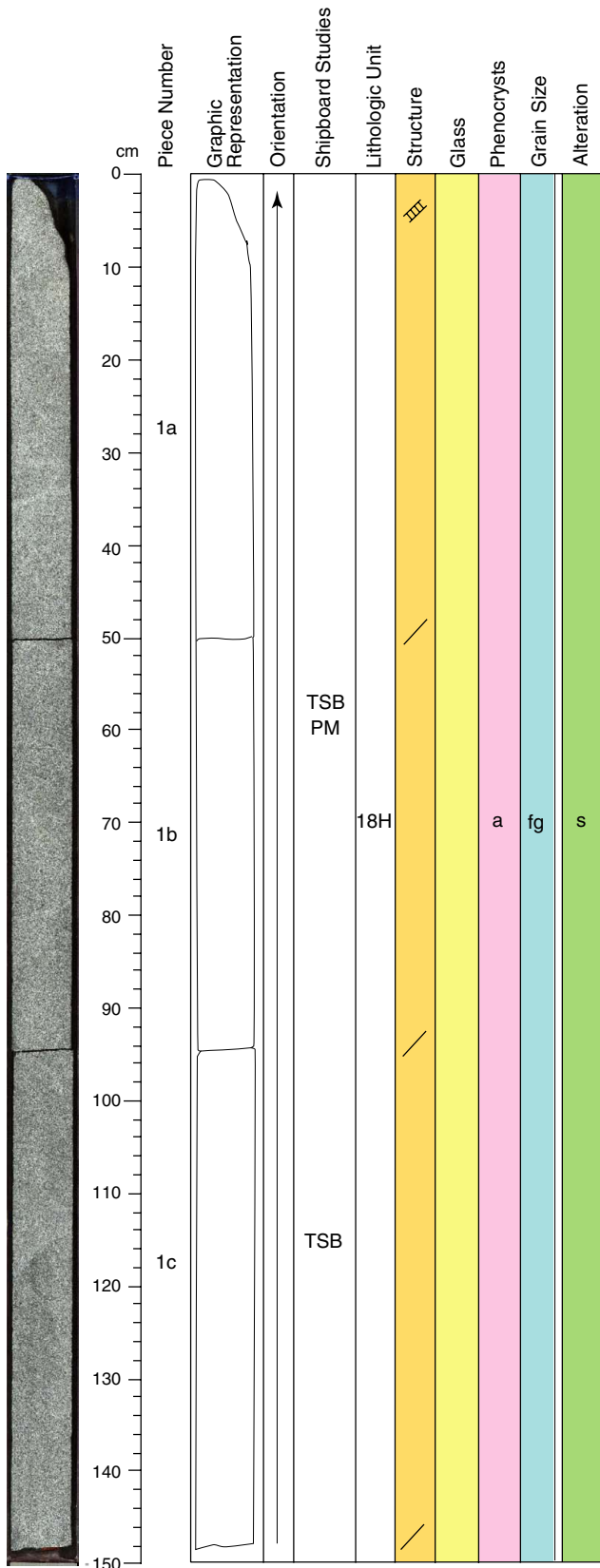
VESICLES: none
 ALTERATION: Slightly altered, dark gray basalt. Local 3-4 mm wide light gray alteration halos along veins.
 VEINS: 0.1-0.2 mm veins of saponite plus minor pyrite.
 STRUCTURE: Vein dips range between 17°-29°. Late magmatic veins dip between 5°-57°. One late magmatic vein displays micro-riedel array.

UNIT: 18H

ROCK NAME: Fine-grained basalt
 SUMMARY DESCRIPTION: Massive fine-grained basalt.
 PIECES: 2-3 (continues next section; igneous description based on 11R-3 Piece 1c)
 CONTACTS:
 Upper: gradational change in grain size
 Lower: gradational change in grain size
 COLOR: black (N2.5/)
 PHENOCRYSTS: none apparent
 GROUNDMASS:
 Grain size: fine-grained
 Texture: subophitic to poikilitic

VESICLES: none
 ALTERATION: Dark gray slightly altered basalt.
 VEINS: 0.1-1.0 mm veins of saponite plus minor pyrite.
 STRUCTURE: Shear vein dipping 75°, with saponite slickenfibers (pitch 24°) in Piece 3.

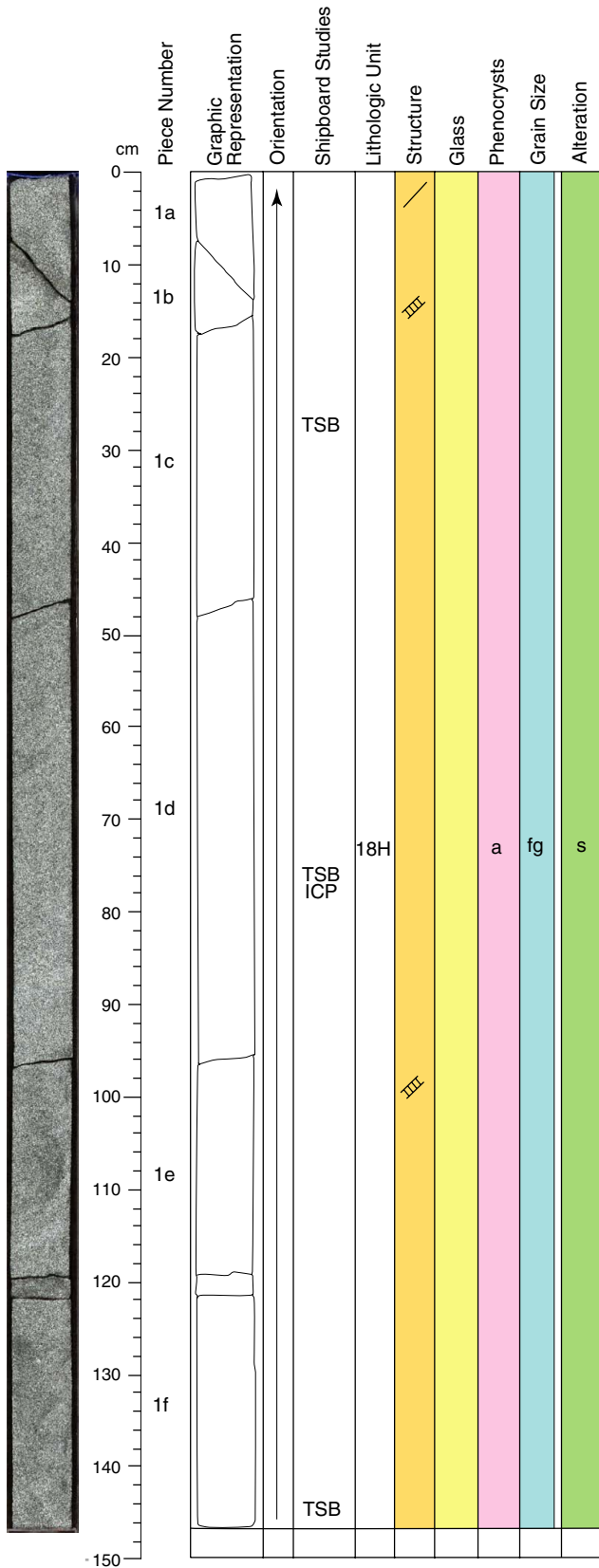
Core Photo



206-1256C-11R-1 (Section top: 303.3 mbsf)

UNIT: 18H
 ROCK NAME: Fine-grained basalt
 SUMMARY DESCRIPTION: Massive fine-grained basalt.
 PIECES: 1 (continues next section; igneous description based on 11R-3 Piece 1c)
 CONTACTS:
 Upper: gradational change in grain size
 Lower: gradational change in grain size
 COLOR: black (N2.5/)
 PHENOCRYSTS: none apparent
 GROUNDMASS:
 Grain size: fine-grained
 Texture: subophitic to poikilitic
 VESICLES: none
 ALTERATION: Dark gray slightly altered basalt.
 VEINS: 0.1-1.0 mm veins of saponite plus minor pyrite.
 STRUCTURE: Rare joints and steeply-dipping veins (74°-90°). Three homogeneously-distributed joints dip from 0°-10°.

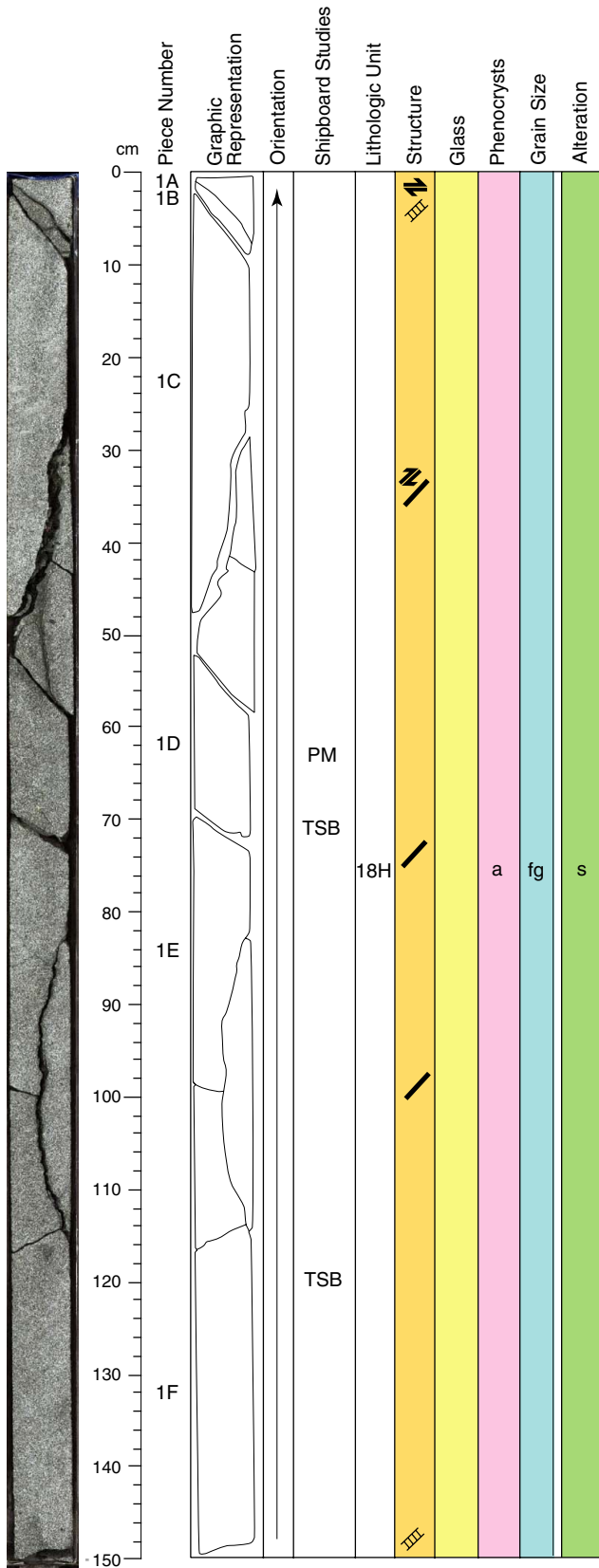
Core Photo



206-1256C-11R-2 (Section top: 304.79 mbsf)

UNIT: 18H
 ROCK NAME: Fine-grained basalt
 SUMMARY DESCRIPTION: Massive fine-grained basalt.
 PIECES: 1 (continues next section; igneous description based on 11R-3 Piece 1c)
 CONTACTS:
 Upper: gradational change in grain size
 Lower: gradational change in grain size
 COLOR: black (N2.5/)
 PHENOCRYSTS: none apparent
 GROUNDMASS:
 Grain size: fine-grained
 Texture: subophitic to poikilitic
 VESICLES: none
 ALTERATION: Dark grey slightly altered basalt.
 VEINS: 0.1-1.0 mm veins of saponite plus minor pyrite.
 STRUCTURE: Rare veins and one joint dipping 10° at top of section. Vein dips are bimodally distributed between 15°-24° and 42°-54°.

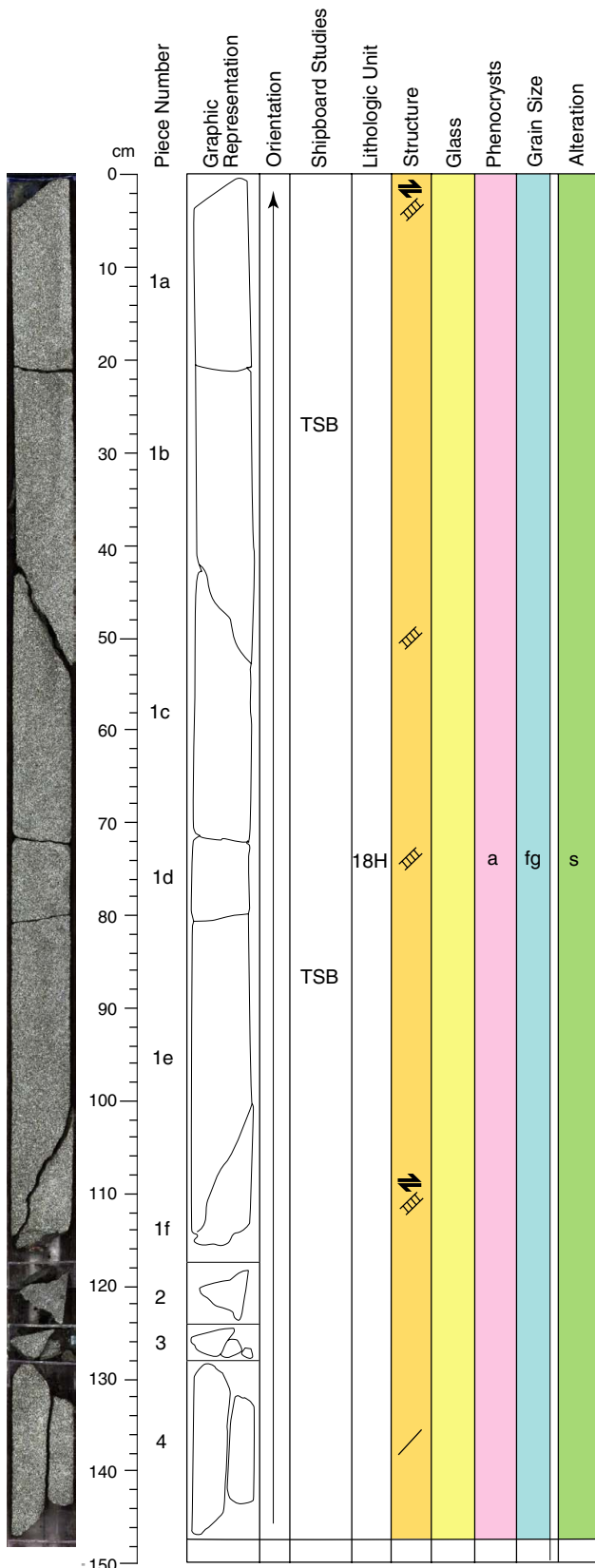
Core Photo



206-1256C-11R-3 (Section top: 306.25 mbsf)

UNIT: 18H
 ROCK NAME: Fine-grained basalt
 SUMMARY DESCRIPTION: Massive fine-grained basalt.
 PIECES: 1 (continues next section; igneous description based on Piece 1c)
 CONTACTS:
 Upper: gradational change in grain size
 Lower: gradational change in grain size
 COLOR: black (N2.5/)
 PHENOCRYSTS: none apparent
 GROUNDMASS:
 Grain size: fine-grained
 Texture: subophitic to poikilitic
 VESICLES: none
 ALTERATION: Dark gray slightly altered basalt.
 VEINS: 0.1-1.0 mm veins of saponite plus minor pyrite.
 STRUCTURE: Diffuse veining and microfaults. Vein dips range from 15°-35°, 42°-51°, and 63°-83°. Four shear veins filled with saponite slickenfibers. One shear vein is gently dipping (pitch = 10°), while the other two are steeply-dipping (pitch = 60°-84°). One microfault dips steeply (83°) with saponite slickenfibers (pitch = 27°). One microfault dips 40°.

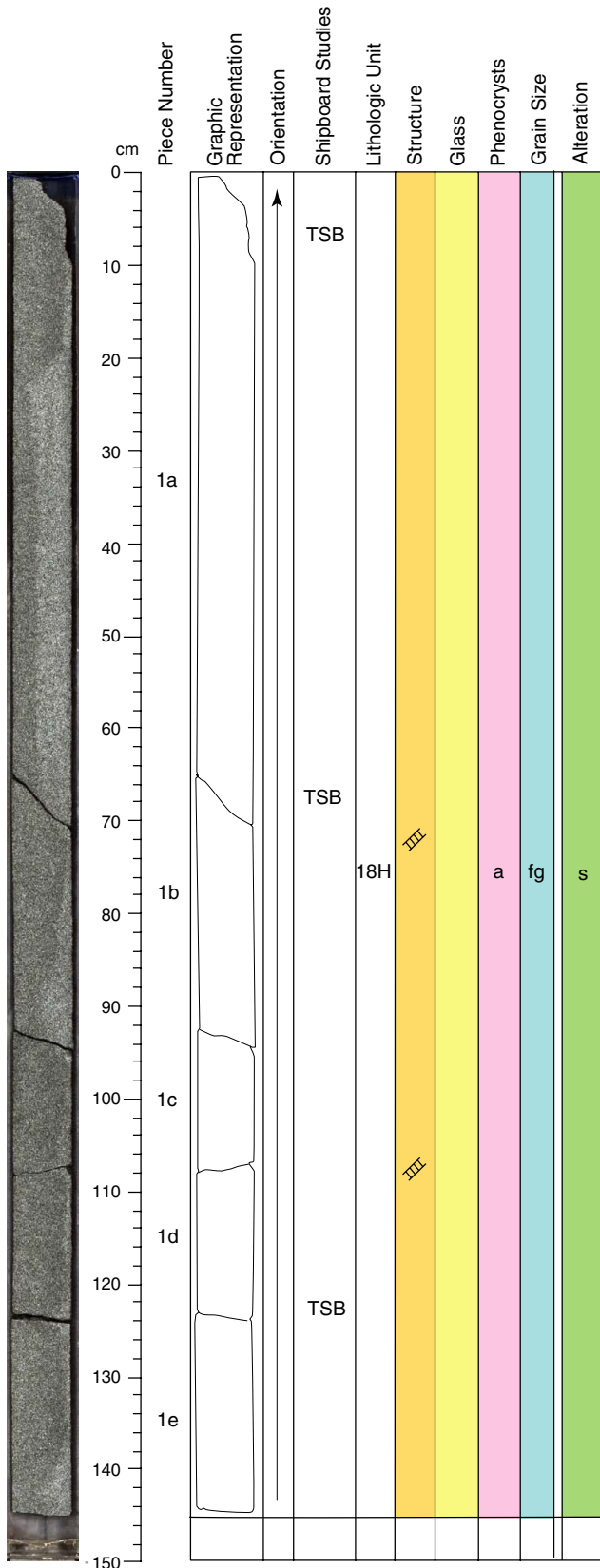
Core Photo



206-1256C-11R-4 (Section top: 307.75 mbsf)

UNIT: 18H
 ROCK NAME: Fine-grained basalt
 SUMMARY DESCRIPTION: Massive fine-grained basalt.
 PIECES: 1-4 (continues next section; igneous description based on 11R-3 Piece 1c)
 CONTACTS:
 Upper: gradational change in grain size
 Lower: gradational change in grain size
 COLOR: black (N2.5/)
 PHENOCRYSTS: none apparent
 GROUNDMASS:
 Grain size: fine-grained
 Texture: subophitic to poikilitic
 VESICLES: none
 ALTERATION: Dark gray slightly altered basalt.
 VEINS: 0.1-1.0 mm veins of saponite plus minor pyrite.
 STRUCTURE: One nearly vertical joint in Piece 4. Vein dips range from 0°-12°. One vein dips steeply (63°). Three moderately- to steeply-dipping shear veins (48°-64°) contain saponite slickenfibers. Slickenfibers in one of these veins dip steeply (pitch = 90°) while the other two dip gently (pitch = 33°). One oriented late magmatic vein.

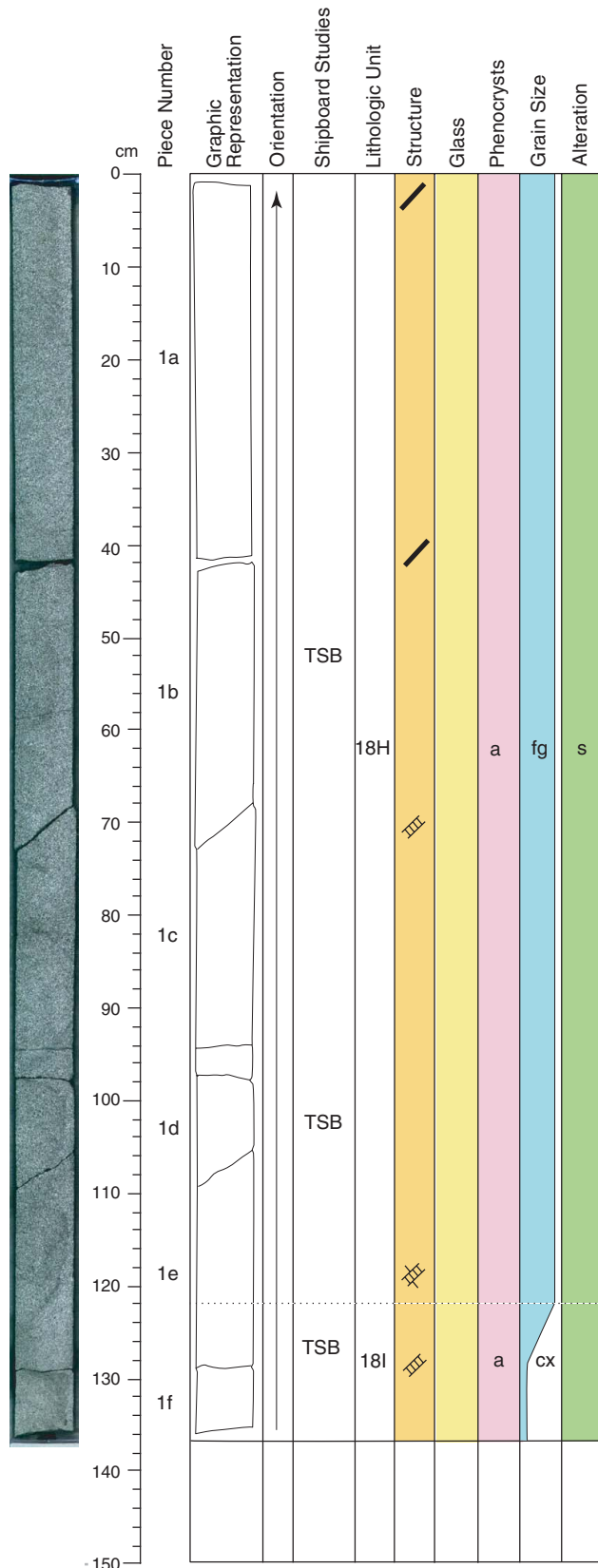
Core Photo



206-1256C-11R-5 (Section top: 309.22 mbsf)

UNIT: 18H
 ROCK NAME: Fine-grained basalt
 SUMMARY DESCRIPTION: Massive fine-grained basalt.
 PIECES: 1 (continues next section; igneous description based on 11R-3 Piece 1c)
 CONTACTS:
 Upper: gradational change in grain size
 Lower: gradational change in grain size
 COLOR: black (N2.5/)
 PHENOCRYSTS: none apparent
 GROUNDMASS:
 Grain size: fine-grained
 Texture: subophitic to poikilitic
 VESICLES: none
 ALTERATION: Dark gray slightly altered basalt.
 VEINS: 0.1-1.0 mm veins of saponite plus minor pyrite.
 STRUCTURE: Most veins dip gently (3°-19°). One steeply-dipping vein (57°).
 One moderately-dipping (46°) shear vein filled with steeply-dipping saponite slickenfibers (pitch = 80°).

Core Photo

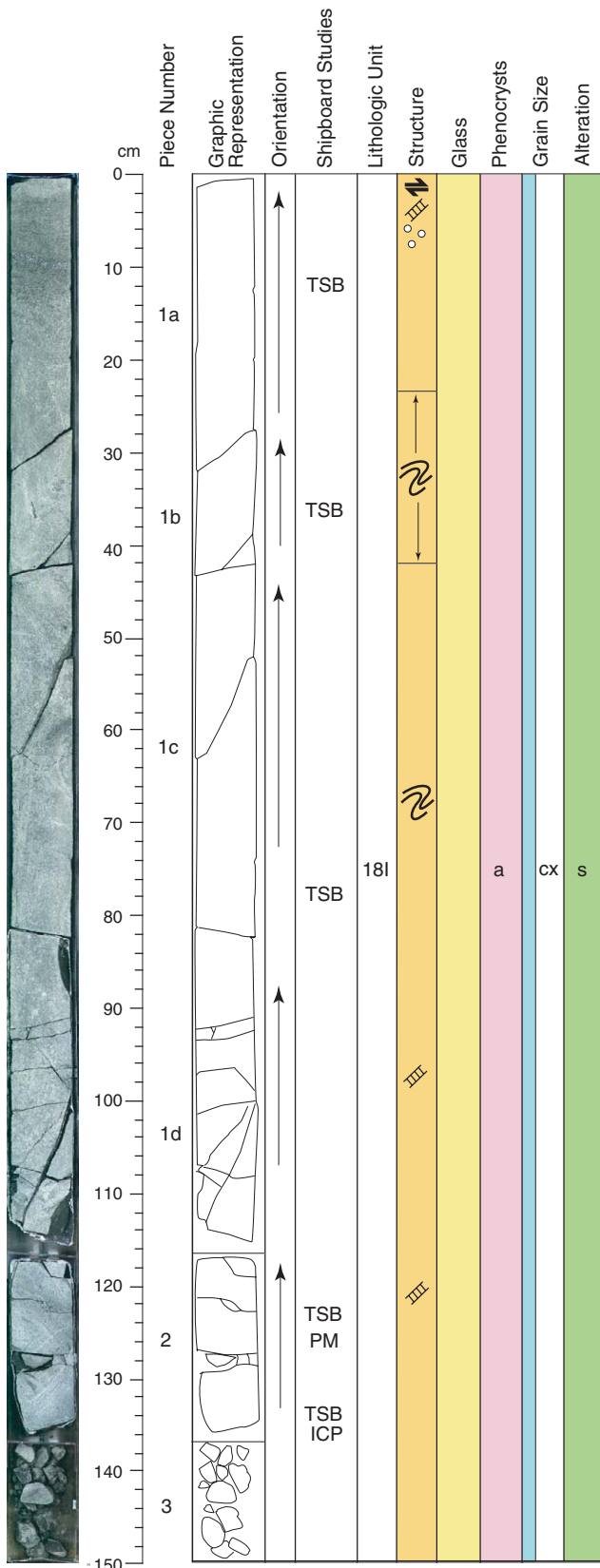


206-1256C-11R-6 (Section top: 310.68 mbsf)

UNIT: 18H
 ROCK NAME: Fine-grained basalt
 SUMMARY DESCRIPTION: Massive fine-grained basalt.
 PIECES: 1a-1e (igneous description based on 11R-3 Piece 1c)
 CONTACTS:
 Upper: gradational change in grain size
 Lower: gradational change in grain size
 COLOR: black (N2.5/)
 PHENOCRYSTS: none apparent
 GROUNDMASS:
 Grain size: fine-grained
 Texture: subophitic to poikilitic
 VESICLES: none
 ALTERATION: Dark gray slightly altered basalt.
 VEINS: 0.1-1.0 mm veins of saponite plus minor pyrite.
 STRUCTURE: Vein dips are bimodally distributed between 0°-18° and 39°-55°. Conjugate vein system occurs in the lower part of the section. One nearly horizontal (40°) joint. One 2.5-mm-thick horizontal fault with slickenfibers and a thin band of cataclasis.

UNIT: 18I
 ROCK NAME: Aphyric cryptocrystalline basalt
 SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt flow margin.
 PIECES: 1f (continues next section; igneous description based on 11R-7 Piece 1)
 CONTACTS:
 Upper: gradational change in grain size
 Lower: not recovered
 COLOR: black (N2.5/)
 PHENOCRYSTS
 Olivine tr % 0.3 mm 100 % altered to saponite
 Clinopyroxene <1% 0.2-0.4 mm
 GROUNDMASS:
 Grain size: cryptocrystalline
 Texture: granoblastic
 VESICLES: none
 ALTERATION: Dark gray slightly altered basalt. Rare 1 mm wide black alteration halos along veins.
 VEINS: 0.1-0.5 mm veins of saponite plus minor pyrite.
 STRUCTURE: Moderately abundant nearly horizontal veins. Joints in Piece 1.
 ADDITIONAL COMMENTS: <1% glomerocrysts of plagioclase plus clinopyroxene plus or minus olivine. Upper subunit boundary is defined by a change in grain size from fine-grained to cryptocrystalline in the interval 120-125 cm.

Core Photo



206-1256C-11R-7 (Section top: 312.04 mbsf)

UNIT: 18l

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt flow margin.

PIECES: 1-3 (igneous description based on Piece 1)

CONTACTS:

Upper: gradational change in grain size

Lower: not recovered

COLOR: black (N2.5/)

PHENOCRYSTS

Olivine tr % 0.3 mm 100 % altered to saponite

Clinopyroxene <1% 0.2-0.4 mm

GROUNDMASS:

Grain size: cryptocrystalline

Texture: granoblastic

VESICLES: Stretched vesicles at the top of section.

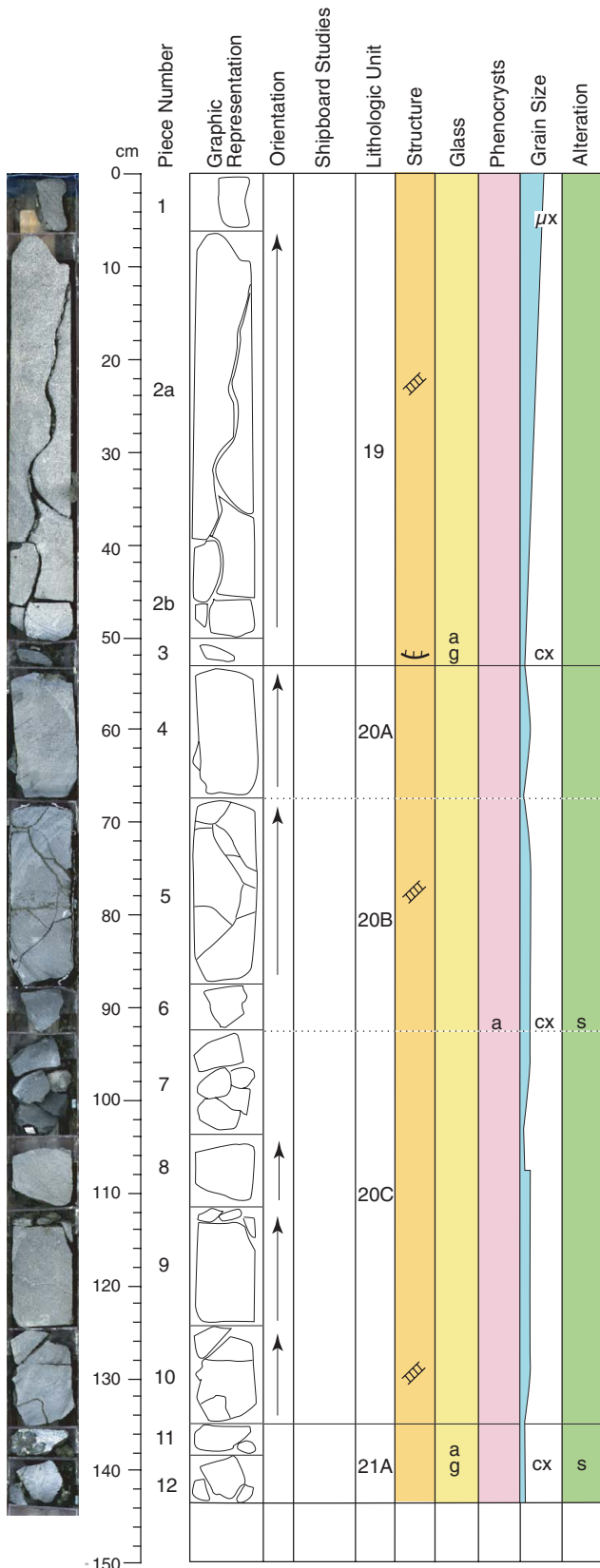
ALTERATION: Dark gray slightly altered basalt. Rare 1 mm wide black alteration halos along veins.

VEINS: 0.1-0.5 mm veins of saponite plus minor pyrite. Minor 1.5-2.0 mm silica veins.

STRUCTURE: Vein dips are bimodally distributed between 9°-19° and 53°-77°. Steeply dipping (77°) shear veins, with shallowly-dipping slickenfibers (pitch = 10°-15°) in Pieces 1c and 1d. Moderately- to steeply- dipping (49°-69°) veins filled with intergrowths of quartz and albite plus late phyllosilicates plus or minus opaque minerals in Pieces 1a and 1d. Veins with plagioclase plus clinopyroxene plus opaque minerals are folded in Piece 1a. Folded veins have nearly isoclinal shape with steeply-dipping axial planes. These veins are gently refolded and cut by coarser-grained veins, shear bands, and tension gashes. Gently-dipping (10°-17°) and moderately-dipping (41°) tension gash arrays in Pieces 1a and 1c. Sigmoidal centimeter-sized pull-aparts in Piece 2. Tension gashes and pull-aparts contain intergrowths of quartz and albite with late phyllosilicates +/- opaque minerals.

ADDITIONAL COMMENTS: <1% glomerocrysts of plagioclase plus clinopyroxene +/- olivine. Deformed variolitic margin at base of the flow (Piece 1) which appears recrystallized (granoblastic texture) in thin section.

Core Photo



206-1256C-12R-1 (Section top: 312.8 mbsf)

UNIT: 19

ROCK NAME: Aphyric microcrystalline basalt
 SUMMARY DESCRIPTION: Aphyric microcrystalline to cryptocrystalline basalt sheet flows with chilled margin in Piece 3.
 PIECES: 1-3 (igneous description based on Piece 2)
 CONTACTS:
 Upper: not recovered
 Lower: chilled margin
 COLOR: black (N2.5/)
 PHENOCRYSTS:
 Olivine <1 % 0.5 mm 100 % altered to saponite
 GROUNDMASS:
 Grain size: microcrystalline to cryptocrystalline
 Texture: intergranular
 VESICLES: Sparsely vesicular filled with saponite and pyrite.
 ALTERATION: Dark gray slightly altered basalt.
 VEINS: 0.1-0.5 mm veins of saponite plus minor pyrite.
 STRUCTURE: Vein dips are bimodally distributed between gently-dipping (8°-16°) and moderately-dipping (35°-53°). Curved veins occur in Piece 2a.
 ADDITIONAL COMMENTS: Glomero-crysts (0.3-0.8 mm) of plagioclase plus clinopyroxene.

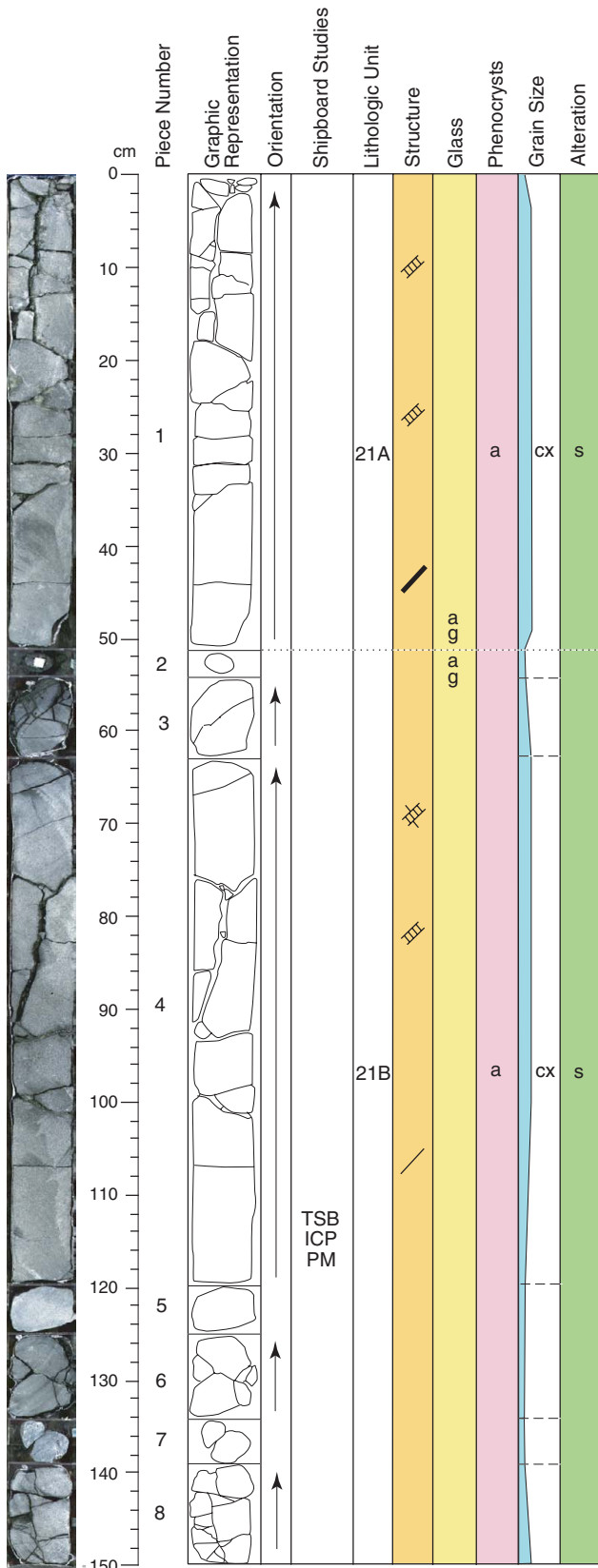
UNIT: 20

ROCK NAME: Aphyric cryptocrystalline basalt
 SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows with altered glass margin at top of Piece 4.
 PIECES: 4-10 (igneous description based on Piece 10)
 CONTACTS:
 Upper: altered glassy margin
 Lower: not recovered
 COLOR: greenish black (5G 2.5/1)
 PHENOCRYSTS:
 Olivine tr% 0.1 mm 100 % altered to saponite
 GROUNDMASS:
 Grain size: cryptocrystalline
 Texture: intergranular
 VESICLES: Sparsely vesicular filled with saponite and pyrite.
 ALTERATION: Dark gray slightly altered basalt.
 VEINS: 0.1-0.5 mm veins of saponite plus minor pyrite.
 STRUCTURE: Flow banding; parallel laminations and alignment of vesicles. Vein dips are bimodally distributed between 8°-23° and 53°-68°.
 ADDITIONAL COMMENTS: Subunits a-c were distinguished based on decreases in grain size.

UNIT: 21

ROCK NAME: Aphyric cryptocrystalline basalt
 SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows.
 PIECES: 11-12 (continues next section; igneous description based on 12R-2 Piece 1)
 CONTACTS:
 Upper: altered glassy margin
 Lower: altered glassy margin
 COLOR: bluish black (5PB 2.5/1)
 PHENOCRYSTS:
 Plagioclase tr % 0.1-0.2 mm
 Olivine 0.1% 0.2-1.0 mm 100% altered to saponite
 Clinopyroxene tr% <0.2 mm
 GROUNDMASS:
 Grain size: cryptocrystalline
 Texture: variolitic
 VESICLES: Very sparsely vesicular filled with saponite.
 ALTERATION: Dark gray slightly altered basalt. Rare 1 mm wide black alteration halos along veins.
 VEINS: 0.1-2.0 mm veins of saponite plus minor pyrite.
 STRUCTURE: No measured veins.
 ADDITIONAL COMMENTS: Subunits a-b defined on the basis of decreases in grain size. 3 cm interval of siliceous interflow sediment (Piece 11).

Core Photo



206-1256C-12R-2 (Section top: 314.24 mbsf)

UNIT: 21

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows.

PIECES: 1-8 (continues next section; igneous description based on Piece 1)

CONTACTS:

Upper: altered glassy margin

Lower: altered glassy margin

COLOR: bluish black (5PB 2.5/1)

PHENOCRYSTS:

Plagioclase tr% 0.1-0.2 mm

Olivine 0.1% 0.2-1.0 mm 100% altered to saponite

Clinopyroxene tr% <0.2 mm

GROUNDMASS:

Grain size: cryptocrystalline

Texture: variolitic

VESICLES: Very sparsely vesicular filled with saponite.

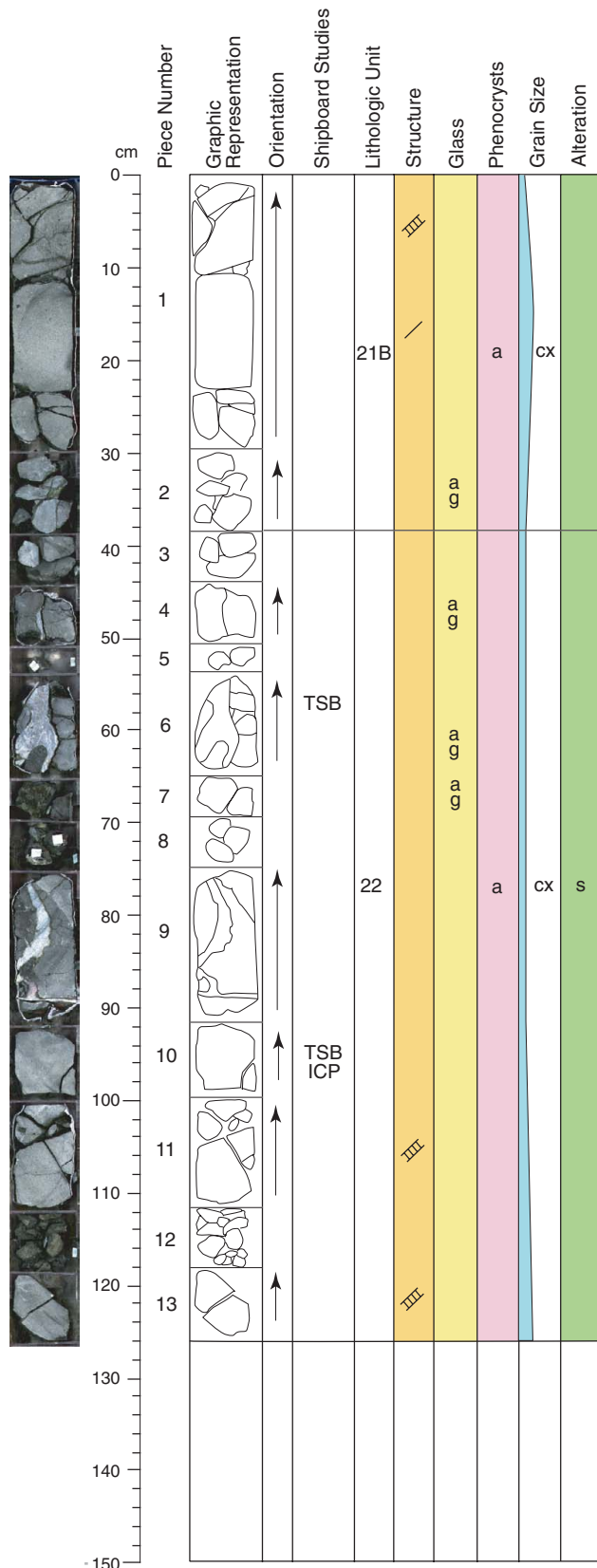
ALTERATION: Dark gray slightly altered basalt. Rare 1 mm wide black alteration halos along veins.

VEINS: 0.1-2.0 mm veins of saponite plus minor pyrite.

STRUCTURE: Diffuse veins with curved morphologies. Gently-dipping (0°-10°) joints in Pieces 2 and 4. Stair-stepped vein in Piece 1. Vein dips are bimodally distributed between 0°-21° and 30°-42°. One steeply dipping vein (68°) in Piece 4. Conjugate vein set in Piece 4. Moderately-dipping (31°) slickenfibers in a gently-dipping (9°) vein in Piece 1.

ADDITIONAL COMMENTS: Subunits a-b defined on the basis of decrease in grain size.

Core Photo



206-1256C-12R-3 (Section top: 315.74 mbsf)

UNIT: 21

ROCK NAME: Aphyric cryptocrystalline basalt
SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows.
PIECES: 1-2 (igneous description based on Piece 1)
CONTACTS:

Upper: Altered glassy margin
Lower: Altered glassy margin

COLOR: bluish black (5PB 2.5/1)

PHENOCRYSTS:

Plagioclase	tr %	0.1-0.2 mm	
Olivine	0.1%	0.2-1.0 mm	100% altered to saponite
Clinopyroxene	tr%	<0.2 mm	

GROUNDMASS:

Grain size: cryptocrystalline
Texture: variolitic

VESICLES: Very sparsely vesicular filled with saponite.

ALTERATION: Dark gray slightly altered basalt. Rare 1 mm wide black alteration halos along veins.

VEINS: 0.1-2.0 mm veins of saponite plus minor pyrite.

STRUCTURE: Diffuse veins. Joints in Pieces 1 and 4. Two gently-dipping oriented veins (3°-13°) in Piece 1.

ADDITIONAL COMMENTS: Subunits a-b defined on the basis of decrease in grain size.

UNIT: 22

ROCK NAME: Aphyric cryptocrystalline basalt
SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt flow margin.
PIECES: 3-13 (continues next section; igneous description based on Piece 9)
CONTACTS:

Upper: altered glass margin
Lower: not recovered

COLOR: dark bluish gray (5PB 3/1)

PHENOCRYSTS:

Plagioclase	0.2%	0.1-0.2 mm
Olivine	0.5%	0.1-0.2 mm
Clinopyroxene	<0.1%	0.1 mm

GROUNDMASS:

Grain size: cryptocrystalline
Texture: variolitic to intersertal

VESICLES: Very sparsely vesicular filled with saponite and pyrite.

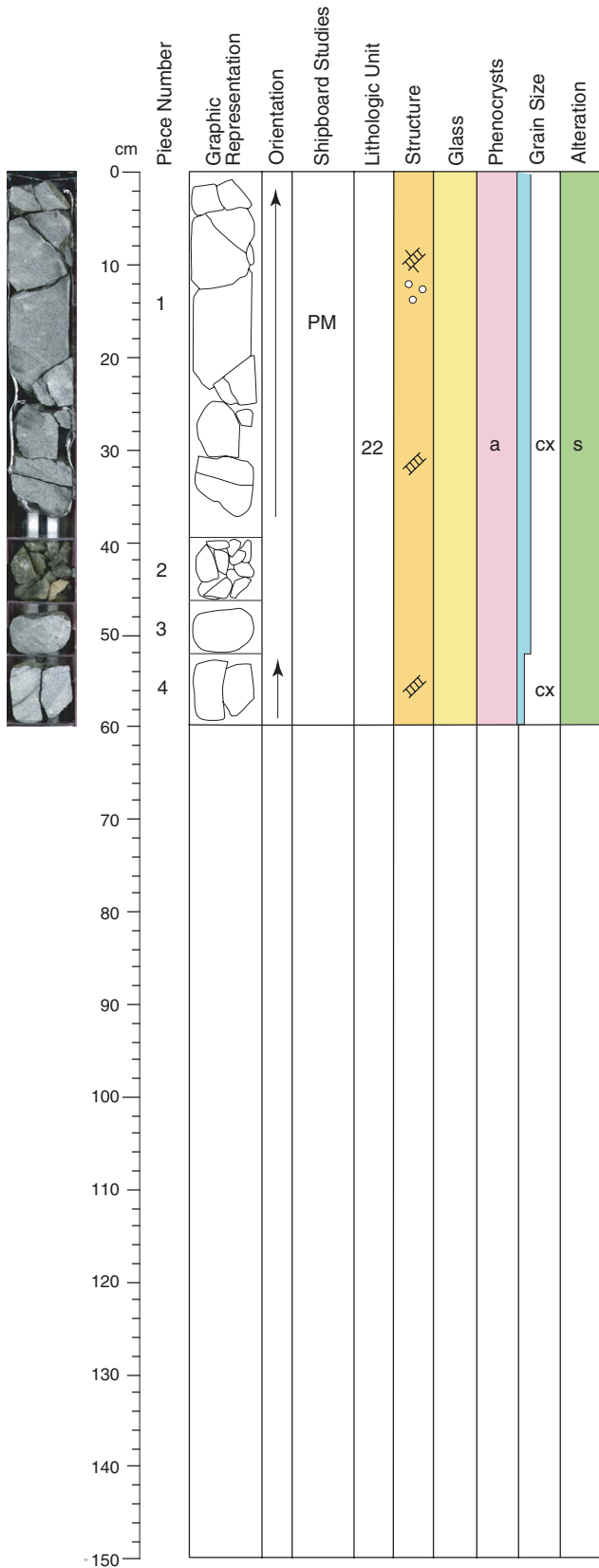
ALTERATION: Dark gray slightly altered basalt.

VEINS: 0.1-0.3 mm veins of saponite plus minor pyrite.

STRUCTURE: Hyaloclastite breccia in Pieces 6 and 9. Moderate to diffuse veining with mostly planar morphology. Two moderately-dipping (34° and 37°) measured veins and one steeply-dipping (71°) vein in Pieces 11 and 13. Two veins cross cut at 90° in Piece 11.

ADDITIONAL COMMENTS: Microgabbroic inclusions up to 3 mm diameter are sporadically present. Groundmass plagioclase is aligned subparallel to the flow surface. Pieces 3-9 are fragmented, jumbled, ropy altered glass, with hydrothermal alteration between clasts and folded crust. Siliceous interflow sediment incorporated into flow-bottom breccia in Pieces 3-9.

Core Photo



206-1256C-12R-4 (Section top: 317.0 mbsf)

UNIT: 22

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt flow margin.

PIECES: 1-4 (igneous description based on 12R-3 Piece 9)

CONTACTS:

Upper: altered glass margin

Lower: not recovered

COLOR: dark bluish grey (5PB 3/1)

PHENOCRYSTS:

Plagioclase 0.2% 0.1-0.2 mm

Olivine 0.5% 0.1-0.2 mm

Clinopyroxene <0.1% 0.1 mm

GROUNDMASS:

Grain size: cryptocrystalline

Texture: variolitic to intersertal

VESICLES: Very sparsely vesicular filled with saponite and pyrite.

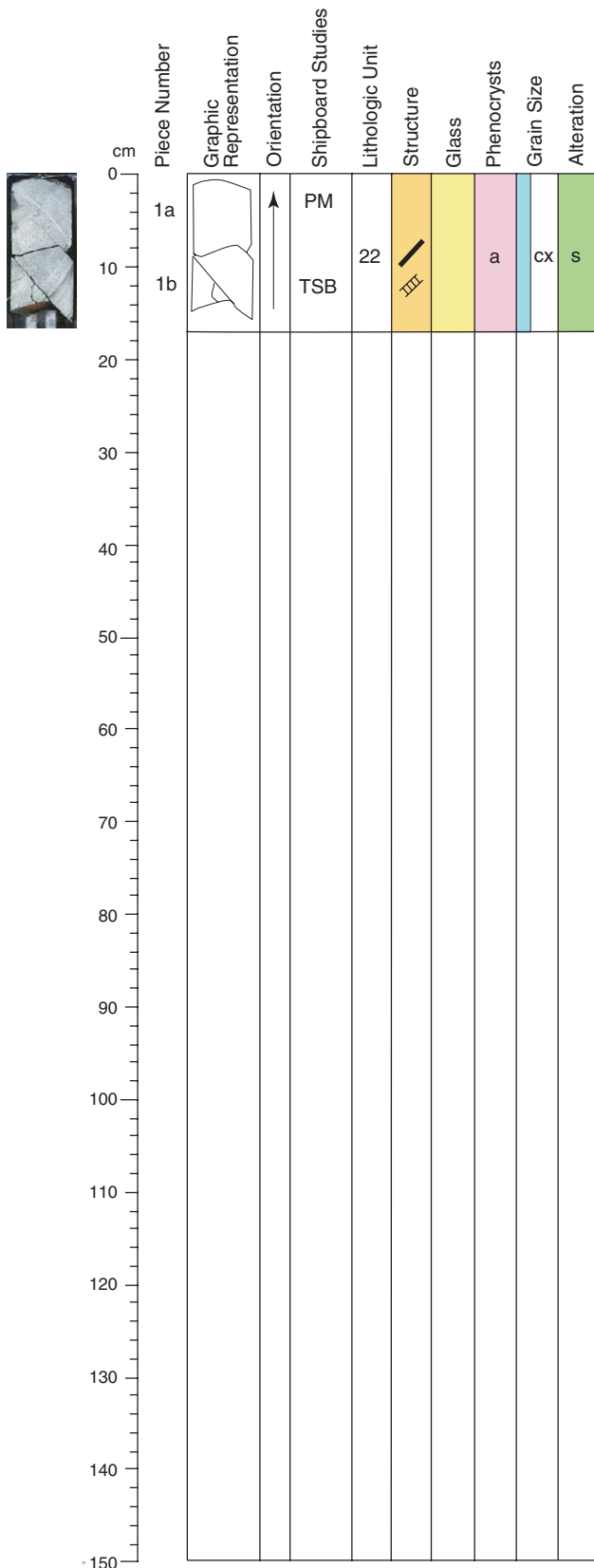
ALTERATION: Dark grey slightly altered basalt.

VEINS: 0.1-0.3 mm veins of saponite plus minor pyrite.

STRUCTURE: Vein dips vary from 15°-24° to 33°-40° and 58°-90°. Conjugate vein sets in Piece 1.

ADDITIONAL COMMENTS: Microgabbroic inclusions up to 3 mm diameter are sporadically present. Groundmass plagioclase is aligned subparallel to the flow surface. Piece 1 may not be oriented as it was dropped on the rig floor.

Core Photo

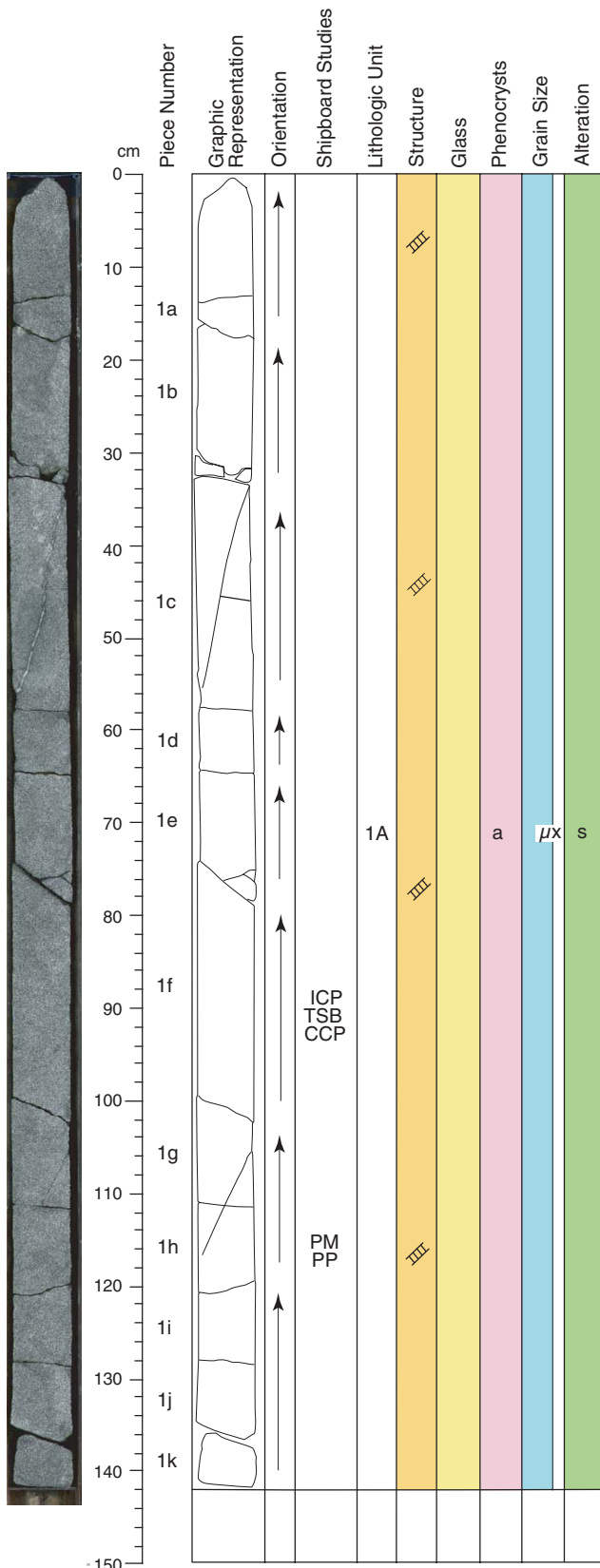


206-1256C-13R-1 (Section top: 322.0 mbsf)

UNIT: 22
ROCK NAME: Aphyric cryptocrystalline basalt
SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt flow margin.
PIECES: 1 (igneous description based on 12R-3 Piece 9)
CONTACTS:
 Upper: altered glass margin
 Lower: not recovered
COLOR: dark bluish gray (5PB 3/1)
PHENOCRYSTS:
 Plagioclase 0.2% 0.1-0.2 mm
 Olivine 0.5% 0.1-0.2 mm
 Clinopyroxene <0.1% 0.1 mm
GROUNDMASS:
 Grain size: cryptocrystalline
 Texture: variolitic to intersertal
VESICLES: Very sparsely vesicular filled with saponite and pyrite.
ALTERATION: Dark gray slightly altered basalt.
VEINS: 0.1-0.3 mm veins of saponite plus minor pyrite. Prismatic aragonite crystals on broken fracture surface of Piece 1.
STRUCTURE: Moderate veining with planar morphology. One gently-dipping (23°) joint. Two moderately-dipping (46°-56°) veins.
ADDITIONAL COMMENTS: Microgabbroic inclusions up to 3 mm diameter are sporadically present. Groundmass plagioclase is aligned subparallel to the flow surface.

1256C-14R No Recovery
 1256D-1 Drilled Without Coring

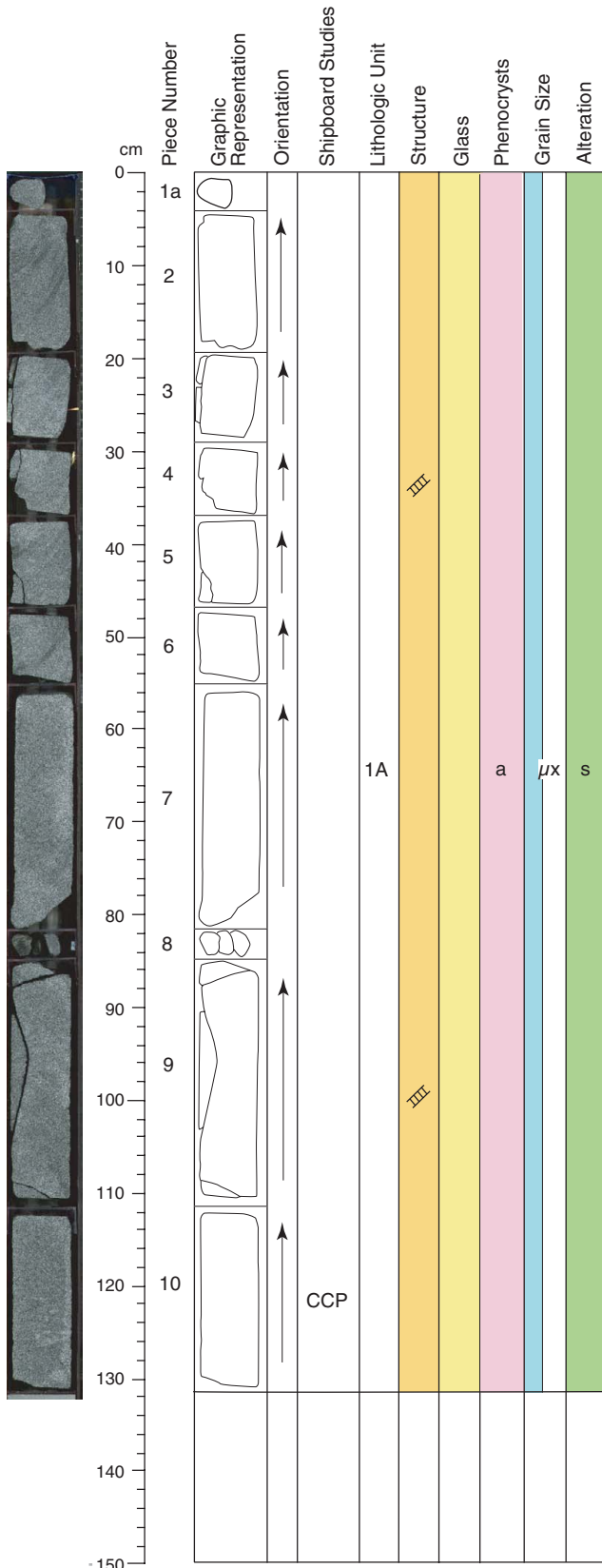
Core Photo



206-1256D-2R-1 (Section top: 276.1 mbsf)

UNIT: 1A
ROCK NAME: Aphyric microcrystalline basalt
SUMMARY DESCRIPTION: Massive microcrystalline basalt.
PIECES: 1 (igneous description based on 2R-1 Piece 1j)
CONTACTS:
 Upper: not recovered
 Lower: gradational change in grain size
COLOR: bluish black (5PB 2.5/1)
PHENOCRYSTS: none apparent
GROUNDMASS:
 Grain size: microcrystalline
 Texture: intergranular
VESICLES: none
ALTERATION: Dark gray slightly altered basalt.
VEINS: 0.1-0.8 mm veins of saponite. 1.5-2.5 mm veins filled with silica, carbonates and minor pyrite and saponite at 44 and 64 cm.
STRUCTURE: Nearly parallel veins with gentle dips. One 2.5 mm steeply dipping composite vein with stair-stepped morphology, filled with silica and saponite minerals and with a black halo in Piece 1c.

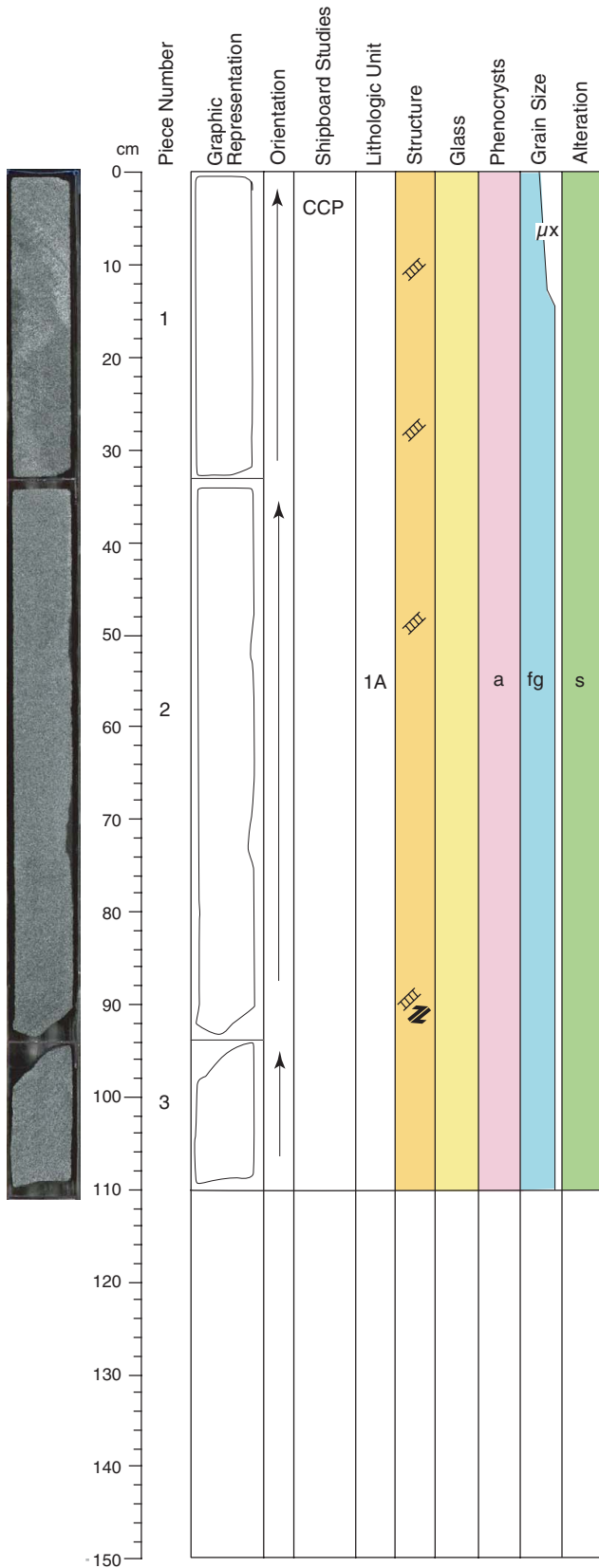
Core Photo



206-1256D-3R-1 (Section top: 278.10 mbsf)

UNIT: 1A
 ROCK NAME: Aphyric microcrystalline basalt
 SUMMARY DESCRIPTION: Massive microcrystalline basalt.
 PIECES: 1-10 (igneous description based on 2R-1 Piece 1j)
 CONTACTS:
 Upper: not recovered
 Lower: gradational change in grain size
 COLOR: bluish black (5PB 2.5/1)
 PHENOCRYSTS: none apparent
 GROUNDMASS:
 Grain size: microcrystalline
 Texture: intergranular
 VESICLES: none
 ALTERATION: Dark gray slightly altered basalt.
 VEINS: 0.1-0.5 mm veins of saponite and minor pyrite.
 STRUCTURE: Two set of veins with irregular morphology; one nearly vertical and one with a gentle dip.

Core Photo



206-1256D-3R-2 (Section top: 279.41 mbsf)

UNIT: 1A

ROCK NAME: Fine-grained basalt

SUMMARY DESCRIPTION: Massive microcrystalline to fine-grained basalt.

PIECES: 1-3 (igneous description based on 2R-1 Piece 1j)

CONTACTS:

Upper: not recovered

Lower: gradual increase in grain size

COLOR: bluish black (5PB 2.5/1)

PHENOCRYSTS: None apparent

GROUNDMASS:

Grain size: microcrystalline to fine-grained

Texture: intergranular

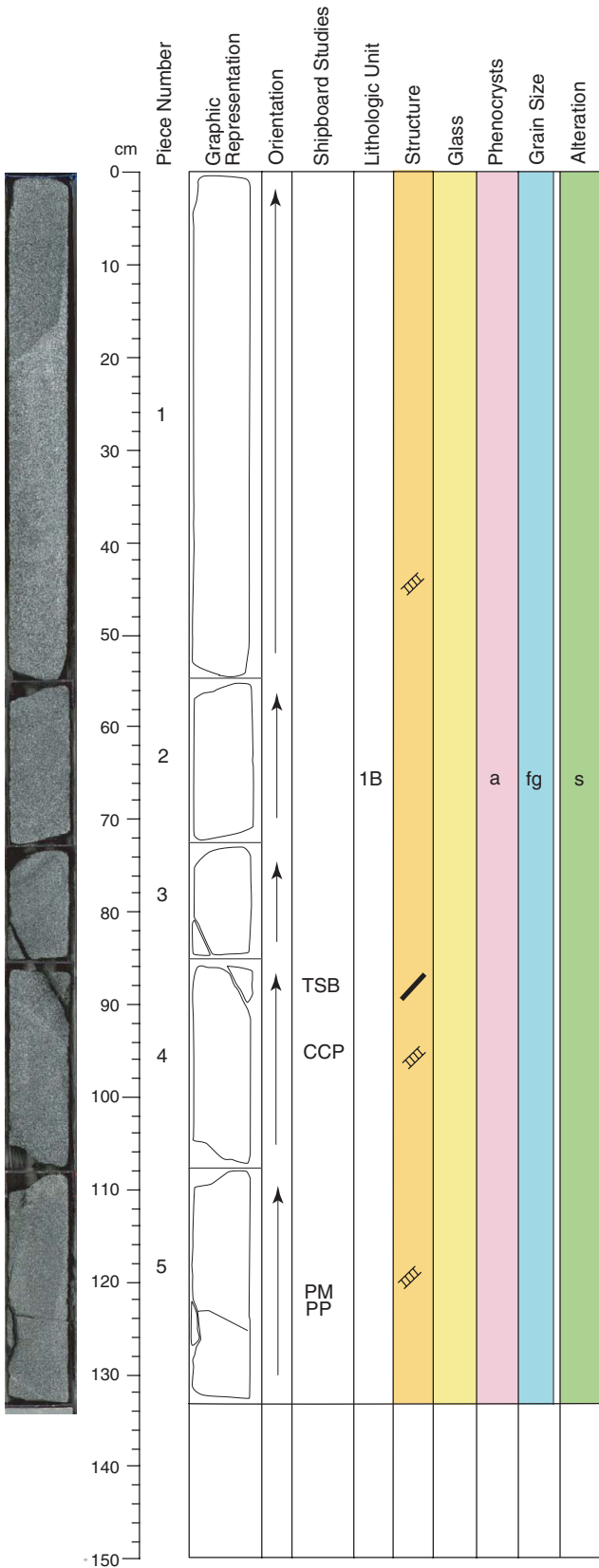
VESICLES: none

ALTERATION: Dark gray slightly altered basalt.

VEINS: 0.1-0.8 mm veins of saponite.

STRUCTURE: Set of 0.1 mm parallel veins in Piece 1 and one splayed vein in Piece 2. Shear vein with saponite down-dip overlapping fibers and dextral sense of shear in Pieces 2 and 3.

Core Photo



206-1256D-3R-3 (Section top: 280.52 mbsf)

UNIT: 1B

ROCK NAME: Fine-grained basalt

SUMMARY DESCRIPTION: Massive fine-grained basalt

PIECES: 1-5 (igneous description based on 3R-3 Piece 1)

CONTACTS:

Upper: gradational change in grain size

Lower: gradational change in grain size

COLOR: black (N2.5/)

PHENOCRYSTS: None apparent

GROUNDMASS:

Grain size: fine-grained

Texture: intergranular to variolitic

VESICLES: none

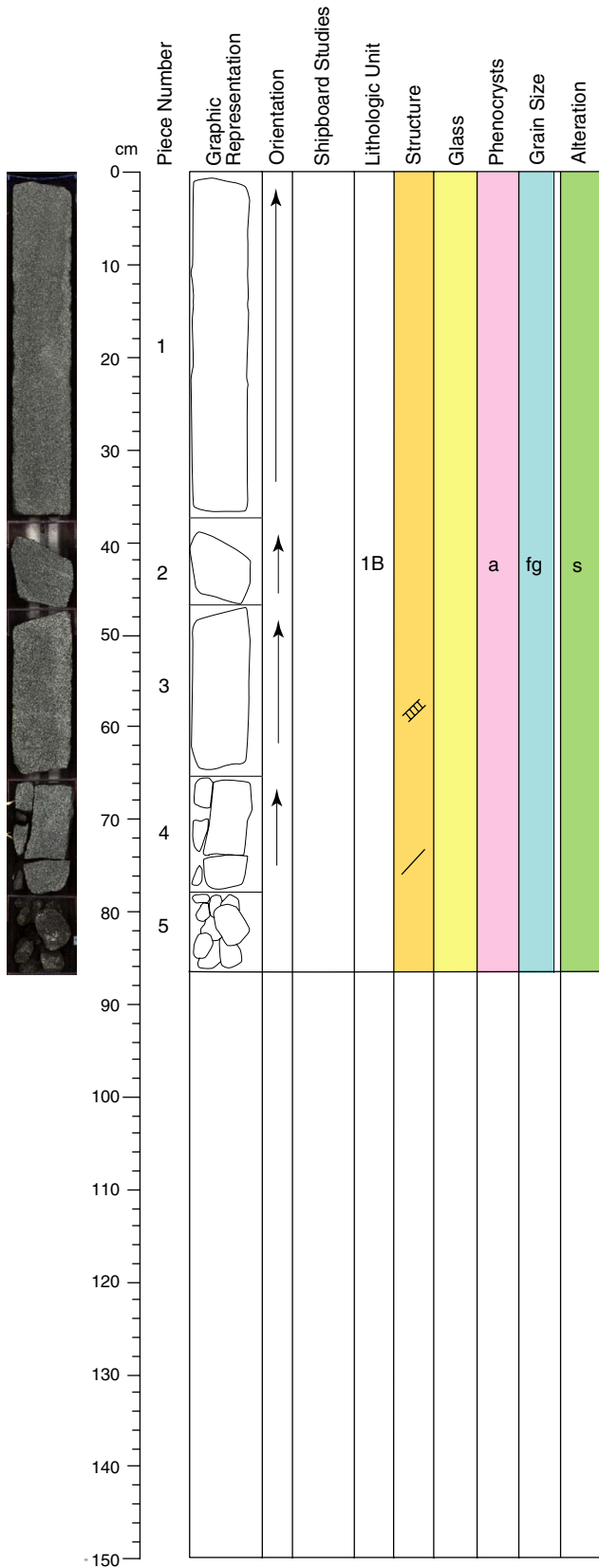
ALTERATION: Dark gray slightly altered basalt

VEINS: 0.1-0.8 mm veins of saponite and minor pyrite. 1 mm veins of silica and minor carbonate and saponite at 109 and 122 cm.

STRUCTURE: One 6.3 mm microfault with microcataclasite and saponite strike-slip slickenfibers in Piece 4. One shear vein with saponite down-dip overlapping fibers in Piece 4. One shear vein with saponite strike-slip fibers in Piece 5.

ADDITIONAL COMMENTS: Piece 1, 10-50 cm is anomalously coarse (but still fine-grained)

Core Photo



206-1256D-3R-4 (Section top: 281.85 mbsf)

UNIT: 1B

ROCK NAME: Fine-grained basalt

SUMMARY DESCRIPTION: Massive fine-grained basalt.

PIECES: 1-5 (igneous description based on Piece 1)

CONTACTS:

Upper: gradational change in grain size

Lower: gradational change in grain size

COLOR: black (N2.5/)

PHENOCRYSTS: None apparent

GROUNDMASS:

Grain size: fine-grained

Texture: intergranular

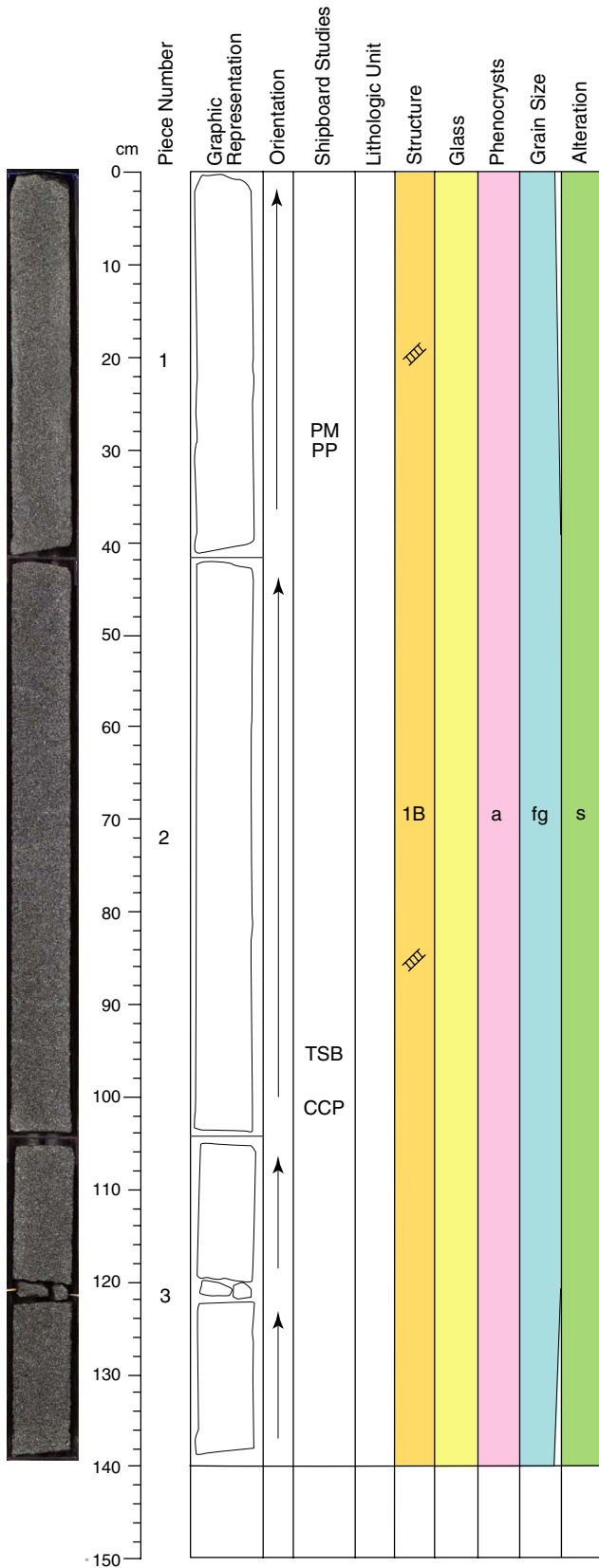
VESICLES: none

ALTERATION: Dark gray slightly altered basalt

VEINS: 0.1-0.3 mm veins of saponite and minor pyrite.

STRUCTURE: One vertical joint in Piece 4a. Shallowly dipping late magmatic veins in Pieces 1,2 and 3.

Core Photo



206-1256D-4R-1 (Section top: 285.1 mbsf)

UNIT: 1B

ROCK NAME: Fine-grained basalt

SUMMARY DESCRIPTION: Massive fine-grained basalt.

PIECES: 1-3 (igneous description based on Pieces1-3)

CONTACTS:

Upper: gradational change in grain size

Lower: gradational change in grain size

COLOR: black (N2.5/)

PHENOCRYSTS: None apparent

GROUNDMASS:

Grain size: fine-grained

Texture: intergranular to variolitic

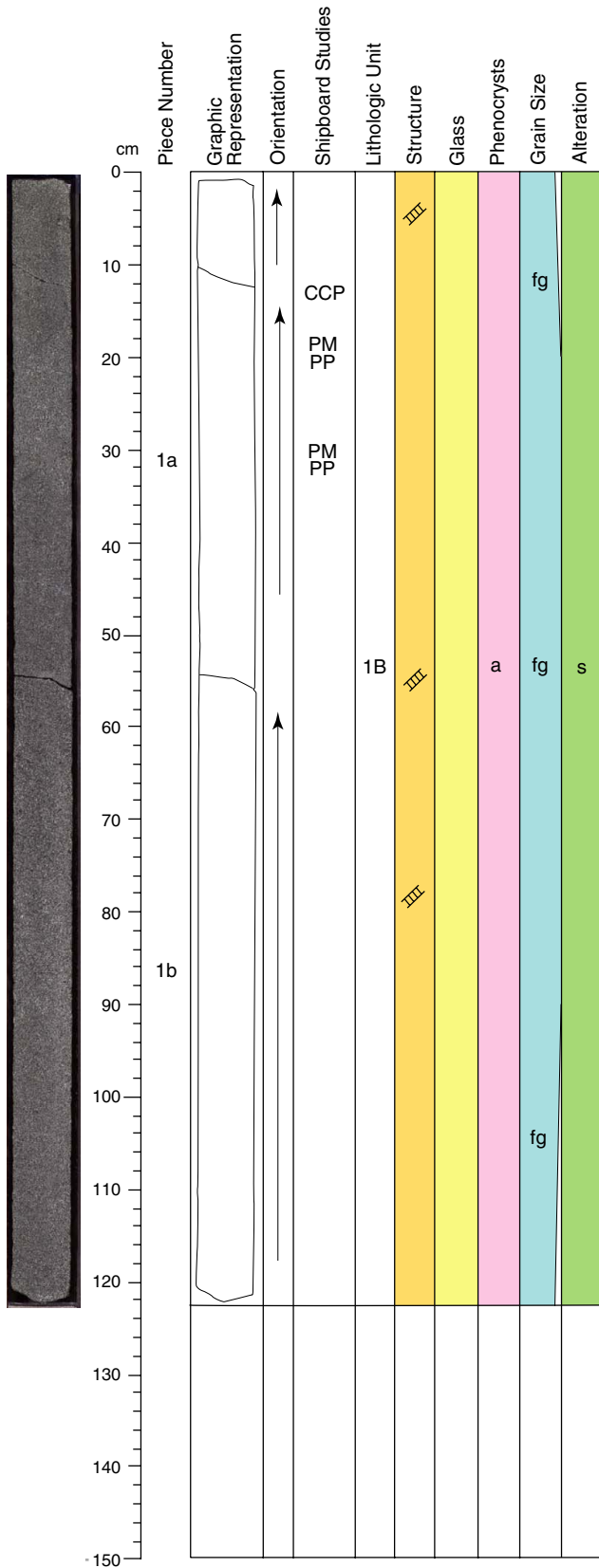
VESICLES: none

ALTERATION: Dark gray slightly altered basalt.

VEINS: 0.2-2 mm veins of saponite. Several veins have 0.5-1 mm white albite rims of late magmatic origin.

STRUCTURE: One set of parallel veins of late magmatic origin throughout the section. Veins are gently dipping with stair-stepped morphology.

Core Photo



206-1256D-4R-2 (Section top: 286.49 mbsf)

UNIT: 1B

ROCK NAME: Fine-grained basalt

SUMMARY DESCRIPTION: Massive fine-grained basalt.

PIECES: 1 (igneous description based on Piece 1)

CONTACTS:

Upper: gradational change in grain size

Lower: gradational change in grain size

COLOR: black (N2.5/)

PHENOCRYSTS: none apparent

GROUNDMASS:

Grain size: fine-grained

Texture: intergranular to variolitic

VESICLES: None

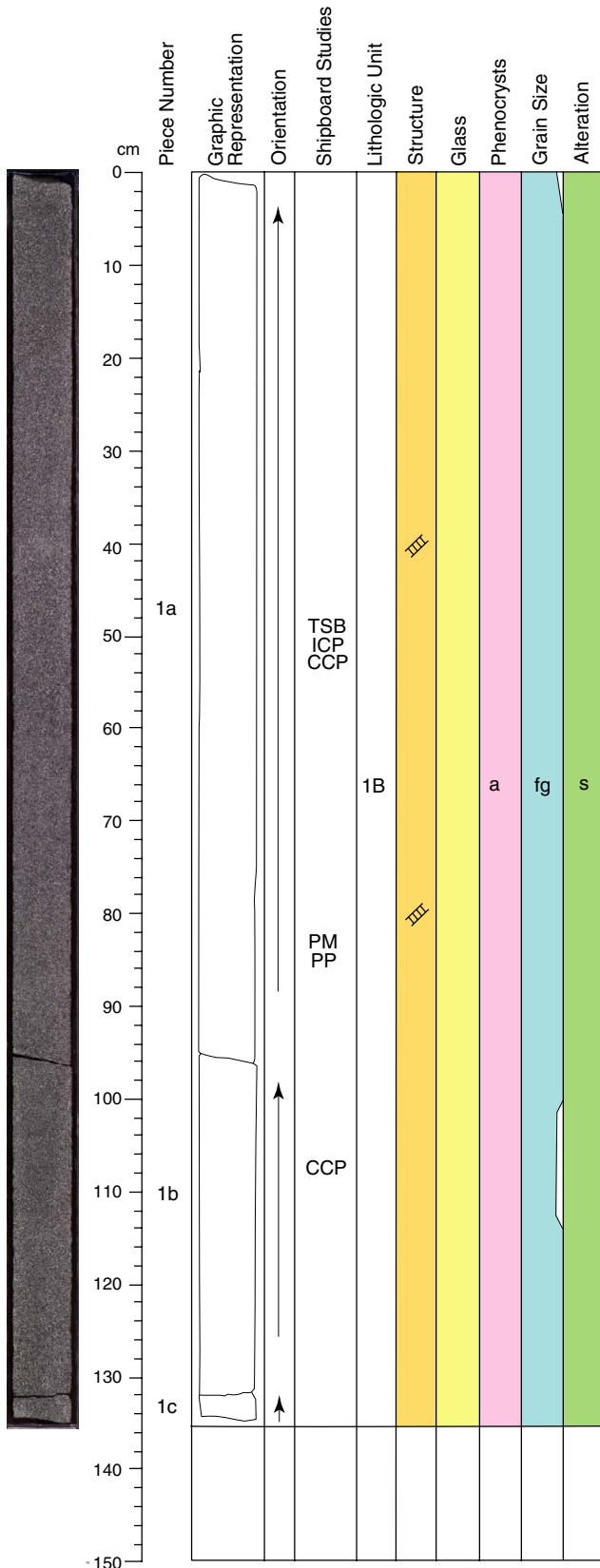
ALTERATION: Dark gray slightly altered basalt

VEINS: 0.1-1.5 mm veins of saponite and minor pyrite. Two veins at 10 and 44 cm have 1 mm albite rims.

STRUCTURE: One set of parallel veins of late magmatic origin throughout the section. Veins are gently dipping with stair-stepped morphology.

ADDITIONAL COMMENTS: Piece 1, 20-90 cm, is an anomalously coarse interval (but still within the range of grain size classified as fine-grained).

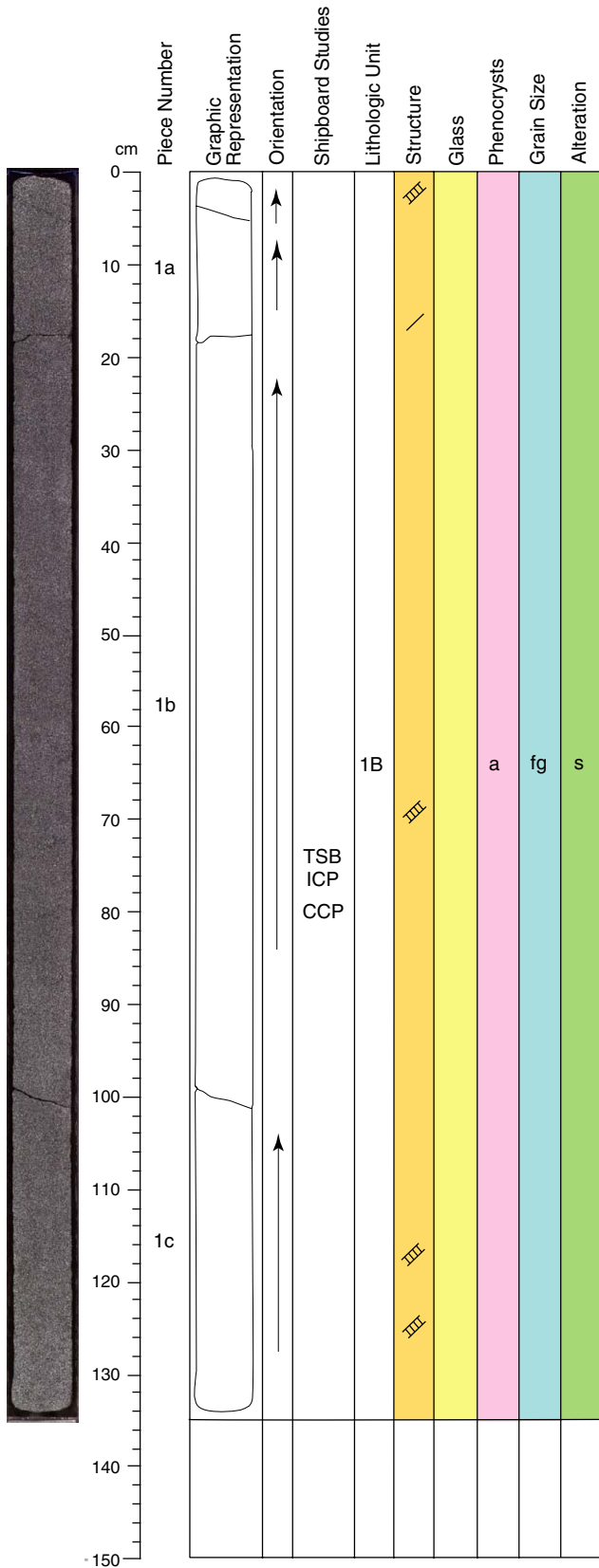
Core Photo



206-1256D-4R-3 (Section top: 287.70 mbsf)

UNIT: 1B
 ROCK NAME: Fine-grained basalt
 SUMMARY DESCRIPTION: Massive fine-grained basalt.
 PIECES: 1 (igneous description based on Piece 1)
 CONTACTS:
 Upper: gradational change in grain size
 Lower: gradational change in grain size
 COLOR: bluish black (5PB 2.5/1)
 PHENOCRYSTS: None apparent
 GROUNDMASS:
 Grain size: fine-grained
 Texture: intergranular to variolitic
 VESICLES: none
 ALTERATION: Dark gray slightly altered basalt
 VEINS: 0.1-0.3 mm veins of saponite and minor pyrite
 STRUCTURE: Set of gently dipping parallel veins regularly distributed throughout the section.

Core Photo



206-1256D-4R-4 (Section top: 289.06 mbsf)

UNIT: 1B

ROCK NAME: Fine-grained basalt

SUMMARY DESCRIPTION: Massive fine-grained basalt.

PIECES: 1 (igneous description based on Piece 1)

CONTACTS:

Upper: gradational change in grain size

Lower: gradational change in grain size

COLOR: greenish black (10Y 2.5/1)

PHENOCRYSTS: None apparent

GROUNDMASS:

Grain size: fine-grained

Texture: intergranular to variolitic

VESICLES: none

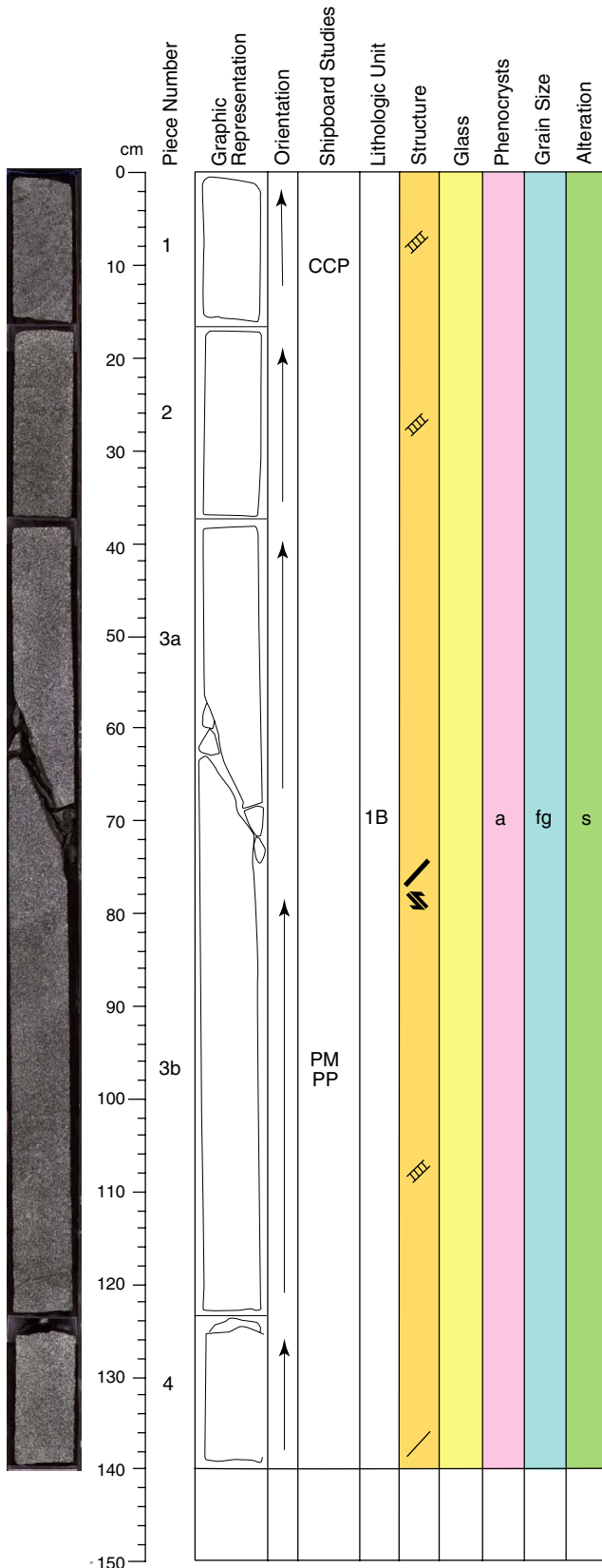
ALTERATION: Dark gray slightly altered basalt

VEINS: 0.1-0.2 mm veins of saponite and minor pyrite

STRUCTURE: Set of parallel stair-stepped veins in the lower part of the section.

One joint at 18 cm in Piece 1a.

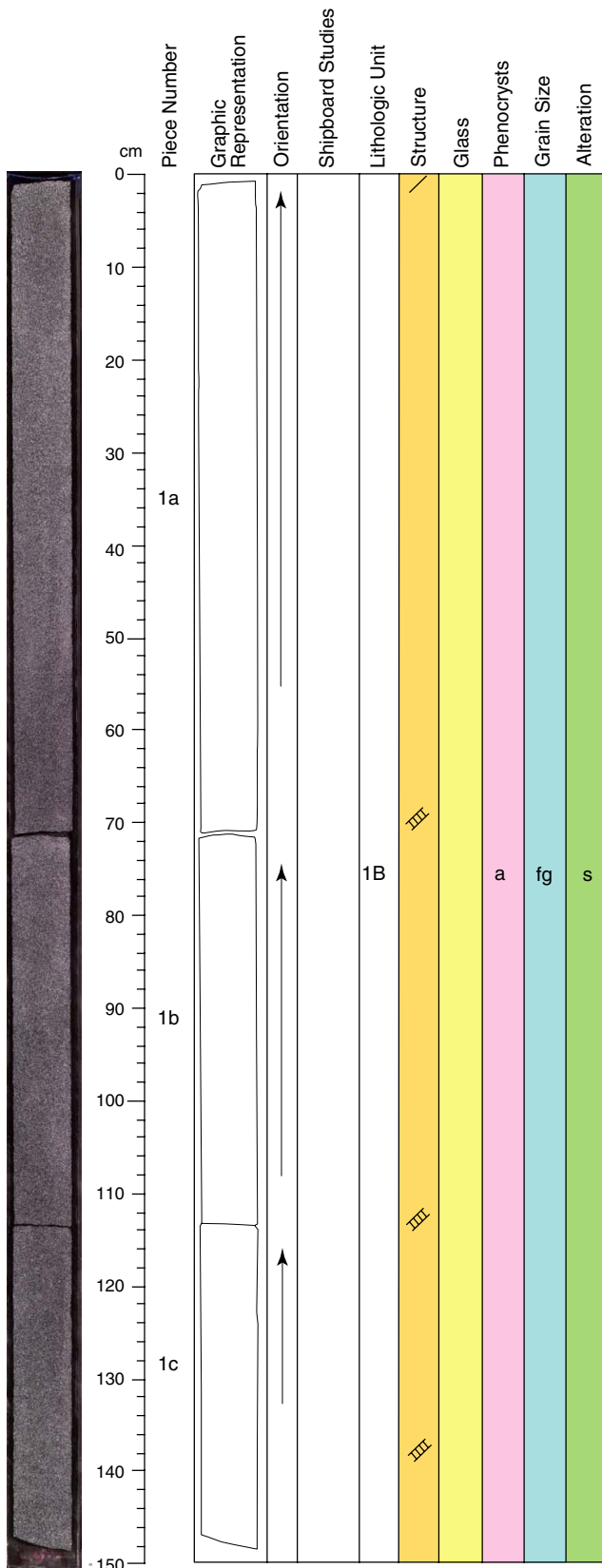
Core Photo



206-1256D-5R-1 (Section top: 289.9 mbsf)

UNIT: 1B
 ROCK NAME: Fine-grained basalt
 SUMMARY DESCRIPTION: Massive fine-grained basalt
 PIECES: 1-4 (igneous description based on Piece 2)
 CONTACTS:
 Upper: gradational change in grain size
 Lower: gradational change in grain size
 COLOR: black (N2.5/)
 PHENOCRYSTS: None apparent
 GROUNDMASS:
 Grain size: fine-grained
 Texture: intergranular
 VESICLES: none
 ALTERATION: Dark gray slightly altered basalt
 VEINS: 0.2-2 mm saponite veins with minor pyrite. 1 mm saponite vein at 105 cm has 0.5 mm albitic rims of late magmatic origin.
 STRUCTURE: One splayed microfault in Piece 3, with microcataclasite and saponite oblique dipping slickenfibres with sinistral sense of shear. One horizontal joint at the bottom part of the section.

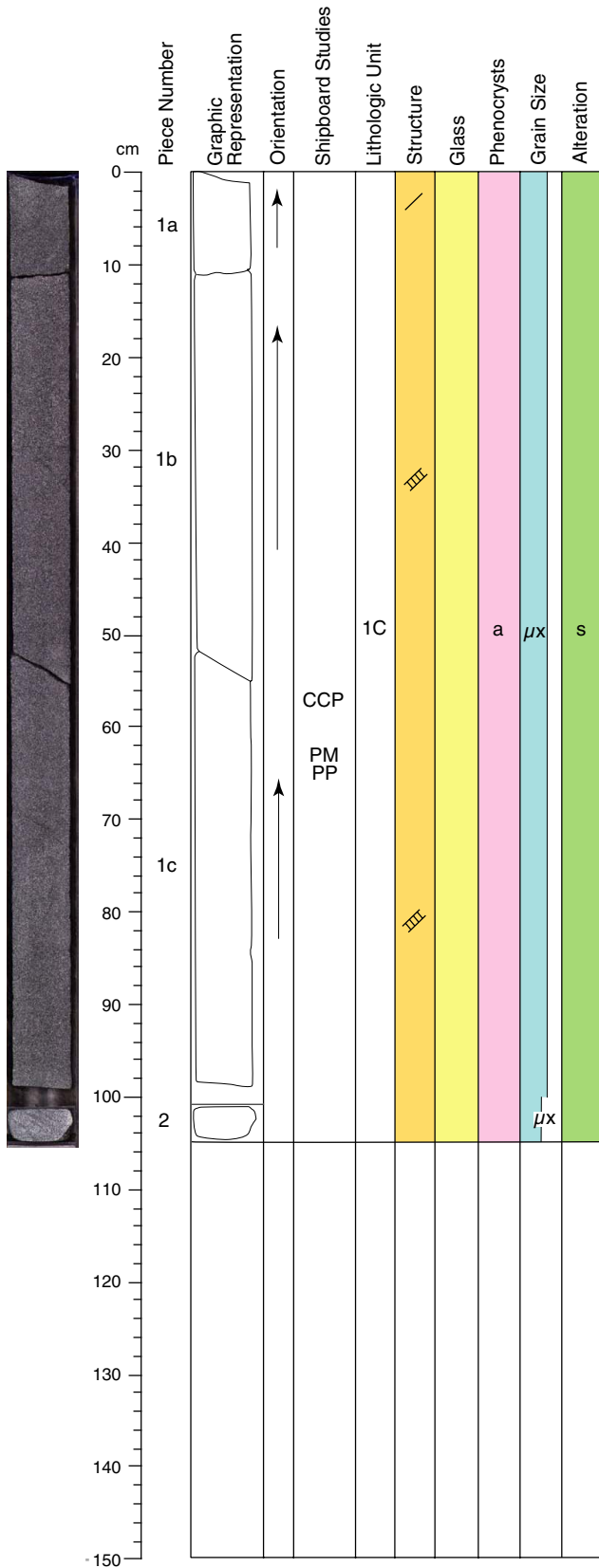
Core Photo



206-1256D-5R-2 (Section top: 291.3 mbsf)

UNIT: 1B
 ROCK NAME: Fine-grained basalt
 SUMMARY DESCRIPTION: Massive fine-grained basalt
 PIECES: 1 (igneous description based on Piece 1)
 CONTACTS:
 Upper: gradational change in grain size
 Lower: gradational change in grain size
 COLOR: black (N2.5/)
 PHENOCRYSTS: None apparent
 GROUNDMASS:
 Grain size: fine-grained
 Texture: intergranular
 VESICLES: none
 ALTERATION: Dark gray slightly altered basalt
 VEINS: 0.1-0.2 mm veins of saponite with minor pyrite
 STRUCTURE: One joint at the top of the section. Three nearly horizontal veins .

Core Photo



206-1256D-5R-3 (Section top: 292.77 mbsf)

UNIT: 1C

ROCK NAME: Microcrystalline basalt

SUMMARY DESCRIPTION: Massive microcrystalline basalt

PIECES: 1-2 (igneous description based on Piece 2)

CONTACTS:

Upper: gradational change in grain size

Lower: gradational change in grain size

COLOR: black (N2.5/)

PHENOCRYSTS: None apparent

GROUNDMASS:

Grain size: microcrystalline

Texture: intergranular

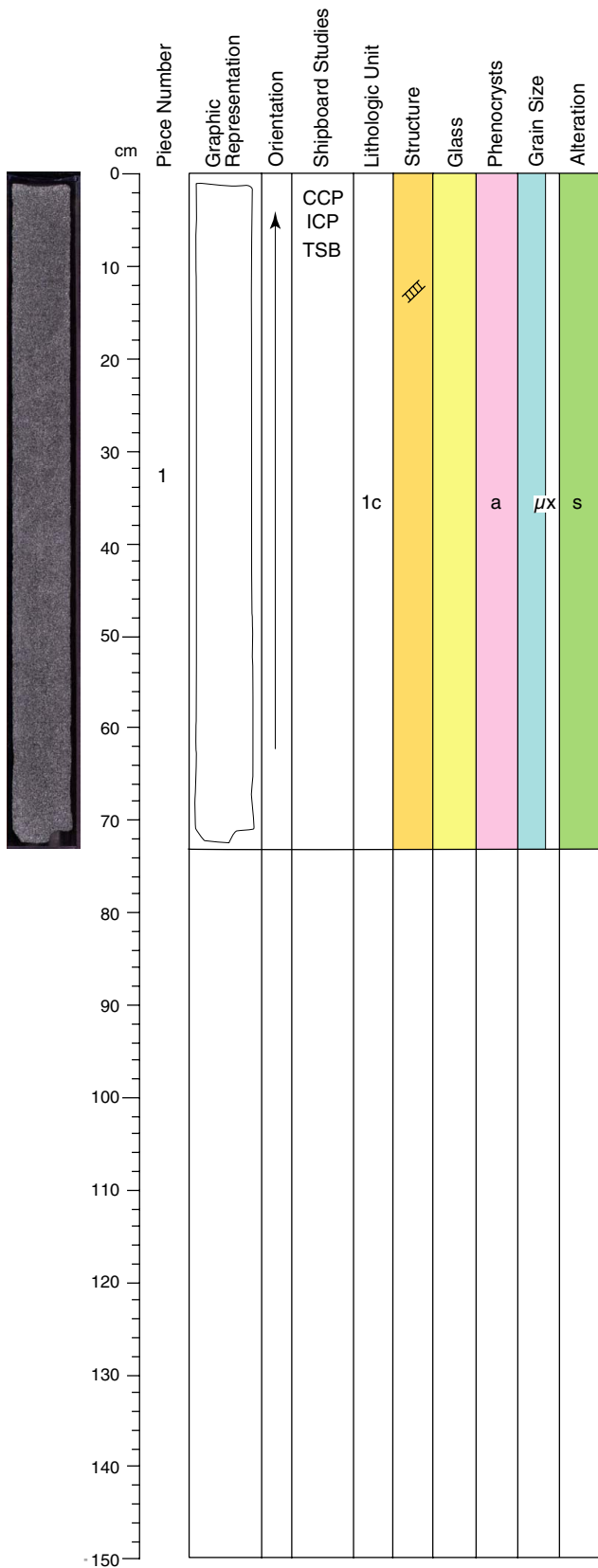
VESICLES: none

ALTERATION: Dark gray slightly altered basalt

VEINS: 0.2-0.5 mm saponite veins with minor pyrite

STRUCTURE: Two joints in Piece 1a. Six nearly parallel veins with irregular morphology regularly distributed throughout the Section.

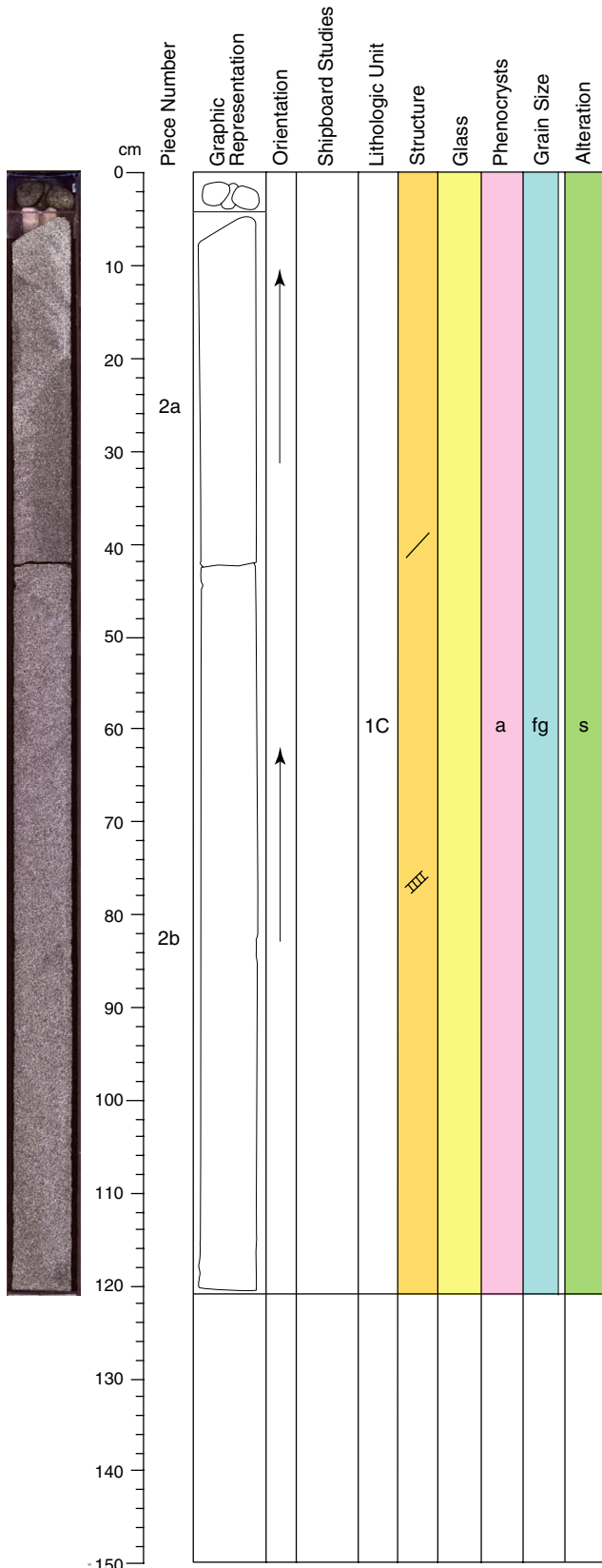
Core Photo



206-1256D-5R-4 (Section top: 293.80 mbsf)

UNIT: 1C
 ROCK NAME: Microcrystalline basalt
 SUMMARY DESCRIPTION: Massive microcrystalline basalt
 PIECES: 1 (igneous description based on Piece 1)
 CONTACTS:
 Upper: gradational change in grain size
 Lower: gradational change in grain size
 COLOR: black (N 2.5/)
 PHENOCRYSTS: None apparent
 GROUNDMASS:
 Grain size: microcrystalline
 Texture: variolitic
 VESICLES: none
 ALTERATION: Dark gray slightly altered basalt
 VEINS: 0.1 mm saponite veins with minor pyrite
 STRUCTURE: Two 0.1 mm veins with irregular morphology.

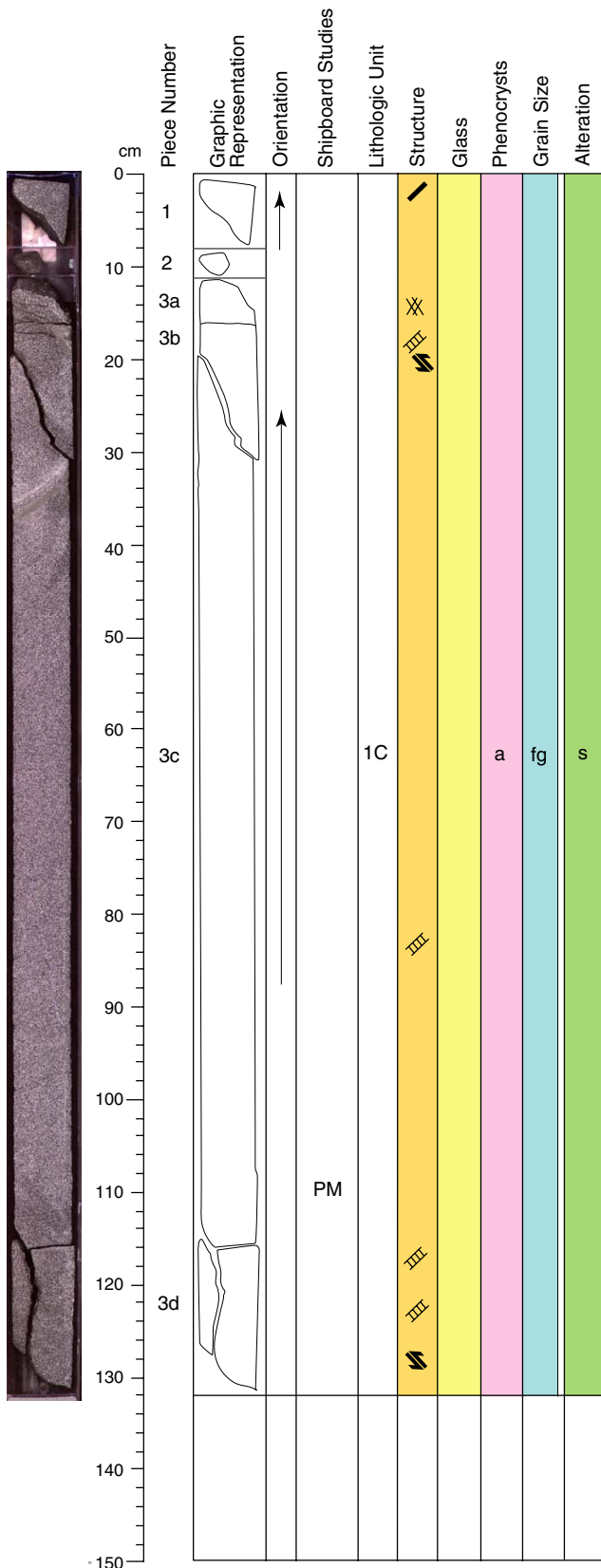
Core Photo



206-1256D-6R-1 (Section top: 294.70 mbsf)

UNIT: 1C
ROCK NAME: Fine-grained basalt
SUMMARY DESCRIPTION: Massive fine-grained basalt
PIECES: 1-2 (igneous description based on Piece 2a)
CONTACTS:
 Upper: gradational change in grain size
 Lower: gradational change in grain size
COLOR: dark greenish gray (10Y 3/1)
PHENOCRYSTS: none apparent
GROUNDMASS:
 Grain size: fine-grained
 Texture: intergranular to variolitic
VESICLES: none
ALTERATION: Dark gray slightly altered basalt
VEINS: single 0.2 mm vein of saponite at 73-80 cm.
STRUCTURE: One joint between Pieces 2a and 2b. One vein in Piece 2b.

Core Photo



206-1256D-6R-2 (Section top: 295.90 mbsf)

UNIT: 1C

ROCK NAME: Fine-grained basalt

SUMMARY DESCRIPTION: Massive fine-grained basalt

PIECES: 1-3 (igneous description based on 6R-1 Piece 2a)

CONTACTS:

Upper: gradational change in grain size

Lower: gradational change in grain size

COLOR: dark greenish gray (10Y 3/1)

PHENOCRYSTS: none apparent

GROUNDMASS:

Grain size: fine-grained

Texture: intergranular to variolitic

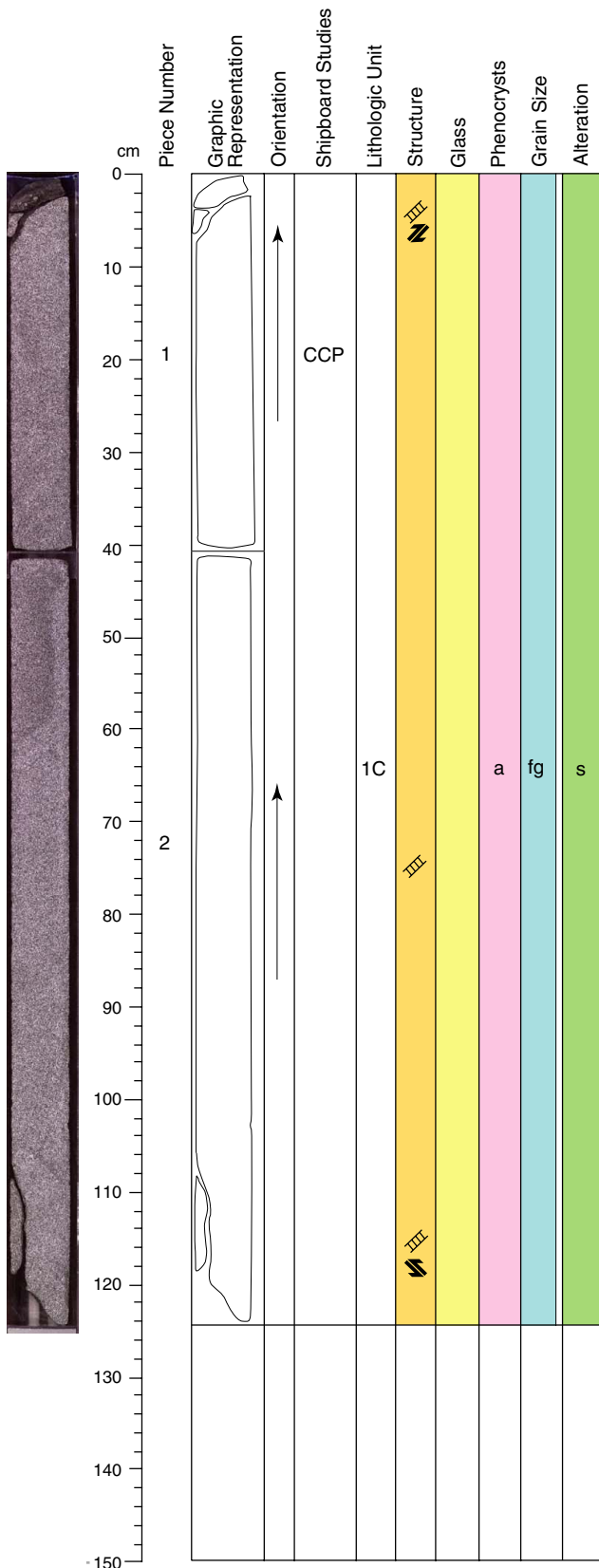
VESICLES: none

ALTERATION: Dark gray slightly altered basalt

VEINS: 0.2-1 mm saponite veins with minor pyrite and local 10 mm wide black alteration halos.

STRUCTURE: One microfault lined by microcataclasite in Piece 1. Three shear veins with dark green overlapping fibers and reverse sense of shear in Pieces 3a and 3b; two strike slip shear veins with dark green slickenfibers and reverse sense of shear in Piece 3d.

Core Photo



206-1256D-6R-3 (Section top: 297.21 mbsf)

UNIT: 1C

ROCK NAME: Fine-grained basalt

SUMMARY DESCRIPTION: Massive fine-grained basalt

PIECES: 1-2 (igneous description based on Piece 1)

CONTACTS:

Upper: gradational change in grain size

Lower: gradational change in grain size

COLOR: greenish black (10Y 2.5/1)

PHENOCRYSTS: none apparent

GROUNDMASS:

Grain size: fine-grained

Texture: intergranular to variolitic

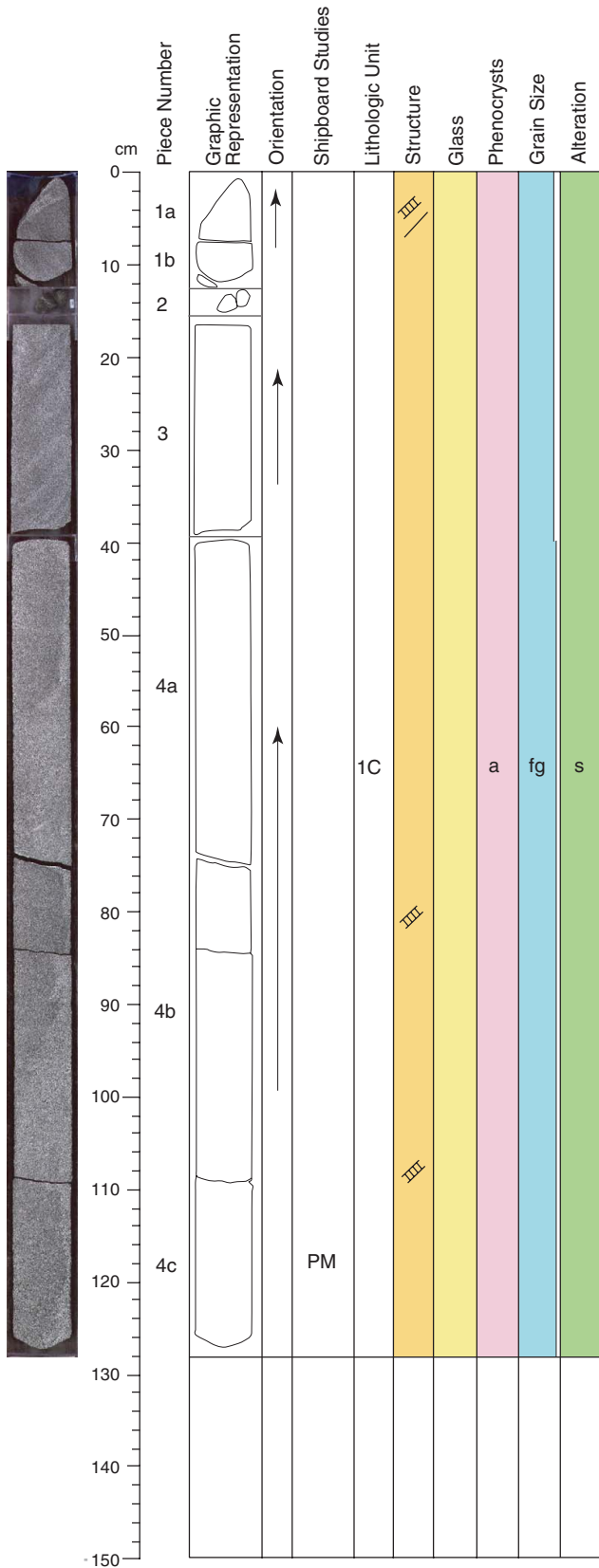
VESICLES: none

ALTERATION: Dark gray slightly altered basalt

VEINS: 0.2-0.5 mm saponite veins with minor pyrite.

STRUCTURE: Five shear veins with saponite overlapping fibers and reverse sense of shear at the top and at the bottom part of the section. One splayed vein in Piece 2.

Core Photo



206-1256D-6R-4 (Section top: 298.44 mbsf)

UNIT: 1C

ROCK NAME: Fine-grained basalt

SUMMARY DESCRIPTION: Massive fine-grained basalt

PIECES: 1-4 (igneous description based on 6R-3 Piece 1)

CONTACTS:

Upper: gradational change in grain size

Lower: gradational change in grain size

COLOR: greenish black (10Y 2.5/1)

PHENOCRYSTS: none apparent

GROUNDMASS:

Grain size: fine-grained

Texture: intergranular to variolitic

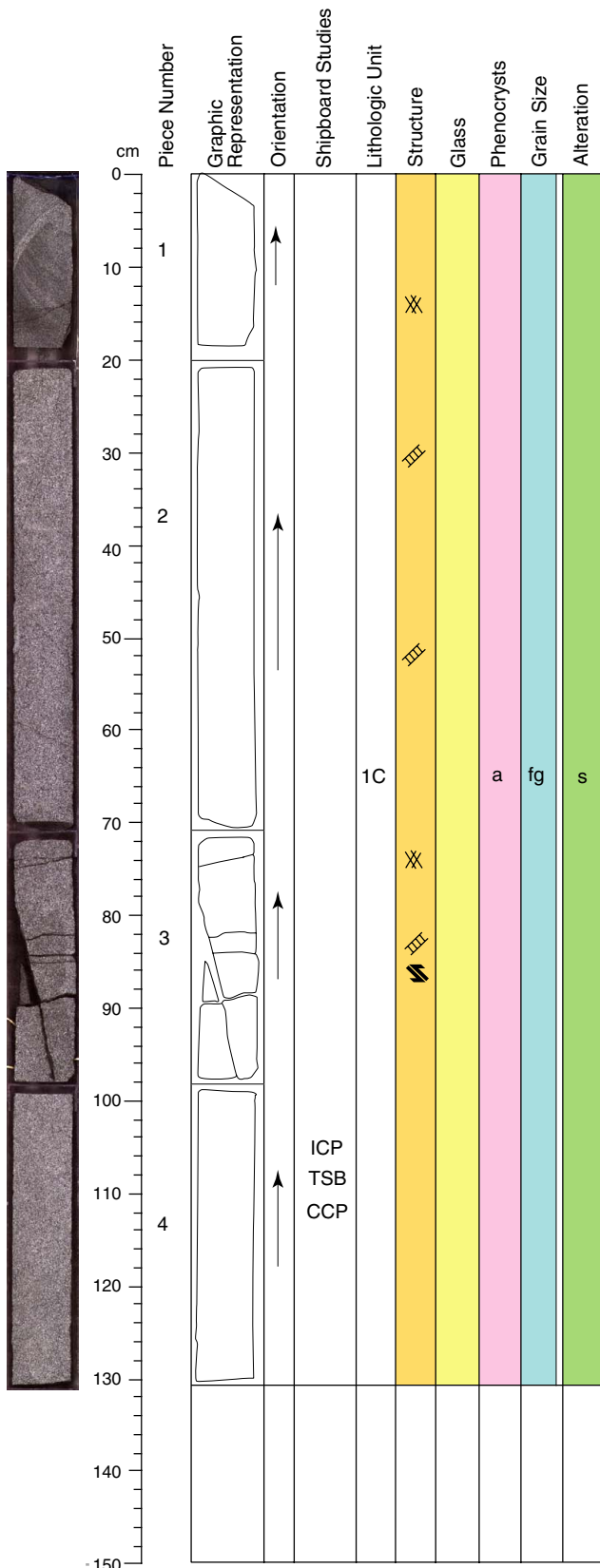
VESICLES: none

ALTERATION: Dark gray slightly altered basalt

VEINS: 0.1-1 mm veins of saponite with minor pyrite. 1 mm carbonate vein at 73 cm.

STRUCTURE: Gently dipping parallel veins with irregular and stair stepped morphology.

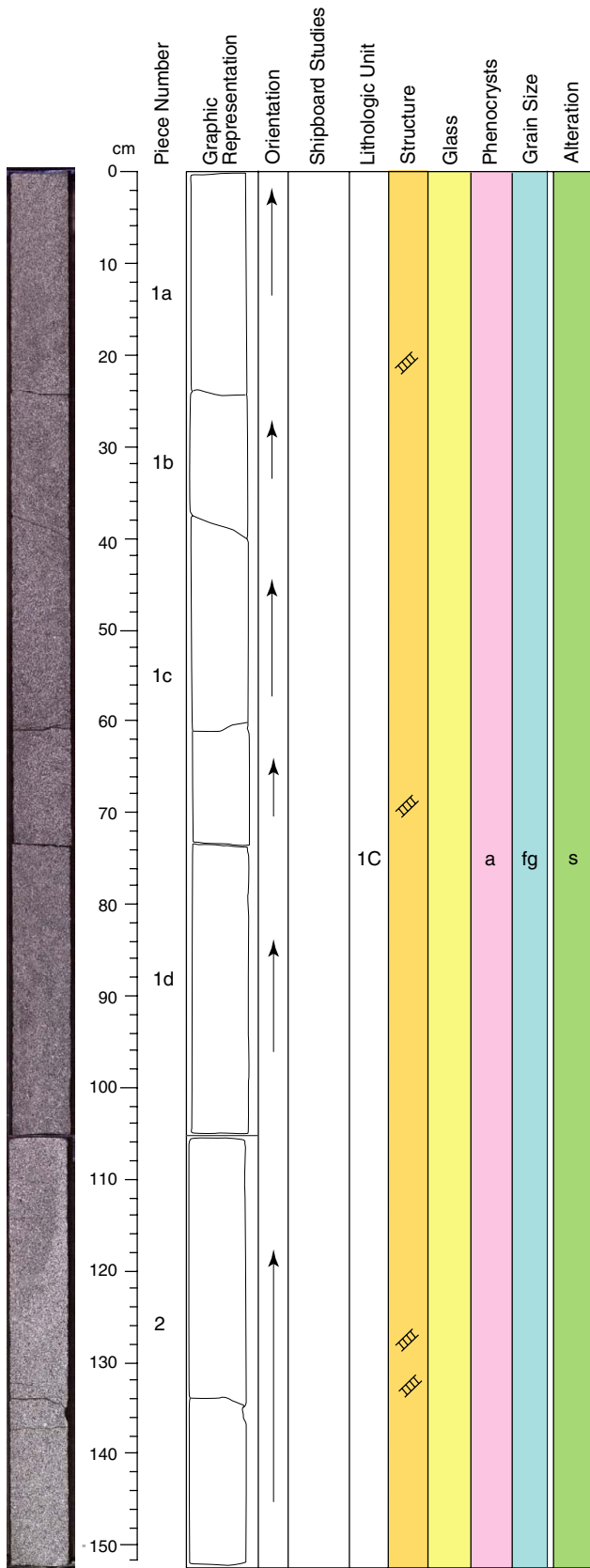
Core Photo



206-1256D-6R-5 (Section top: 299.71 mbsf)

UNIT: 1C
ROCK NAME: Fine-grained basalt
SUMMARY DESCRIPTION: Massive fine-grained basalt
PIECES: 1-4 (igneous description based on Piece 1)
CONTACTS:
 Upper: gradational change in grain size
 Lower: gradational change in grain size
COLOR: greenish black (10Y 2.5/1)
PHENOCRYSTS: none apparent
GROUNDMASS:
 Grain size: fine-grained
 Texture: intergranular to variolitic
VESICLES: none
ALTERATION: Dark gray slightly altered basalt
VEINS: 0.1-1.5 mm veins of saponite with minor pyrite.
STRUCTURE: Vein network with splayed and anastomosing morphology in Piece 1. One shear vein with saponite slickenfibers and reverse sense of shear in Piece 3. Shear vein cuts seven nearly horizontal 2 mm veins.

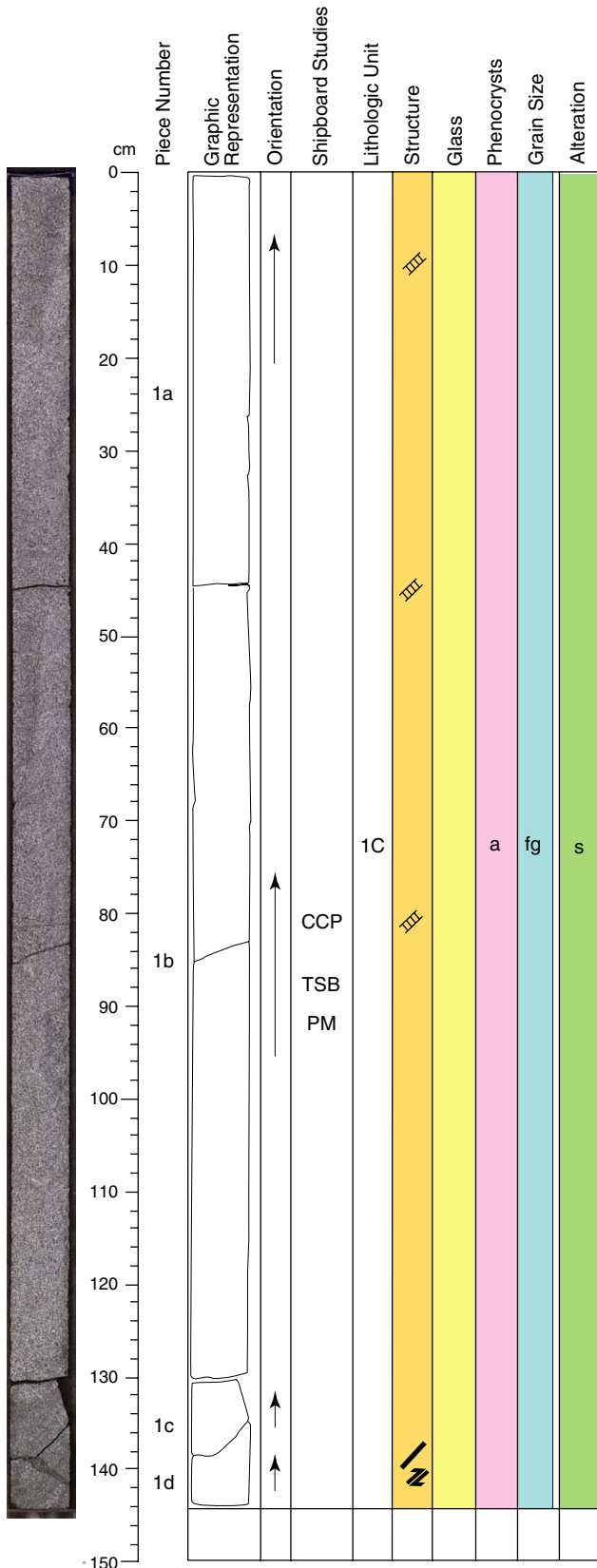
Core Photo



206-1256D-6R-6 (Section top: 301.02 mbsf)

UNIT:
 UNIT: 1c
 ROCK NAME: Fine-grained basalt
 SUMMARY DESCRIPTION: Massive fine-grained basalt
 PIECES: 1-2 (igneous description based on 6R-5 Piece 1)
 CONTACTS:
 Upper: gradational change in grain size
 Lower: gradational change in grain size
 COLOR: greenish black (10Y 2.5/1)
 PHENOCRYSTS: none apparent
 GROUNDMASS:
 Grain size: fine-grained
 Texture: intergranular to variolitic
 VESICLES: none
 ALTERATION: Dark gray slightly altered basalt
 VEINS: 0.2-1.5 mm veins of saponite with minor pyrite
 STRUCTURE: Sub parallel veins with gentle dip. One steeply dipping vein in Piece 2.

Core Photo



206-1256D-6R-7 (Section top: 302.54 mbsf)

UNIT: 1C

ROCK NAME: Fine-grained basalt

SUMMARY DESCRIPTION: Massive fine-grained basalt

PIECES: 1 (igneous description based on Piece 1)

CONTACTS:

Upper: gradational change in grain size

Lower: gradational change in grain size

COLOR: greenish black (10Y 2.5/1)

PHENOCRYSTS: none apparent

GROUNDMASS:

Grain size: fine-grained

Texture: intergranular to variolitic

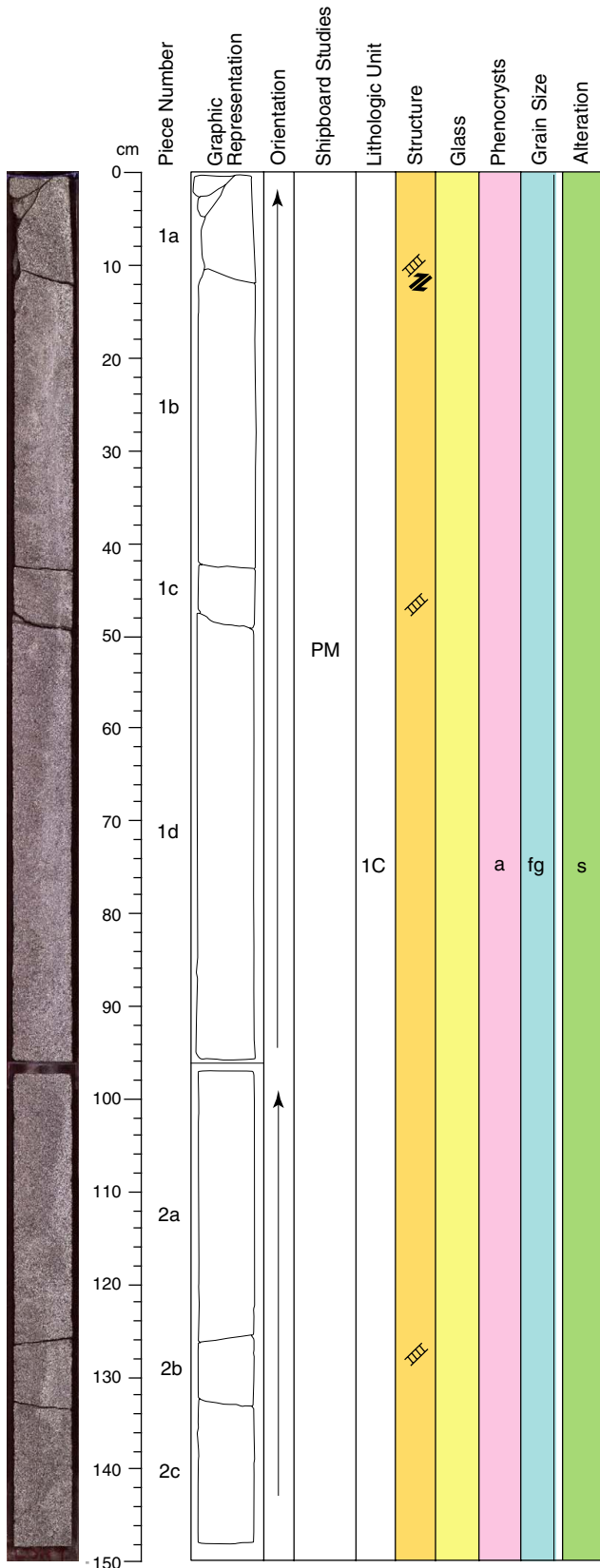
VESICLES: none

ALTERATION: Dark gray slightly altered basalt

VEINS: 0.2-1.5 mm veins of saponite with minor pyrite

STRUCTURE: One microfault with splayed morphology and reverse sense of shear in Piece 1d. Most veins have gentle dip; one sub vertical vein in Pieces 1a and 1b.

Core Photo



206-1256D-7R-1 (Section top: 303.90 mbsf)

UNIT: 1C

ROCK NAME: Fine-grained basalt

SUMMARY DESCRIPTION: Massive fine-grained basalt.

PIECES: 1-2 (igneous description based on Piece 1b)

CONTACTS:

Upper: gradational change in grain size

Lower: gradational change in grain size

COLOR: black (N 2.5/)

PHENOCRYSTS: none apparent

GROUNDMASS:

Grain size: fine-grained

Texture: intergranular

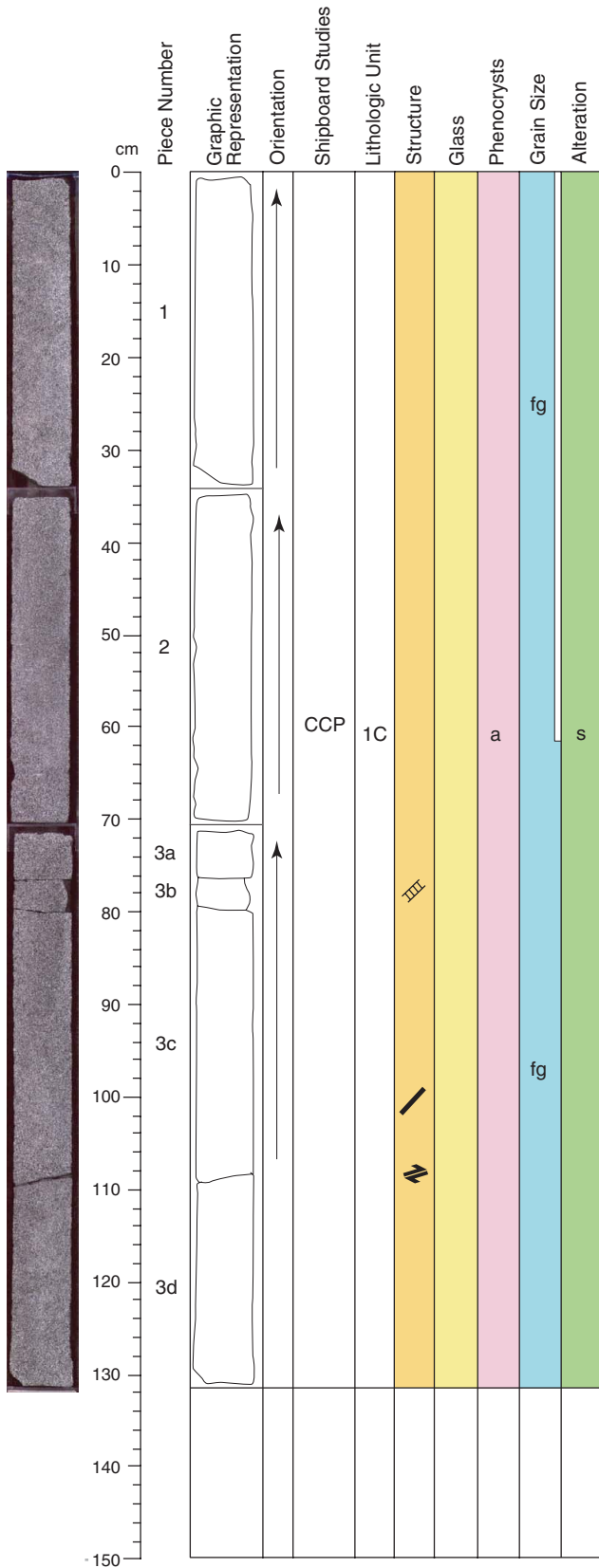
VESICLES: none

ALTERATION: Dark gray slightly altered basalt

VEINS: 0.1-0.4 mm veins of saponite with minor pyrite. Carbonate vein at 49 cm.

STRUCTURE: One shear vein with saponite overlapping fibers and dextral reverse shear sense in Piece 1a. One 3 mm fibrous composite vein with splayed morphology in Piece 1a.

Core Photo



206-1256D-7R-2 (Section top: 305.37 mbsf)

UNIT: 1C

ROCK NAME: Fine-grained basalt

SUMMARY DESCRIPTION: Massive fine-grained basalt.

PIECES: 1-3 (igneous description based on 7R-1 Piece 1b)

CONTACTS:

Upper: gradational change in grain size

Lower: gradational change in grain size

COLOR: black (N 2.5)

PHENOCRYSTS: none apparent

GROUNDMASS:

Grain size: fine-grained

Texture: intergranular

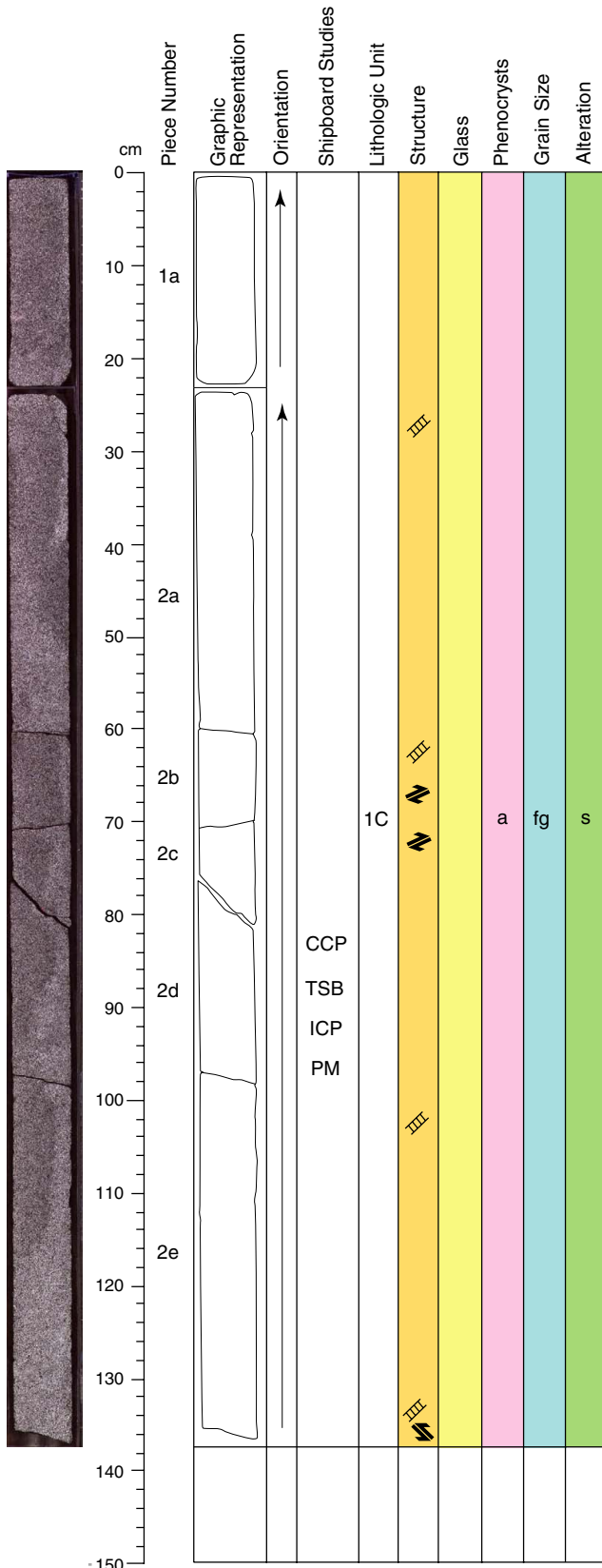
VESICLES: none

ALTERATION: Dark gray slightly altered basalt

VEINS: 0.2-0.5 mm veins of saponite with minor pyrite

STRUCTURE: One gently dipping microfault with microcataclasite and with reverse sense of shear in Piece 3c. Two sub horizontal veins in Pieces 3a and 3b.

Core Photo



206-1256D-7R-3 (Section top: 306.68 mbsf)

UNIT: 1C

ROCK NAME: Fine-grained basalt

SUMMARY DESCRIPTION: Massive fine-grained basalt.

PIECES: 1-2 (igneous description based on 7R-1 Piece 1b)

CONTACTS:

Upper: gradational change in grain size

Lower: gradational change in grain size

COLOR: black (N 2.5/)

PHENOCRYSTS: none apparent

GROUNDMASS:

Grain size: fine-grained

Texture: intergranular

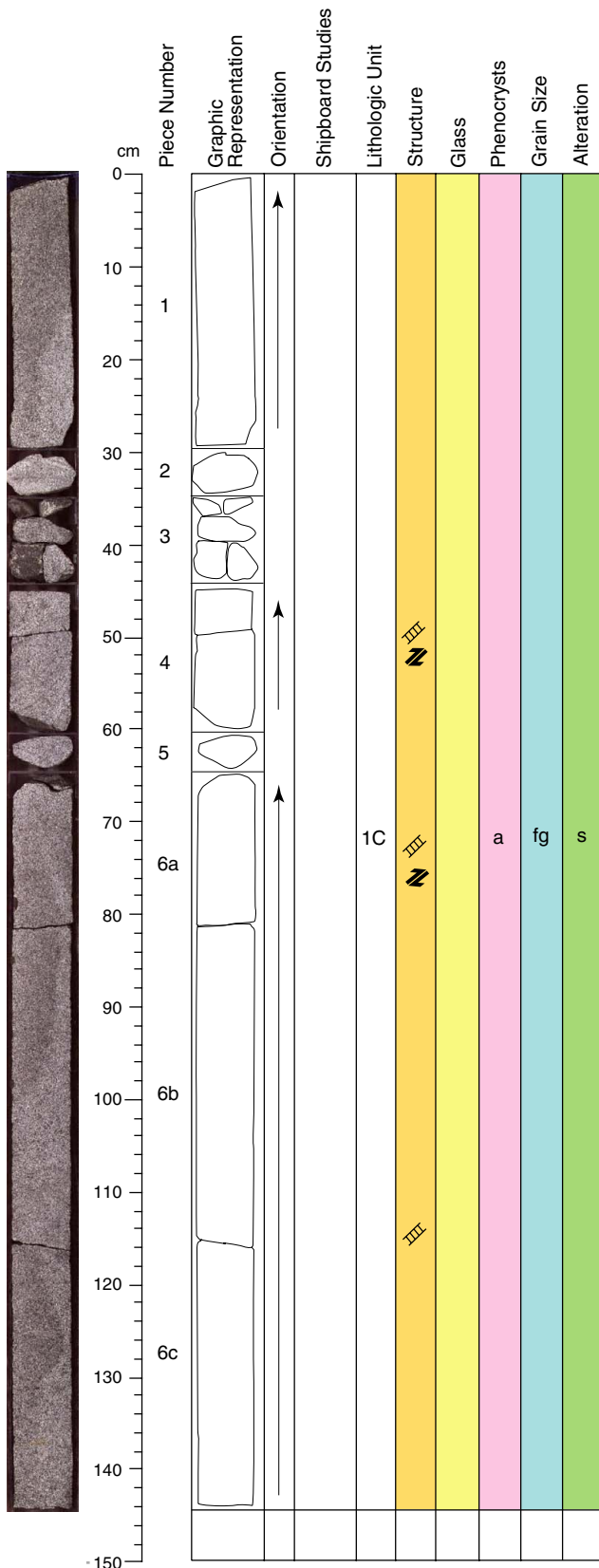
VESICLES: none

ALTERATION: Dark gray slightly altered basalt

VEINS: 0.2-0.5 mm veins of saponite with minor pyrite

STRUCTURE: Two shear veins with saponite overlapping fibers and reverse sense of shear in Piece 2b; one shear vein with sinistral sense of shear at the bottom of the Section.

Core Photo



206-1256D-7R-4 (Section top: 308.05 mbsf)

UNIT: 1C

ROCK NAME: Fine-grained basalt

SUMMARY DESCRIPTION: Massive fine-grained basalt.

PIECES: 1-6 (igneous description based on Piece 1)

CONTACTS:

Upper: gradational change in grain size

Lower: gradational change in grain size

COLOR: black (N 2.5/)

PHENOCRYSTS: none apparent

GROUNDMASS:

Grain size: fine-grained

Texture: intergranular

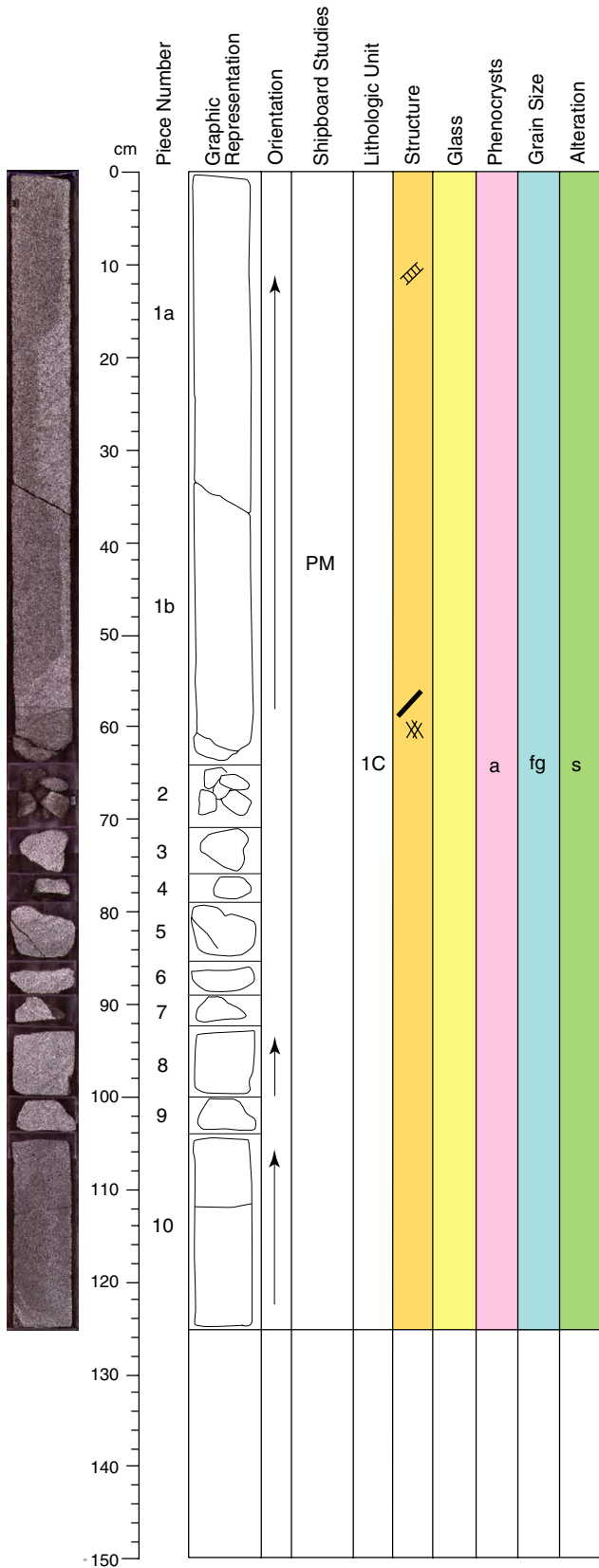
VESICLES: none

ALTERATION: Dark gray slightly altered basalt

VEINS: 0.1-1.5 mm veins of saponite with minor pyrite. Carbonate vein at 1 cm.

STRUCTURE: Two shear veins with saponite overlapping fibers and reverse sense of shear in Pieces 4 and 6a.

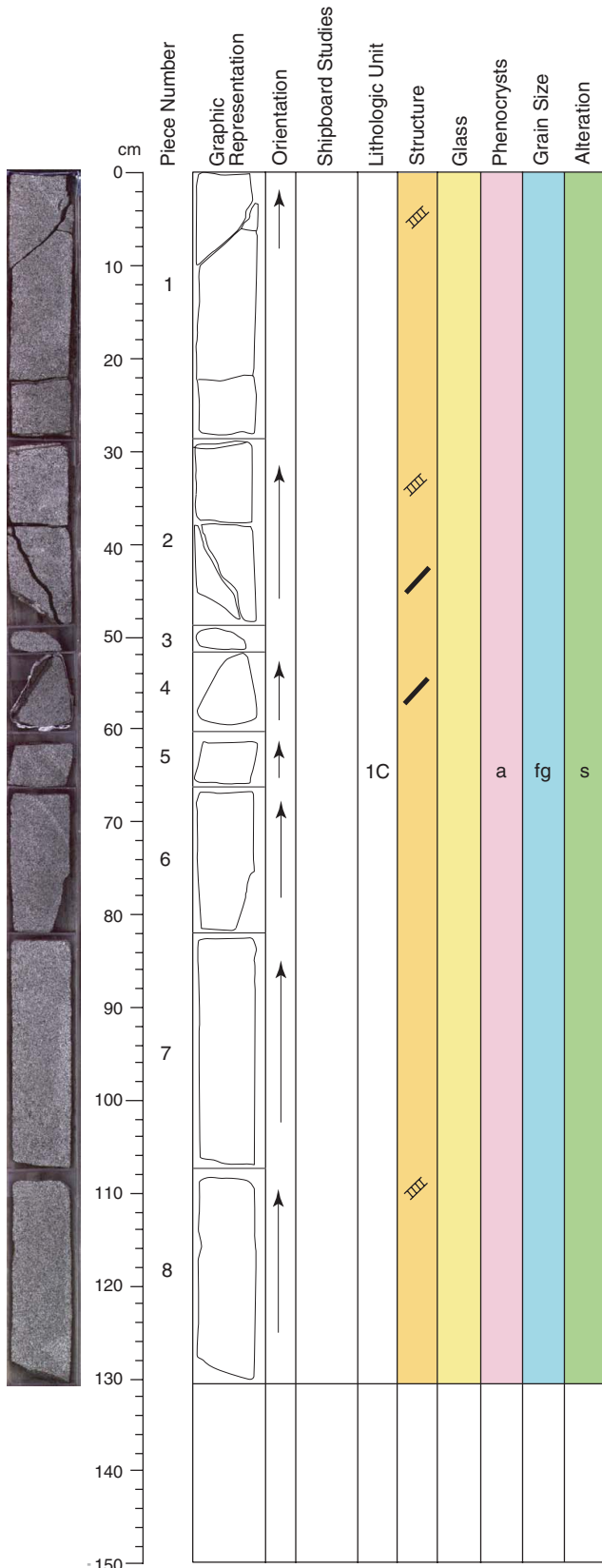
Core Photo



206-1256D-7R-5 (Section top: 309.49 mbsf)

UNIT: 1C
 ROCK NAME: Fine-grained basalt
 SUMMARY DESCRIPTION: Massive fine-grained basalt.
 PIECES: 1-10 (igneous description based on 7R-4 Piece 1)
 CONTACTS:
 Upper: gradational change in grain size
 Lower: gradational change in grain size
 COLOR: black (N 2.5/)
 PHENOCRYSTS: none apparent
 GROUNDMASS:
 Grain size: fine-grained
 Texture: intergranular
 VESICLES: none
 ALTERATION: Dark gray slightly altered basalt
 VEINS: 0.1-0.3 mm veins of saponite with minor pyrite
 STRUCTURE: One network of splayed veins and one microfault with slickenlines and microcataclasis in the lower part of Piece 1b.

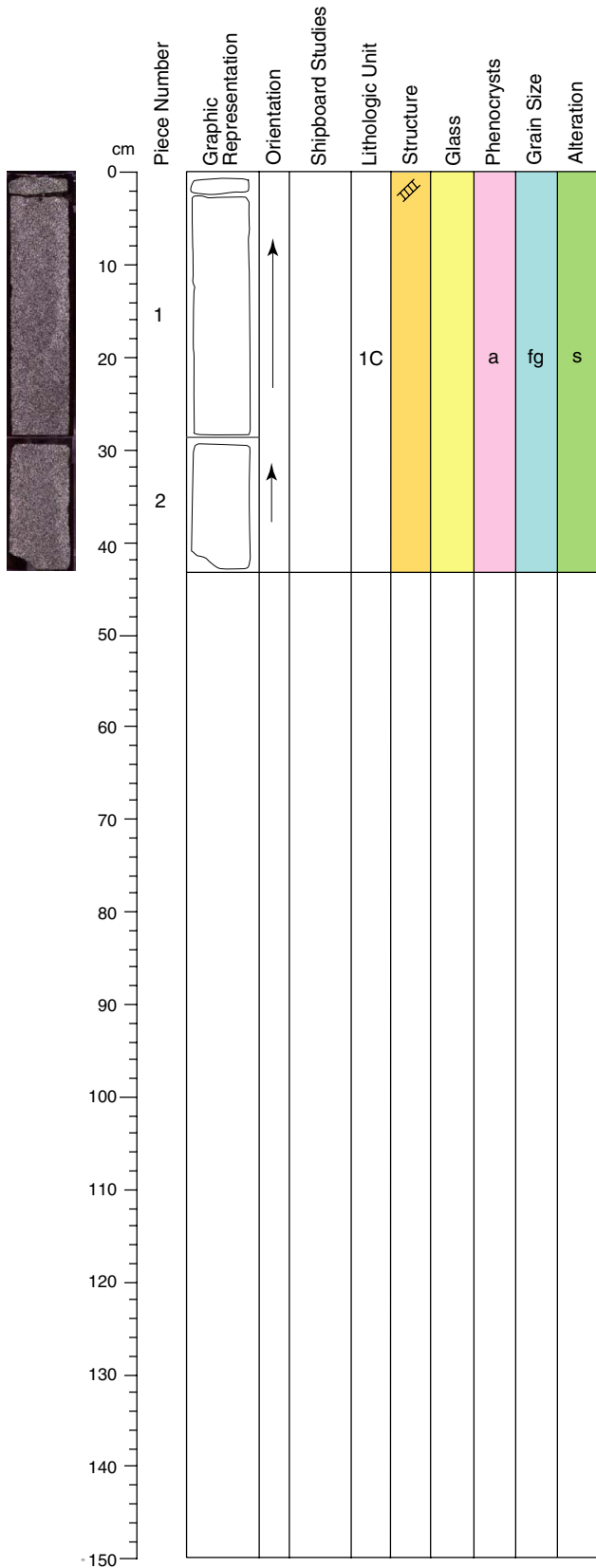
Core Photo



206-1256D-7R-6 (Section top: 310.74 mbsf)

UNIT: 1C
ROCK NAME: Fine-grained basalt
SUMMARY DESCRIPTION: Massive fine-grained basalt.
PIECES: 1-8 (igneous description based on 7R-4 Piece 1)
CONTACTS:
 Upper: gradational change in grain size
 Lower: gradational change in grain size
COLOR: black (N 2.5/)
PHENOCRYSTS: none apparent
GROUNDMASS:
 Grain size: fine-grained
 Texture: intergranular
VESICLES: none
ALTERATION: Dark gray slightly altered basalt
VEINS: 0.1-1.5 mm veins of saponite with minor pyrite. Carbonate vein at 22 cm.
STRUCTURE: Two microfaults with microcataclasite and slickenfibers in Pieces 2b and 4. Conjugate system of veins in Pieces 1a, 2a, and 2b.

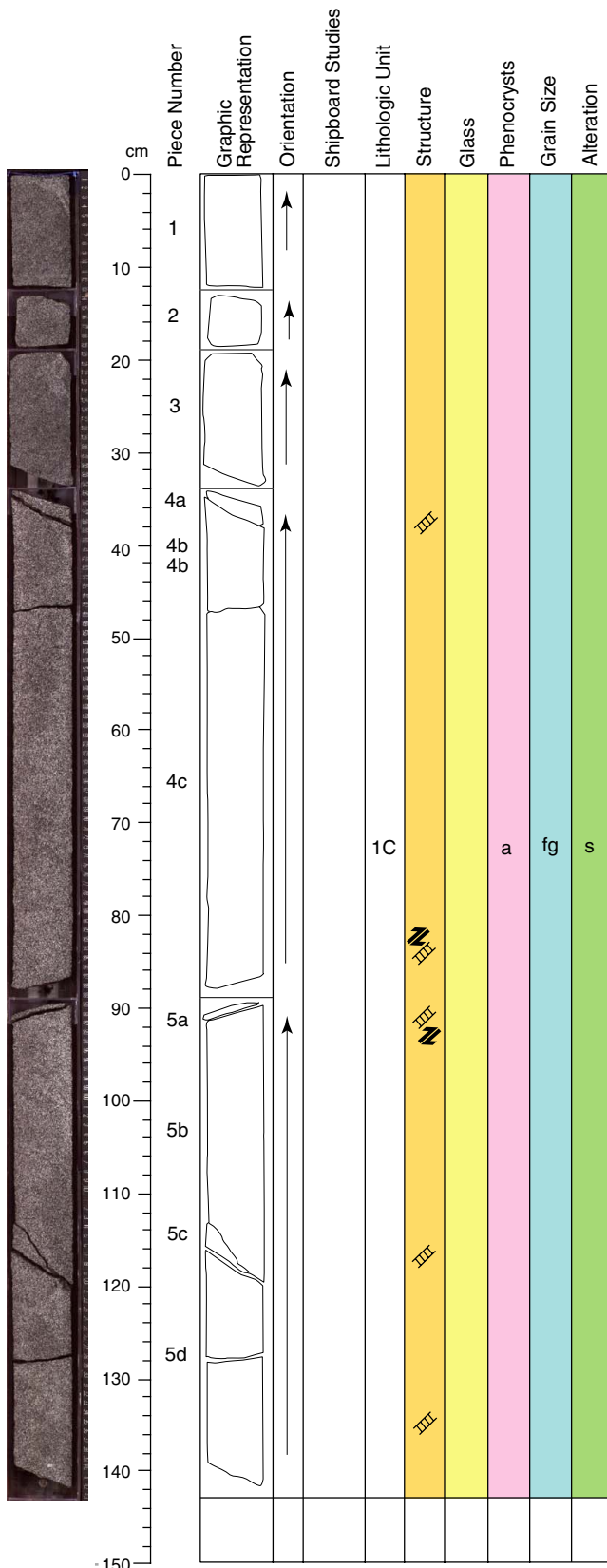
Core Photo



206-1256D-7R-7 (Section top: 312.05 mbsf)

UNIT: 1C
 ROCK NAME: Fine-grained basalt
 SUMMARY DESCRIPTION: Massive fine-grained basalt.
 PIECES: 1-2 (igneous description based on 7R-4 Piece 1)
 CONTACTS:
 Upper: gradational change in grain size
 Lower: gradational change in grain size
 COLOR: black (N 2.5/)
 PHENOCRYSTS: none apparent
 GROUNDMASS:
 Grain size: fine-grained
 Texture: intergranular
 VESICLES: none
 ALTERATION: Dark gray slightly altered basalt
 VEINS: 2 mm saponite vein.
 STRUCTURE: Veins with gentle dips at the top of Piece 1.

Core Photo



206-1256D-8R-1 (Section top: 313.30 mbsf)

UNIT: 1C

ROCK NAME: Fine-grained basalt

SUMMARY DESCRIPTION: Massive fine-grained basalt

PIECES: 1-5 (igneous description based on Piece 4b)

CONTACTS:

Upper: gradational change in grain size

Lower: gradational change in grain size

COLOR: greenish black (10Y 2.5/1)

PHENOCRYSTS: none apparent

GROUNDMASS:

Grain size: fine-grained

Texture: intergranular to variolitic/poikilitic

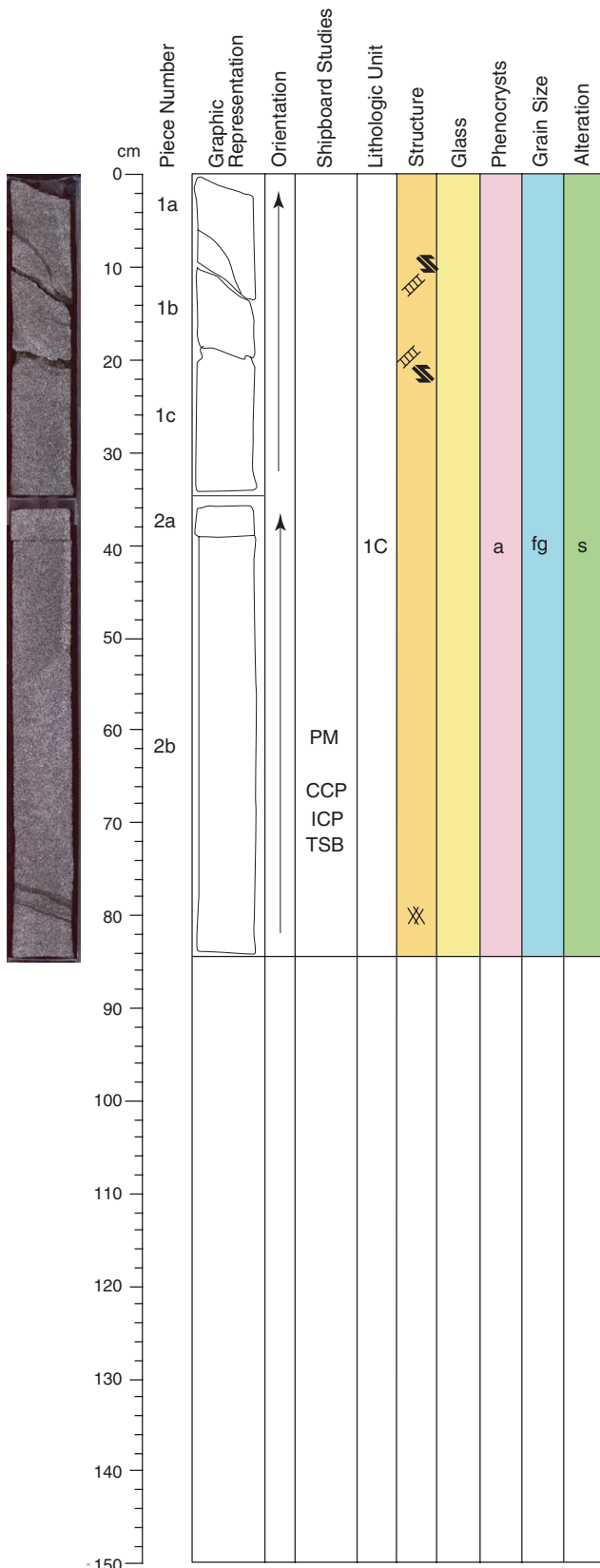
VESICLES: none

ALTERATION: Dark gray slightly altered basalt

VEINS: 0.1-1.5 mm veins of saponite with minor pyrite

STRUCTURE: Two shear veins with dark green overlapping fibers and reverse sense of shear in Pieces 4c and 5a. Veins with gentle dip, one nearly vertical vein in Pieces 5c and 5d.

Core Photo



206-1256D-8R-2 (Section top: 314.73 mbsf)

UNIT: 1c

ROCK NAME: Fine-grained basalt

SUMMARY DESCRIPTION: Massive fine-grained basalt

PIECES: 1-2 (igneous description based on 8R-1 Piece 4b)

CONTACTS:

Upper: gradational change in grain size

Lower: gradational change in grain size

COLOR: greenish black (10Y 2.5/1)

PHENOCRYSTS: none apparent

GROUNDMASS:

Grain size: fine-grained

Texture: intergranular to variolitic/poikilitic

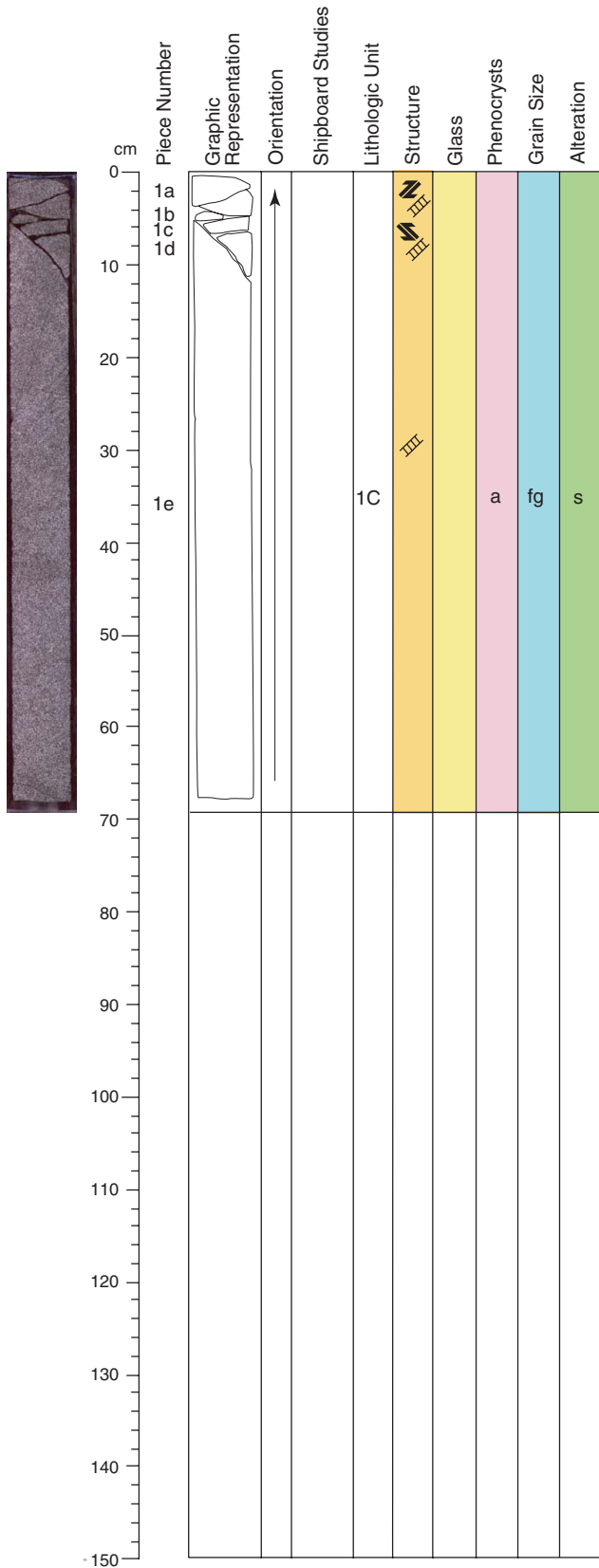
VESICLES: none

ALTERATION: Dark gray slightly altered basalt

VEINS: 0.3-1 mm veins of saponite with minor pyrite. Vein net at 77 cm.

STRUCTURE: One 5.2 mm splayed shear vein with curving fibers and reverse sense of shear in Piece 1a. One shear vein with down dip overlapping fibers and reverse sense of shear at 21 cm. Vein network of 0.1 mm dark green anastomosing and gently dipping veins in the lower part of the section.

Core Photo



206-1256D-8R-3 (Section top: 315.57 mbsf)

UNIT: 1C

ROCK NAME: Fine-grained basalt

SUMMARY DESCRIPTION: Massive fine-grained basalt

PIECES: 1 (igneous description based on Piece 1e)

CONTACTS:

Upper: gradational change in grain size

Lower: gradational change in grain size

COLOR: greenish black (5GY 2.5/1)

PHENOCRYSTS: none apparent

GROUNDMASS:

Grain size: fine-grained

Texture: intergranular

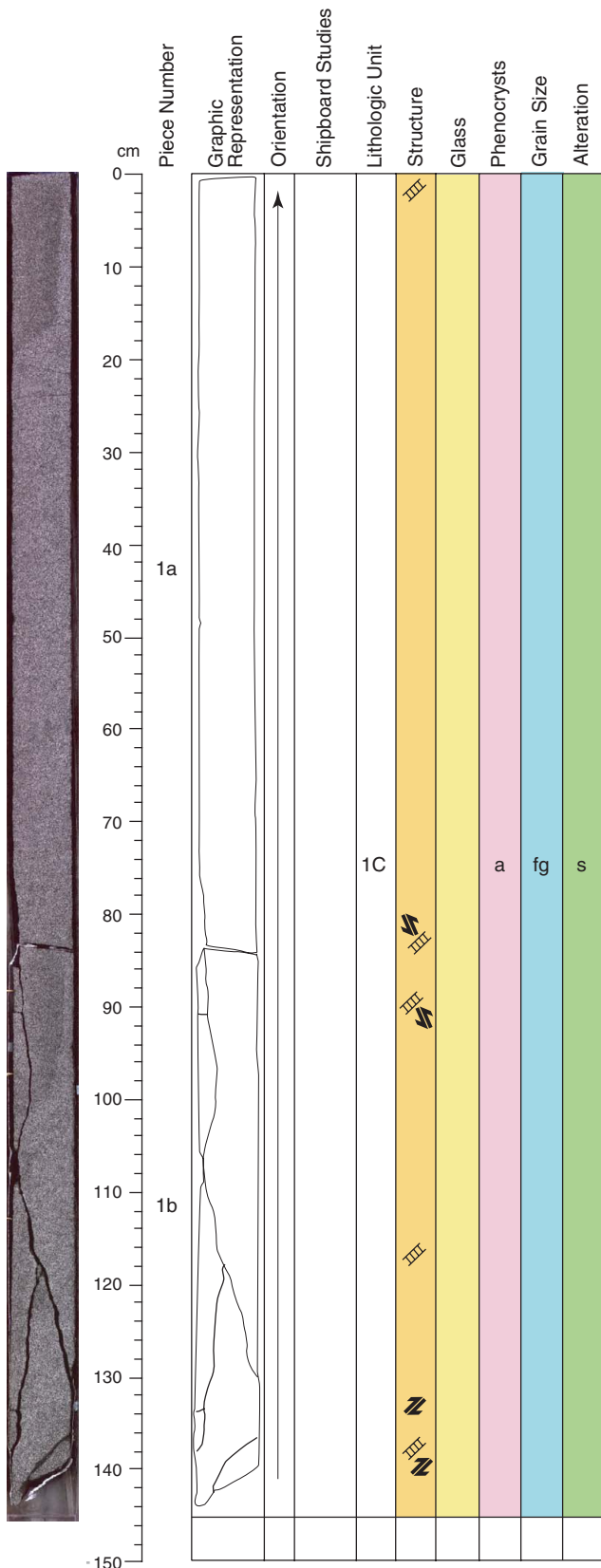
VESICLES: none

ALTERATION: Dark gray slightly altered basalt

VEINS: 0.2-0.8 mm veins of saponite with minor pyrite

STRUCTURE: En-echelon system of normal shear veins linked to one main vein.

Core Photo



206-1256D-8R-4 (Section top: 316.26 mbsf)

UNIT: 1C

ROCK NAME: Fine-grained basalt

SUMMARY DESCRIPTION: Massive fine-grained basalt

PIECES: 1 (igneous description based on 8R-3 Piece 1e)

CONTACTS:

Upper: gradational change in grain size

Lower: gradational change in grain size

COLOR: greenish black (5GY 2.5/1)

PHENOCRYSTS: none apparent

GROUNDMASS:

Grain size: fine-grained

Texture: intergranular

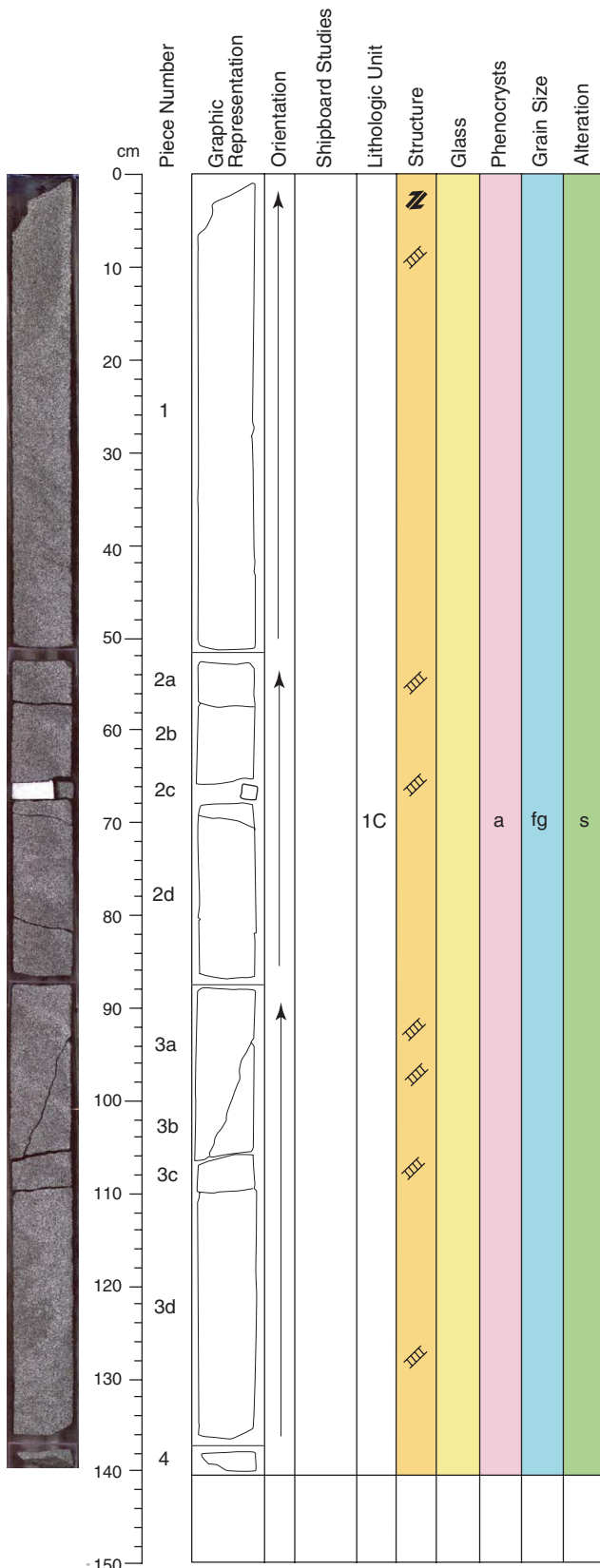
VESICLES: none

ALTERATION: Dark gray slightly altered basalt

VEINS: 0.3-1 mm veins of saponite with minor pyrite. Carbonate vein at 1 cm.

STRUCTURE: Mostly shear veins with overlapping saponite fibers and reverse sense of shear. One sinistral strike slip shear vein in Piece 1b.

Core Photo



206-1256D-8R-5 (Section top: 317.71 mbsf)

UNIT: 1C

ROCK NAME: Fine-grained basalt

SUMMARY DESCRIPTION: Massive fine-grained basalt

PIECES: 1-4 (igneous description based on Piece 2b)

CONTACTS:

Upper: gradational change in grain size

Lower: gradational change in grain size

COLOR: greenish black (5GY 2.5/1)

PHENOCRYSTS:

Plagioclase tr % 2.0 mm

Clinopyroxene <1% 0.2 mm

GROUNDMASS:

Grain size: fine-grained

Texture: intergranular

VESICLES: none

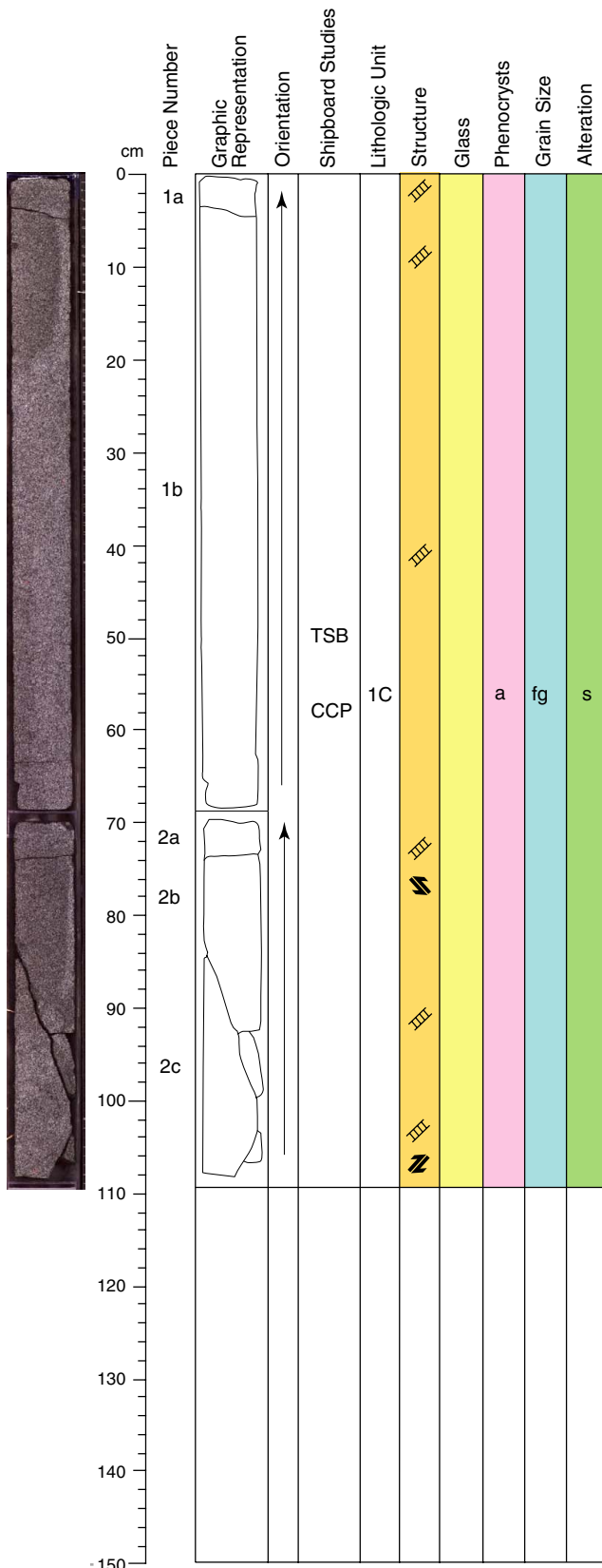
ALTERATION: Dark gray slightly altered basalt

VEINS: 0.2-0.8 mm veins of saponite with minor pyrite

STRUCTURE: Two shear veins with down dip overlapping saponite fibers and reverse sense of shear at the top of the section. Gently dipping parallel veins cut by a steeply dipping vein with an apparent offset of 5.6 mm in Pieces 3a, 3b, and 3c.

ADDITIONAL COMMENTS: Rare clinopyroxene phenocrysts occur up to 5 mm long and 0.2 mm wide.

Core Photo



206-1256D-8R-6 (Section top: 319.11 mbsf)

UNIT: 1C

ROCK NAME: Fine-grained basalt

SUMMARY DESCRIPTION: Massive fine-grained basalt

PIECES: 1-2 (igneous description based on 8R-5 Piece 2b)

CONTACTS:

Upper: gradational change in grain size

Lower: gradational change in grain size

COLOR: greenish black (5GY 2.5/1)

PHENOCRYSTS:

Plagioclase tr % 2.0 mm

Clinopyroxene <1% 0.2 mm

GROUNDMASS:

Grain size: fine-grained

Texture: intergranular

VESICLES: none

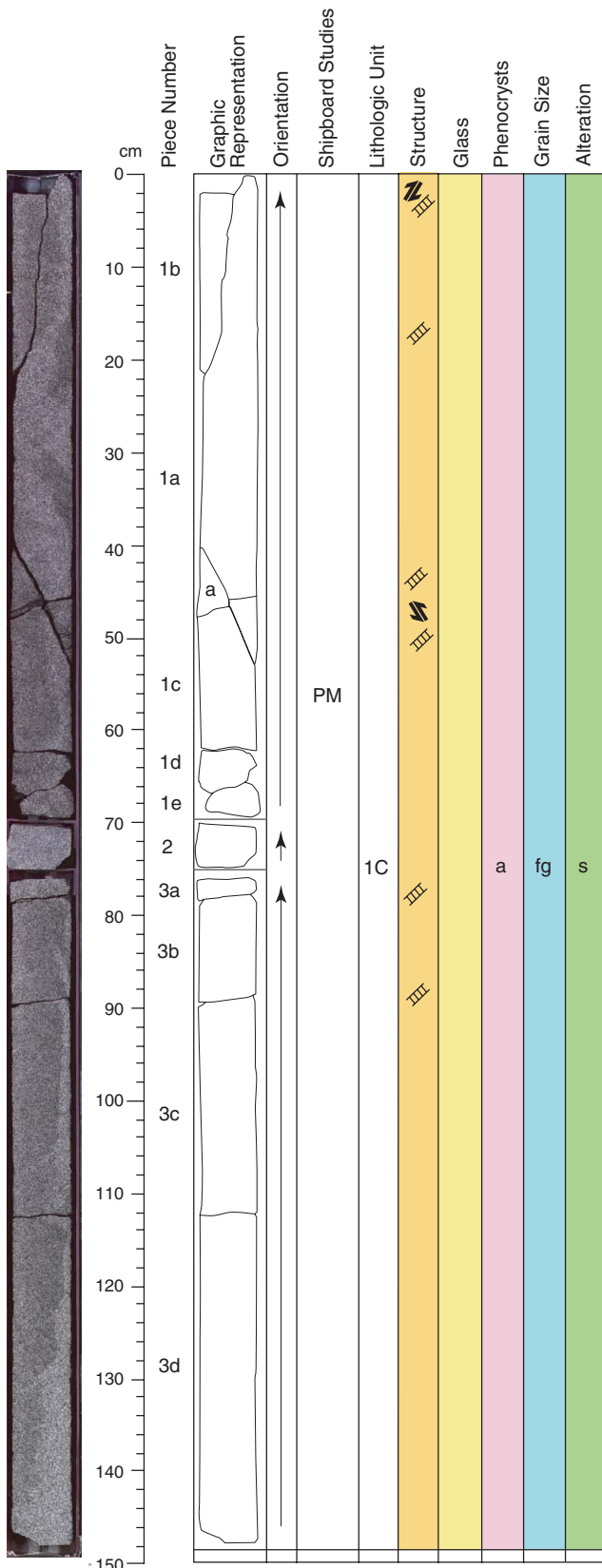
ALTERATION: Dark gray slightly altered basalt

VEINS: 0.1-1.5 mm veins of saponite with minor pyrite

STRUCTURE: One steeply dipping vein cuts gently dipping parallel veins in Pieces 1a and 1b. Two shear veins with down dip saponite overlapping fibers and reverse sense of shear in Piece 2b and 2c.

ADDITIONAL COMMENTS: Rare clinopyroxene phenocrysts occur up to 5 mm long and 0.2 mm wide.

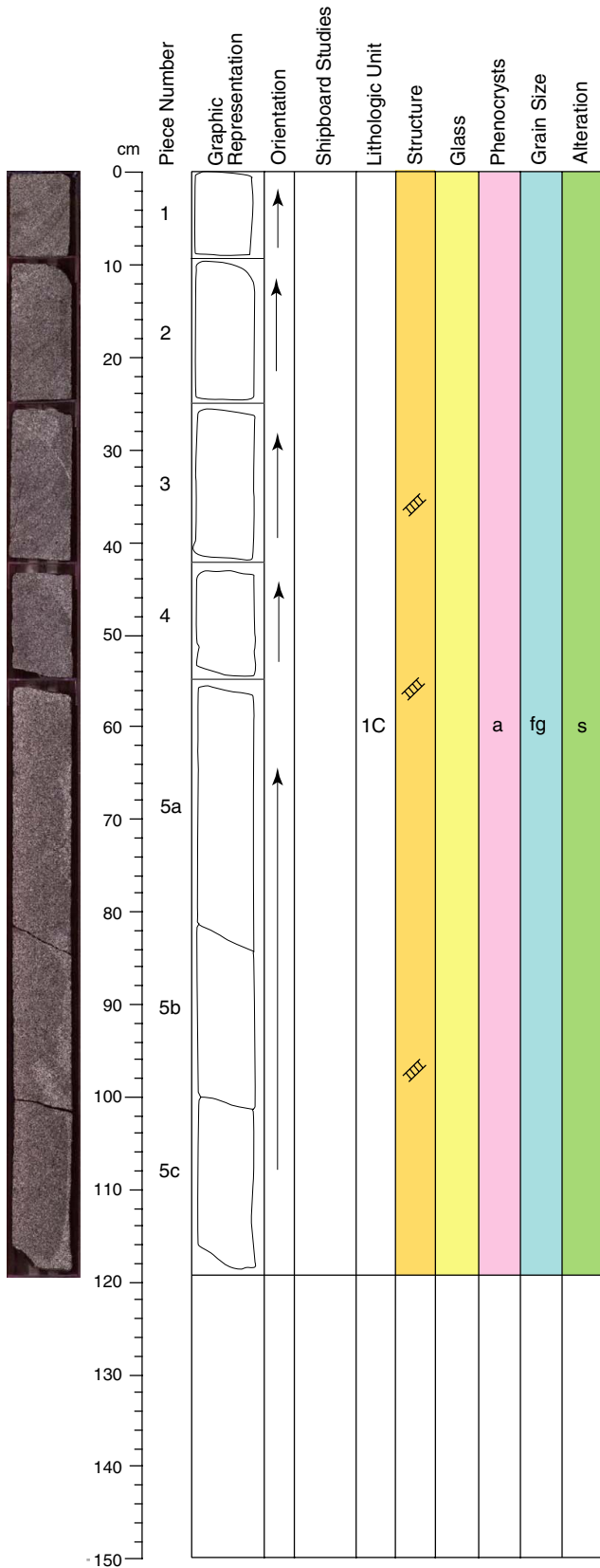
Core Photo



206-1256D-8R-7 (Section top: 320.20 mbsf)

UNIT: 1C
ROCK NAME: Fine-grained basalt
SUMMARY DESCRIPTION: Massive fine-grained basalt
PIECES: 1-3 (igneous description based on 8R-5 Piece 2b)
CONTACTS:
 Upper: gradational change in grain size
 Lower: gradational change in grain size
COLOR: greenish black (5GY 2.5/1)
PHENOCRYSTS:
 Plagioclase tr % 2.0 mm
 Clinopyroxene <1% 0.2 mm
GROUNDMASS:
 Grain size: fine-grained
 Texture: intergranular
VESICLES: none
ALTERATION: Dark gray slightly altered basalt
VEINS: 0.1-1 mm veins of saponite with minor pyrite
STRUCTURE: One nearly vertical shear vein cuts gently dipping parallel veins in Pieces 1a and 1b. One shear vein with down dip overlapping fibers and reverse sense of shear in Piece 1a and 1c.
ADDITIONAL COMMENTS: Rare clinopyroxene phenocrysts occur up to 5 mm long and 0.2 mm wide.

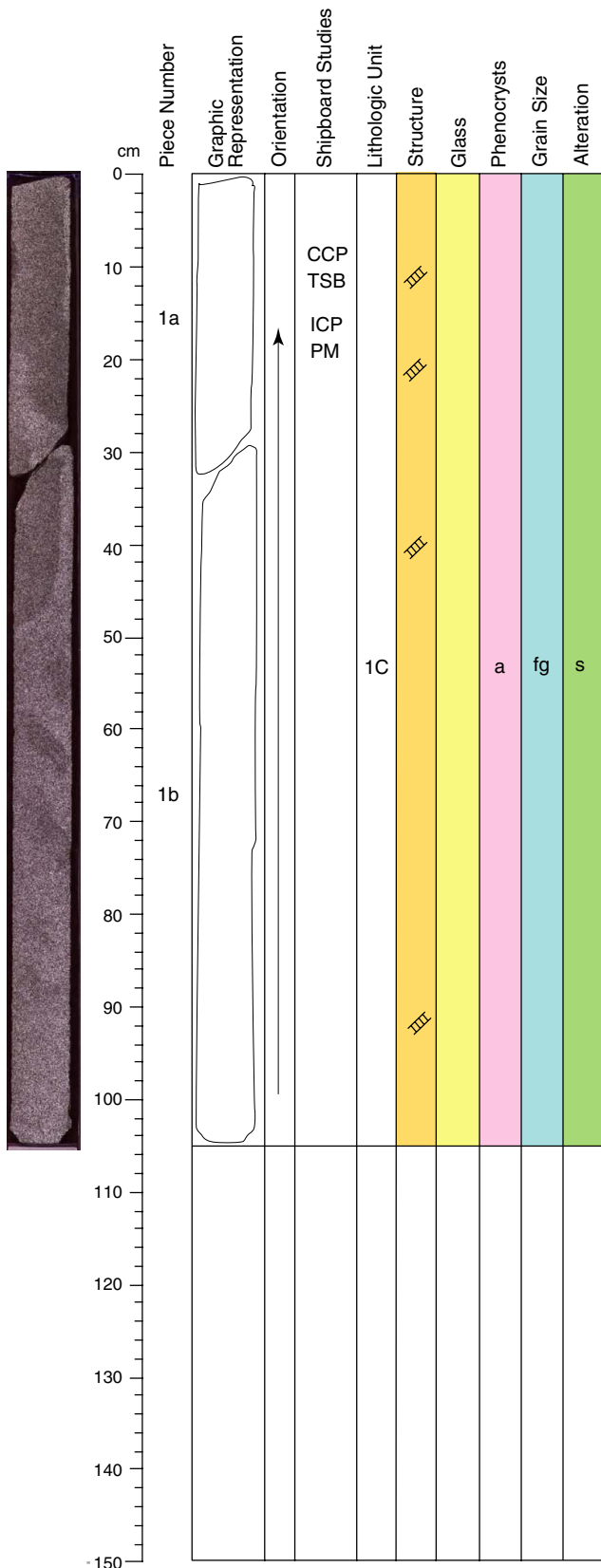
Core Photo



206-1256D-9R-1 (Section top: 322.80 mbsf)

UNIT: 1C
ROCK NAME: Fine-grained basalt
SUMMARY DESCRIPTION: Massive fine-grained basalt
PIECES: 1-5 (igneous description based on Piece 4)
CONTACTS:
 Upper: gradational change in grain size
 Lower: gradational change in grain size
COLOR: greenish black (10GY 2.5/1)
PHENOCRYSTS: none apparent
GROUNDMASS:
 Grain size: fine-grained
 Texture: intergranular
VESICLES: none
ALTERATION: Dark gray slightly altered basalt
VEINS: 0.2-0.5 mm veins of saponite with minor pyrite
STRUCTURE: Four 0.5-0.7 mm parallel veins with gentle dips. Five 0.2 mm steeply dipping veins with irregular and stair stepped morphology.

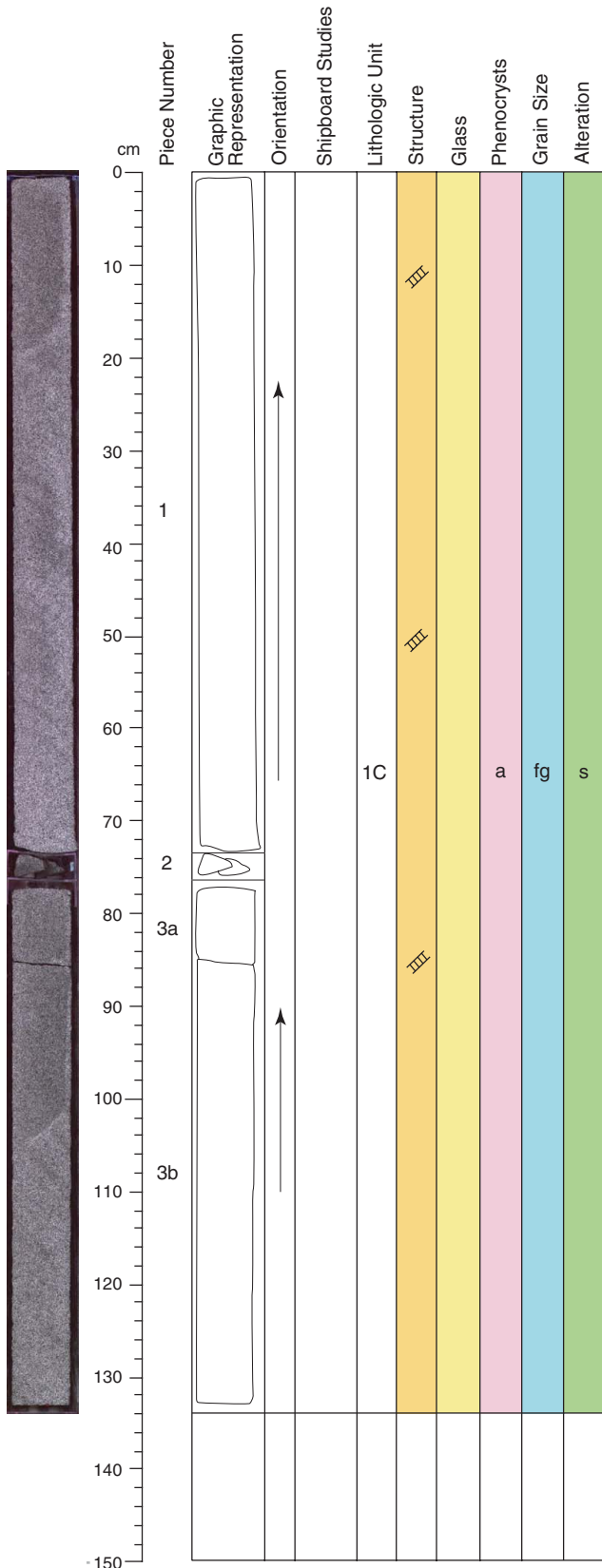
Core Photo



206-1256D-9R-2 (Section top: 323.99 mbsf)

UNIT: 1C
 ROCK NAME: Fine-grained basalt
 SUMMARY DESCRIPTION: Massive fine-grained basalt
 PIECES: 1 (igneous description based on 9R-1 Piece 4)
 CONTACTS:
 Upper: gradational change in grain size
 Lower: gradational change in grain size
 COLOR: greenish black (10GY 2.5/1)
 PHENOCRYSTS: none apparent
 GROUNDMASS:
 Grain size: fine-grained
 Texture: intergranular
 VESICLES: none
 ALTERATION: Dark gray slightly altered basalt
 VEINS: 0.2-0.4 mm veins of saponite with minor pyrite
 STRUCTURE: Steeply dipping veins with irregular and stepped morphology.
 One splayed vein at 27-36 cm.

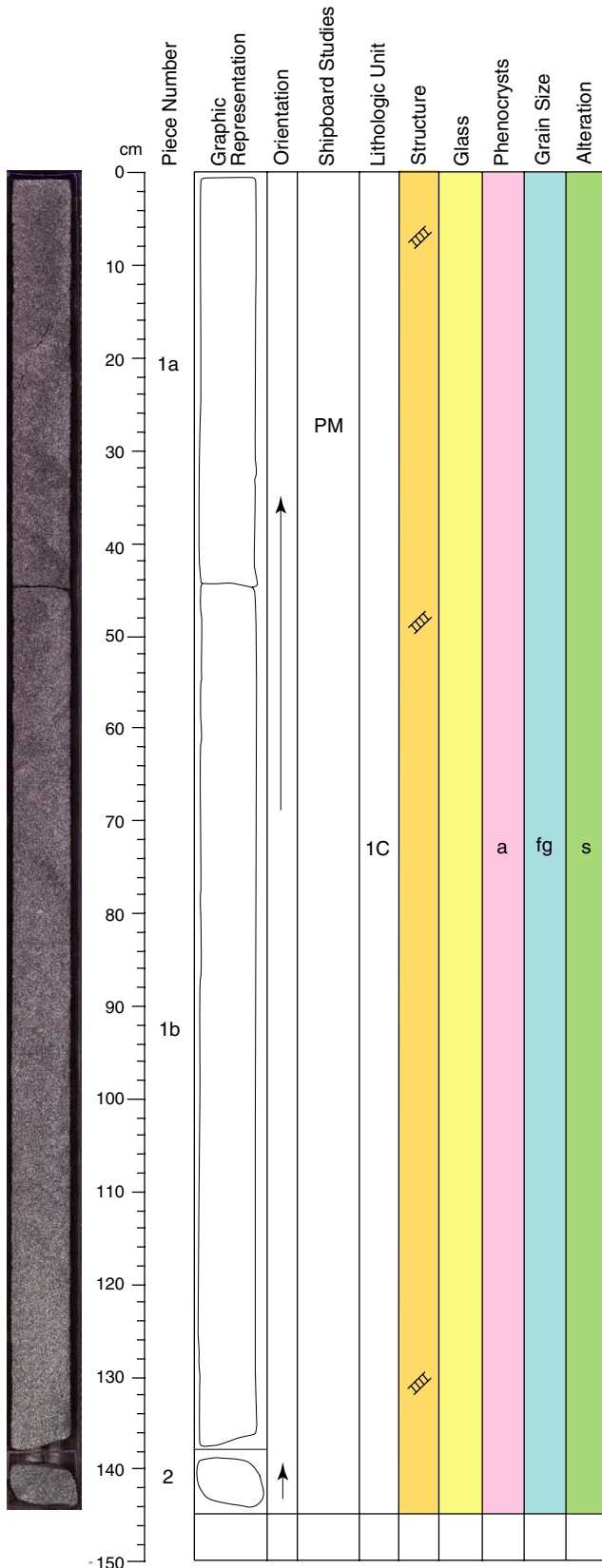
Core Photo



206-1256D-9R-3 (Section top: 325.04 mbsf)

UNIT: 1C
ROCK NAME: Fine-grained basalt
SUMMARY DESCRIPTION: Massive fine-grained basalt
PIECES: 1-3 (igneous description based on 9R-1 Piece 4)
CONTACTS:
 Upper: gradational change in grain size
 Lower: subunit; gradational change in grain size
COLOR: greenish black (10GY 2.5/1)
PHENOCRYSTS: none apparent
GROUNDMASS:
 Grain size: fine-grained
 Texture: intergranular
VESICLES: none
ALTERATION: Dark gray slightly altered basalt
VEINS: 0.2-0.6 mm veins of saponite with minor pyrite
STRUCTURE: Two nearly vertical veins with irregular and stepped morphology

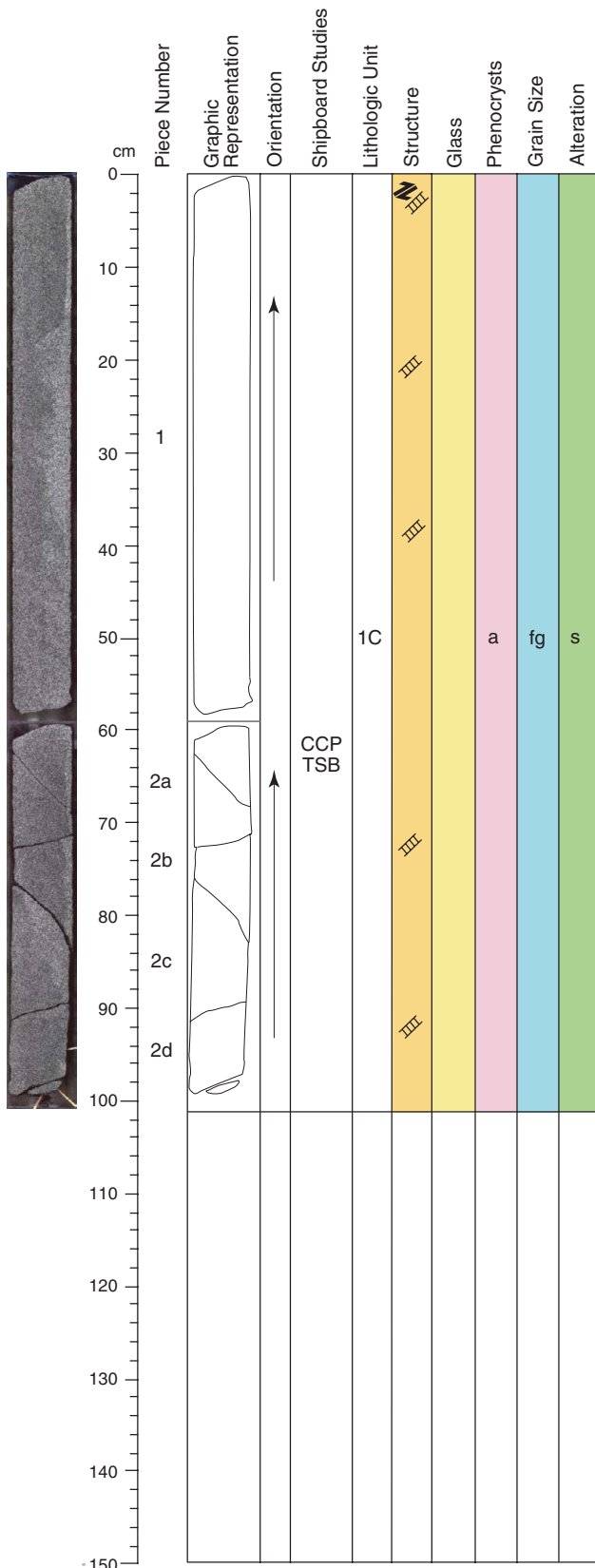
Core Photo



206-1256D-9R-4 (Section top: 326.37 mbsf)

UNIT: 1C
ROCK NAME: Fine-grained basalt
SUMMARY DESCRIPTION: Massive fine-grained basalt
PIECES: 1-2 (igneous description based on 9R-1 Piece 4)
CONTACTS:
 Upper: gradational change in grain size
 Lower: gradational change in grain size
COLOR: greenish black (10GY 2.5/1)
PHENOCRYSTS: none apparent
GROUNDMASS:
 Grain size: fine-grained
 Texture: intergranular
VESICLES: none
ALTERATION: Dark gray slightly altered basalt
VEINS: 0.2-0.6 mm veins of saponite with minor pyrite
STRUCTURE: Mostly steeply dipping veins with irregular and stair-stepped morphology.

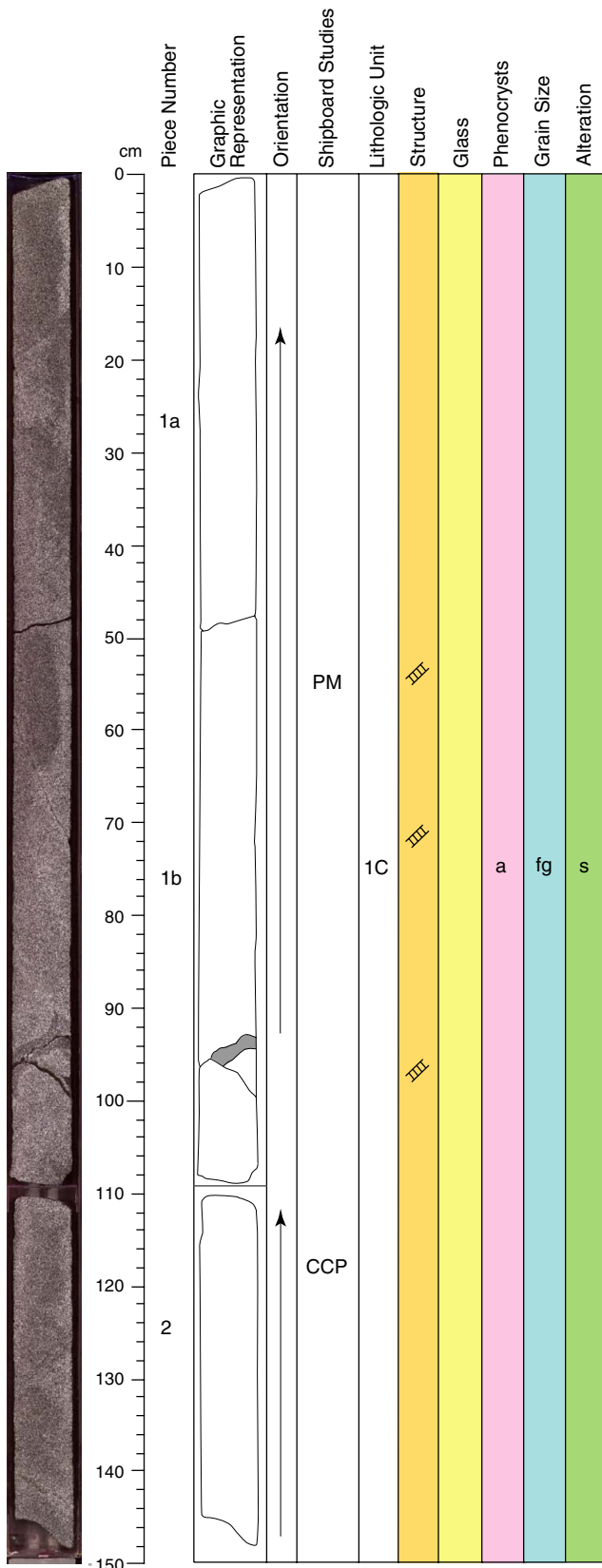
Core Photo



206-1256D-9R-5 (Section top: 327.82 mbsf)

UNIT: 1C
ROCK NAME: Fine-grained basalt
SUMMARY DESCRIPTION: Massive fine-grained basalt
PIECES: 1-2 (igneous description based on 9R-1 Piece 4)
CONTACTS:
 Upper: gradational change in grain size
 Lower: gradational change in grain size
COLOR: greenish black (10GY 2.5/1)
PHENOCRYSTS: none apparent
GROUNDMASS:
 Grain size: fine-grained
 Texture: intergranular
VESICLES: none
ALTERATION: Dark gray slightly altered basalt
VEINS: 0.2-0.5 mm veins of saponite with minor pyrite
STRUCTURE: One shear vein with dark green down dip overlapping saponite fibers and reverse sense of shear at the top of the section. Set of parallel, steeply dipping 0.2 mm veins with irregular and stair-stepped morphology in Piece 1.

Core Photo



206-1256D-10R-1 (Section top: 327.40 mbsf)

UNIT: 1C

ROCK NAME: Fine-grained basalt

SUMMARY DESCRIPTION: Massive fine-grained basalt

PIECES: 1-2 (igneous description based on Piece 1a)

CONTACTS:

Upper: gradational change in grain size

Lower: gradational change in grain size

COLOR: greenish black (10Y 2.5/1)

PHENOCRYSTS: none apparent

GROUNDMASS:

Grain size: fine-grained

Texture: intergranular to poikilitic

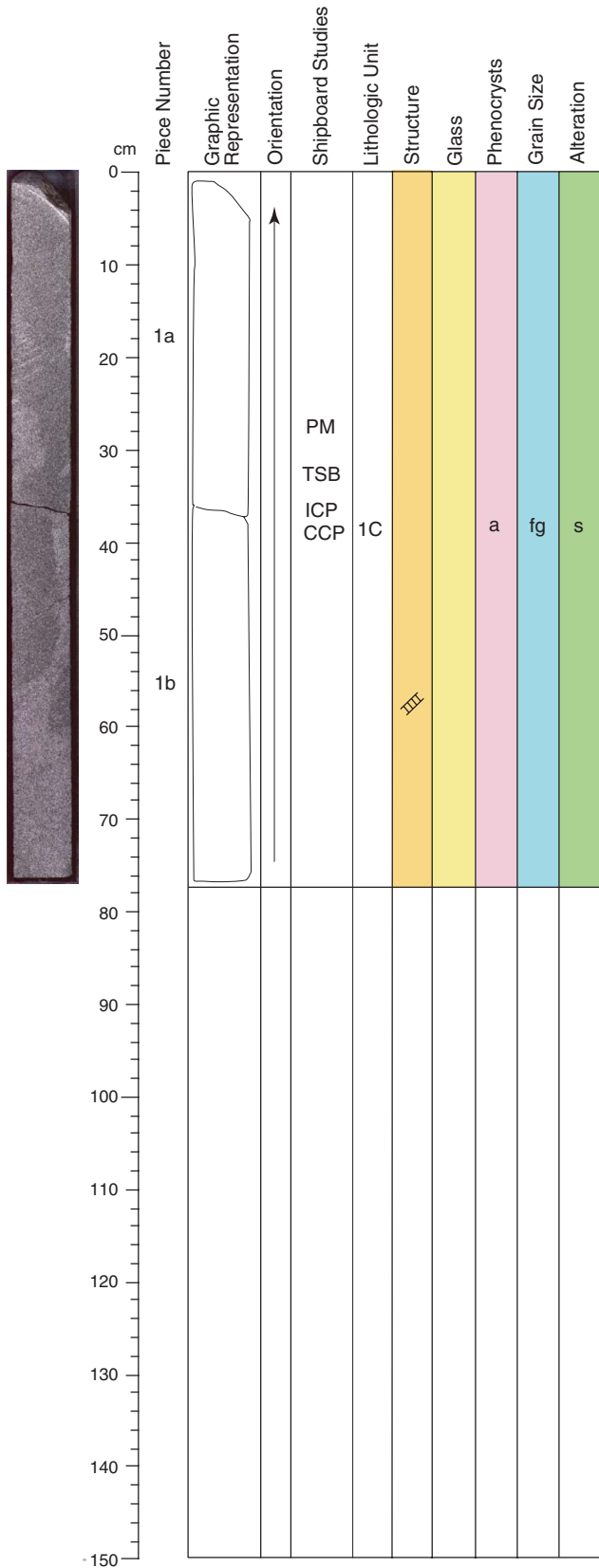
VESICLES: none

ALTERATION: Dark gray slightly altered basalt. 10-15 mm wide dark gray saponite rich alteration halos locally in piece 1 and 2.

VEINS: 0.2-0.5 mm veins of saponite with minor pyrite

STRUCTURE: Veins with irregular and stepped morphology. One late magmatic medium grained 8.5 mm stair-stepped vein in piece 1b. Termination tail of the vein is an array of en echelon tension gashes, σ_1 sub-vertical. Two drilling induced (?) joints in Piece 1b along the late magmatic vein.

Core Photo



206-1256D-10R-2 (Section top: 328.89 mbsf)

UNIT: 1C

ROCK NAME: Fine-grained basalt

SUMMARY DESCRIPTION: Massive fine-grained basalt

PIECES: 1 (igneous description based on 10R-1 Piece 1a)

CONTACTS:

Upper: gradational change in grain size

Lower: gradational change in grain size

COLOR: greenish black (10Y 2.5/1)

PHENOCRYSTS: none apparent

GROUNDMASS:

Grain size: fine-grained

Texture: intergranular to poikilitic

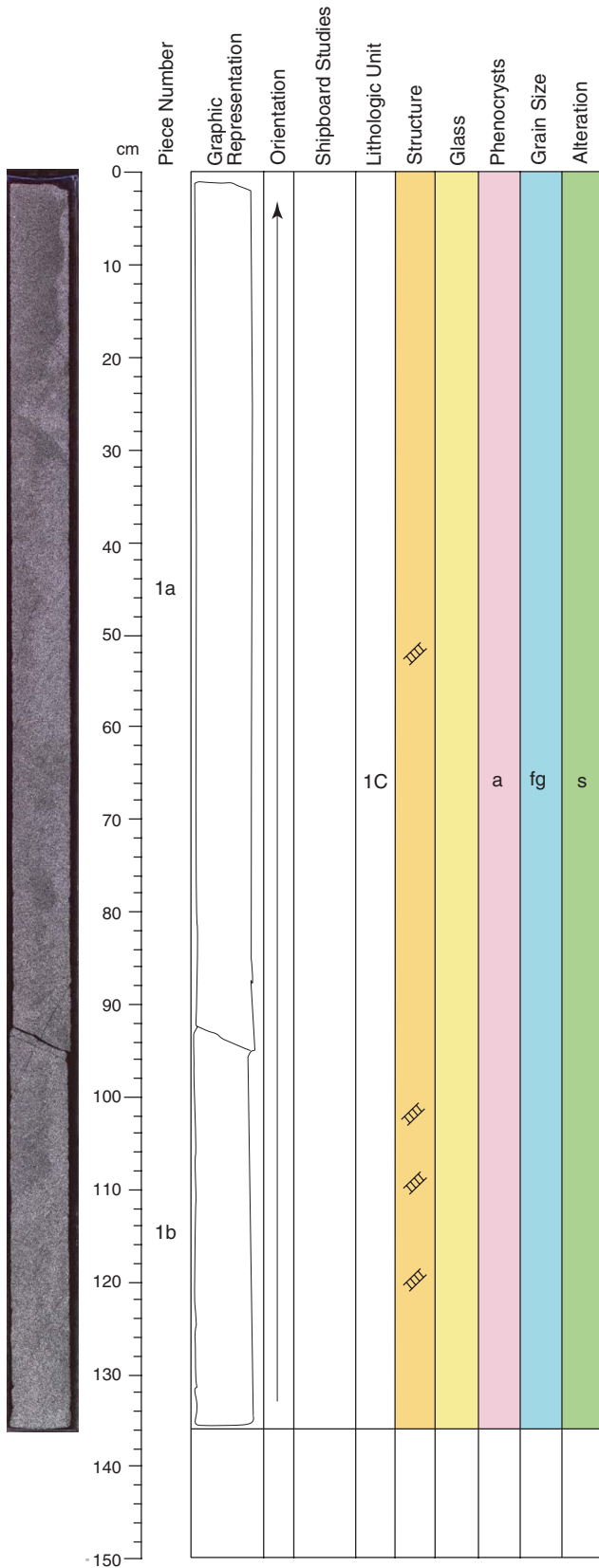
VESICLES: none

ALTERATION: Dark gray slightly altered basalt

VEINS: 0.1-0.5 mm veins of saponite with minor pyrite. Silica in vein at 2 cm.

STRUCTURE: Veins with irregular and stair-stepped morphology.

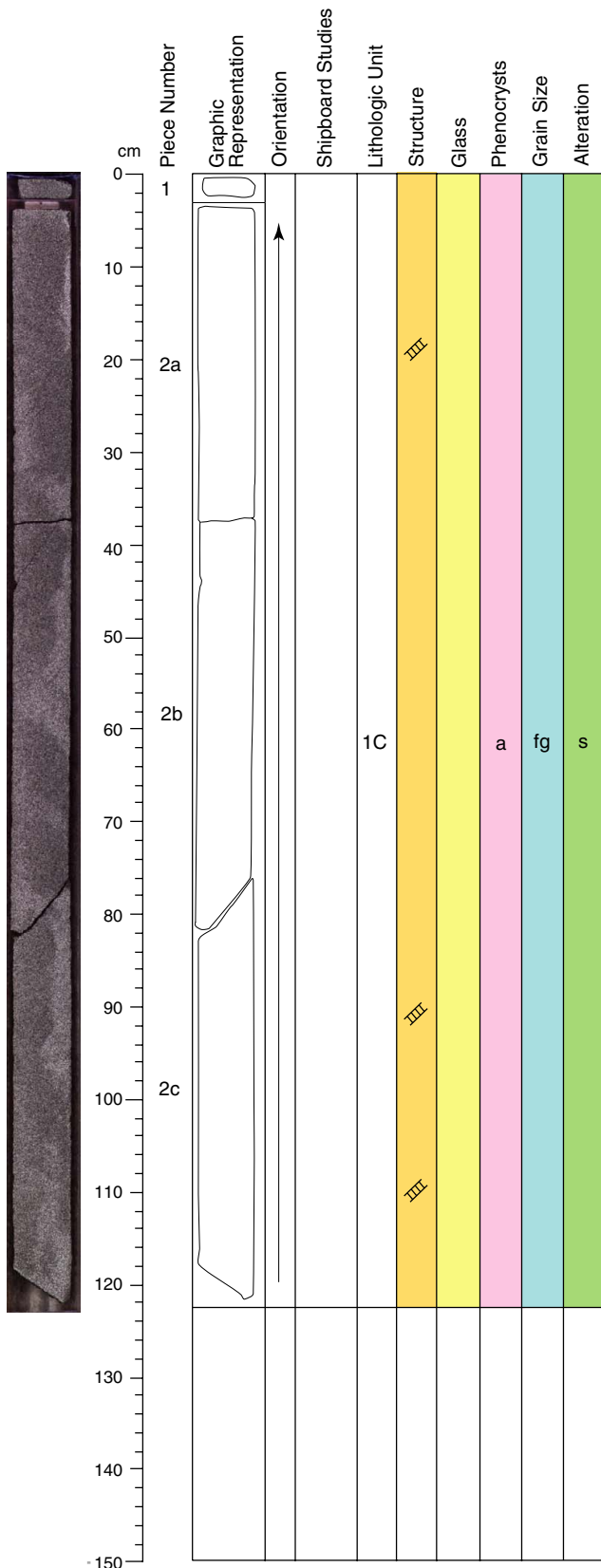
Core Photo



206-1256D-10R-3 (Section top: 329.67 mbsf)

UNIT: 1C
ROCK NAME: Fine-grained basalt
SUMMARY DESCRIPTION: Massive fine-grained basalt
PIECES: 1 (igneous description based on Piece 1b)
CONTACTS:
 Upper: gradational change in grain size
 Lower: gradational change in grain size
COLOR: greenish black (10Y 2.5/1)
PHENOCRYSTS: none apparent
GROUNDMASS:
 Grain size: fine-grained
 Texture: intergranular to variolitic
VESICLES: none
ALTERATION: Dark gray slightly altered basalt
VEINS: 0.1-0.3 mm veins of saponite with minor pyrite
STRUCTURE: Set of nearly parallel 0.3 mm veins with irregular and stair-stepped morphology. Veins are steeply dipping (50°-60°) and regularly distributed throughout the section.

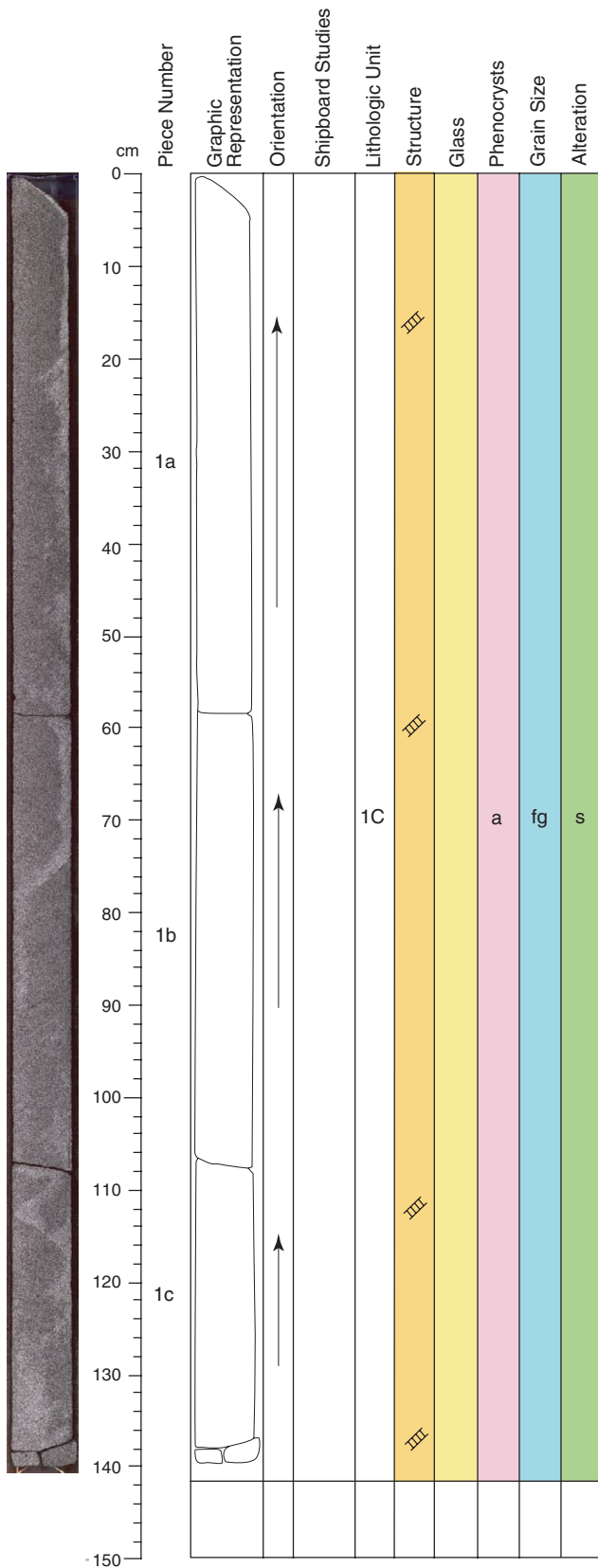
Core Photo



206-1256D-10R-4 (Section top: 331.03 mbsf)

UNIT: 1C
 ROCK NAME: Fine-grained basalt
 SUMMARY DESCRIPTION: Massive fine-grained basalt
 PIECES: 1-2 (igneous description based on 10R-3 Piece 1b)
 CONTACTS:
 Upper: gradational change in grain size
 Lower: gradational change in grain size
 COLOR: greenish black (10Y 2.5/1)
 PHENOCRYSTS: none apparent
 GROUNDMASS:
 Grain size: fine-grained
 Texture: intergranular to variolitic
 VESICLES: none
 ALTERATION: Dark gray slightly altered basalt
 VEINS: 0.1-1 mm veins of saponite
 STRUCTURE: Set of nearly parallel 0.3 mm veins with irregular and stair-stepped morphology. Veins are steeply dipping (50-60°) and regularly distributed throughout the section.

Core Photo



206-1256D-11R-1 (Section top: 331.90 mbsf)

UNIT: 1C

ROCK NAME: Fine-grained basalt

SUMMARY DESCRIPTION: Massive fine-grained basalt

PIECES: 1 (igneous description based on Piece 1a)

CONTACTS:

Upper: gradational change in grain size

Lower: gradational change in grain size

COLOR: greenish black (10Y 2.5/1)

PHENOCRYSTS: none apparent

GROUNDMASS:

Grain size: fine-grained

Texture: intergranular to variolitic

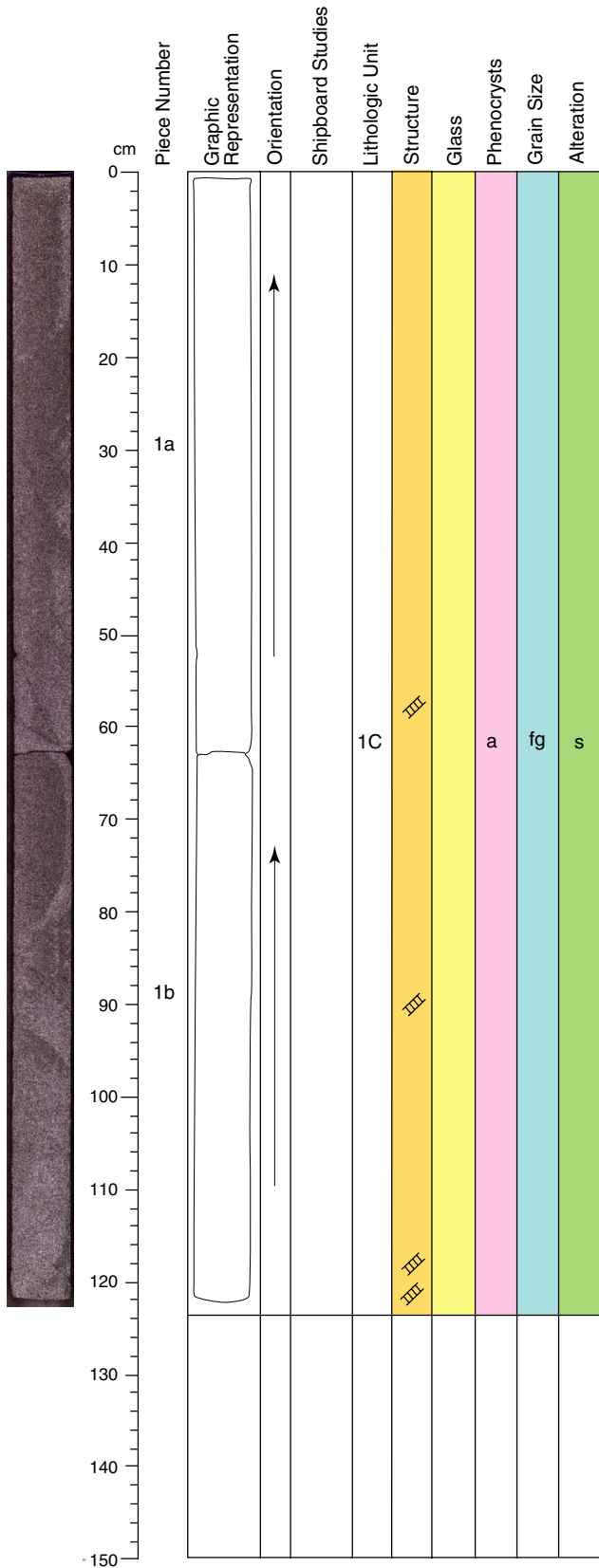
VESICLES: none

ALTERATION: Dark gray slightly altered basalt

VEINS: 0.1-0.2 mm veins of saponite with minor pyrite

STRUCTURE: Set of nearly parallel 0.3 mm veins with irregular and stair-stepped morphology. Veins are steeply dipping (50-60°) and regularly distributed throughout the section.

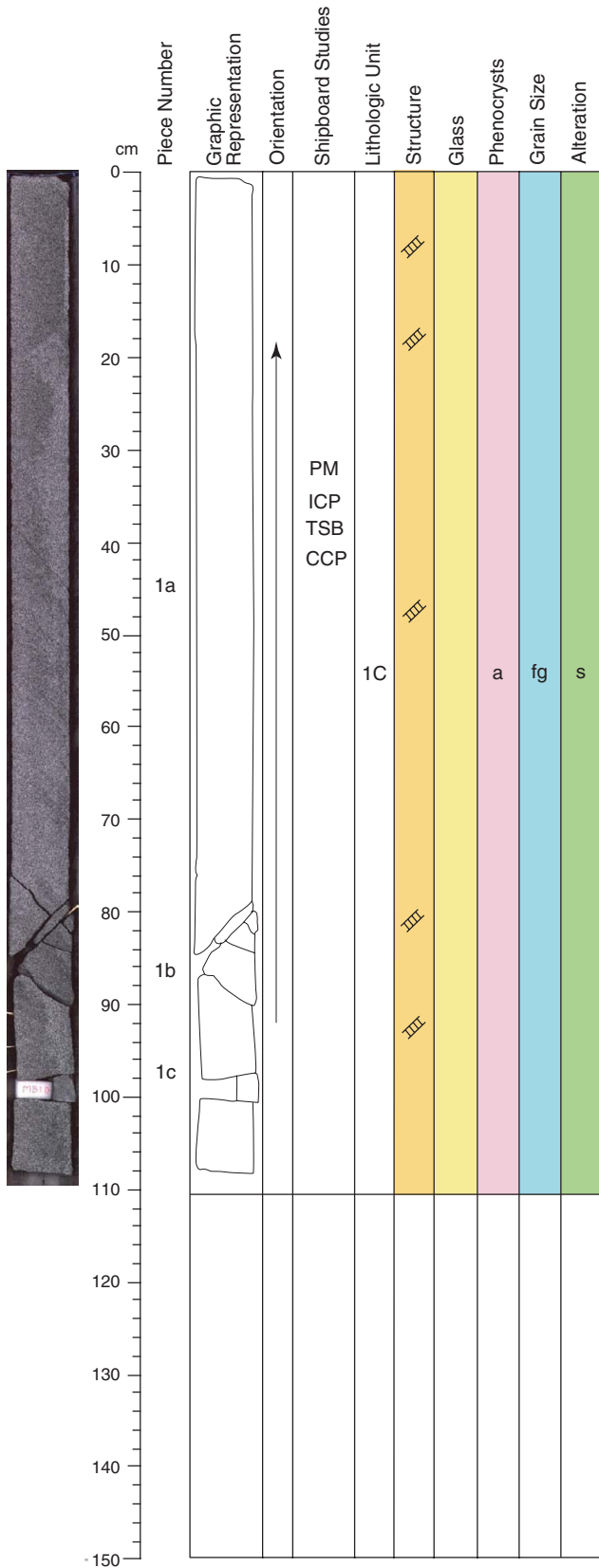
Core Photo



206-1256D-11R-2 (Section top: 333.31 mbsf)

UNIT: 1C
ROCK NAME: Fine-grained basalt
SUMMARY DESCRIPTION: Massive fine-grained basalt
PIECES: 1 (igneous description based on 11R-1 Piece 1a)
CONTACTS:
 Upper: gradational change in grain size
 Lower: gradational change in grain size
COLOR: greenish black (10Y 2.5/1)
PHENOCRYSTS: none apparent
GROUNDMASS:
 Grain size: fine-grained
 Texture: intergranular to variolitic
VESICLES: none
ALTERATION: Dark gray slightly altered basalt
VEINS: 0.1-0.5 mm veins of saponite with minor pyrite
STRUCTURE: Set of nearly parallel 0.2-0.3 mm veins with irregular and stair-stepped morphology. Veins are steeply dipping (50-60°) and regularly distributed throughout the section.

Core Photo



206-1256D-11R-3 (Section top: 334.54 mbsf)

UNIT: 1C

ROCK NAME: Fine-grained basalt

SUMMARY DESCRIPTION: Massive fine-grained basalt

PIECES: 1 (igneous description based on Piece 1a)

CONTACTS:

Upper: gradational change in grain size

Lower: gradational change in grain size

COLOR: greenish black (10Y 2.5/1)

PHENOCRYSTS: none apparent

GROUNDMASS:

Grain size: fine-grained

Texture: intergranular to variolitic

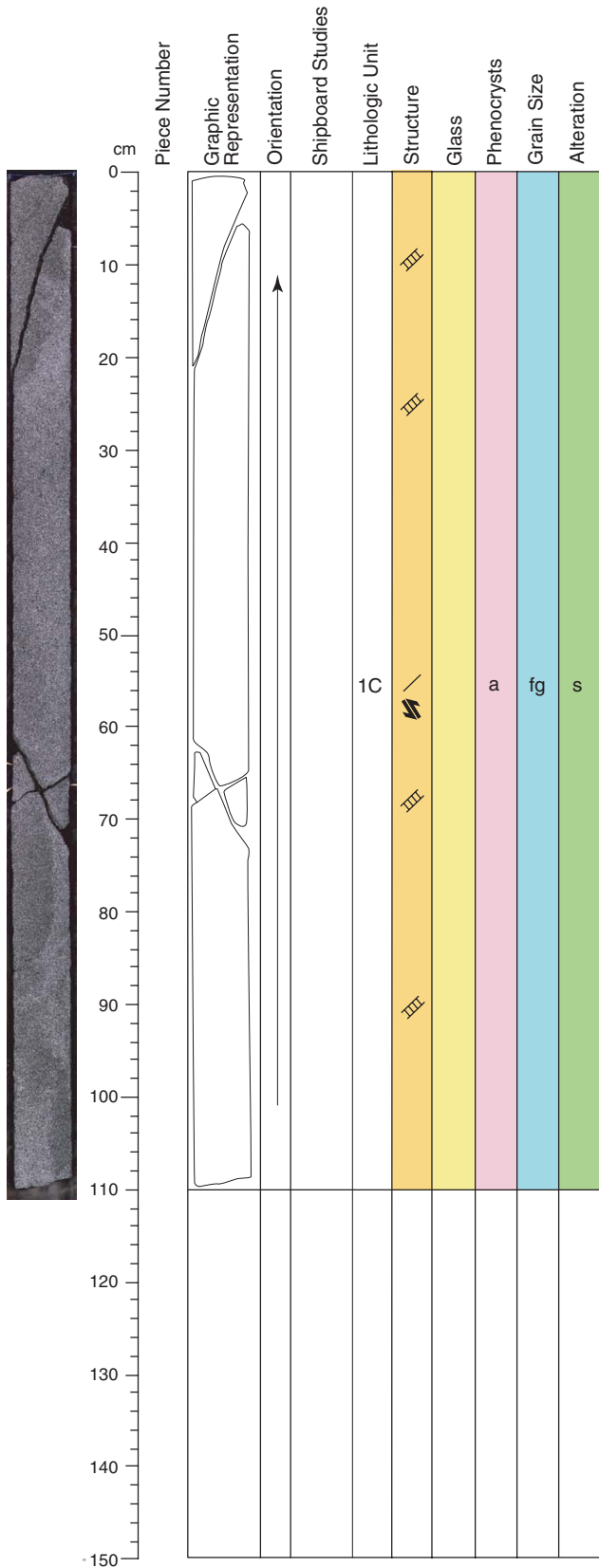
VESICLES: none

ALTERATION: Dark gray slightly altered basalt

VEINS: 0.1-0.4 mm veins of saponite with minor pyrite

STRUCTURE: Set of nearly parallel 0.3 mm veins with irregular and stair-stepped morphology. Veins are steeply dipping (50°-60°) and regularly distributed throughout the section. Two strike slip shear veins at 78-80 cm.

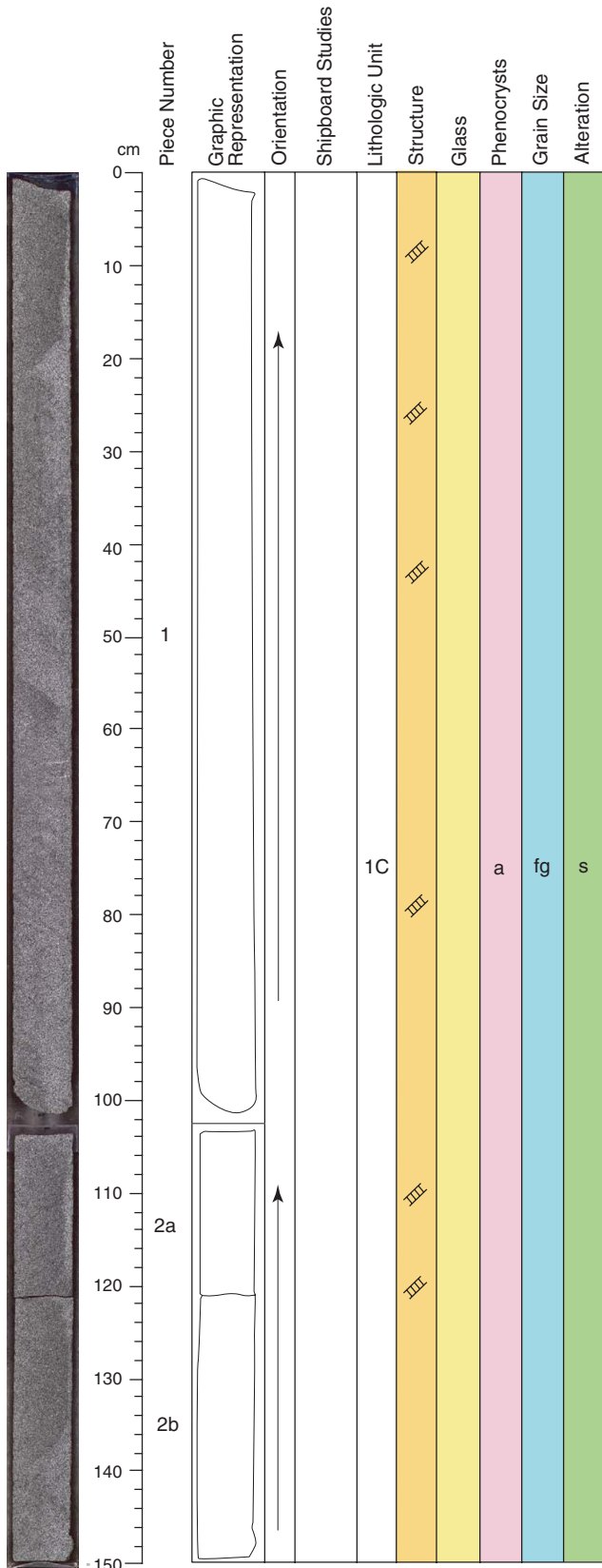
Core Photo



206-1256D-11R-4 (Section top: 335.64 mbsf)

UNIT: 1C
ROCK NAME: Fine-grained basalt
SUMMARY DESCRIPTION: Massive fine-grained basalt
PIECES: 1 (igneous description based on 11R-3 Piece 1a)
CONTACTS:
 Upper: gradational change in grain size
 Lower: gradational change in grain size
COLOR: greenish black (10Y 2.5/1)
PHENOCRYSTS: none apparent
GROUNDMASS:
 Grain size: fine-grained
 Texture: intergranular to variolitic
VESICLES: none
ALTERATION: Dark gray slightly altered basalt
VEINS: 0.2-1 mm veins of saponite with minor pyrite
STRUCTURE: Set of nearly parallel 0.3 mm veins with irregular and stair-stepped morphology. Veins are steeply dipping (50°-60°) and regularly distributed throughout the section. One microfault with microcataclasite and reverse sense of shear in Piece 1b.

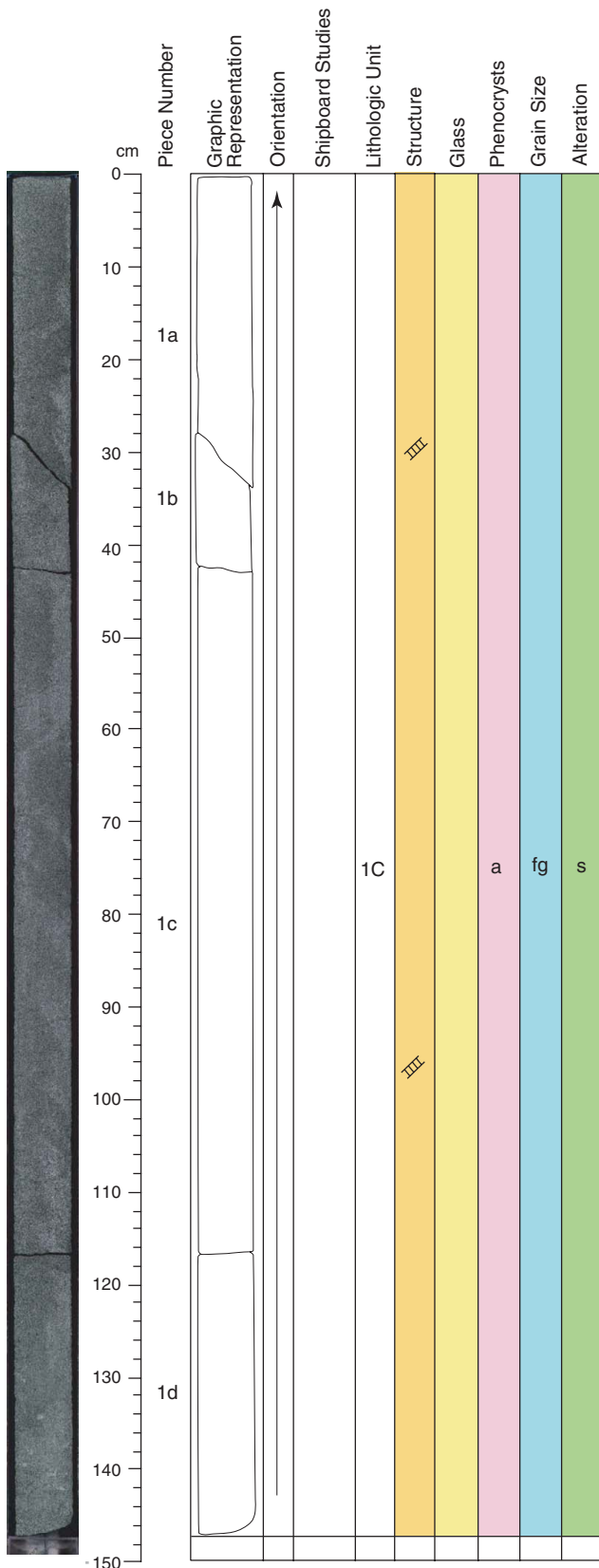
Core Photo



206-1256D-11R-5 (Section top: 336.74 mbsf)

UNIT: 1C
ROCK NAME: Fine-grained basalt
SUMMARY DESCRIPTION: Massive fine-grained basalt
PIECES: 1-2 (igneous description based on 11R-3 Piece 1a)
CONTACTS:
 Upper: gradational change in grain size
 Lower: gradational change in grain size
COLOR: greenish black (10Y 2.5/1)
PHENOCRYSTS: none apparent
GROUNDMASS:
 Grain size: fine-grained
 Texture: intergranular to variolitic
VESICLES: none
ALTERATION: Dark gray slightly altered basalt.
VEINS: 0.1-0.3 mm veins of saponite with minor pyrite
STRUCTURE: Set of nearly parallel 0.3-0.4 mm veins with irregular and stair-stepped morphology. Veins are steeply dipping (50°-60°) and regularly distributed throughout the section.

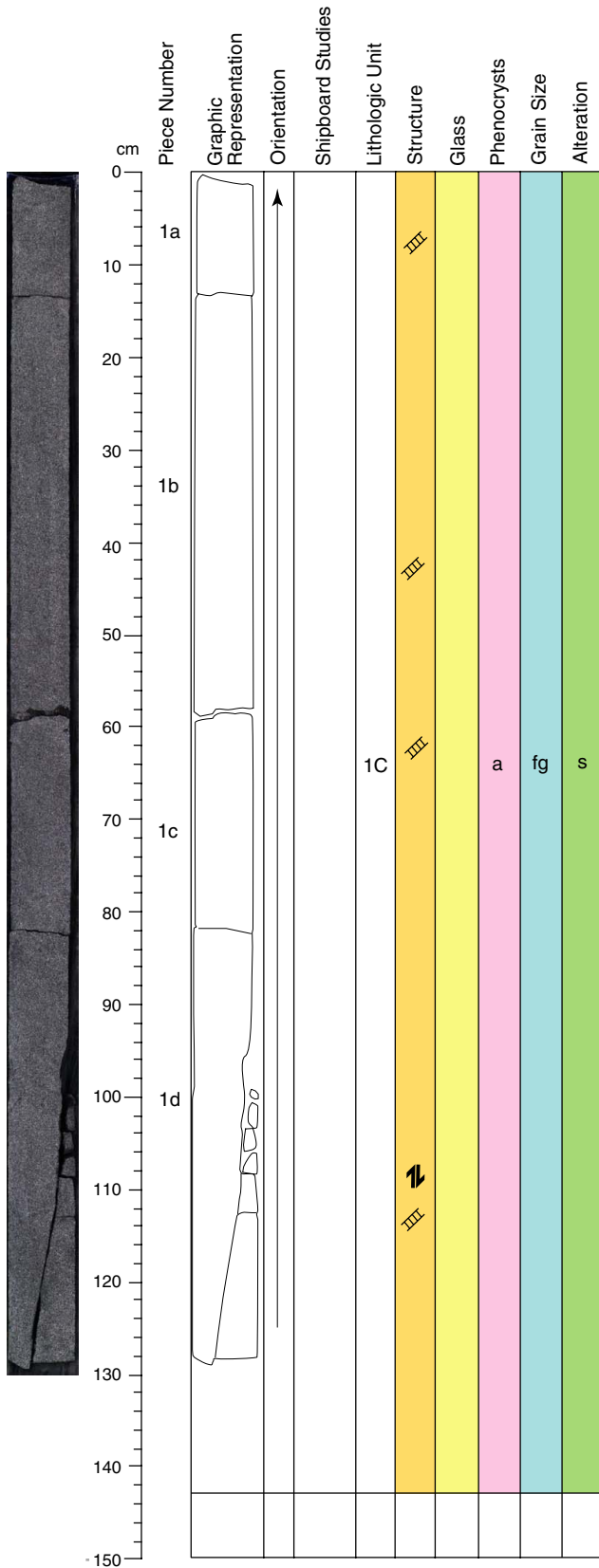
Core Photo



206-1256D-12R-1 (Section top: 341.20 mbsf)

UNIT: 1C
ROCK NAME: Fine-grained basalt
SUMMARY DESCRIPTION: Massive fine-grained basalt
PIECES: 1 (igneous description based on 12R-2 Piece 1a)
CONTACTS:
 Upper: gradational change in grain size
 Lower: gradational change in grain size
COLOR: greenish black (10Y 2.5/1)
PHENOCRYSTS: none apparent
GROUNDMASS:
 Grain size: fine-grained
 Texture: intergranular
VESICLES: none
ALTERATION: Dark gray slightly altered basalt.
VEINS: 0.1 to 0.2 mm veins of saponite with minor pyrite.
STRUCTURE: Set of nearly parallel 0.5-0.8 mm veins with stair-stepped morphology and gentle dip.

Core Photo



206-1256D-12R-2 (Section top: 342.67 mbsf)

UNIT: 1C

ROCK NAME: Fine-grained basalt

SUMMARY DESCRIPTION: Massive fine-grained basalt.

PIECES: 1 (igneous description based on Piece 1a)

CONTACTS:

Upper: gradational change in grain size

Lower: gradational change in grain size

COLOR: greenish black (10Y 2.5/1)

PHENOCRYSTS: none apparent

GROUNDMASS:

Grain size: fine-grained

Texture: intergranular

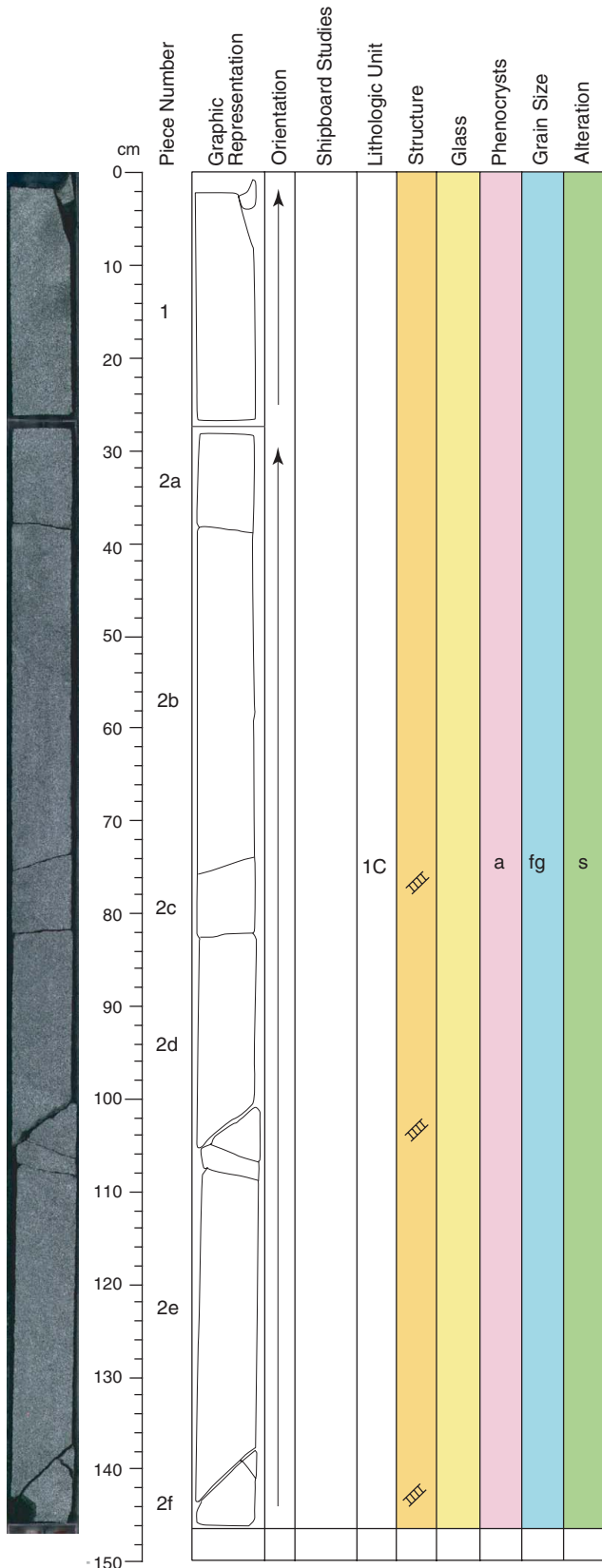
VESICLES: none

ALTERATION: Dark gray slightly altered basalt.

VEINS: 0.1 to 1.0 mm veins of saponite with minor pyrite and carbonate.

STRUCTURE: Set of nearly horizontal 0.5-0.6 mm veins with irregular stair-stepped morphology. One shear vein with overlapping fibers and reverse sense of shear in Pieces 1d.

Core Photo



206-1256D-12R-3 (Section top: 343.97 mbsf)

UNIT: 1C

ROCK NAME: Fine-grained basalt

SUMMARY DESCRIPTION: Massive fine-grained basalt.

PIECES: 1-2 (igneous description based on 12R-4 Piece 2b)

CONTACTS:

Upper: gradational change in grain size

Lower: gradational change in grain size

COLOR: bluish black (10B 2.5/1)

PHENOCRYSTS: none apparent

GROUNDMASS:

Grain size: fine-grained

Texture: intergranular

VESICLES: none

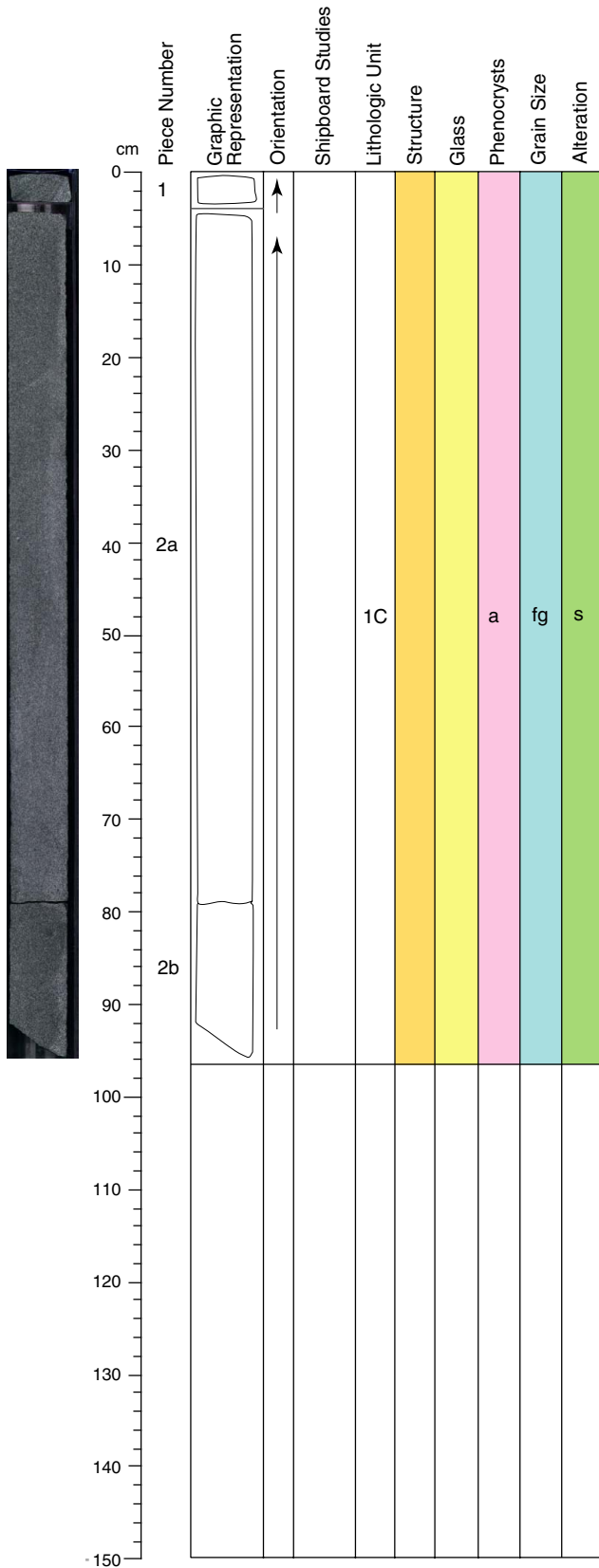
ALTERATION: Dark gray slightly altered basalt.

VEINS: 0.1 to 0.5 mm veins of saponite with minor pyrite.

STRUCTURE: Veins commonly have irregular stair-stepped morphology.

Conjugate veins in Pieces 2d, 2e, and 2f.

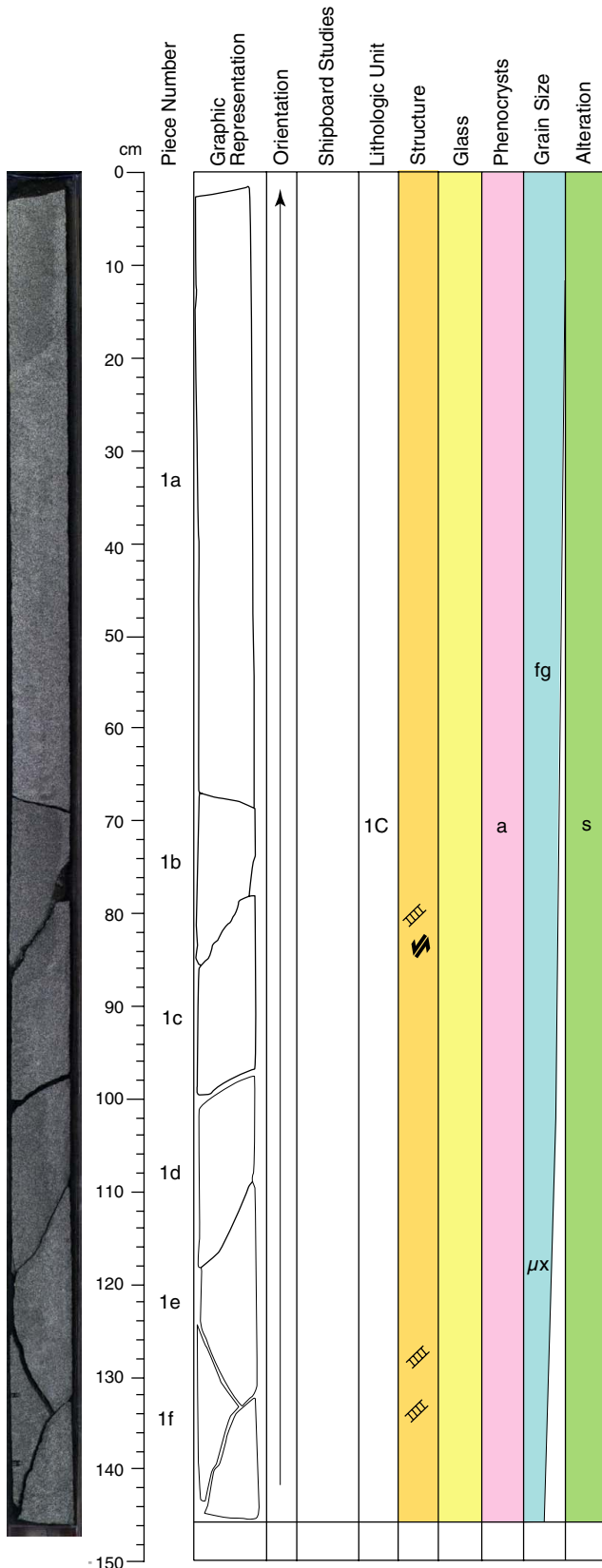
Core Photo



206-1256D-12R-4 (Section top: 345.42 mbsf)

UNIT: 1C
ROCK NAME: Fine-grained basalt
SUMMARY DESCRIPTION: Massive fine-grained basalt.
PIECES: 1-2 (igneous description based on Piece 2b)
CONTACTS:
 Upper: gradational change in grain size
 Lower: gradational change in grain size
COLOR: bluish black (10B 2.5/1)
PHENOCRYSTS: none apparent
GROUNDMASS:
 Grain size: fine-grained
 Texture: intergranular
VESICLES: none
ALTERATION: Dark gray slightly altered basalt.
VEINS: 0.1 to 0.2 mm veins of saponite with minor pyrite.

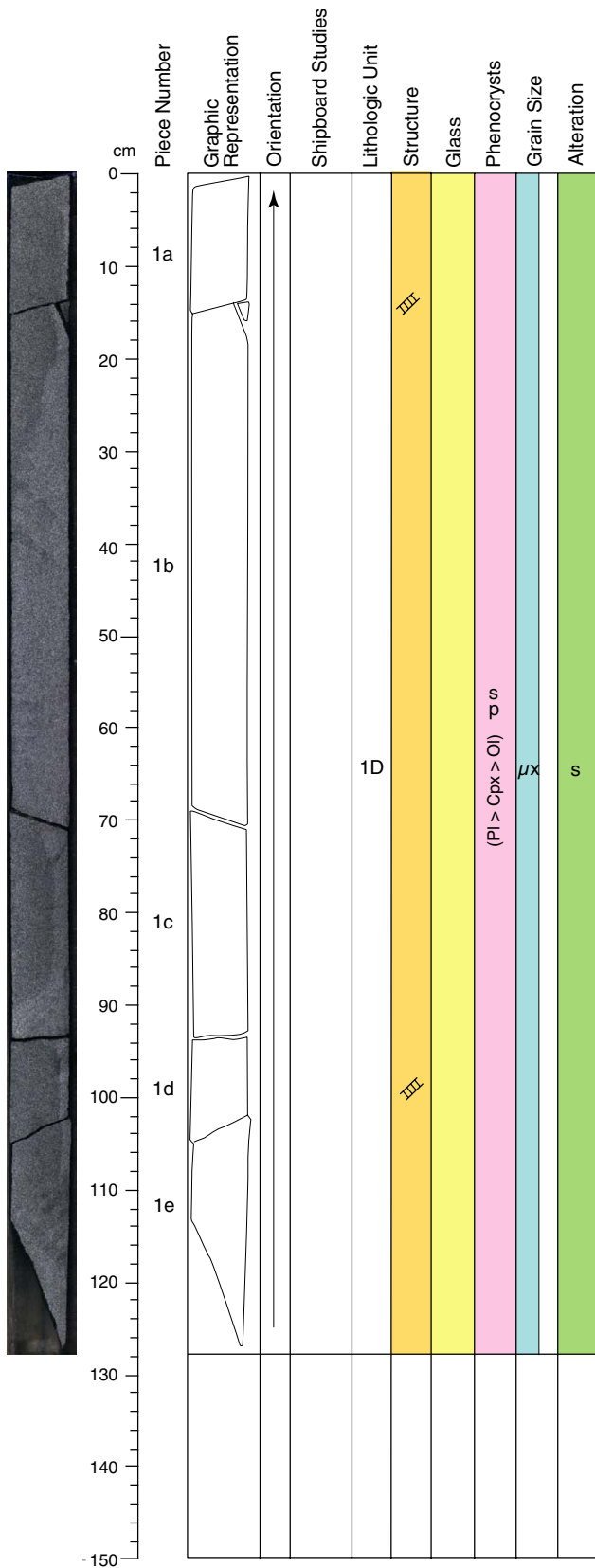
Core Photo



206-1256D-12R-5 (Section top: 346.38 mbsf)

UNIT: 1C
 ROCK NAME: Fine-grained basalt
 SUMMARY DESCRIPTION: Massive fine-grained basalt.
 PIECES: 1 (igneous description based on 12R-4 Piece 2b)
 CONTACTS:
 Upper: gradational change in grain size
 Lower: gradational change in grain size
 COLOR: bluish black (10B 2.5/1)
 PHENOCRYSTS: none apparent
 GROUNDMASS:
 Grain size: fine-grained
 Texture: intergranular
 VESICLES: none
 ALTERATION: Dark gray slightly altered basalt.
 VEINS: 0.2 to 1.0 mm veins of saponite with minor pyrite and carbonate.
 STRUCTURE: Shear vein with slickenfibers and sinistral strike slip sense of shear in Pieces 1b and 1c.

Core Photo



206-1256D-12R-6 (Section top: 347.83 mbsf)

UNIT: 1D

ROCK NAME: Sparsely olivine-clinopyroxene-plagioclase phyric microcrystalline basalt

SUMMARY DESCRIPTION: Massive sparsely-phyric microcrystalline basalt.

PIECES: 1 (igneous description based on 12R-8 Piece 1f)

CONTACTS:

Upper: gradational change in grain size
 Lower: not recovered

COLOR: black (N 2.5/)

PHENOCRYSTS:

Plagioclase	1%	0.1 mm	
Olivine	<<1%	0.2-0.5 mm	100% altered to saponite
Clinopyroxene	<1%	0.2-0.3 mm	

GROUNDMASS:

Grain size: microcrystalline
 Texture: intergranular

VESICLES: none

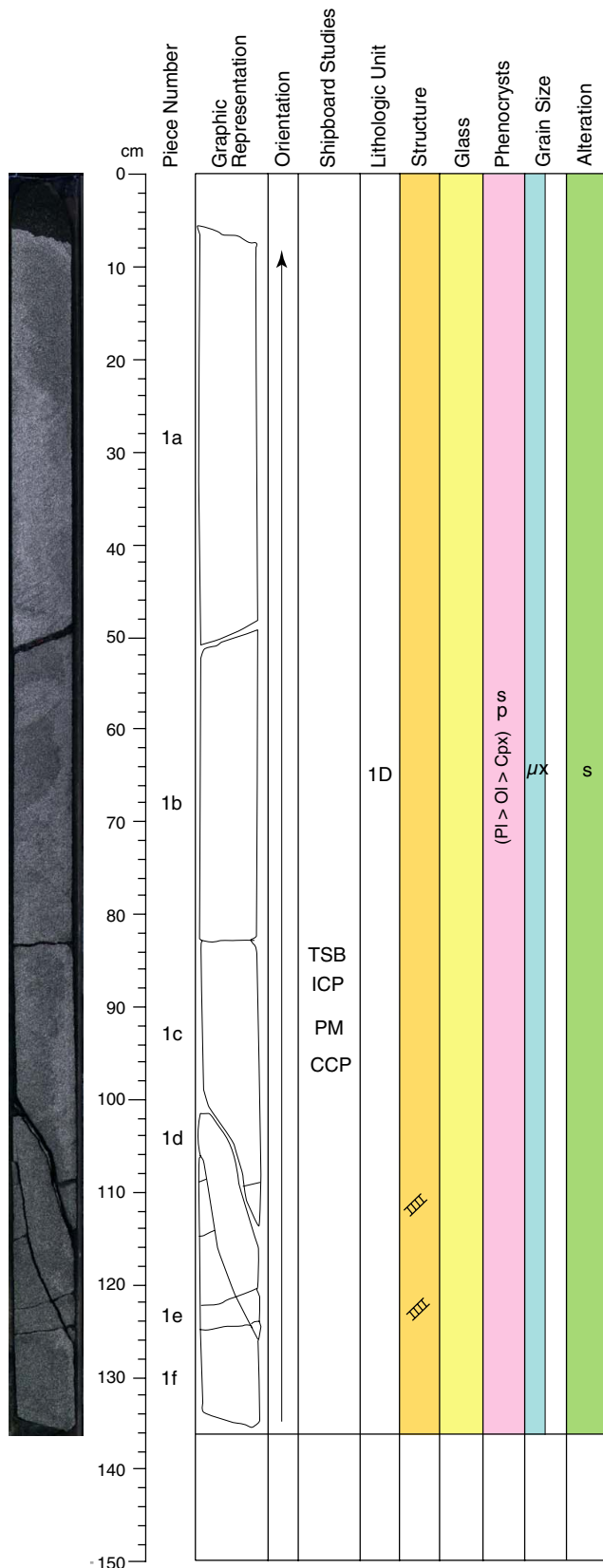
ALTERATION: Dark gray slightly altered basalt.

VEINS: 0.2 to 1.0 mm veins of saponite with minor pyrite and carbonate.

Carbonate occurs in 1 mm wide veins in Piece 1.

STRUCTURE: Rare veins.

Core Photo



206-1256D-12R-7 (Section top: 349.11 mbsf)

UNIT: 1D

ROCK NAME: Sparsely olivine-clinopyroxene-plagioclase phyric microcrystalline basalt

SUMMARY DESCRIPTION: Massive sparsely-phyric microcrystalline basalt.

PIECES: 1 (igneous description based on 12R-8 Piece 1f)

CONTACTS:

Upper: gradational change in grain size
 Lower: not recovered

COLOR: black (N 2.5/)

PHENOCRYSTS:

Plagioclase	1%	0.1 mm	
Olivine	<<1%	0.2-0.5 mm	100% altered to saponite
Clinopyroxene	<1%	0.2-0.3 mm	

GROUNDMASS:

Grain size: microcrystalline
 Texture: intergranular

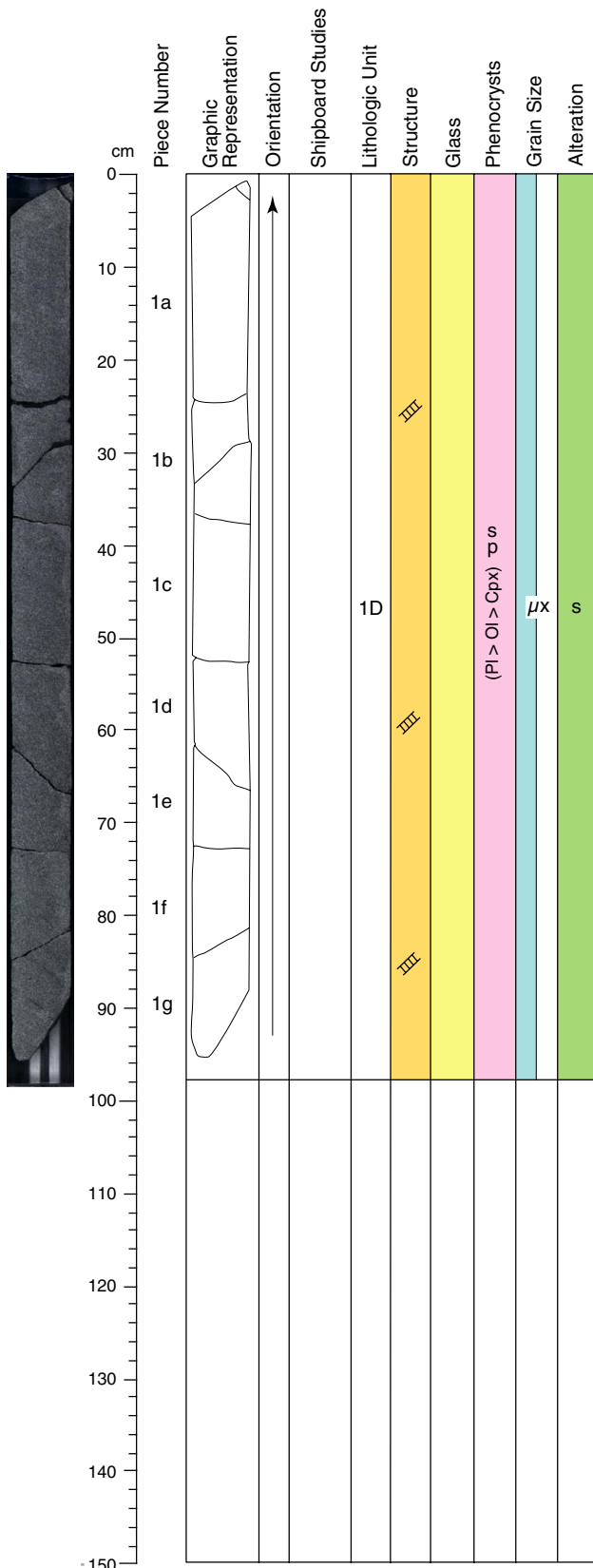
VESICLES: none

ALTERATION: Dark gray slightly altered basalt.

VEINS: 0.1 to 0.2 mm veins of saponite with minor pyrite. Two larger veins (0.3 and 0.5 mm) contain saponite with carbonate and rare pyrite. One larger (1.5 mm) silica vein with carbonate and saponite.

STRUCTURE: Rare veins in Pieces 1a and 1b with more common veins in Pieces 1d, 1e and 1f. Set of parallel planar veins cutting one steeply-dipping vein in Piece 1d.

Core Photo



206-1256D-12R-8 (Section top: 350.50 mbsf)

UNIT: 1D

ROCK NAME: Sparsely olivine-clinopyroxene-plagioclase phyric microcrystalline basalt

SUMMARY DESCRIPTION: Massive sparsely-phyric microcrystalline basalt.

PIECES: 1 (igneous description based on Piece 1f)

CONTACTS:

Upper: gradational change in grain size

Lower: not recovered

COLOR: black (N 2.5/)

PHENOCRYSTS:

Plagioclase	1%	0.1 mm	
Olivine	<<1%	0.2-0.5 mm	100% altered to saponite
Clinopyroxene	<1%	0.2-0.3 mm	

GROUNDMASS:

Grain size: microcrystalline

Texture: intergranular

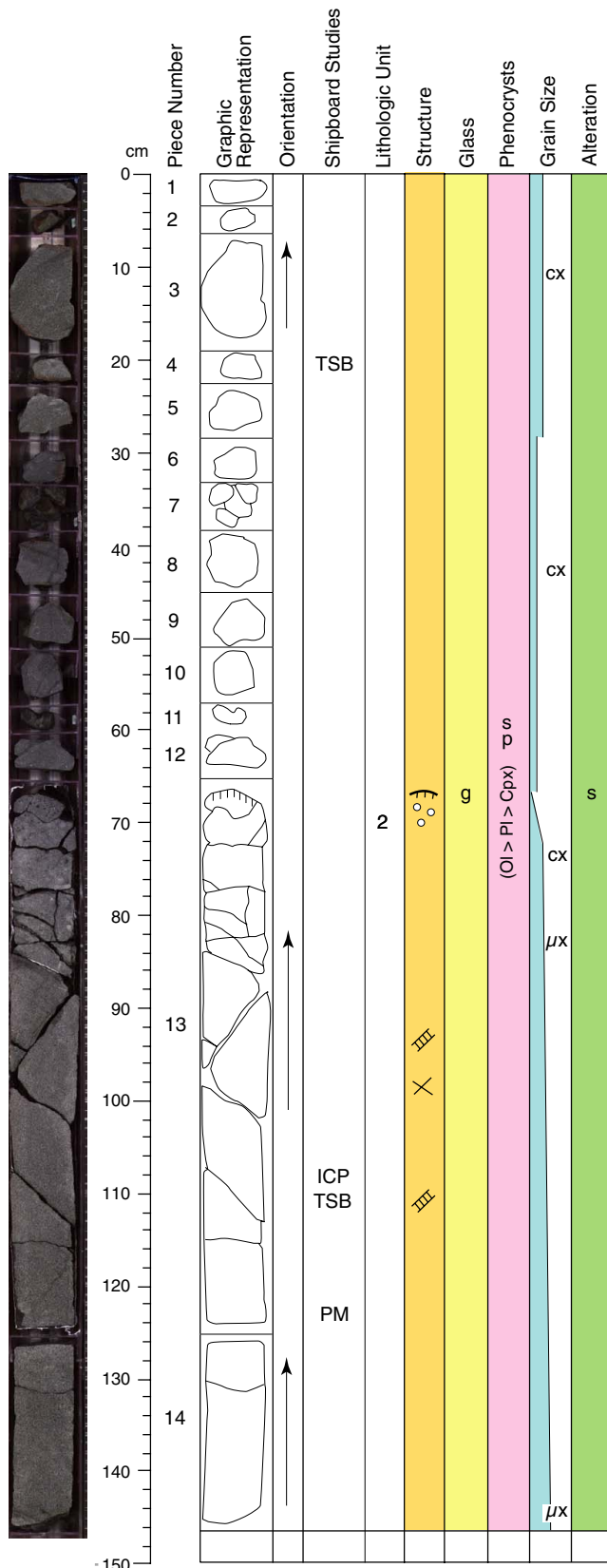
VESICLES: none

ALTERATION: Dark gray slightly altered basalt.

VEINS: 0.1 to 1 mm veins of saponite with minor pyrite and carbonate. Two larger (0.5 and 1 mm) veins of carbonate with saponite.

STRUCTURE: Diffuse veins with irregular stair-stepped morphology.

Core Photo



206-1256D-13R-1 (Section top: 350.30 mbsf)

UNIT: 2

ROCK NAME: Sparsely clinopyroxene-plagioclase-olivine-phyric
 cryptocrystalline basalt

SUMMARY DESCRIPTION: Sparsely-phyric cryptocrystalline to
 microcrystalline sheet flows with glassy margins.

PIECES: 1-14 (igneous description based on Piece 3)

CONTACTS:

Upper: not recovered

Lower: not recovered

COLOR: bluish black (5PB 2.5/1)

PHENOCRYSTS:

Plagioclase 0.5 % 0.2-1.0 mm

Olivine 1 % 0.2 mm 100 % altered to saponite

Clinopyroxene 0.1% 0.1-0.2 mm

GROUNDMASS:

Grain size: cryptocrystalline to microcrystalline

Texture: variolitic to intergranular

VESICLES: Sparse vesicles filled with saponite.

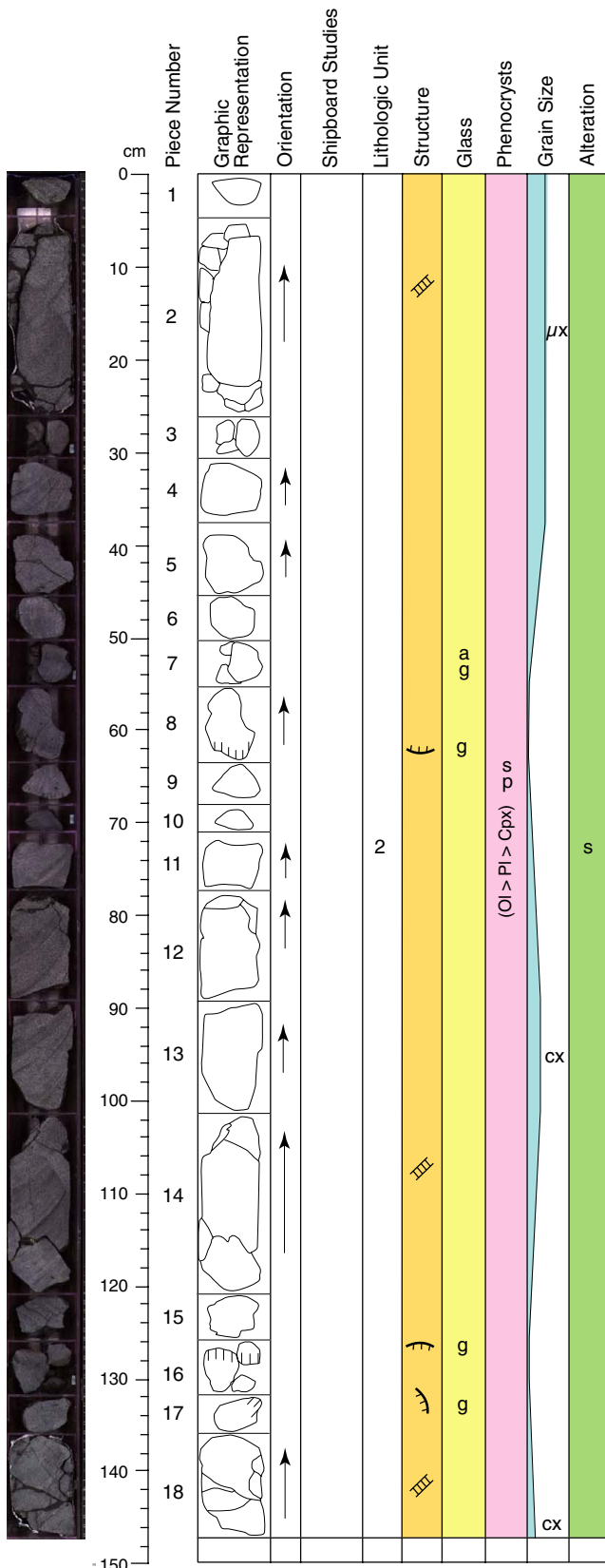
ALTERATION: Dark gray slightly altered basalt. Brown and rare black halos in
 Pieces 1 to 8. Rare black halos in Pieces 9 to 13.

VEINS: Common 0.1 to 0.7 mm veins of saponite and rare pyrite throughout
 section with. Three saponite plus pyrite (>10%) veins in Piece 13.
 Saponite plus iron oxyhydroxide veins common in Pieces 2 to 8
 rimmed by brown halos. Two carbonate veins in Piece 13.

STRUCTURE: Veins display curved morphology. Two veins with black halos
 belong to a conjugate system of planar veins in Pieces 13 and 14.

ADDITIONAL COMMENTS: Small clots (<1 mm) of plagioclase plus
 clinopyroxene in Piece 3. Piece 13 has vesiculated flow top up to 5 cm
 thick, where spherical to distorted vesicles up to 3 mm in diameter are
 concentrated. The bottom of the same flow was not recovered.

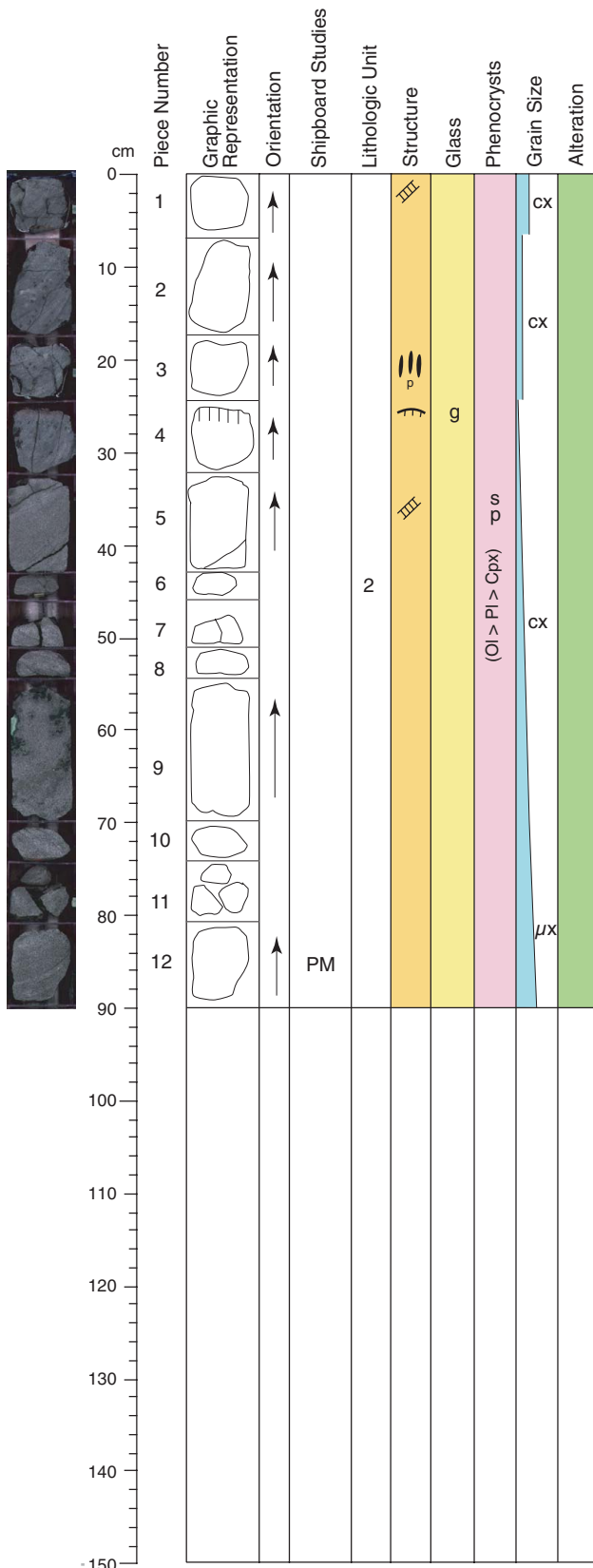
Core Photo



206-1256D-13R-2 (Section top: 351.77 mbsf)

UNIT: 2
 ROCK NAME: Sparsely clinopyroxene-plagioclase-olivine-phyric
 cryptocrystalline basalt
 SUMMARY DESCRIPTION: Sparsely-phyric cryptocrystalline to microcrystalline
 sheet flows with glassy margins.
 PIECES: 1-13 (igneous description based on Piece 8)
 CONTACTS:
 Upper: not recovered
 Lower: not recovered
 COLOR: bluish black (5PB 2.5/1)
 PHENOCRYSTS:
 Plagioclase 0.5 % 0.2-1.0 mm
 Olivine 1 % 0.2 mm 100 % altered to saponite
 Clinopyroxene 0.1 % 0.1-0.2 mm
 GROUNDMASS:
 Grain size: cryptocrystalline to microcrystalline.
 Texture: variolitic to intergranular
 VESICLES: Sparse vesicles filled with saponite.
 ALTERATION: Dark gray slightly altered basalt with sparse slightly altered glass.
 One black halo in Piece 6.
 VEINS: Common 0.1 to 2 mm veins of saponite with rare pyrite. Pieces 5, 7, 13,
 17, and 18 contain veins of saponite with iron oxyhydroxide. Pieces 5,
 6, 12, 14, and 16 contain celadonite veins with minor saponite plus or
 minus iron oxyhydroxide.
 STRUCTURE: Steeply-dipping and radial veins filled with celadonite and
 saponite. Curved veins in Piece 2.

Core Photo



206-1256D-13R-3 (Section top: 353.24 mbsf)

UNIT: 2

ROCK NAME: Sparsely clinopyroxene-plagioclase-olivine-phyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Sparsely-phyric cryptocrystalline to microcrystalline sheet flows with glassy margins.

PIECES: 1-12 (igneous description based on Piece 4)

CONTACTS:

Upper: not recovered

Lower: not recovered

COLOR: bluish black (5PB 2.5/1)

PHENOCRYSTS:

Plagioclase 1.0 % 0.1-1.0 mm

Olivine 1 % 0.2-0.5 mm 100 % altered to saponite

Clinopyroxene 0.2% 0.05-0.3 mm

GROUNDMASS:

Grain size: cryptocrystalline to microcrystalline.

Texture: variolitic to intergranular

VESICLES: Sparse 0.2-1 mm spherical to elongate vesicles filled with saponite.

Piece 9 contains abundant 1-5 mm vugs filled with celadonite.

ALTERATION: Dark gray slightly altered basalt with rare black and brown halos.

Sparse slightly altered glass.

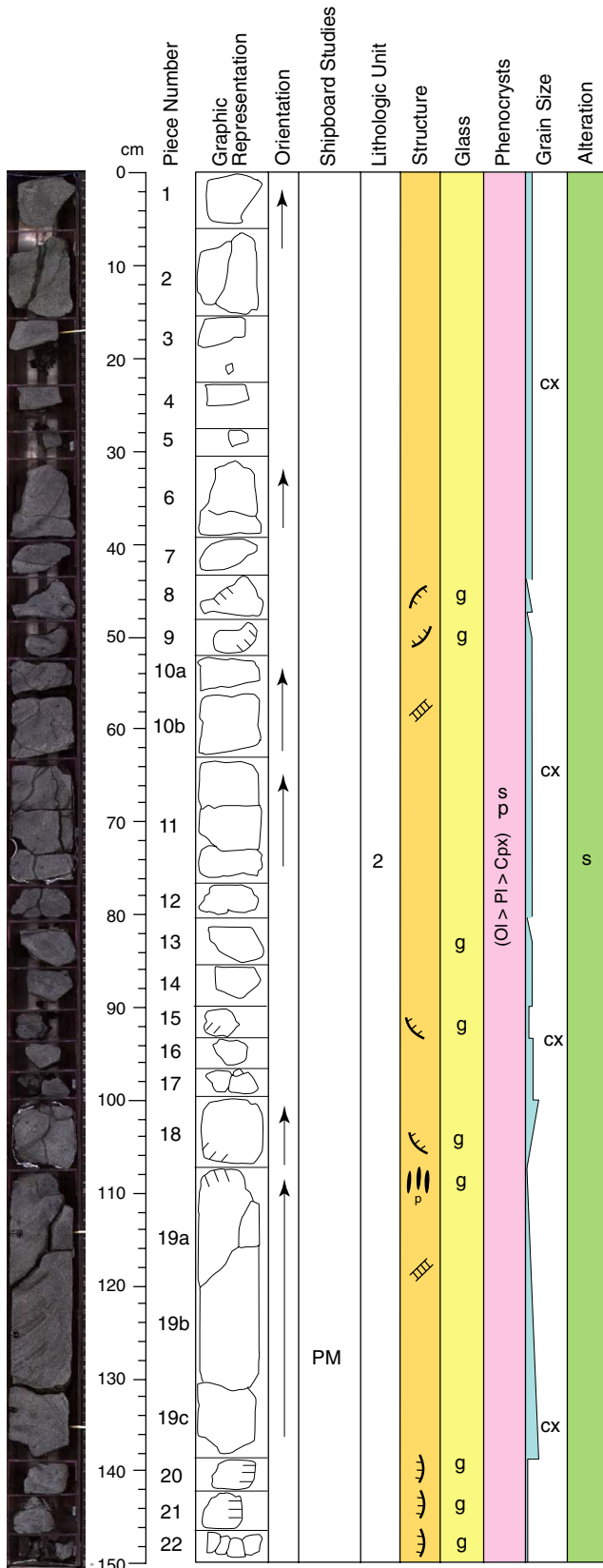
VEINS: Common 0.1 to 1.0 mm saponite veins with minor iron oxyhydroxide and pyrite. One saponite plus celadonite plus iron oxyhydroxide vein in Piece 2.

Piece 2.

STRUCTURE: Common steeply-dipping and radial veins filled with saponite and rare celadonite in Pieces 1-5.

ADDITIONAL COMMENTS: Glassy margin >4 mm thick at top of Piece 4.

Core Photo



206-1256D-14R-1 (Section top: 359.50 mbsf)

UNIT: 2

ROCK NAME: Sparsely clinopyroxene-plagioclase-olivine-phyric
 cryptocrystalline basalt

SUMMARY DESCRIPTION: Sparsely-phyric cryptocrystalline sheet flows with
 glassy margins.

PIECES: 1-22 (igneous description based on Piece 10B)

CONTACTS:

Upper: not recovered
 Lower: not recovered

COLOR: bluish black (5PB 2.5/1)

PHENOCRYSTS:

Plagioclase	0.5 %	0.1-1.0 mm	
Olivine	1 %	0.2-0.5 mm	100 % altered to saponite
Clinopyroxene	0.1 %	0.02-0.1 mm	

GROUNDMASS:

Grain size: cryptocrystalline
 Texture: variolitic to intergranular

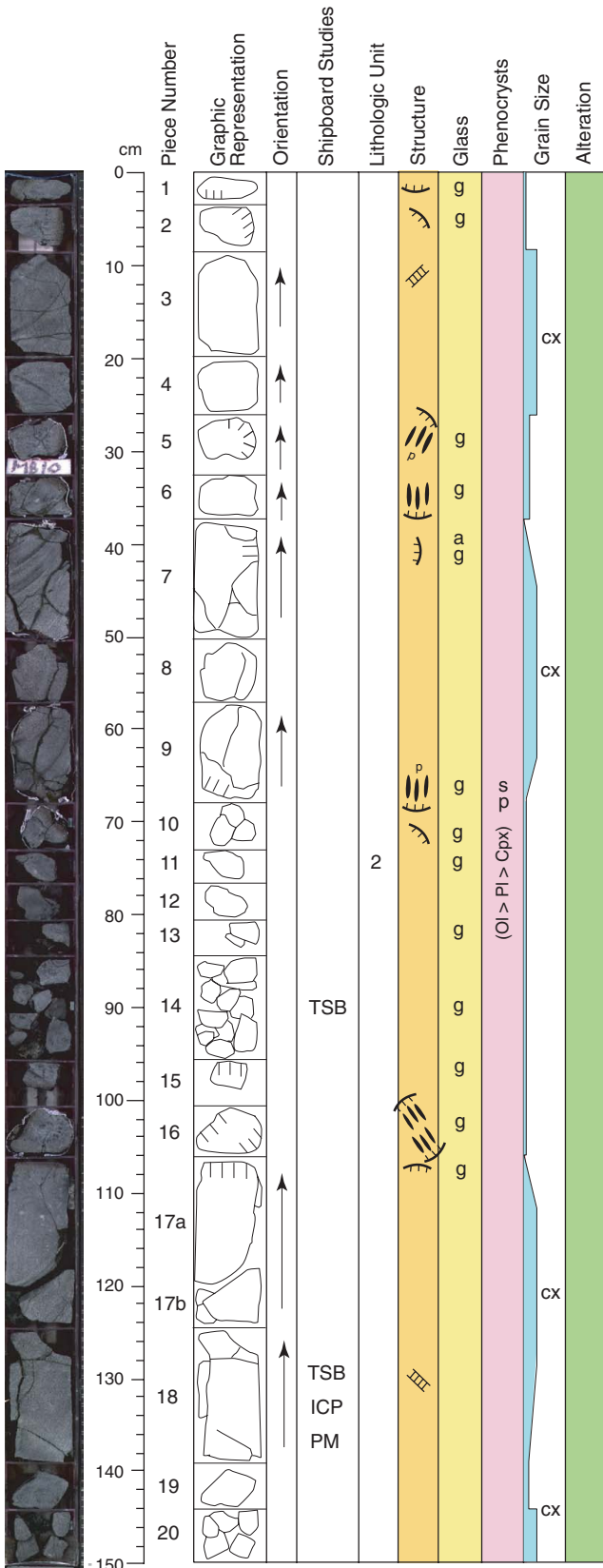
VESICLES: none

ALTERATION: Dark gray slightly altered basalt with rare black and brown halos.
 Sparse moderately altered glass.

VEINS: Common 0.1 to 2.0 mm saponite veins. Less common 0.3 to 5 mm veins
 filled with celadonite, saponite, and minor iron oxyhydroxide. Two veins
 filled with saponite, celadonite, and iron oxyhydroxide have black halos
 with a pyrite front in Piece 19.

STRUCTURE: Curved veins with Y-shaped intersection, filled with saponite and
 celadonite. Radial and concentric veins in Pieces 10, 11, 18, and 19.

Core Photo



206-1256D-14R-2 (Section top: 361.00 mbsf)

UNIT: 2

ROCK NAME: Sparsely clinopyroxene-plagioclase-olivine-phyric
 cryptocrystalline basalt

SUMMARY DESCRIPTION: Sparsely-phyric cryptocrystalline sheet flows with
 glassy margins.

PIECES: 1-19 (igneous description based on Piece 16a)

CONTACTS:

Upper: not recovered

Lower: not recovered

COLOR: bluish black (5PB 2.5/1)

PHENOCRYSTS:

Plagioclase 1.0 % 0.2-1.5 mm

Olivine 1.0 % 0.1-1.0 mm 100 % altered to saponite

Clinopyroxene 0.1 % <0.2 mm

GROUNDMASS:

Grain size: cryptocrystalline

Texture: variolitic to intergranular

VESICLES: Spherical vesicles <0.5 mm in diameter; larger irregular vesicles up
 to 1 mm long. Vesicles filled with saponite.

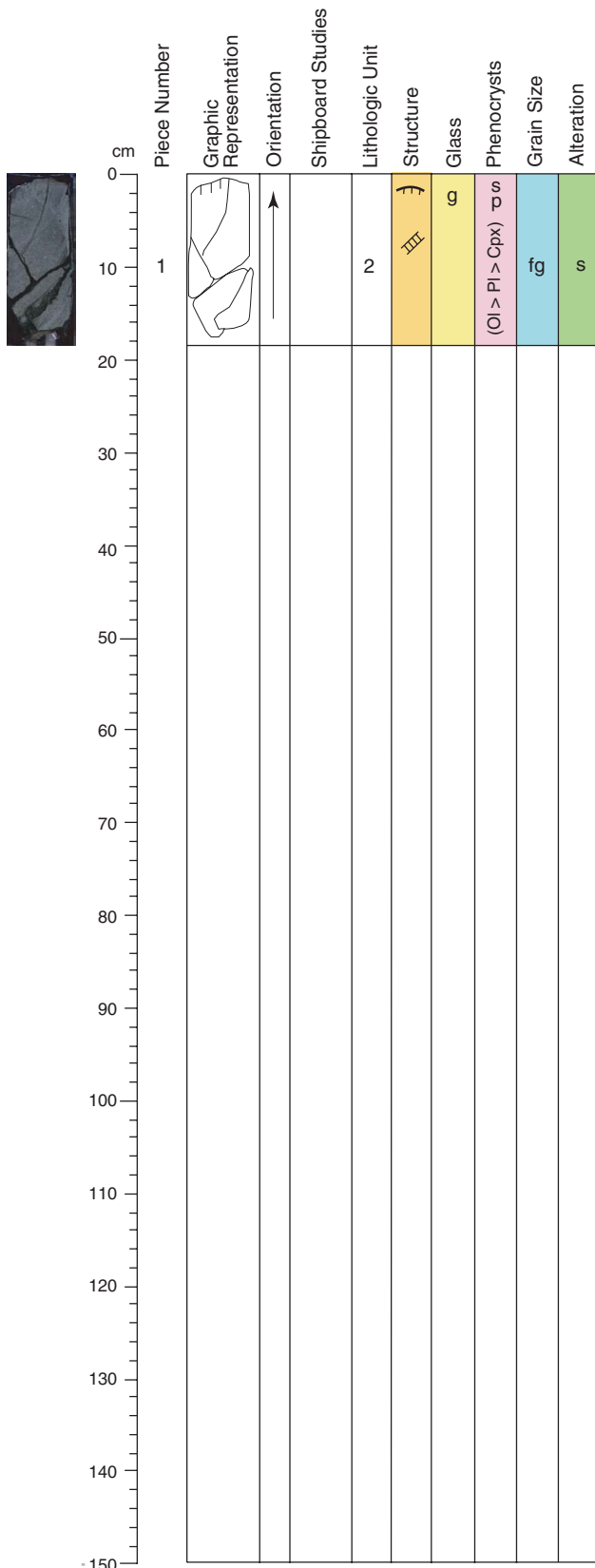
ALTERATION: Dark gray slightly altered basalt with rare black and brown halos.
 Sparse moderately altered glass.

VEINS: 0.1 to 1.5 mm veins filled with saponite, celadonite, and iron
 oxyhydroxide. Minor (2%) pyrite in a saponite vein in Piece 17.

STRUCTURE: Curved veins with Y-shaped intersections, filled with saponite and
 celadonite. Radial and concentric veins relative to the chilled margin in
 Pieces 3-10.

ADDITIONAL COMMENTS: Thick glassy margin >1 cm thick at top of Piece
 16a. Plagioclase forms clots with or without clinopyroxene.

Core Photo



206-1256D-14R-3 (Section top: 362.50 mbsf)

UNIT: 2

ROCK NAME: Sparsely clinopyroxene-plagioclase-olivine-phyric
 cryptocrystalline basalt

SUMMARY DESCRIPTION: Sparsely-phyric cryptocrystalline sheet flows with
 glassy margins.

PIECES: 1 (igneous description based on 14R-2 Piece 16a)

CONTACTS:

Upper: not recovered

Lower: not recovered

COLOR: bluish black (5PB 2.5/1)

PHENOCRYSTS:

Plagioclase 1.0 % 0.2-1.5 mm

Olivine 1.0 % 0.1-1.0 mm 100 % altered to saponite

Clinopyroxene 0.1 % <0.2 mm

GROUNDMASS:

Grain size: cryptocrystalline

Texture: variolitic to intergranular

VESICLES: none

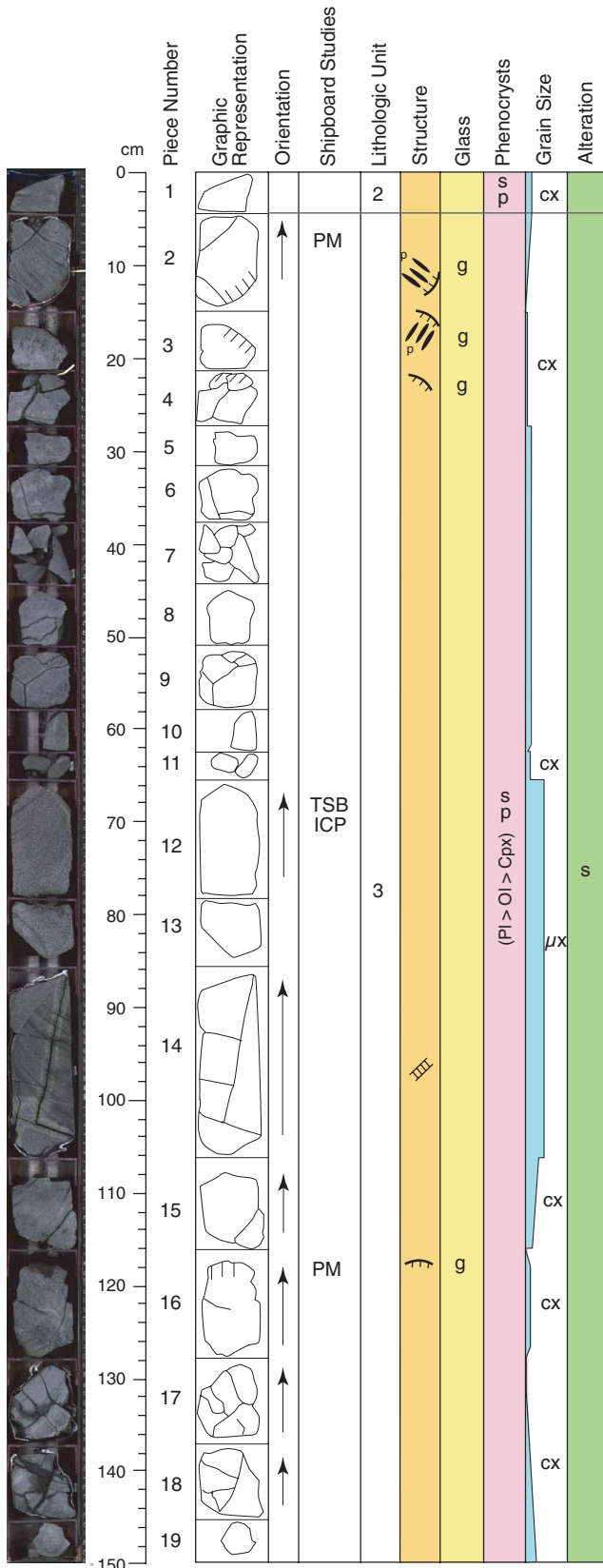
ALTERATION: Dark gray slightly altered basalt with rare black and brown halos.

VEINS: 0.3 to 5 mm saponite veins with minor iron oxyhydroxide.

STRUCTURE: Curved veins filled with saponite and celadonite. Radial and
 concentric veins relative to glassy chilled margins.

ADDITIONAL COMMENTS: Glassy margin at top of Piece 1.

Core Photo



206-1256D-15R-1 (Section top: 364.20 mbsf)

UNIT: 2

ROCK NAME: Sparsely clinopyroxene-plagioclase-olivine-phyric
cryptocrystalline basalt

SUMMARY DESCRIPTION: Sparsely-phyric cryptocrystalline sheet flows.

PIECES: 1 (igneous description based on Piece 1)

CONTACTS:

Upper: not recovered

Lower: not recovered

COLOR: bluish black (5PB 2.5/1)

PHENOCRYSTS:

Plagioclase 0.8 % 0.2-2.0 mm

Olivine 1.0 % 0.2-1.0 mm 100 % altered to saponite

Clinopyroxene 0.1 % 0.2 mm

GROUNDMASS:

Grain size: cryptocrystalline

Texture: variolitic

VESICLES: none

ALTERATION: Dark gray slightly altered basalt.

VEINS: none

STRUCTURE: no oriented veins

ADDITIONAL COMMENTS: Plagioclase forms clots with or without
clinopyroxene.

UNIT: 3

ROCK NAME: Sparsely clinopyroxene-olivine-plagioclase-phyric
cryptocrystalline basalt

SUMMARY DESCRIPTION: Sparsely-phyric cryptocrystalline to microcrystalline
pillow basalts with glassy margins.

PIECES: 2-19 (igneous description based on Piece 2)

CONTACTS:

Upper: not recovered

Lower: not recovered

COLOR: black (N 2.5/)

PHENOCRYSTS:

Plagioclase 1.0 % 0.2-1.0 mm

Olivine 0.5 % 0.5-2.0 mm 100 % altered to saponite

Clinopyroxene 0.1 % <0.2 mm

GROUNDMASS:

Grain size: cryptocrystalline to microcrystalline

Texture: variolitic

VESICLES: Radially-oriented pipe vesicles up to 1 cm oriented perpendicular to
curved glassy margins. Pieces 3, 4, and 16 also have small pipe
vesicles.

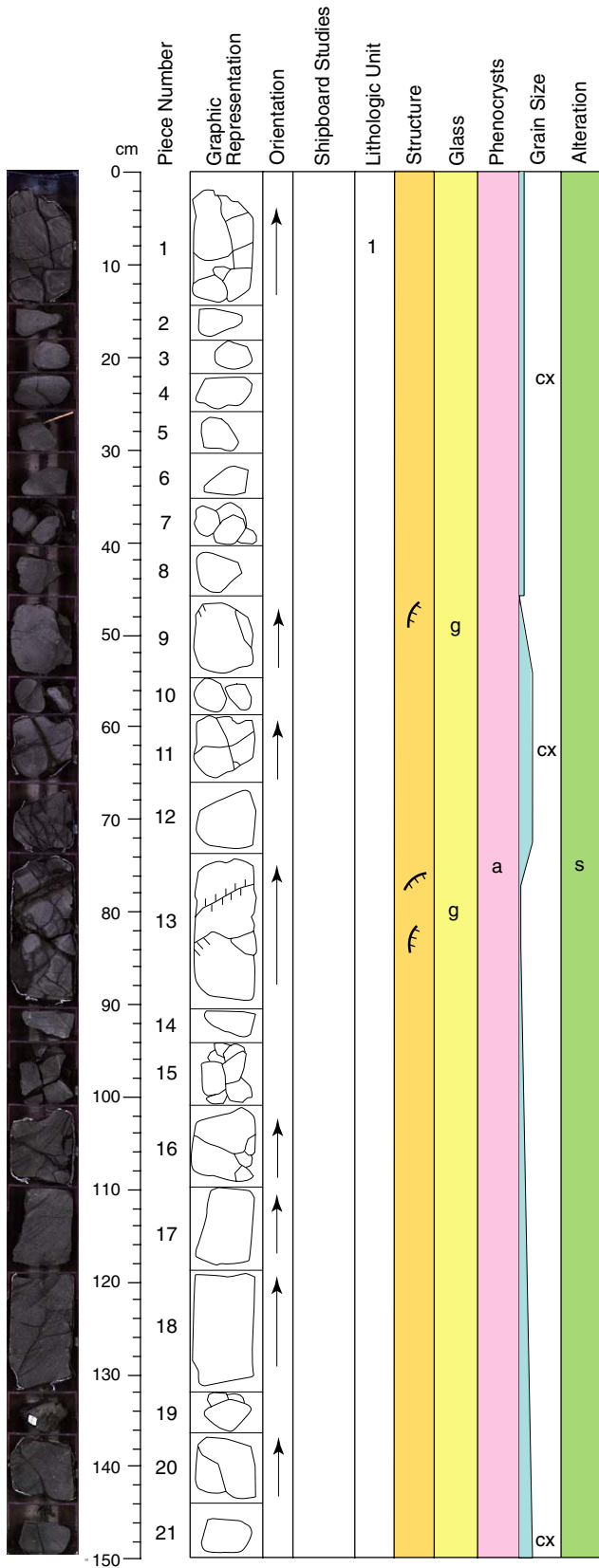
ALTERATION: Dark gray slightly altered basalt with black halos in Pieces 12,
13, 14, and 17. Sparse highly altered glass.

VEINS: 0.1 to 1.0 mm veins filled with saponite, celadonite, and iron
oxyhydroxide.

STRUCTURE: Curved veins filled with saponite and celadonite; radial and
concentric veins relative to chilled margins. Set of parallel veins
orthogonal to a steeply dipping vein with black halo in Piece 14.

ADDITIONAL COMMENTS: Curved glassy margin at bottom of Piece 2.
Pieces 12 to 14 are microcrystalline; all other pieces are cryptocrystalline.

Core Photo



206-1256D-15R-2 (Section top: 365.70 mbsf)

UNIT: 3

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline pillow basalts with glassy margins.

PIECES: 1-21 (igneous description based on Piece 13a)

CONTACTS:

Upper: not recovered
 Lower: not recovered

COLOR: black (N 2.5/)

PHENOCRYSTS:

Plagioclase	0.2 %	0.1-1.0 mm	
Olivine	<0.1 %	0.1-0.2 mm	100 % altered to saponite
Clinopyroxene	<0.1 %	0.1-0.2 mm	

GROUNDMASS:

Grain size: cryptocrystalline
 Texture: variolitic to holohyaline

VESICLES: none.

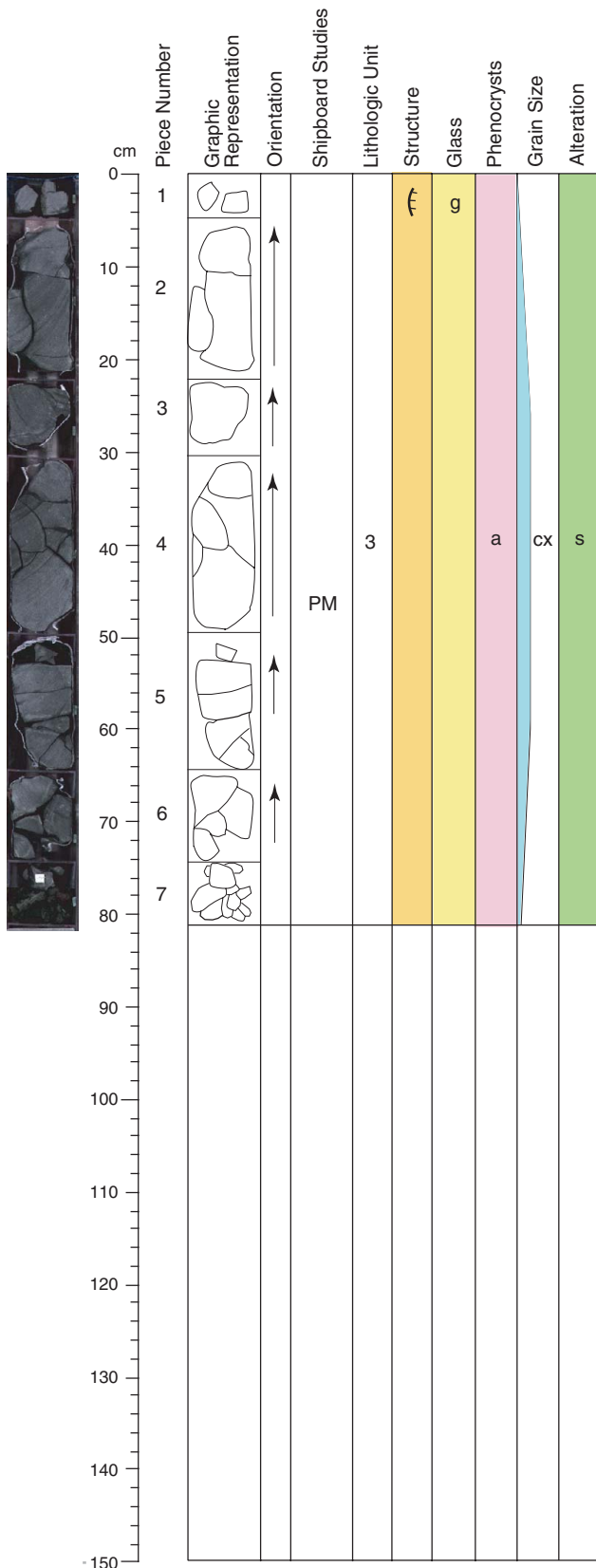
ALTERATION: Dark gray slightly altered basalt with black halos. Sparse slightly altered glass.

VEINS: 0.1 to 1.0 mm veins filled with saponite, celadonite, and iron oxyhydroxide.

STRUCTURE: Irregular and curved crosscutting veins.

ADDITIONAL COMMENTS: Thick glassy margin runs obliquely through Piece 13a.

Core Photo



206-1256D-15R-3 (Section top: 367.2 mbsf)

UNIT: 3

ROCK NAME: Aphyric cryptocrystalline basalt
 SUMMARY DESCRIPTION: Aphyric cryptocrystalline pillow basalts with glassy margins.

PIECES: 1-7 (igneous description based on Piece 2)

CONTACTS:

Upper: not recovered
 Lower: not recovered

COLOR: black (N 2.5/)

PHENOCRYSTS:

Plagioclase 0.1 % 0.05 mm
 Olivine <0.1 % <0.1 mm 100 % altered to saponite
 Clinopyroxene <<0.1 % <.01 mm

GROUNDMASS:

Grain size: cryptocrystalline
 Texture: holohyaline to variolitic

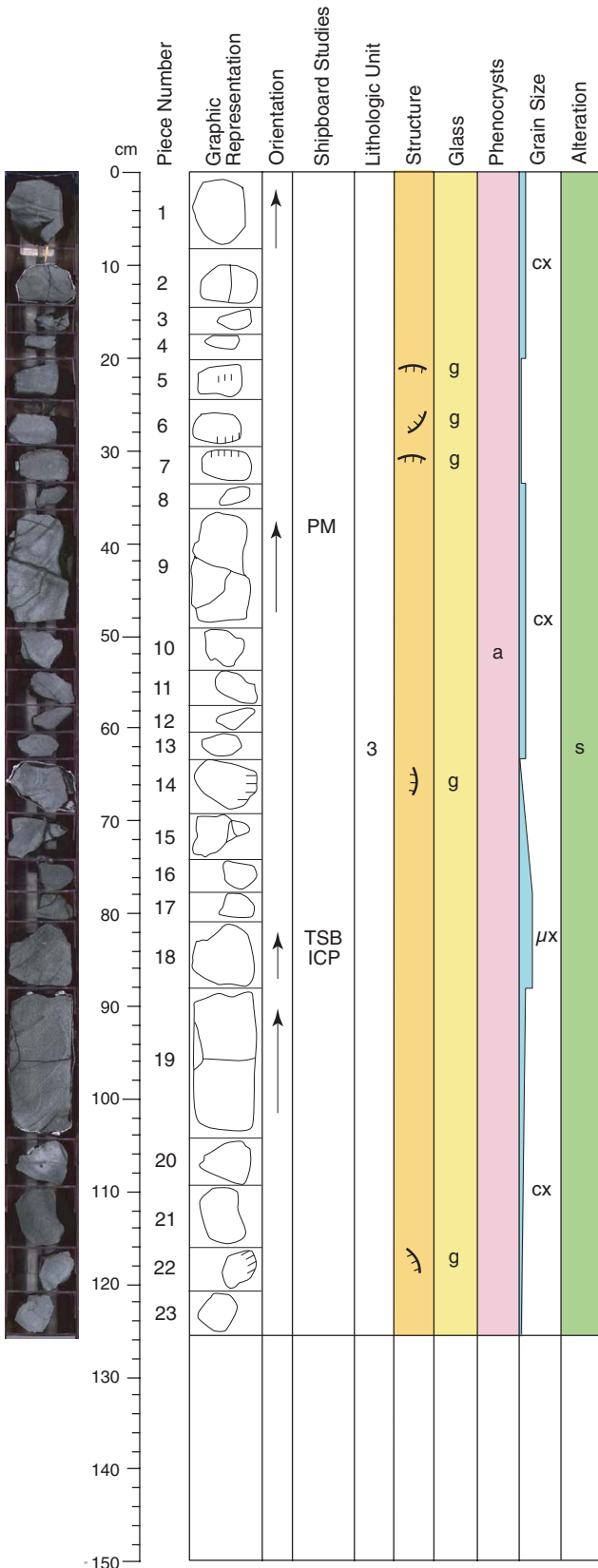
VESICLES: none

ALTERATION: Dark gray slightly altered basalt with black halos. Sparse slightly altered glass.

VEINS: 0.1 to 1.0 mm veins filled with saponite, celadonite, and iron oxyhydroxide.

STRUCTURE: Radial and concentric veins throughout.

Core Photo



206-1256D-16R-1 (Section top: 368.9 mbsf)

UNIT: 3

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline to microcrystalline pillow basalts with glassy margins.

PIECES: 1-23 (igneous description based on Piece 1)

CONTACTS:

Upper: not recovered

Lower: not recovered

COLOR: very dark grey (N 3/)

PHENOCRYSTS:

Plagioclase 0.4 % 0.1-1.0 mm

Olivine 0.1 % 0.1-1.0 mm 100 % altered to saponite

Clinopyroxene <0.1 % 0.05-0.1 mm

GROUNDMASS:

Grain size: cryptocrystalline to microcrystalline

Texture: variolitic to holohyaline

VESICLES: None

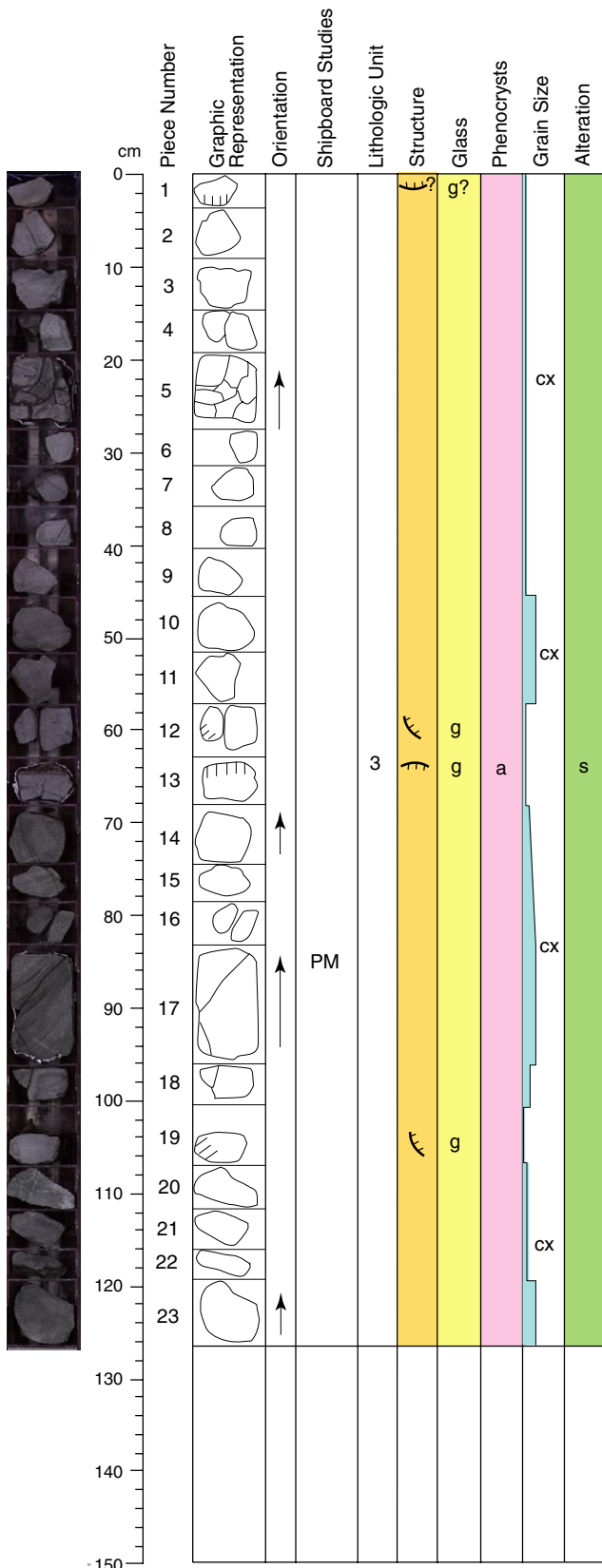
ALTERATION: Dark gray slightly altered basalt, with 2-15 mm dark alteration halos along veins

VEINS: 0.1-1.5 mm veins of saponite with local celadonite and iron oxyhydroxide

STRUCTURE: Curved veins filled with saponite and celadonite. Radial and concentric veins relative to glassy chilled margins. Veins with Y-shaped intersection in Piece 19.

ADDITIONAL COMMENTS: Pieces 17 to 18 are microcrystalline; others are cryptocrystalline.

Core Photo



206-1256D-17R-1 (Section top: 373.5 mbsf)

UNIT: 3

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline pillow basalt with glassy margins.

PIECES: 1-23 (igneous description based on Piece 1)

CONTACTS:

Upper: not recovered

Lower: not recovered

COLOR: very dark gray (N 3/)

PHENOCRYSTS: none apparent

GROUNDMASS:

Grain size: cryptocrystalline

Texture: holohyaline to variolitic

VESICLES: none

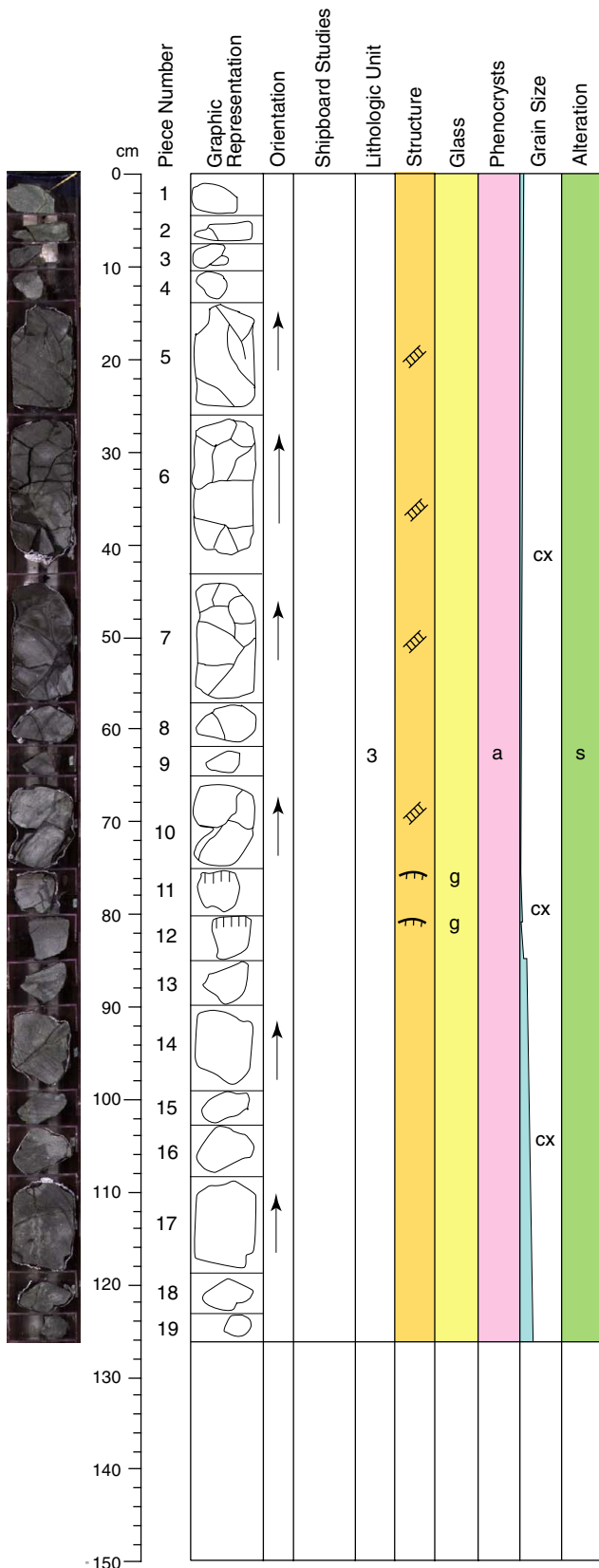
ALTERATION: Dark gray slightly altered basalt, with 2-15 mm black alteration halos along veins

VEINS: 0.1-1.5 mm veins of saponite and celadonite with local iron oxyhydroxide

STRUCTURE: Curved veins filled with saponite and celadonite. Radial and concentric veins relative to glassy chilled margins.

ADDITIONAL COMMENTS: Piece 13 has a thick (>1 cm) glassy margin. Entire core is non-vesicular.

Core Photo



206-1256D-18R-1 (Section top: 378.00 mbsf)

UNIT: 3

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows with glassy margins.

PIECES: 1-19 (igneous description based on 18R-2 Piece 8)

CONTACTS:

Upper: not recovered

Lower: not recovered

COLOR: black (N2.5/)

PHENOCRYSTS: none apparent

GROUNDMASS:

Grain size: cryptocrystalline

Texture: intergranular

VESICLES: none

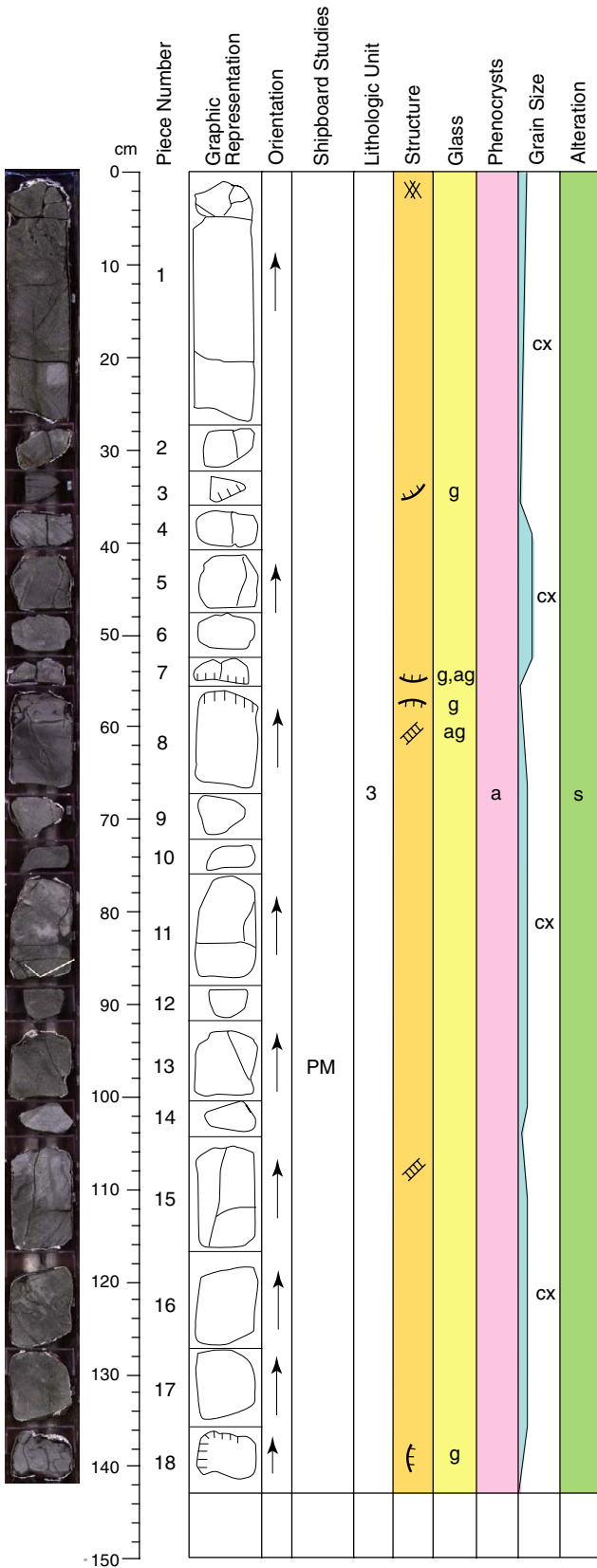
ALTERATION: Dark gray slightly altered basalt, with 5-23 mm black alteration halos along veins

VEINS: 0.1-1.0 mm veins of saponite and celadonite with local iron oxyhydroxide

STRUCTURE: Curved veins filled with saponite and celadonite and flanked by dark halos. Radial and concentric veins with Y-shaped intersections in Pieces 6, 7, and 10.

ADDITIONAL COMMENTS: Glassy margins in Pieces 11 and 12.

Core Photo



206-1256D-18R-2 (Section top: 379.26 mbsf)

UNIT: 3

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows with glassy margins.

PIECES: 1-18 (igneous description based on Piece 8)

CONTACTS:

Upper: not recovered

Lower: not recovered

COLOR: black (N2.5/)

PHENOCRYSTS: none apparent

GROUNDMASS:

Grain size: cryptocrystalline

Texture: intergranular

VESICLES: none

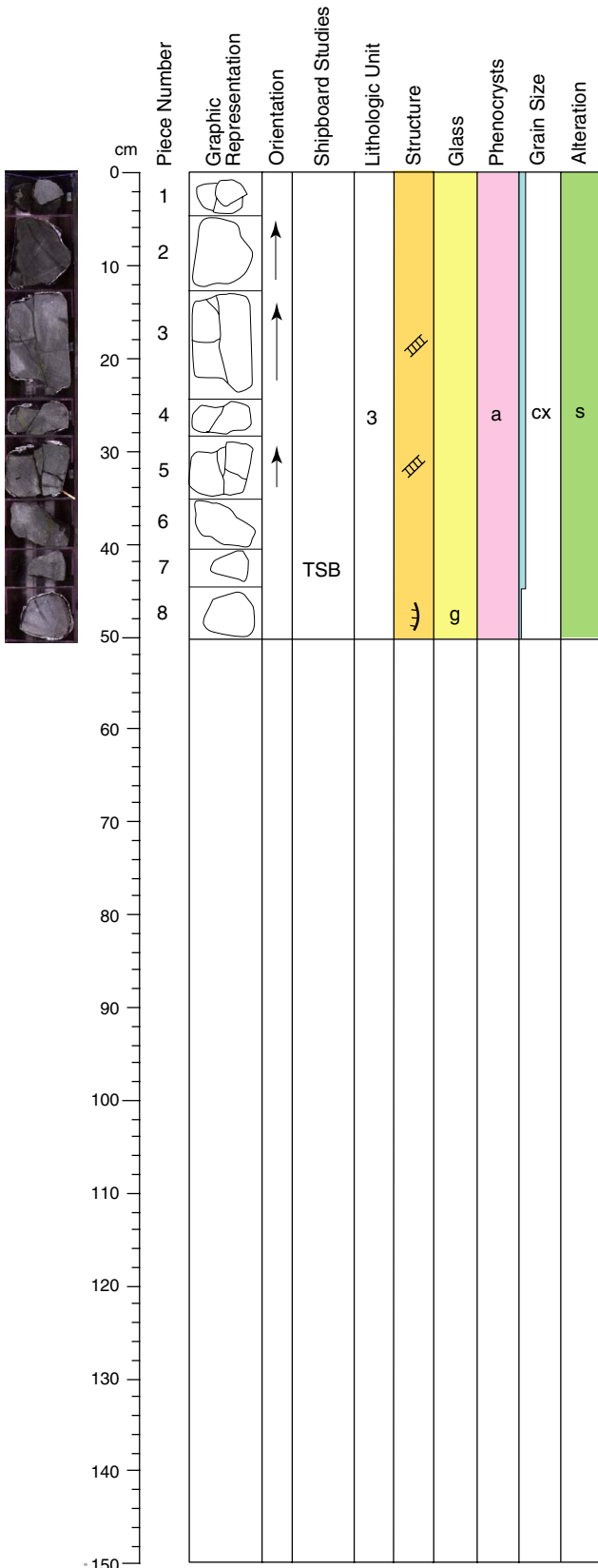
ALTERATION: Dark gray slightly altered basalt, with 5-15 mm black and mixed dark + brown alteration halos along veins.

VEINS: 0.1-1 mm veins of saponite and celadonite with local iron oxyhydroxide

STRUCTURE: Curved veins filled with saponite and celadonite and flanked by dark halos. Radial and concentric veins relative to glassy chilled margin in Piece 8. Vein network and vugs filled with celadonite.

ADDITIONAL COMMENTS: Glassy margins in Pieces 3, 7, 8, and 18.

Core Photo



206-1256D-19R-1 (Section top: 382.70 mbsf)

UNIT: 3

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows with glassy margins.

PIECES: 1-8 (igneous description based on Piece 3)

CONTACTS:

Upper: not recovered

Lower: not recovered

COLOR: black (N2.5/)

PHENOCRYSTS: none apparent

GROUNDMASS:

Grain size: cryptocrystalline

Texture: intergranular

VESICLES: none

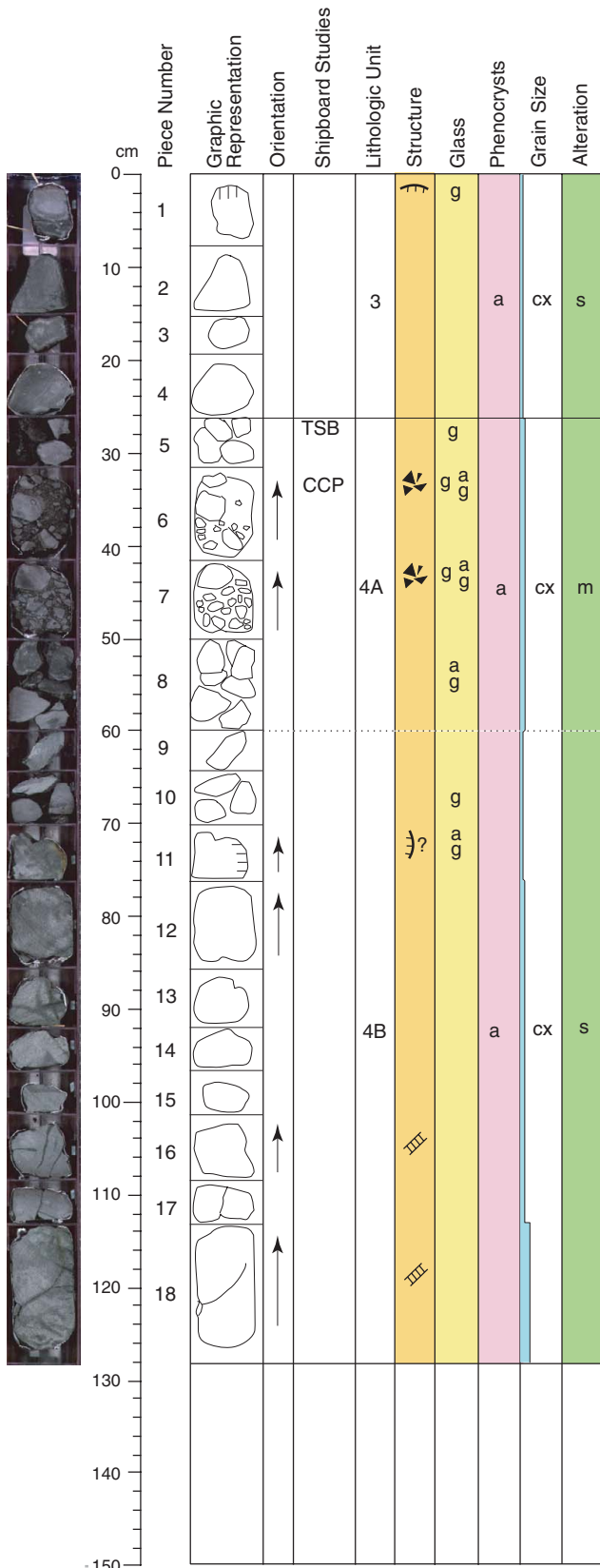
ALTERATION: Dark gray slightly altered basalt, with 4-12 mm black alteration halos along veins.

VEINS: 0.1-1.5 mm veins of saponite and celadonite with local iron oxyhydroxide

STRUCTURE: Planar and curved veins flanked by dark halos. Veins with Y-shaped intersection in Piece 3.

ADDITIONAL COMMENTS: Glassy margin in Piece 8.

Core Photo



206-1256D-20R-1 (Section top: 387.40 mbsf)

UNIT: 3

ROCK NAME: Aphyric cryptocrystalline basalt
SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows with glassy margins.

PIECES: 1-4 (igneous description based on 19R-1 Piece 3)

CONTACTS:

Upper: not recovered

Lower: not recovered

COLOR: black (N2.5/)

PHENOCRYSTS: none apparent

GROUNDMASS:

Grain size: cryptocrystalline

Texture: intergranular

VESICLES: none

ALTERATION: Dark gray slightly altered basalt, with 1-10 mm black and brown alteration halos along veins

VEINS: 0.1-1.5 mm veins of saponite and celadonite with local iron oxyhydroxide

ADDITIONAL COMMENTS: Glassy margin in Piece 1.

UNIT: 4A

ROCK NAME: Aphyric cryptocrystalline basalt
SUMMARY DESCRIPTION: Volcanic breccia composed of aphyric cryptocrystalline basalt and altered glass.

PIECES: 5-8 (igneous description based on Piece 6)

CONTACTS:

Upper: not recovered

Lower: not recovered

COLOR: bluish black (5PB 2.5/1)

PHENOCRYSTS:

Plagioclase <0.1% 0.05 mm

Clinopyroxene <0.1% <0.02 mm

GROUNDMASS:

Grain size: cryptocrystalline

Texture: variolitic to holohyaline

VESICLES: none

ALTERATION: Dark gray slightly altered basalt. Fragments with 1-10 mm black and brown alteration halos along veins, within moderately altered volcanic breccia.

VEINS: 0.1-1.5 mm veins of saponite and celadonite with local iron oxyhydroxide

STRUCTURE: Dark green veins inside lithic clasts in breccia of Pieces 6 and 7.

Light green veins cut both the matrix and clasts. Shear veins cut clasts and matrix of breccia in Pieces 6 and 7.

ADDITIONAL COMMENTS: Pieces 6 and 7 are coherent pieces of volcanic breccia consisting of lithic clasts embedded in a matrix of glassy fragments. Lithic clasts have sharp, angular edges, some of which have glassy margins. The matrix consists of clasts (<1 cm) of dark brown, fresh glass with rounded to angular edges. Plagioclase and clinopyroxene in lithic fragments appear in clusters <1 mm diameter.

UNIT: 4B

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows

PIECES: 9-18 (igneous description based on Piece 16)

CONTACTS:

Upper: not recovered

Lower: not recovered

COLOR: bluish black (5PB 2.5/1)

PHENOCRYSTS:

Plagioclase <0.1% <0.15 mm

Clinopyroxene <0.1% <0.05 mm

GROUNDMASS:

Grain size: cryptocrystalline

Texture: variolitic

VESICLES: none

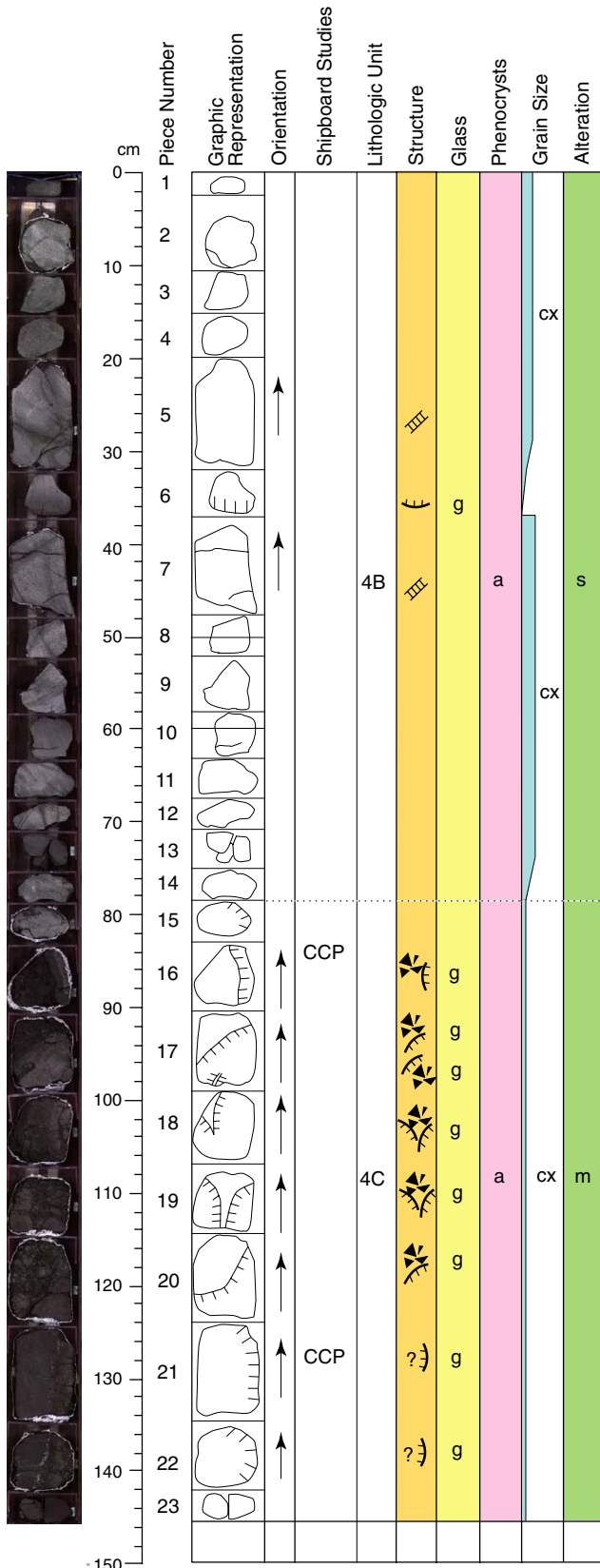
ALTERATION: Dark gray slightly altered basalt, with 1-10 mm black and brown alteration halos along veins

VEINS: 0.1-1.5 mm veins of saponite and celadonite with local iron oxyhydroxide

STRUCTURE: Curved radial and concentric veins with Y-shaped intersection in Piece 18.

ADDITIONAL COMMENTS: Rock contains rare clusters (<1 mm) long of

Core Photo



206-1256D-21R-1 (Section top: 396.80 mbsf)

UNIT: 4B

ROCK NAME: Aphyric cryptocrystalline basalt
SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows
PIECES: 1-14 (igneous description based on 20R-1 Piece 16)
CONTACTS:
Upper: not recovered
Lower: not recovered

COLOR: bluish black (5PB 2.5/1)

PHENOCRYSTS:

Plagioclase <0.1% <0.15 mm
Clinopyroxene <0.1% <0.05 mm

GROUNDMASS:

Grain size: cryptocrystalline
Texture: variolitic

VESICLES: none

ALTERATION: Dark gray slightly altered basalt, with 1-8 mm dark alteration halos along veins.

VEINS: 0.2-0.6 mm veins of saponite and celadonite with local iron oxyhydroxide

STRUCTURE: Curved veins filled with saponite and celadonite and flanked by dark halos in Pieces 5 and 7.

UNIT: 4C

ROCK NAME: Volcanic breccia
SUMMARY DESCRIPTION: Volcanic breccia consisting of aphyric cryptocrystalline basalt and glass.

PIECES: 15-23 (igneous description based on Piece 17)

CONTACTS:

Upper: not recovered
Lower: not recovered

COLOR: bluish black (5PB 2.5/1)

PHENOCRYSTS:

Plagioclase <0.1% <0.05 mm
Clinopyroxene <0.1% <0.05 mm

GROUNDMASS:

Grain size: cryptocrystalline to glassy
Texture: holocrystalline to variolitic

VESICLES: ~0.2%

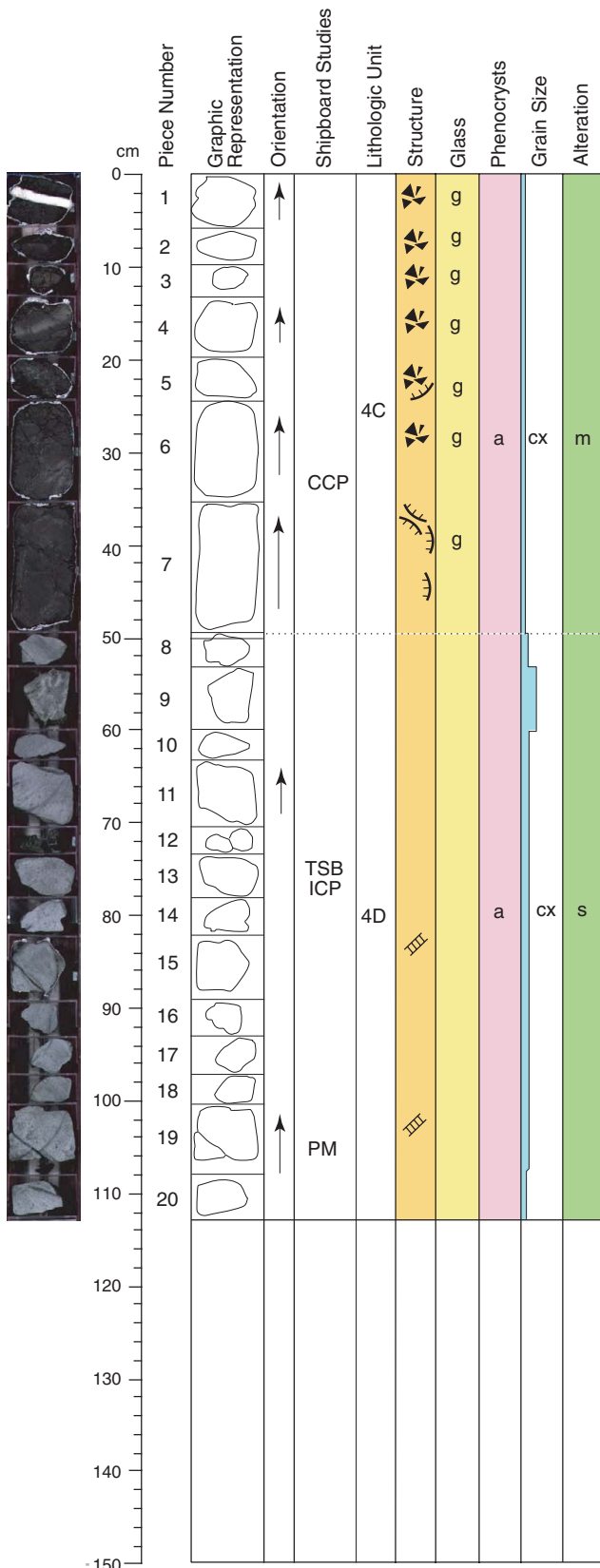
ALTERATION: Smaller glass shards highly altered to smectite leading to moderate overall alteration.

VEINS: Breccia matrix consists of saponite and local trace white zeolite (?)

STRUCTURE: Fibrous saponite veins cut glass fragments and basalt clasts in Piece 16

ADDITIONAL COMMENTS: Clasts of aphyric cryptocrystalline basalt embedded in fragments of fresh and altered glass. Glass fragments (<1 cm long) show conchoidal fracture. Large basalt clasts have fractured surfaces or glassy margins. Fractured surfaces have sharp edges while glassy or chilled margins have lobate undulating outlines with occasional deep embayments. Thin platy or polygonal glass shards (<1 mm in length) fill large embayments. Rare spherical vesicles (<1 mm diameter) are present at the chilled surfaces of lava clasts.

Core Photo



206-1256D-21R-2 (Section top: 398.25 mbsf)

UNIT: 4C

ROCK NAME: Volcanic breccia
 SUMMARY DESCRIPTION: Volcanic breccia consisting of aphyric cryptocrystalline basalt and glass.

PIECES: 1-7 (igneous description based on 21-R2 Piece 17)

CONTACTS:

Upper: not recovered
 Lower: not recovered

COLOR: bluish black (5PB 2.5/1)

PHENOCRYSTS:

Plagioclase <0.1% <0.05 mm
 Clinopyroxene <0.1% <0.05 mm

GROUNDMASS:

Grain size: cryptocrystalline to glassy
 Texture: holocrystalline to variolitic

VESICLES: ~0.2%

ALTERATION: Smaller glass shards highly altered to smectite leading to moderate overall alteration.

VEINS: Breccia matrix consists of saponite and local trace white zeolite (?)

STRUCTURE: Fibrous saponite veins cut glass fragments and basalt clasts in Piece 16

ADDITIONAL COMMENTS: Clasts of aphyric cryptocrystalline basalt embedded in fragments of fresh and altered glass. Glass fragments (<1 cm long) show conchoidal fracture. Large basalt clasts have fractured surfaces or glassy margins. Fractured surfaces have sharp edges while glassy or chilled margins have lobate undulating outlines with occasional deep embayments. Thin platy or polygonal glass shards (<1 mm in length) fill large embayments. Rare spherical vesicles (<1 mm diameter) are present at the chilled surfaces of lava clasts.

UNIT: 4D

ROCK NAME: Aphyric cryptocrystalline basalt
 SUMMARY DESCRIPTION: Aphyric cryptocrystalline massive basalt sheet flows.

PIECES: 8-20 (igneous description based on Piece 9)

CONTACTS:

Upper: not recovered
 Lower: not recovered

COLOR: bluish black (5PB 2.5/1)

PHENOCRYSTS: none apparent

GROUNDMASS:

Grain size: cryptocrystalline
 Texture: variolitic

VESICLES: ~0.5%

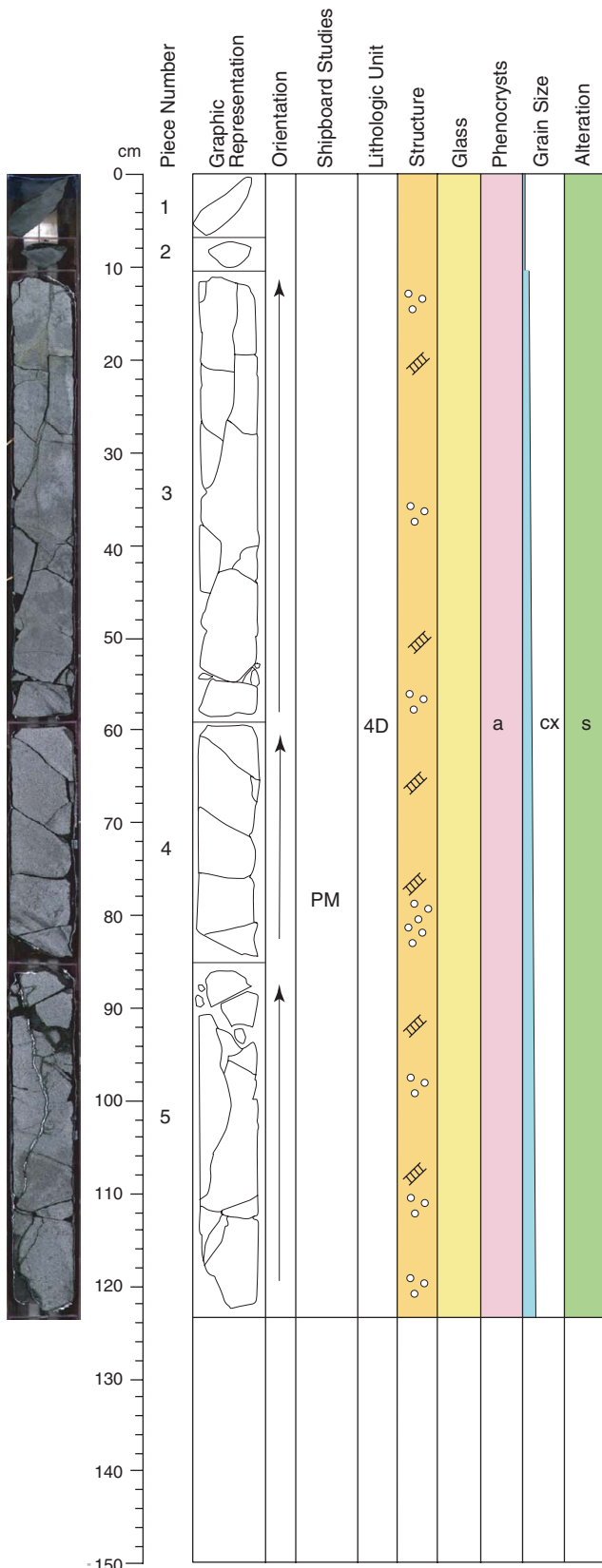
ALTERATION: Dark gray slightly altered basalt, with 1.5-2 mm black alteration halos along veins.

VEINS: 0.2-0.5 mm veins of saponite.

STRUCTURE: no relevant structures

ADDITIONAL COMMENTS: Rare glomerocrysts or microgabbros (<1 mm long) of plagioclase plus clinopyroxene are present.

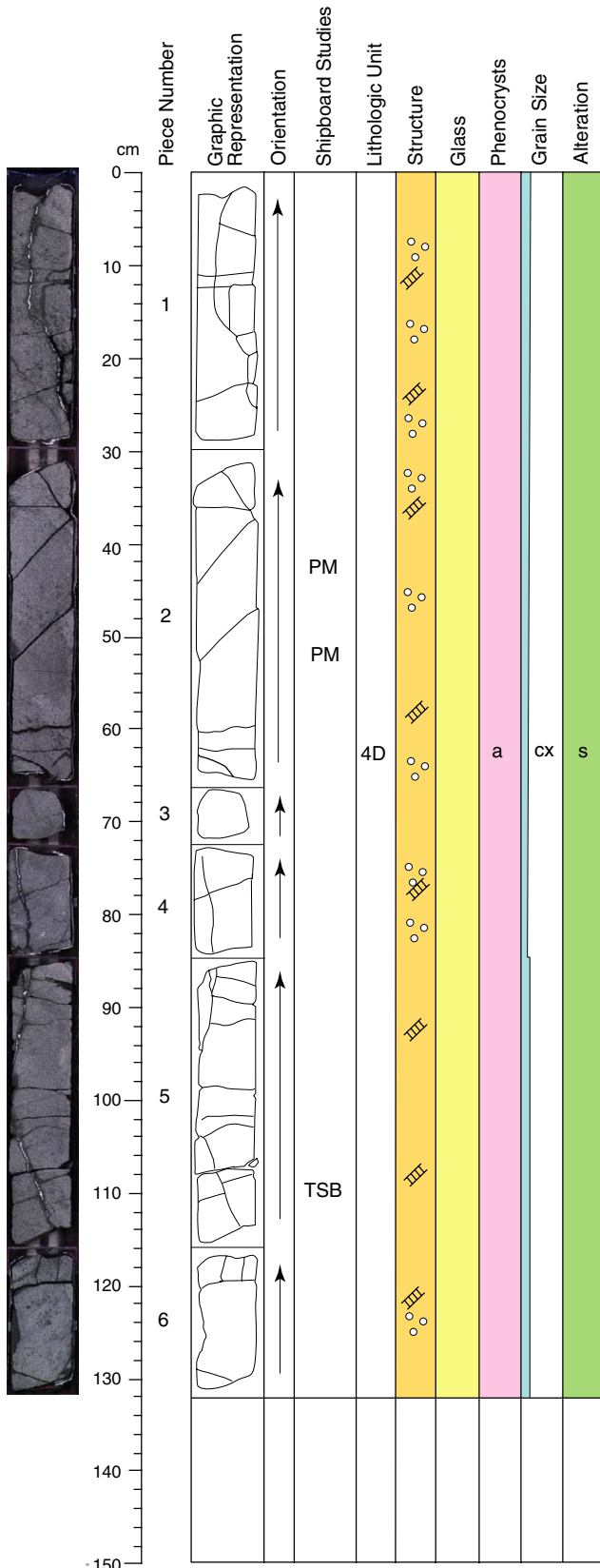
Core Photo



206-1256D-22R-1 (Section top: 406.00 mbsf)

UNIT: 4D
ROCK NAME: Aphyric cryptocrystalline basalt
SUMMARY DESCRIPTION: Aphyric cryptocrystalline massive basalt flows
PIECES: 1-5 (igneous description based on Piece 4)
CONTACTS:
 Upper: not recovered
 Lower: not recovered
COLOR: black (N2.5/)
PHENOCRYSTS:
 Olivine <1% 0.2-0.5 mm 100% altered to saponite
GROUNDMASS:
 Grain size: cryptocrystalline
 Texture: intergranular
VESICLES: Sparsely vesicular filled with saponite
ALTERATION: Dark gray slightly altered basalt, with 5-12 mm mixed black and brown alteration halos along veins.
VEINS: 0.1-2.5 mm veins of saponite and celadonite with local iron oxyhydroxide and pyrite.
STRUCTURE: Curved veins filled with saponite and flanked by dark and green halos. Pieces 3 and 5 are cut by steeply dipping anastomosing veins lined by saponite and white minerals. Planar and steeply dipping veins flanked by dark green vesicles in Piece 4.
ADDITIONAL COMMENTS: Rare (<<1%) glomerocrysts of plagioclase plus pyroxene.

Core Photo



206-1256D-22R-2 (Section top: 407.23 mbsf)

UNIT: 4D

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline massive basalt flows

PIECES: 1-6 (igneous description based on Piece 4)

CONTACTS:

Upper: not recovered

Lower: not recovered

COLOR: black (N2.5/)

PHENOCRYSTS:

Olivine <1% 0.3-0.5 mm 100% altered to saponite

GROUNDMASS:

Grain size: cryptocrystalline

Texture: intergranular

VESICLES: Rare vesicles filled with saponite

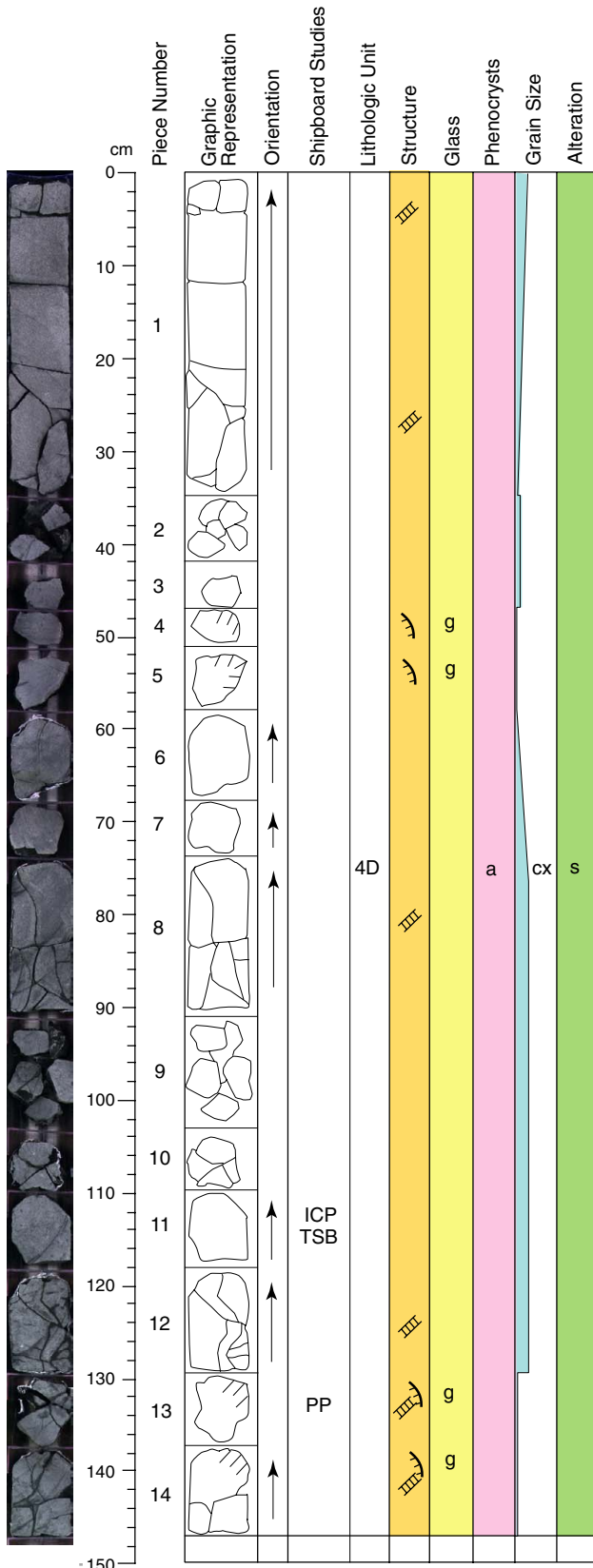
ALTERATION: Dark gray slightly altered basalt, with 0.5-8 mm black alteration halos along veins.

VEINS: 0.1-0.6 mm veins of saponite and celadonite with local iron oxyhydroxide and pyrite. Larger (1.5-2.0 mm) veins of saponite and silica occur in Pieces 1, 4, and 5.

STRUCTURE: Curved and planar veins filled with saponite. Pieces 1 and 5 are cut by curved and anastomosing steeply dipping veins lined by saponite and silica.

ADDITIONAL COMMENTS: <1% glomerocrysts or microgabbaros of plagioclase plus clinopyroxene.

Core Photo



206-1256D-22R-3 (Section top: 408.55 mbsf)

UNIT: 4D

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows with glassy margins.

PIECES: 1-14 (igneous description based on 22R-4 Piece 7)

CONTACTS:

Upper: not recovered

Lower: not recovered

COLOR: black (N2.5/)

PHENOCRYSTS: None apparent

GROUNDMASS:

Grain size: cryptocrystalline

Texture: intergranular

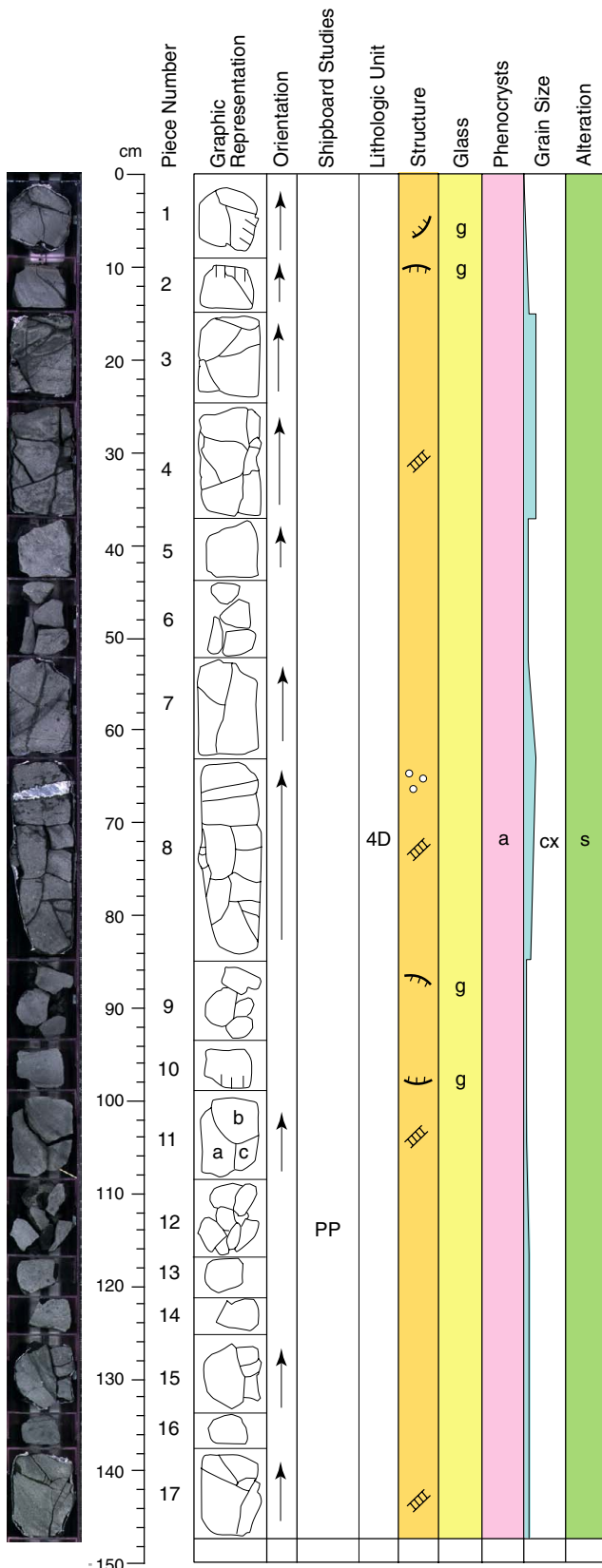
VESICLES: Rare vesicles filled with saponite

ALTERATION: Dark gray slightly altered basalt, with 1-12 mm black and rare mixed black and brown alteration halos along veins.

VEINS: 0.1-3.0 mm veins of saponite and celadonite with local iron oxyhydroxide and pyrite. 10 mm silica vein in Piece 8.

STRUCTURE: Curved and planar veins filled with saponite and flanked by dark halos are common. Radial and concentric veins with Y-shaped intersection in Pieces 8, 12, and 13.

Core Photo



206-1256D-22R-4 (Section top: 410.02 mbsf)

UNIT: 4D

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows with glassy margins.

PIECES: 1-17 (igneous description based on Piece 7)

CONTACTS:

Upper: not recovered

Lower: not recovered

COLOR: black (N2.5)

PHENOCRYSTS: None apparent

GROUNDMASS:

Grain size: cryptocrystalline

Texture: intergranular

VESICLES: Rare vesicles filled with saponite

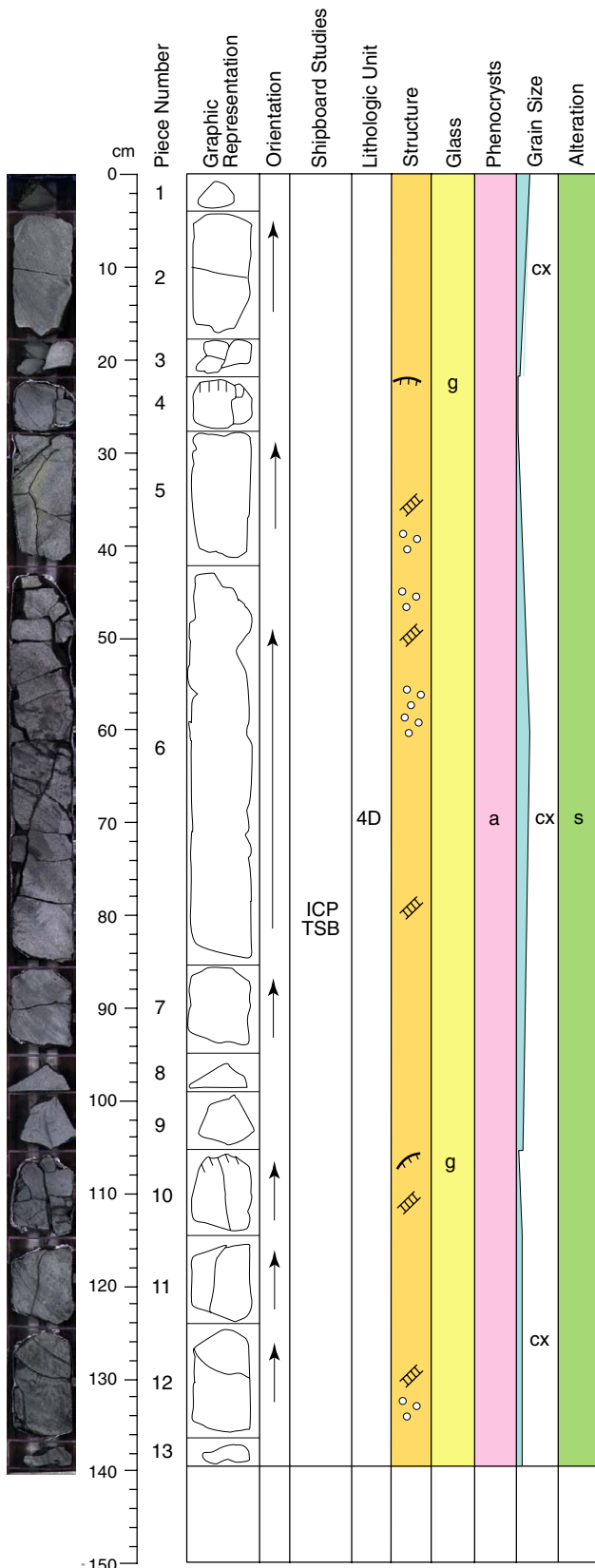
ALTERATION: Dark gray slightly altered basalt, with 0.5-12 mm black alteration halos along veins.

VEINS: 0.1-2.5 mm veins of saponite and celadonite with local iron oxyhydroxide and pyrite.

STRUCTURE: Radial and concentric veins with Y-shaped intersections are common throughout the core. Curved veins lined by white minerals in Pieces 4 and 7. 1 cm wide vein filled with silica, with irregular margins in Piece 8.

ADDITIONAL COMMENTS: <1% glomerocrysts or microgabbros (~0.5 mm diameter) of plagioclase plus clinopyroxene. Lava wrinkles on Piece 9.

Core Photo



206-1256D-23R-1 (Section top: 410.30 mbsf)

UNIT: 4D

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows with glassy margins.

PIECES: 1-13 (igneous description based on Piece 2)

CONTACTS:

Upper: not recovered
 Lower: not recovered

COLOR: black (N2.5/)

PHENOCRYSTS:

Plagioclase	0.15 %	<0.2 mm	
Olivine	<0.1 %	<0.1 mm	100% altered to saponite
Clinopyroxene	<0.1 %	<0.05 mm	

GROUNDMASS:

Grain size: cryptocrystalline
 Texture: intergranular to variolitic

VESICLES: Sparse, filled with saponite.

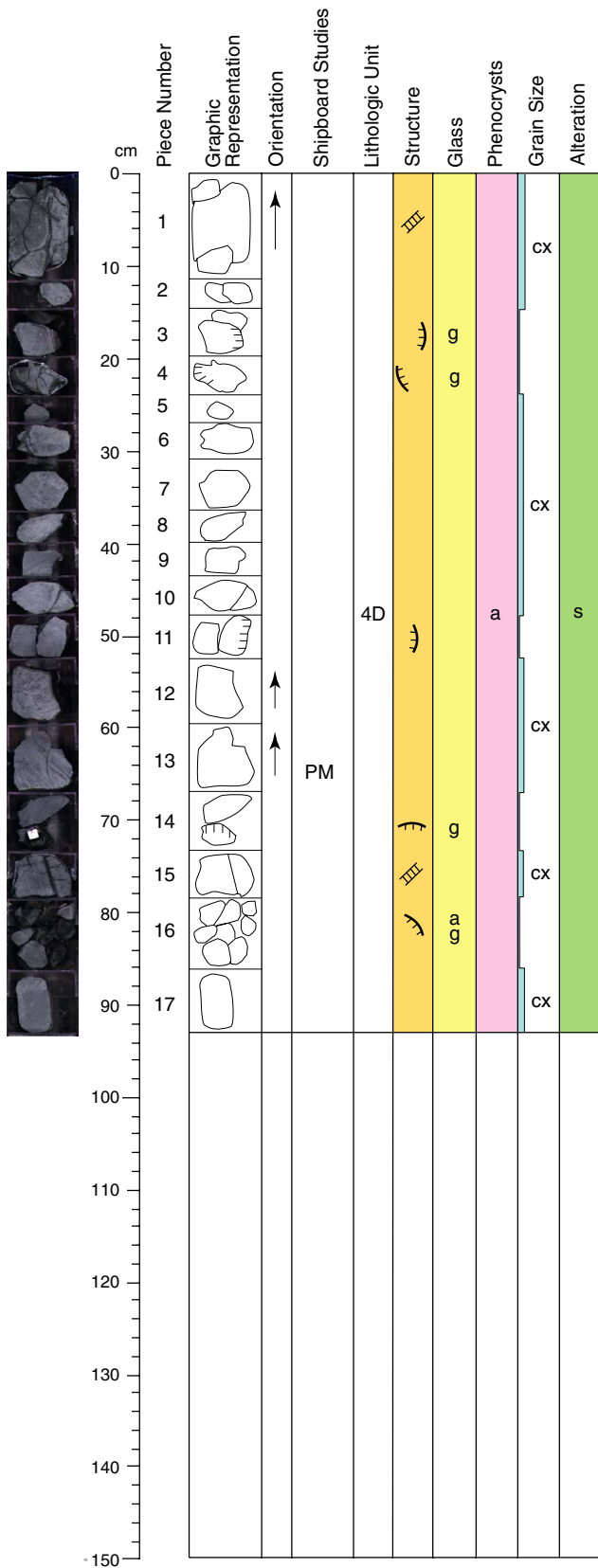
ALTERATION: Dark gray slightly altered basalt, with 1-12 mm black and mixed black and brown alteration halos along veins.

VEINS: 0.2-1.0 mm veins of saponite and celadonite with local iron oxyhydroxide and pyrite in Piece 8. Two 1 mm saponite and silica veins in Piece 13.

STRUCTURE: Radial and concentric veins with Y-shaped intersections in Pieces 5 and 6. Curved veins are flanked by parallel sets of dark green vesicles in Piece 6.

ADDITIONAL COMMENTS: Olivine occurs as discrete crystals. Plagioclase forms clusters with clinopyroxene.

Core Photo



206-1256D-23R-2 (Section top: 411.69 mbsf)

UNIT: 4D

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows with glassy margins.

PIECES: 1-17 (igneous description based on Piece 13)

CONTACTS:

Upper: not recovered
 Lower: not recovered

COLOR: black (N2.5/)

PHENOCRYSTS:

Plagioclase 0.15 % <0.2 mm
 Olivine <0.1 % <0.2 mm 100% altered to saponite
 Clinopyroxene <0.1 % <0.1 mm

GROUNDMASS:

Grain size: cryptocrystalline
 Texture: intergranular to variolitic

VESICLES:

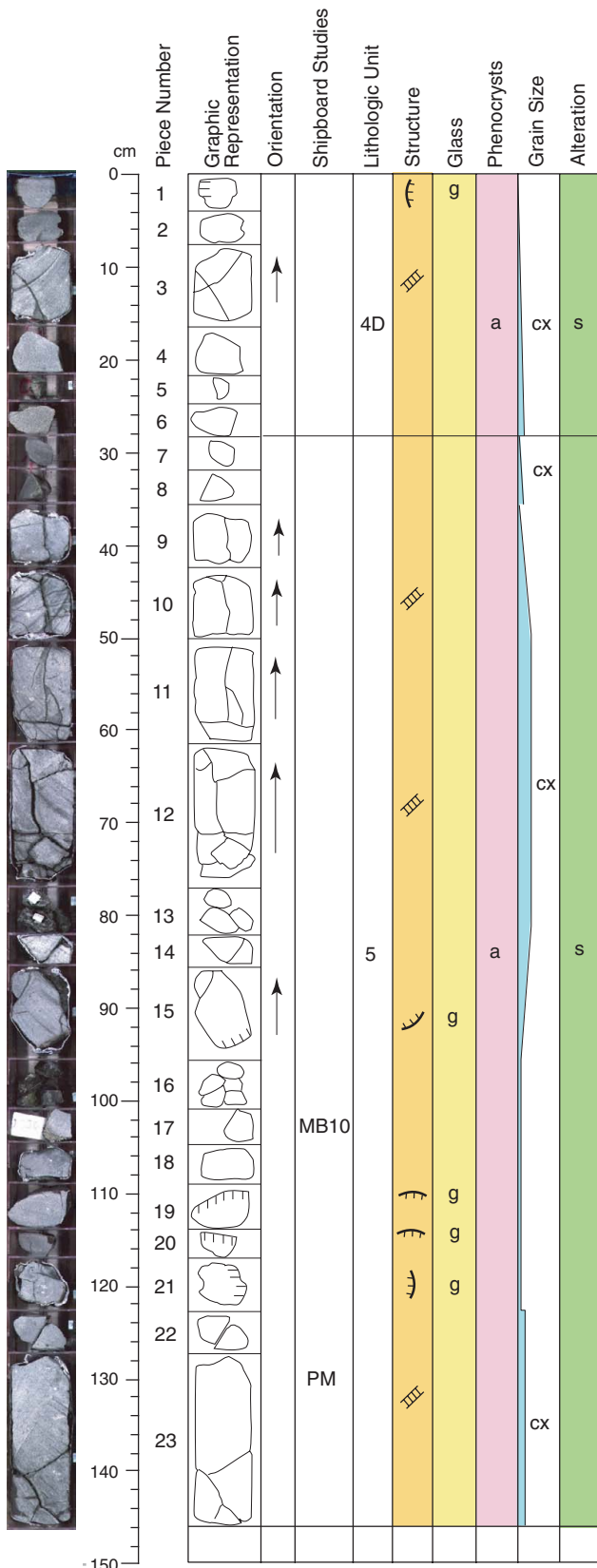
ALTERATION: Dark gray slightly altered basalt, with 1-5 mm black alteration halos along veins.

VEINS: 0.1-0.6 mm veins of saponite and celadonite with local iron oxyhydroxide and rare pyrite in Piece 12. Two saponite and silica veins in Pieces 1 and 14.

STRUCTURE: Curved and steeply dipping veins in Piece 1.

ADDITIONAL COMMENTS: Olivine occurs as discrete crystals. Plagioclase forms clusters with clinopyroxene.

Core Photo



206-1256D-24R-1 (Section top: 419.50 mbsf)

UNIT: 4D

ROCK NAME: Aphyric cryptocrystalline basalt
 SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows with glassy margins.

PIECES: 1-6 (igneous description based on Piece 3)

CONTACTS:

Upper: not recovered
 Lower: not recovered

COLOR: black (N2.5/)

PHENOCRYSTS:

Olivine <1% 0.1-0.2 mm 100% altered to saponite

GROUNDMASS:

Grain size: cryptocrystalline
 Texture: intergranular to variolitic

VESICLES: Rare, filled with saponite.

ALTERATION: Dark gray slightly altered basalt, with 1-4 mm black alteration halos along veins.

VEINS: 0.2-0.3 mm veins of saponite and celadonite with local iron oxyhydroxide.

STRUCTURE: Planar and curved veins flanked by dark halos in Pieces 3 and 12. Y-shaped intersections in Pieces 12 and 23. Subvertical sinuous veins and radial veins in Pieces 9, 10, 12, and 23.

ADDITIONAL COMMENTS: Rare clusters (<0.5 mm diameter) of plagioclase plus clinopyroxene.

UNIT: 5

ROCK NAME: Aphyric cryptocrystalline basalt
 SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows with glassy margins.

PIECES: 7-23 (igneous description based on Piece 11)

CONTACTS:

Upper: not recovered
 Lower: not recovered

COLOR: black (N2.5/)

PHENOCRYSTS:

Plagioclase <<1% 0.3-0.4 mm
 Olivine <1% 0.1-0.2 mm 100% altered to saponite
 Clinopyroxene <<1% 0.2-0.3 mm

GROUNDMASS:

Grain size: cryptocrystalline
 Texture: intergranular to variolitic

VESICLES: Sparse, filled with saponite.

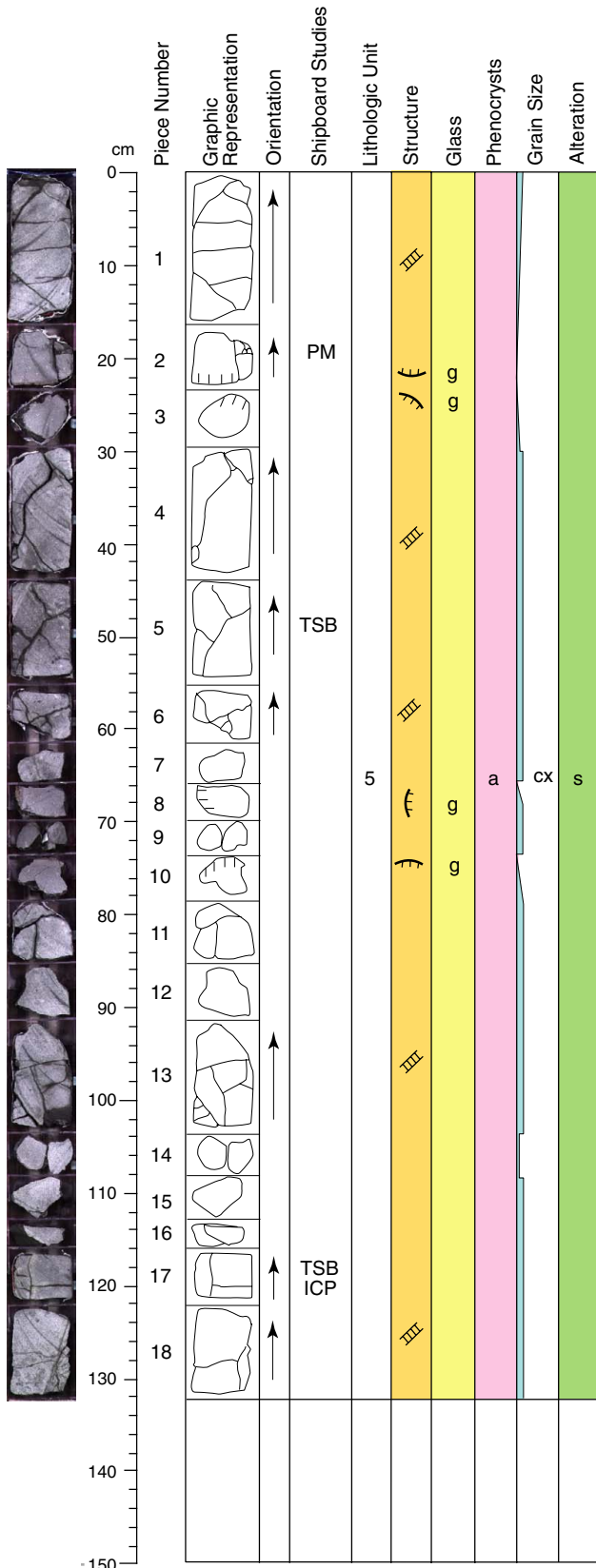
ALTERATION: Dark gray slightly altered basalt, with 1-10 mm black alteration halos along veins.

VEINS: 0.1-0.5 mm veins of saponite and celadonite with local iron oxyhydroxide.

STRUCTURE: Planar and curved veins flanked by dark halos in Piece 12. Y-shaped intersection in Pieces 12 and 23. Subvertical sinuous veins and radial veins in Pieces 9, 10, 12, and 23.

ADDITIONAL COMMENTS: Sparse (~1%) clusters (0.4-1.0 mm diameter) of plagioclase plus clinopyroxene plus or minus olivine.

Core Photo



206-1256D-24R-2 (Section top: 420.96 mbsf)

UNIT: 5

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows with glassy margins.

PIECES: 1-18 (igneous description based on Piece 4)

CONTACTS:

Upper: not recovered

Lower: not recovered

COLOR: black (N2.5/)

PHENOCRYSTS:

Plagioclase <<1% 0.2-0.3 mm

Olivine <1% 0.1-0.2 mm 100% altered to saponite

GROUNDMASS:

Grain size: cryptocrystalline

Texture: intergranular

VESICLES: Sparse, filled with saponite.

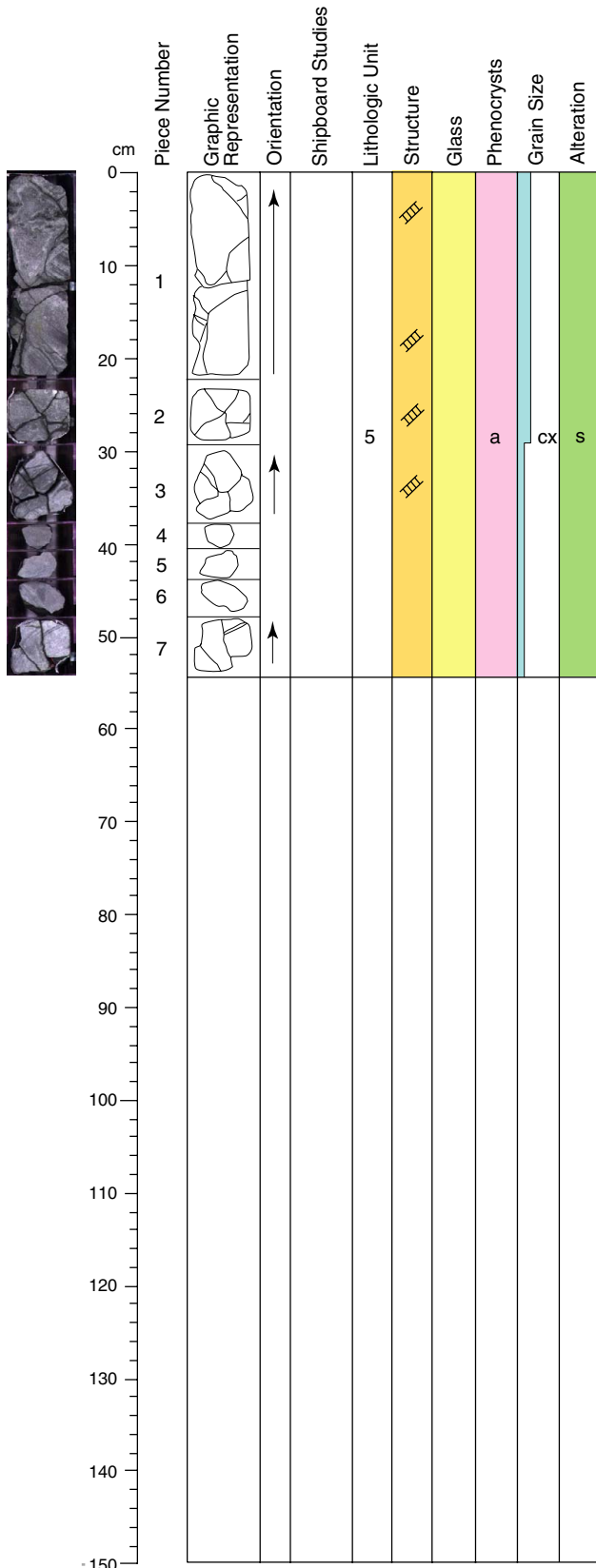
ALTERATION: Dark gray slightly altered basalt, with 1-7 mm black alteration halos along veins.

VEINS: 0.1-0.8 mm veins of saponite and celadonite with local iron oxyhydroxide.

STRUCTURE: Subvertical sinuous veins and radial veins in Pieces 1, 2, 4, 5, 13, 17, and 18. Y-shaped and subvertical curved veins with dark halos in Pieces 2, 4, 5, and 11.

ADDITIONAL COMMENTS: Sparse (~1%) clusters (0.4-0.8 mm diameter) of plagioclase plus clinopyroxene, a few of which (in Piece 4) have pale green pyroxene (pigeonite?).

Core Photo



206-1256D-24R-3 (Section top: 422.28 mbsf)

UNIT: 5

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows.

PIECES: 1-7 (igneous description based on Piece 1)

CONTACTS:

Upper: not recovered

Lower: not recovered

COLOR: black (N2.5/)

PHENOCRYSTS:

Plagioclase 0.2 % 0.1-0.4 mm

Olivine 0.3 % 0.2 mm 100% altered to saponite

Clinopyroxene 0.1 % 0.2 mm

GROUNDMASS:

Grain size: cryptocrystalline

Texture: variolitic

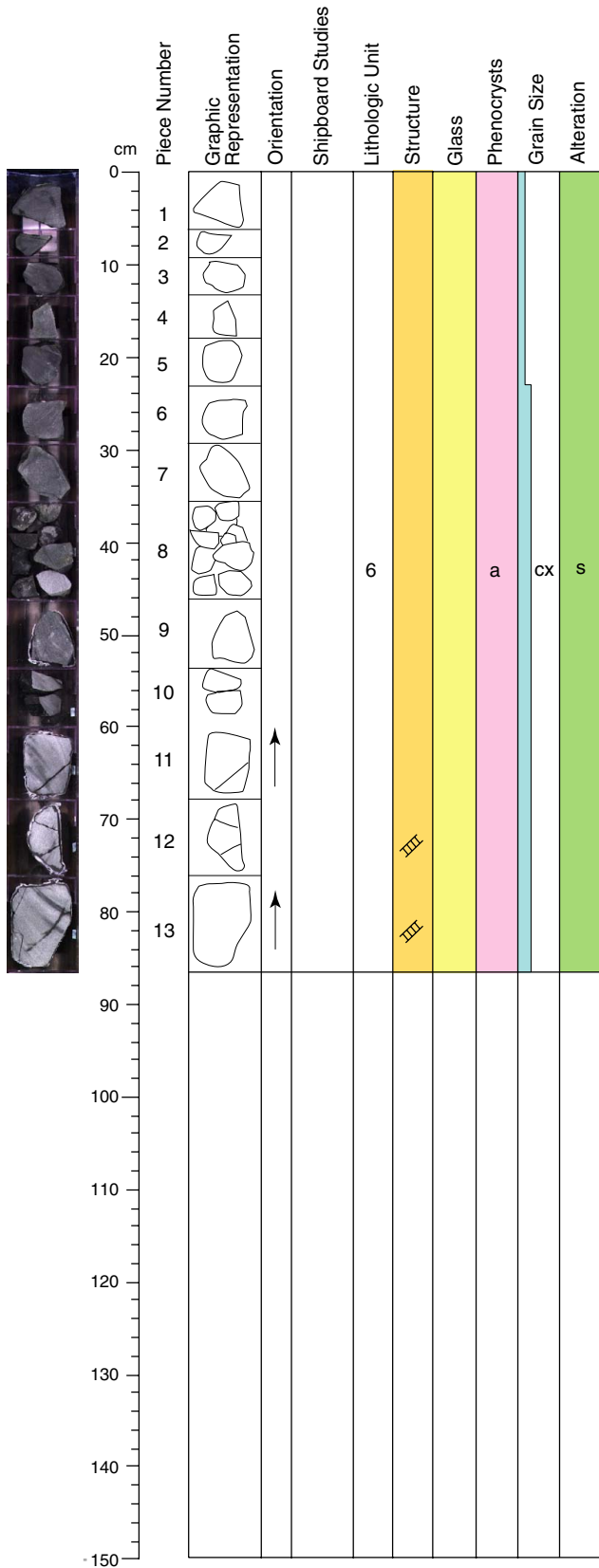
VESICLES: Sparse, filled with saponite.

ALTERATION: Dark gray slightly to moderately altered basalt, with 4-8 mm black alteration halos along veins. One 5 mm mixed black and brown alteration halo in Piece 1.

VEINS: 0.1-1.0 mm veins of saponite. 0.3 mm vein of saponite, celadonite, and iron oxyhydroxide in Piece 7.

STRUCTURE: Subvertical sinuous veins and radial veins flanked by dark alteration halo in Pieces 1, 2, and 3.

Core Photo



206-1256D-25R-1 (Section top: 428.80 mbsf)

UNIT: 6

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows.

PIECES: 1-13 (igneous description based on Piece 11)

CONTACTS:

Upper: not recovered

Lower: not recovered

COLOR: black (N2.5/)

PHENOCRYSTS: None apparent

GROUNDMASS:

Grain size: cryptocrystalline

Texture: intergranular

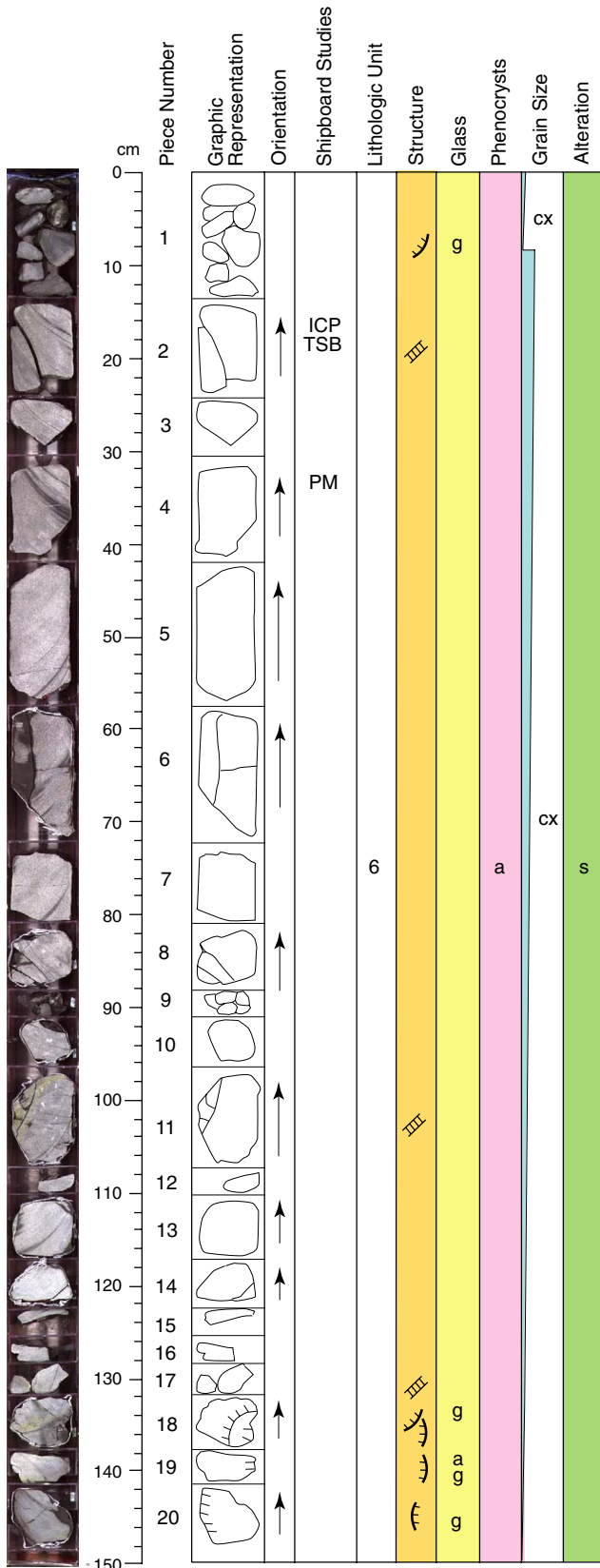
VESICLES: none

ALTERATION: Dark gray slightly altered basalt, with 2-12 mm black alteration halos along veins.

VEINS: 0.1-1.5 mm veins filled with saponite. Rare veins filled with saponite, celadonite, and iron oxyhydroxide.

STRUCTURE: Subvertical and radial veins in Pieces 12 and 13.

Core Photo



206-1256D-26R-1 (Section top: 438.30 mbsf)

UNIT: 6

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows with glassy margins.

PIECES: 1-20 (igneous description based on Piece 5)

CONTACTS:

Upper: not recovered

Lower: not recovered

COLOR: black (N2.5/)

PHENOCRYSTS:

Olivine <<1 % 0.1 mm 100% altered to saponite

GROUNDMASS:

Grain size: cryptocrystalline

Texture: intergranular

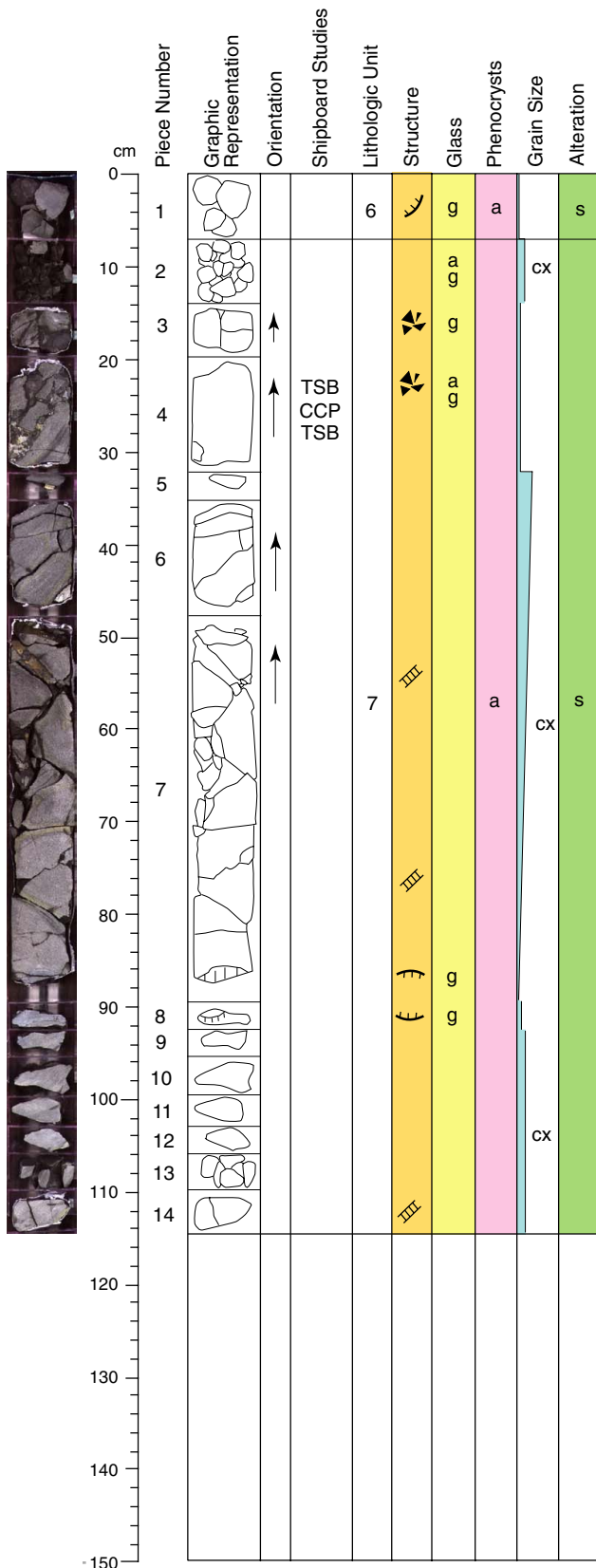
VESICLES: none

ALTERATION: Dark gray slightly altered basalt, with 1.5-10 mm black and mixed black and brown alteration halos along veins.

VEINS: 0.1-1.5 mm veins of saponite and celadonite with local iron oxyhydroxide and rare pyrite and carbonate.

STRUCTURE: Curved veins flanked by alteration halos. Set of radial veins in Pieces 6 and 12.

Core Photo



206-1256D-26R-2 (Section top: 439.78 mbsf)

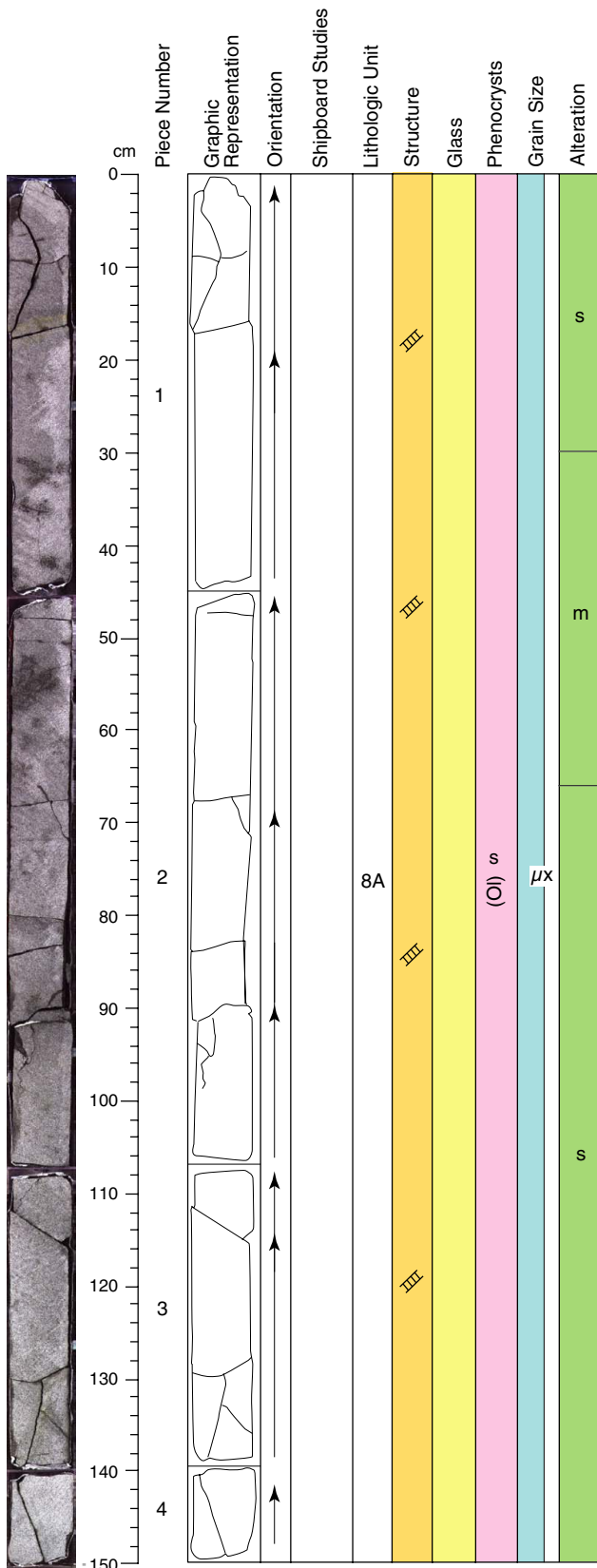
UNIT: 6

ROCK NAME: Aphyric cryptocrystalline basalt
 SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows.
 PIECES: 1 (igneous description based on 26R-1 Piece 5)
 CONTACTS:
 Upper: not recovered
 Lower: not recovered
 COLOR: black (N2.5/)
 PHENOCRYSTS:
 Olivine <<1% 0.1 mm 100% altered to saponite
 GROUNDMASS:
 Grain size: cryptocrystalline
 Texture: intergranular
 VESICLES: none
 ALTERATION: Dark gray slightly altered basalt.
 VEINS: none
 STRUCTURE: none

UNIT: 7

ROCK NAME: Aphyric cryptocrystalline basalt
 SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows.
 PIECES: 2-14 (igneous description based on Piece 4)
 CONTACTS:
 Upper: not recovered
 Lower: not recovered
 COLOR: bluish black (5PB 2.5/1)
 PHENOCRYSTS:
 Plagioclase 0.1% 0.3 mm
 Clinopyroxene tr. 0.2 mm
 GROUNDMASS:
 Grain size: cryptocrystalline
 Texture: variolitic
 VESICLES: none
 ALTERATION: Dark gray slightly altered basalt, with 2-8 mm black and mixed black and brown alteration halos along veins.
 VEINS: 0.1-0.5 mm veins of saponite with local iron oxyhydroxide.
 STRUCTURE: Curved subvertical and radial veins flanked by alteration halos.
 ADDITIONAL COMMENTS: Sparse (~1%) crystal clots of plagioclase plus clinopyroxene. Piece 4 has an unusual texture with brecciated basalt and recrystallized sediment intruded by a finger of basalt. This is described further in the "Structure" and "Alteration" section of the Site 1256 chapter.

Core Photo



206-1256D-26R-3 (Section top: 440.92 mbsf)

UNIT: 8A

ROCK NAME: Sparsely olivine-phyric microcrystalline basalt

SUMMARY DESCRIPTION: Sparsely-phyric microcrystalline massive basalt.

PIECES: 1-4 (igneous description based on Piece 2)

CONTACTS:

Upper: not recovered

Lower: glassy margin

COLOR: black (N2.5/)

PHENOCRYSTS:

Olivine 1% 0.3-0.5 mm 100% altered to saponite

GROUNDMASS:

Grain size: microcrystalline

Texture: intergranular

VESICLES: Rare vesicles filled with saponite

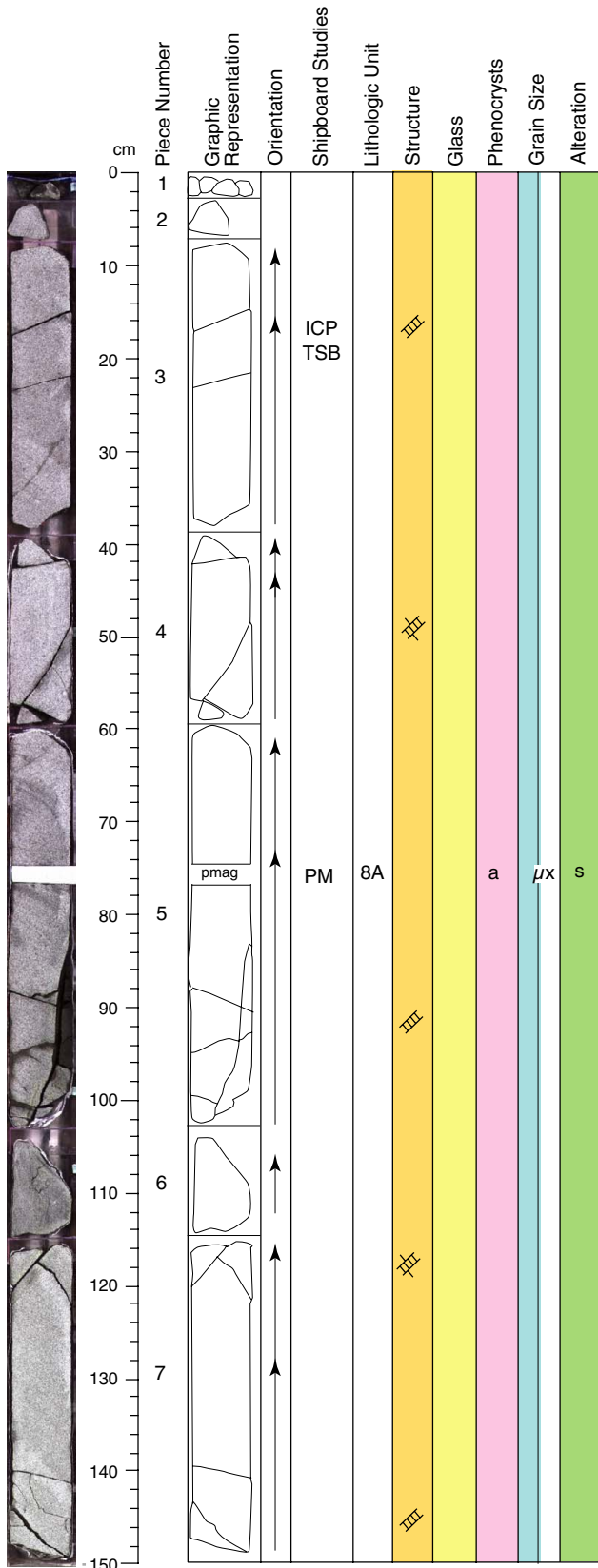
ALTERATION: Dark gray slightly to moderately altered basalt, with 4-14 mm black and mixed black and brown alteration halos along veins.

VEINS: 0.1-0.5 mm veins of saponite with local pyrite and iron oxyhydroxide.

Two saponite and silica veins in Pieces 2 and 3.

STRUCTURE: One sinuous subvertical vein associated with radial veins and one vertical planar Piece 1. Set of parallel subhorizontal veins in Piece 2. Veins with Y-intersections in Piece 3.

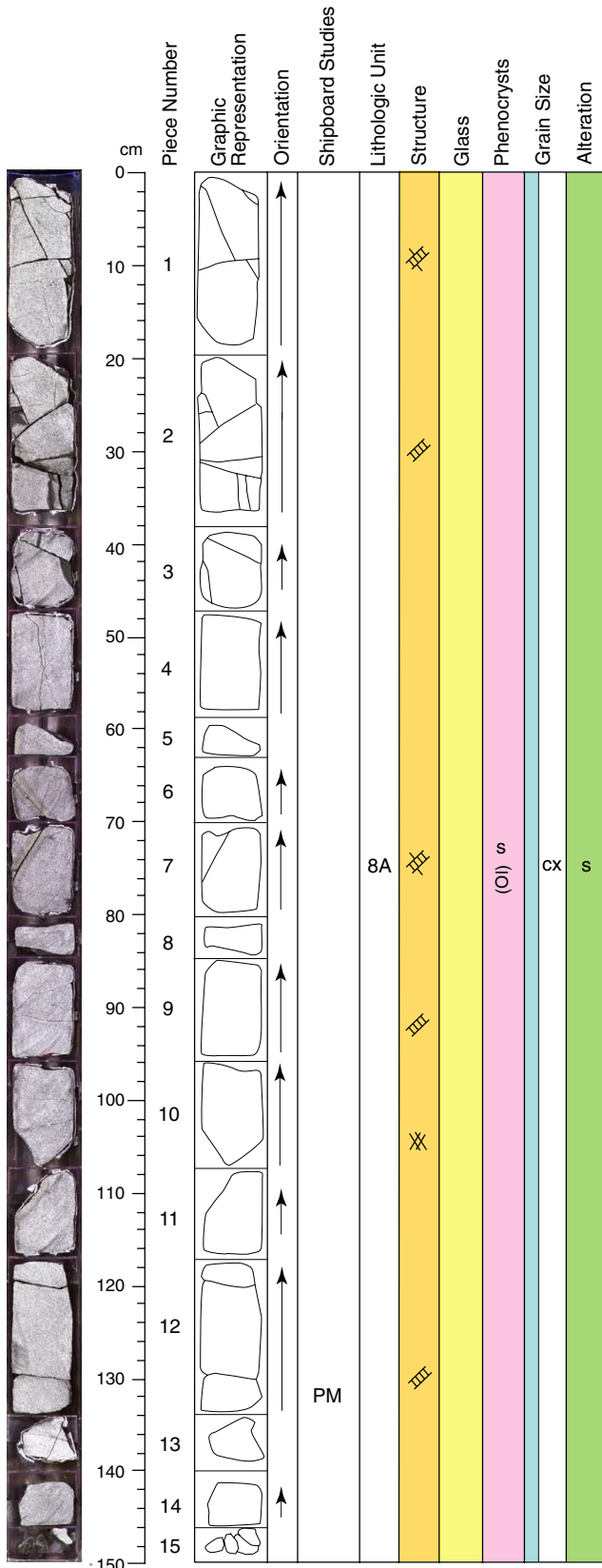
Core Photo



206-1256D-26R-4 (Section top: 442.42 mbsf)

UNIT: 8A
 ROCK NAME: Aphyric microcrystalline basalt
 SUMMARY DESCRIPTION: Aphyric microcrystalline massive basalt.
 PIECES: 1-7 (igneous description based on Piece 3)
 CONTACTS:
 Upper: not recovered
 Lower: glassy margin
 COLOR: black (N2.5/)
 PHENOCRYSTS:
 Olivine <1 % 0.3 mm 100 % altered to saponite
 GROUNDMASS:
 Grain size: microcrystalline
 Texture: intergranular
 VESICLES: Rare vesicles filled with saponite
 ALTERATION: Dark gray slightly altered basalt, with 3-12 mm black and mixed black and brown alteration halos along veins.
 VEINS: 0.1-0.6 mm veins of saponite and celadonite with local pyrite and iron oxyhydroxide.
 STRUCTURE: Conjugate vein sets evenly distributed in the section.

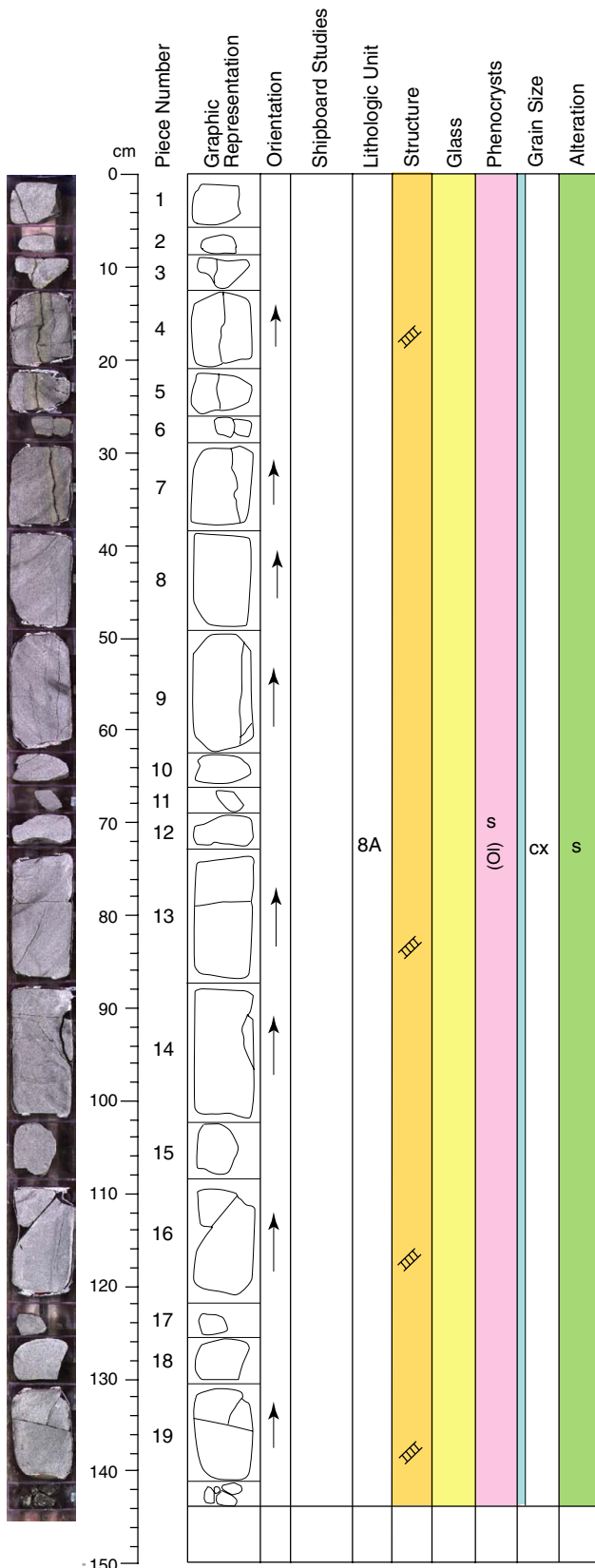
Core Photo



206-1256D-26R-5 (Section top: 443.92 mbsf)

UNIT: 8A
 ROCK NAME: Sparsely olivine-phyric cryptocrystalline basalt
 SUMMARY DESCRIPTION: Sparsely-phyric cryptocrystalline massive basalt.
 PIECES: 1-15 (igneous description based on Piece 10)
 CONTACTS:
 Upper: not recovered
 Lower: glassy margin
 COLOR: very dark grey (N3/)
 PHENOCRYSTS:
 Olivine 1 % 0.1-0.3 mm 100 % altered to saponite
 GROUNDMASS:
 Grain size: cryptocrystalline
 Texture: variolitic
 VESICLES: none
 ALTERATION: Dark gray slightly altered basalt, with 4-11 mm black and mixed black and brown alteration halos along veins.
 VEINS: 0.1-0.5 mm veins of saponite with local pyrite and rare celadonite and carbonate.
 STRUCTURE: Conjugate steeply dipping veins in Pieces 6 and 7. Veins are flanked by alteration halos. Vein network of 0.1 mm horizontal veins at the bottom of Piece 10.

Core Photo



206-1256D-26R-6 (Section top: 445.42 mbsf)

UNIT: 8A

ROCK NAME: Sparsely olivine-phyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Sparsely-phyric cryptocrystalline massive basalt.

PIECES: 1-20 (igneous description based on 26R-5 Piece 10)

CONTACTS:

Upper: not recovered

Lower: glassy margin

COLOR: very dark gray (N3/)

PHENOCRYSTS:

Olivine 1 % 0.1-0.3 mm 100 % altered to saponite

GROUNDMASS:

Grain size: cryptocrystalline

Texture: variolitic

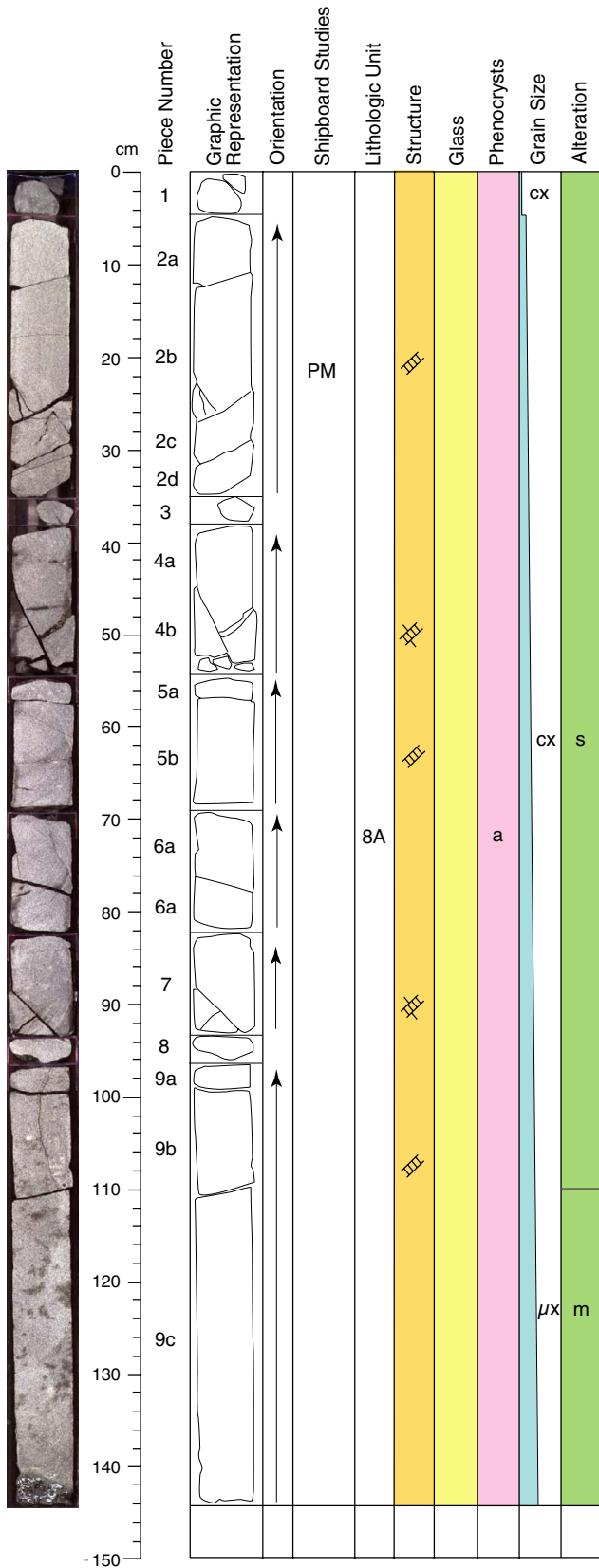
VESICLES: none

ALTERATION: Dark gray slightly altered basalt, with 1.5-15 mm black and mixed black and brown alteration halos along veins.

VEINS: 0.1-1.5 mm veins of saponite with rare celadonite, iron oxyhydroxide and pyrite.

STRUCTURE: Mostly subvertical veins.

Core Photo



206-1256D-27R-1 (Section top: 445.40 mbsf)

UNIT: 8A

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline massive basalt.

PIECES: 1-9 (igneous description based on Piece 7)

CONTACTS:

Upper: not recovered

Lower: glassy margin

COLOR: black (N2.5/)

PHENOCRYSTS:

Olivine <1 % 0.3 mm 100% altered to saponite

GROUNDMASS:

Grain size: cryptocrystalline

Texture: intergranular to variolitic

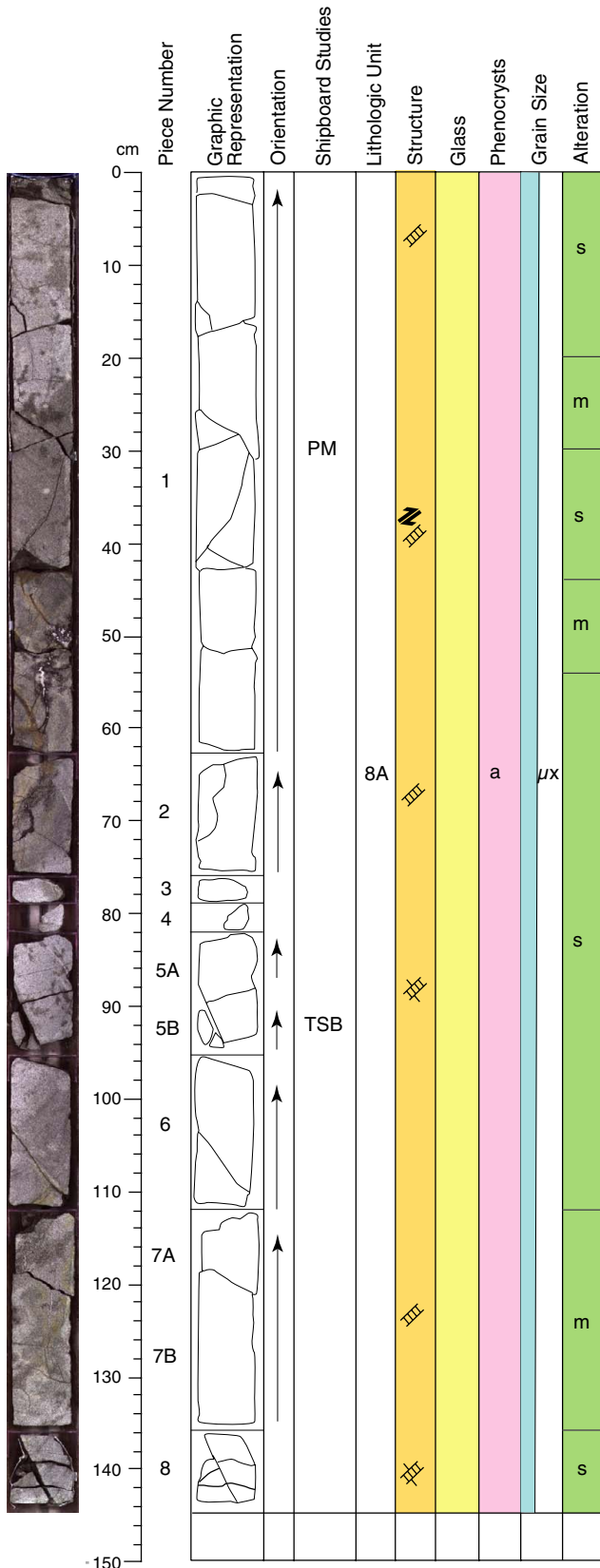
VESICLES: Sparsely vesicular

ALTERATION: Dark gray slightly to moderately altered basalt, with a 5 mm black alteration halo along a vein in Piece 6.

VEINS: 0.1-1.5 mm veins of saponite with local carbonate, iron oxyhydroxide, and pyrite. One silica and minor saponite vein in Piece 9.

STRUCTURE: Sets of parallel gently dipping veins throughout the Section. Conjugate steeply dipping veins in Pieces 4 and 7.

Core Photo



206-1256D-27R-2 (Section top: 446.84 mbsf)

UNIT: 8A

ROCK NAME: Aphyric microcrystalline basalt

SUMMARY DESCRIPTION: Aphyric microcrystalline massive basalt.

PIECES: 1-8 (igneous description based on Piece 1b)

CONTACTS:

Upper: not recovered

Lower: glassy margin

COLOR: black (N2.5/)

PHENOCRYSTS: None apparent

GROUNDMASS:

Grain size: microcrystalline

Texture: variolitic

VESICLES: none

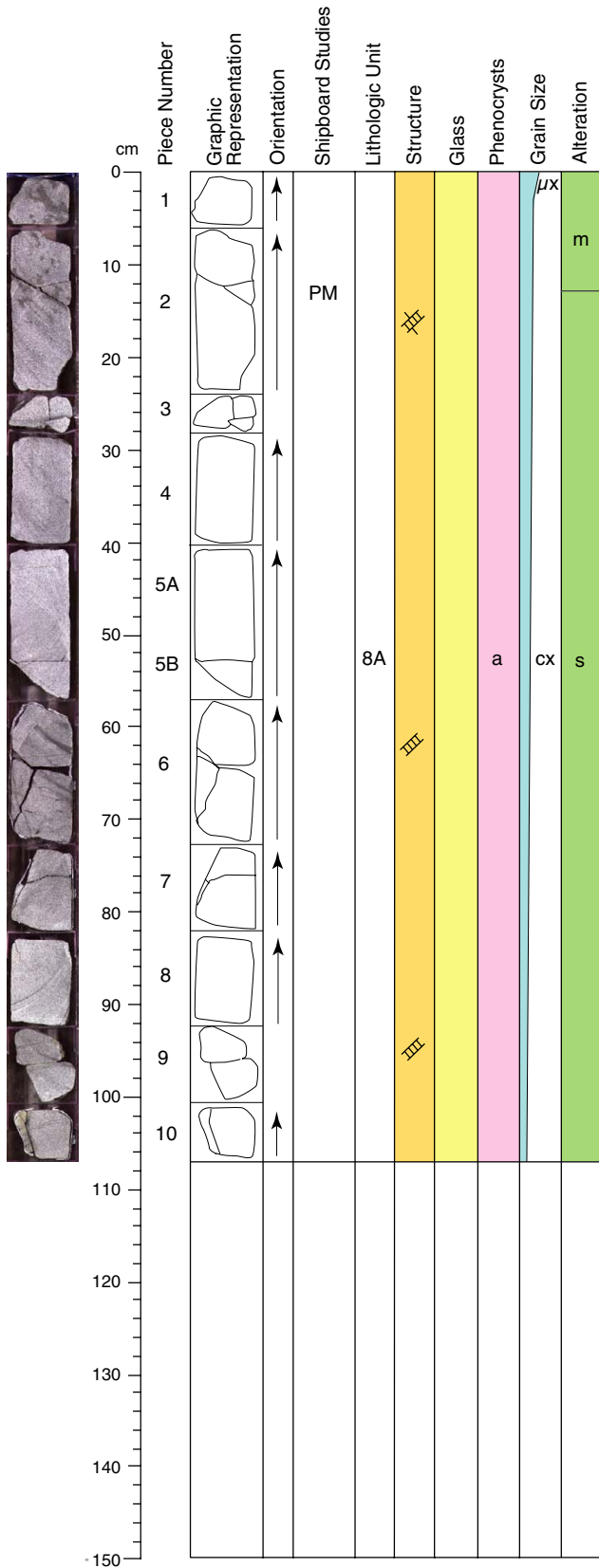
ALTERATION: Dark gray slightly to moderately altered basalt, with 4-15 mm mixed black and brown alteration halos along veins.

VEINS: 0.2-2.0 mm veins of saponite with celadonite, carbonate, iron oxyhydroxide and silica.

STRUCTURE: Set of parallel gently dipping veins in Piece 1. Conjugate systems in Pieces 1, 5, 6, and 8. Veins with Y-shaped intersections in Pieces 1 and 2. Two shear veins with overlapping fibers and reverse sense of shear. Vein network associated with amygdaloid zone in Piece 1.

ADDITIONAL COMMENTS: Pieces 1-7 have dark green patches.

Core Photo



206-1256D-27R-3 (Section top: 448.29 mbsf)

UNIT: 8A

ROCK NAME: Aphyric cryptocrystalline to microcrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline to microcrystalline massive basalt.

PIECES: 1-10 (igneous description based on Piece 4)

CONTACTS:

Upper: not recovered
 Lower: glassy margin

COLOR: black (N2.5/)

PHENOCRYSTS:

Olivine 0.1 % <0.4 mm 100 % altered to saponite

GROUNDMASS:

Grain size: cryptocrystalline to microcrystalline
 Texture: variolitic

VESICLES: none

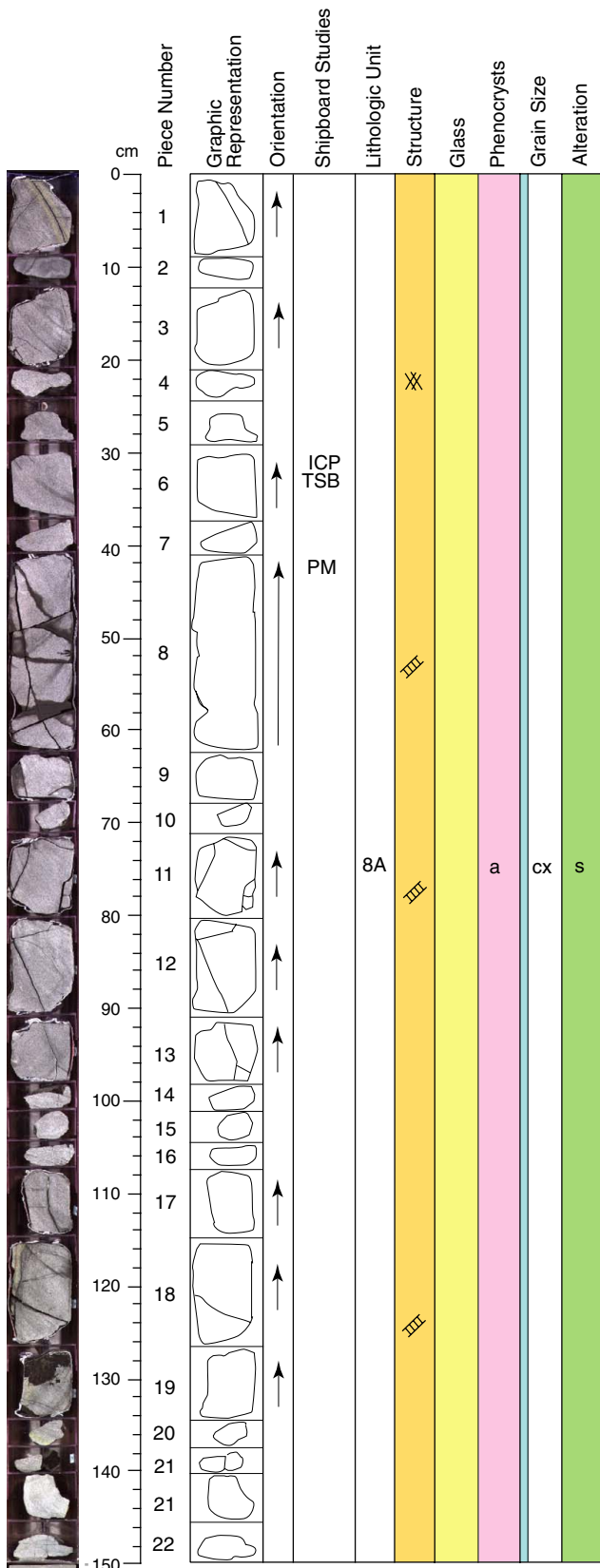
ALTERATION: Dark gray slightly to moderately altered basalt, with 2-10 mm black and mixed black and brown alteration halos along veins.

VEINS: 0.1-1.0 mm veins of saponite with local iron oxyhydroxide and pyrite.

STRUCTURE: Conjugate planar veins in Pieces 2 and 5.

ADDITIONAL COMMENTS: Pieces 1-2 have light greenish gray alteration patches. Pale yellow-green pigeonite (?) present in the groundmass along with dark green augite.

Core Photo



206-1256D-28R-1 (Section top: 450.90 mbsf)

UNIT: 8A

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline massive basalt.

PIECES: 1-23 (igneous description based on 27R-3 Piece 4)

CONTACTS:

Upper: not recovered

Lower: glassy margin

COLOR: black (N2.5/)

PHENOCRYSTS:

Olivine 0.1 % <0.4 mm 100 % altered to saponite

GROUNDMASS:

Grain size: cryptocrystalline

Texture: variolitic

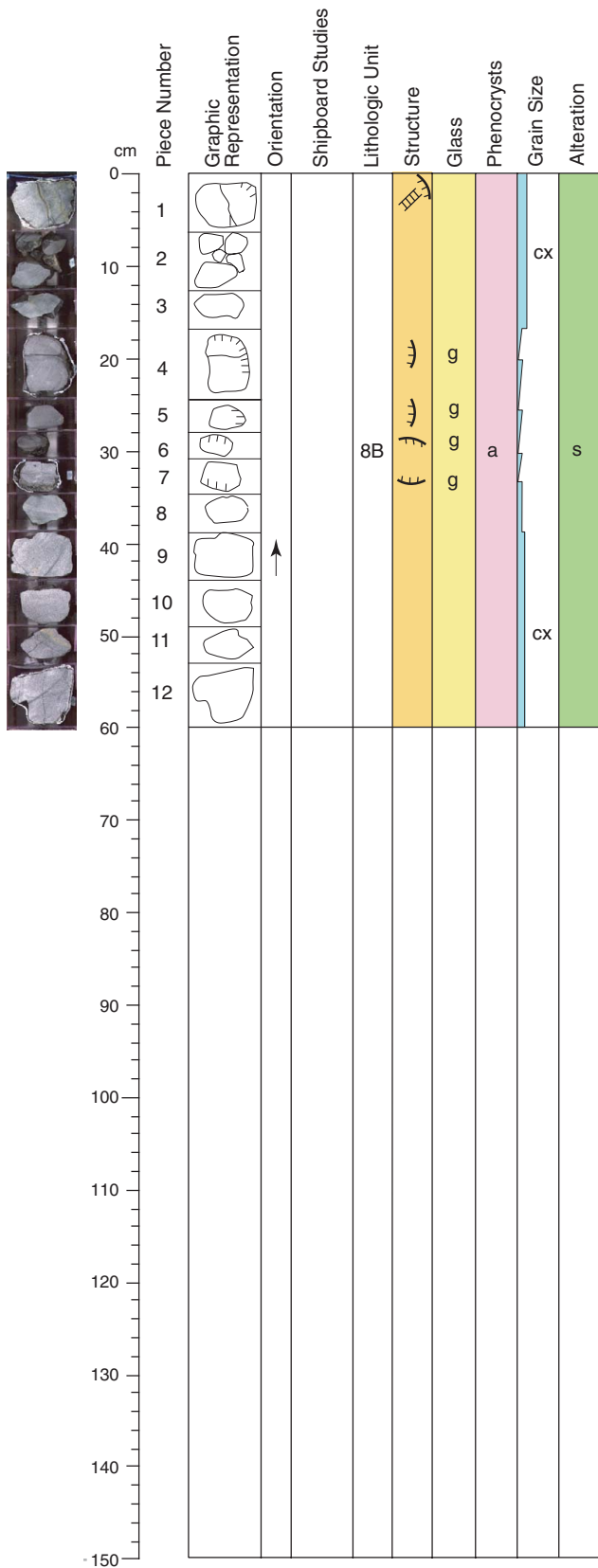
VESICLES: none

ALTERATION: Dark gray slightly altered basalt, with 1-12 mm black and rare mixed black and brown alteration halos along veins.

VEINS: 0.1-2.0 mm veins of saponite with local celadonite, iron oxyhydroxide and pyrite and rare carbonate and silica.

STRUCTURE: Steeply dipping veins throughout the Section; steeply dipping curved veins crosscut by parallel moderately dipping veins in Piece 8.

Core Photo



206-1256D-28R-2 (Section top: 452.40 mbsf)

UNIT: 8B

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows with glassy margins.

PIECES: 1-12 (igneous description based on Piece 4)

CONTACTS:

Upper: glassy margin
 Lower: not recovered

COLOR: black (N2.5/)

PHENOCRYSTS:

Plagioclase <<1 % <0.1 mm
 Clinopyroxene <<1 % <0.1 mm

GROUNDMASS:

Grain size: cryptocrystalline
 Texture: variolitic

VESICLES: none

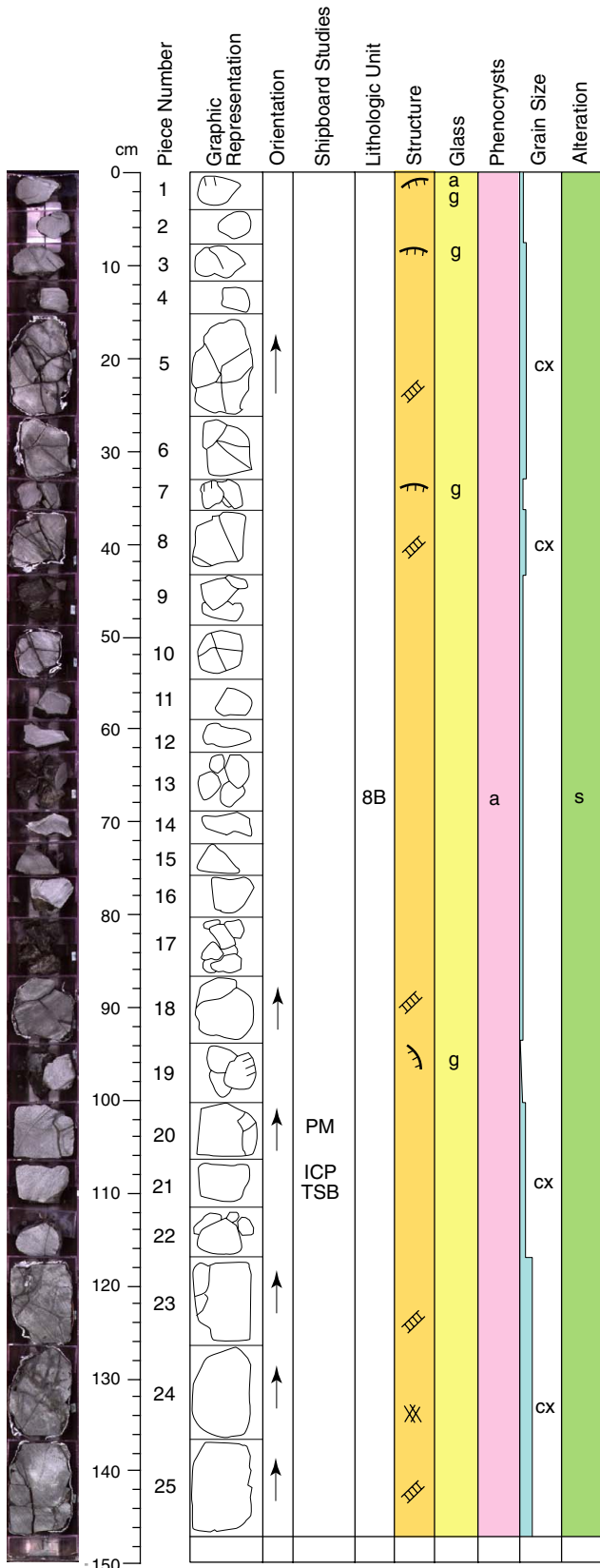
ALTERATION: Dark gray slightly altered basalt, with 2-14 mm black and mixed black and brown alteration halos along veins.

VEINS: 0.1-1.5 mm veins of saponite with local celadonite, iron oxyhydroxide and minor pyrite.

STRUCTURE: none

ADDITIONAL COMMENTS: Rare tiny clots of plagioclase plus clinopyroxene in Piece 4.

Core Photo



206-1256D-29R-1 (Section top: 456.60 mbsf)

UNIT: 8B

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows with glassy margins.

PIECES: 1-25 (igneous description based on Piece 4)

CONTACTS:

Upper: glassy margin
 Lower: not recovered

COLOR: black (N2.5/)

PHENOCRYSTS:

Plagioclase <<1% <0.1 mm
 Clinopyroxene <<1% <0.1 mm

GROUNDMASS:

Grain size: cryptocrystalline
 Texture: variolitic

VESICLES: none

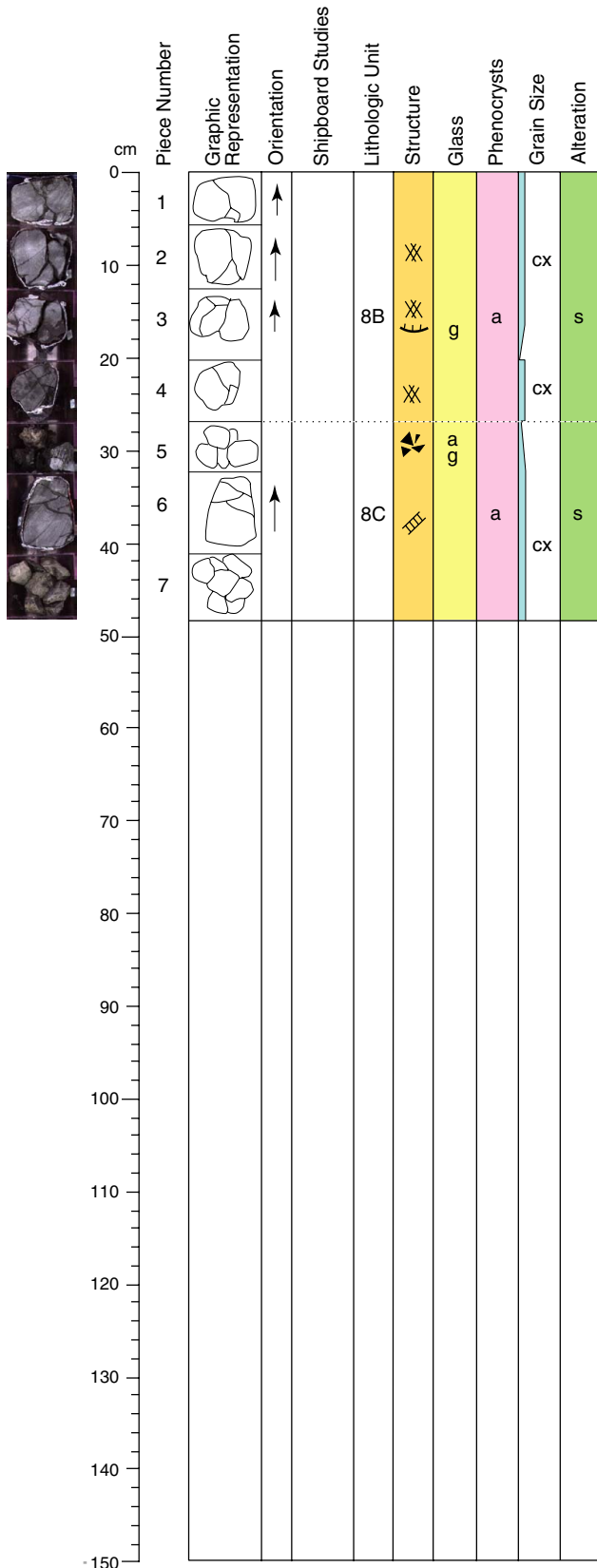
ALTERATION: Dark gray slightly altered basalt, with 0.5-12 mm black and mixed black and brown alteration halos along veins.

VEINS: 0.1-0.8 mm veins of saponite with iron oxyhydroxide and minor silica.

STRUCTURE: Subvertical curved veins and radial veins in Pieces 5 and 8. Y-shaped intersections in Pieces 10, 18, and 20. Incipient brecciation associated with vein networks in Pieces 23 and 24.

ADDITIONAL COMMENTS: Rare tiny clots of plagioclase plus clinopyroxene in Piece 3.

Core Photo



206-1256D-29R-2 (Section top: 458.07 mbsf)

UNIT: 8B

ROCK NAME: Aphyric cryptocrystalline basalt
SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows with glassy margins.

PIECES: 1-4 (igneous description based on 29R-1 Piece 3)

CONTACTS:

Upper: glassy margin
Lower: not recovered

COLOR: black (N2.5/)

PHENOCRYSTS:

Plagioclase <<1 % <0.1 mm
Clinopyroxene <<1 % <0.1 mm

GROUNDMASS:

Grain size: cryptocrystalline
Texture: variolitic

VESICLES: none

ALTERATION: Dark gray slightly altered basalt.

VEINS: 0.1-0.8 mm veins of saponite with minor iron oxyhydroxide.

STRUCTURE: Incipient brecciation in Piece 1. Vein networks with Y-shaped intersection in Pieces 2, 3, and 4.

UNIT: 8C

ROCK NAME: Aphyric cryptocrystalline basalt
SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows and hyaloclastite.

PIECES: 5-7 (igneous description based on 30R-1 Piece 3)

CONTACTS:

Upper: not recovered
Lower: not recovered

COLOR: black (N2.5/)

PHENOCRYSTS: none apparent

GROUNDMASS:

Grain size: cryptocrystalline to holohyaline
Texture: intergranular to glassy

VESICLES: none

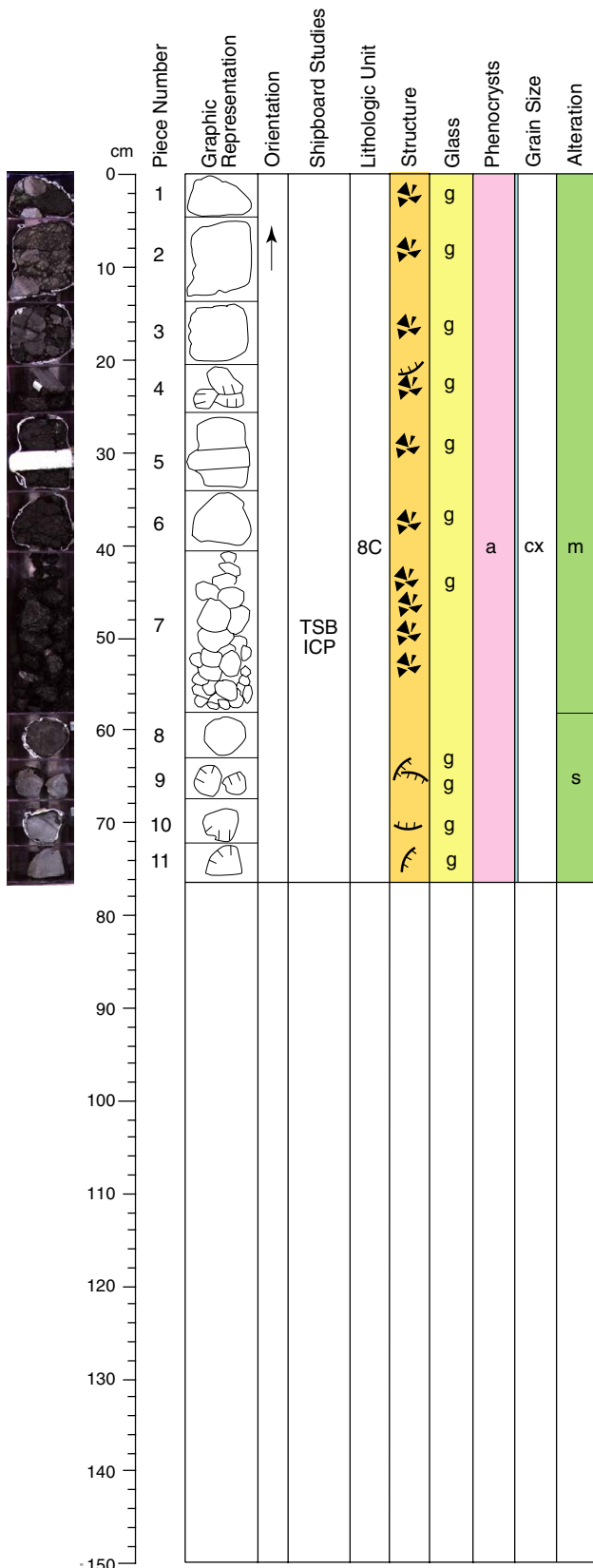
ALTERATION: Dark gray slightly altered basalt, with 5-10 mm black alteration halos along veins.

VEINS: 0.1-0.3 mm veins of saponite with minor iron oxyhydroxide.

STRUCTURE: Veins with Y-shaped intersection in Piece 6.

ADDITIONAL COMMENTS: Piece 5 consists of fragments of hyaloclastite breccia.

Core Photo



206-1256D-30R-1 (Section top: 461.40 mbsf)

UNIT: 8C

ROCK NAME: Aphyric cryptocrystalline to holohyaline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows and hyaloclastite.

PIECES: 1-11 (igneous description based on Piece 3)

CONTACTS:

Upper: not recovered

Lower: not recovered

COLOR: black (N2.5/)

PHENOCRYSTS: none apparent

GROUNDMASS:

Grain size: cryptocrystalline to holohyaline

Texture: intergranular to glassy

VESICLES: none

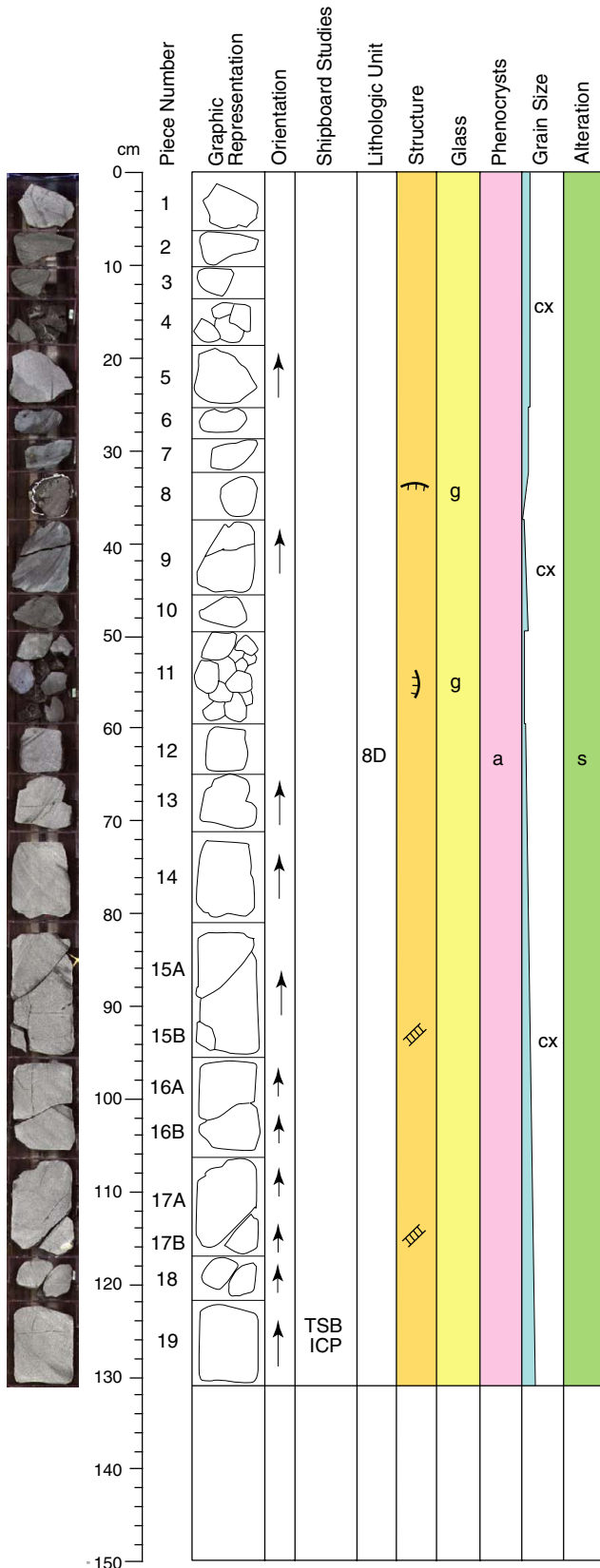
ALTERATION: Dark gray slightly altered basalt and moderately altered hyaloclastite breccia.

VEINS: 0.1-0.2 mm veins of saponite with minor iron oxyhydroxide.

STRUCTURE: None.

ADDITIONAL COMMENTS: Pieces 1-7 are hyaloclastite breccia consisting of black fresh to slightly altered glassy clasts and angular cryptocrystalline lava clasts with glassy chilled margins. Some lava clasts are fractured in situ and fragments are not displaced. Finer clasts (<1 cm diameter) are made up entirely of glass. Pieces 8 and 9 are cryptocrystalline basalt with glassy margins and could be large clasts of lava within the same hyaloclastite.

Core Photo



206-1256D-31R-1 (Section top: 466.00 mbsf)

UNIT: 8C

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows with glassy margins.

PIECES: 1-19 (igneous description based on Piece 14)

CONTACTS:

Upper: not recovered

Lower: chilled margin in 35R-2 Piece 9

COLOR: black (N2.5/)

PHENOCRYSTS:

Olivine <1% 0.1-0.2 mm 100% altered to saponite

GROUNDMASS:

Grain size: cryptocrystalline

Texture: intergranular to variolitic

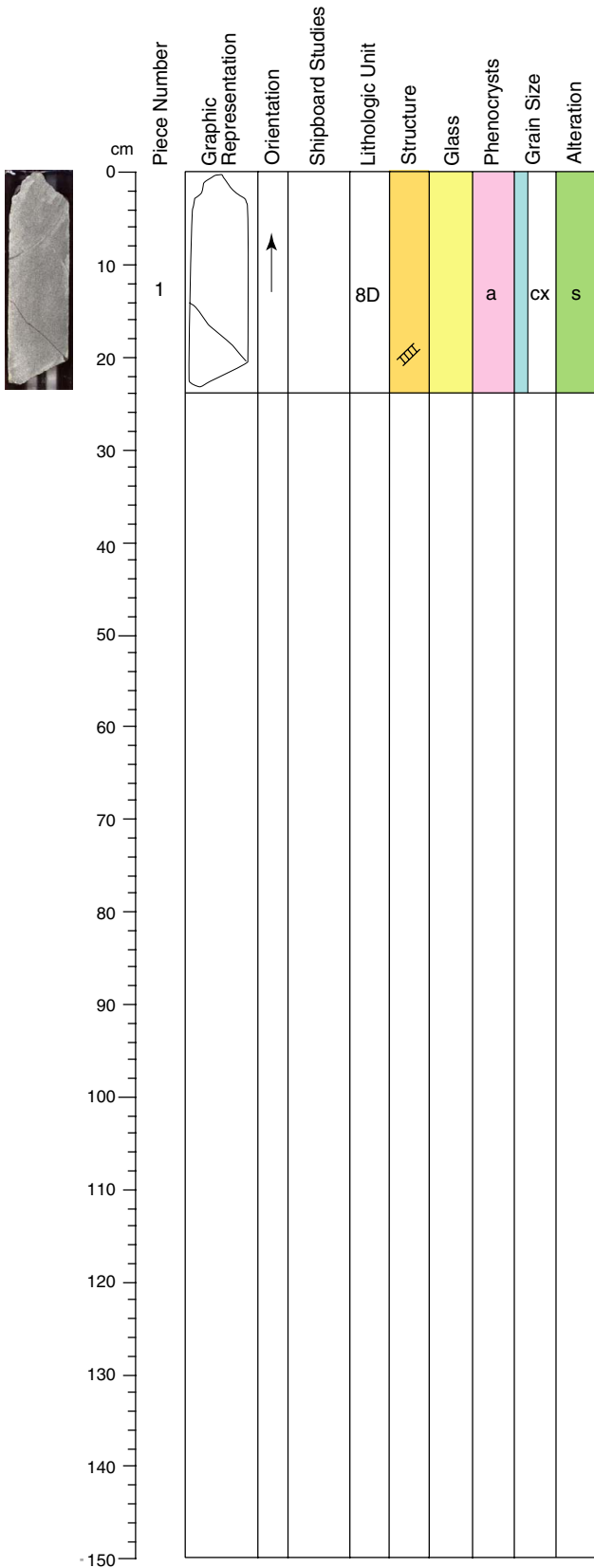
VESICLES: Sparsely vesicular

ALTERATION: Dark gray slightly altered basalt, with 2-16 mm black and mixed black and brown alteration halos along veins.

VEINS: 0.1-0.3 mm veins of saponite with celadonite, iron oxyhydroxide and pyrite.

STRUCTURE: Curved and radial veins in Pieces 15 and 16.

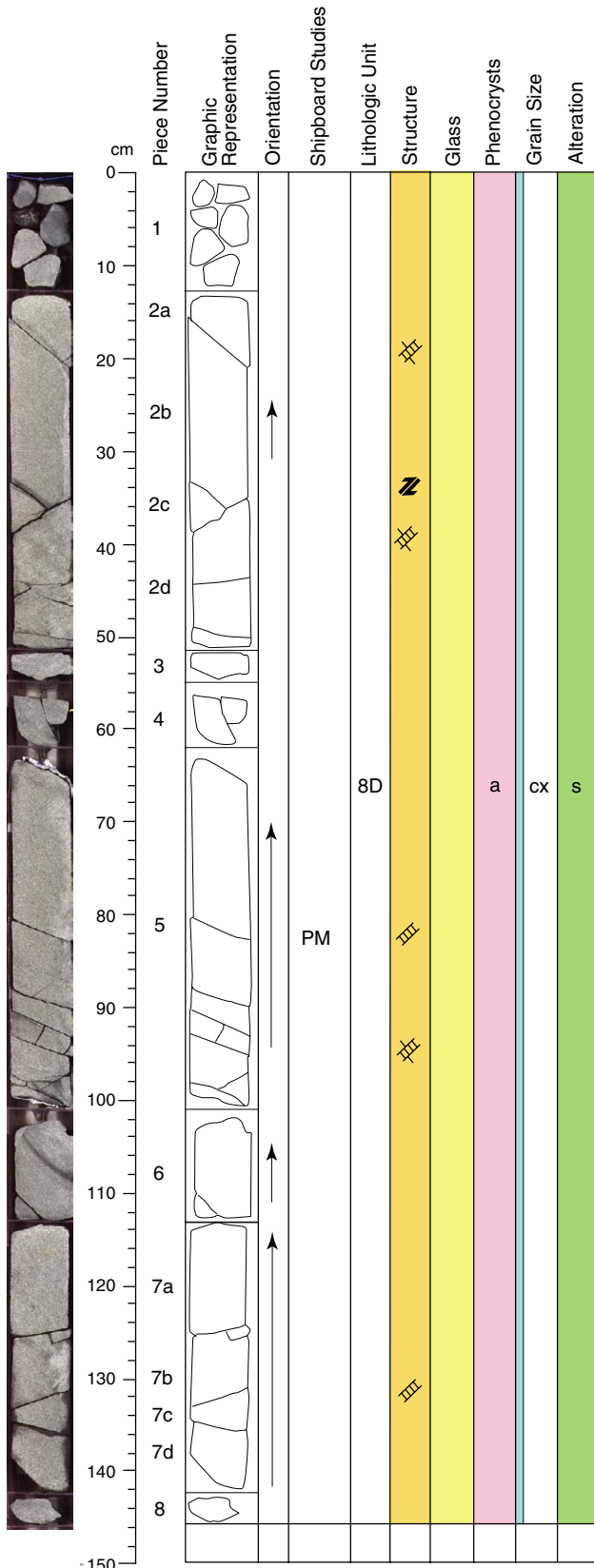
Core Photo



206-1256D-31R-2 (Section top: 467.31 mbsf)

UNIT: 8C
ROCK NAME: Aphyric cryptocrystalline basalt
SUMMARY DESCRIPTION: Massive aphyric cryptocrystalline basalt flow.
PIECES: 1-19 (igneous description based on 31R-1 Piece 14)
CONTACTS:
 Upper: not recovered
 Lower: chilled margin in 35R-2 Piece 9
COLOR: black (N2.5/)
PHENOCRYSTS:
 Olivine <1% 0.1-0.2 mm 100% altered to saponite
GROUNDMASS:
 Grain size: cryptocrystalline
 Texture: intergranular to variolitic
VESICLES: Sparsely vesicular
ALTERATION: Dark gray slightly altered basalt.
VEINS: 0.1-0.2 mm veins of saponite.
STRUCTURE: One planar vein.

Core Photo



206-1256D-32R-1 (Section top: 475.20 mbsf)

UNIT: 8D

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Massive aphyric cryptocrystalline basalt.

PIECES: 1-8 (igneous description based on Piece 5)

CONTACTS:

Upper: not recovered

Lower: chilled margin in 35R-2 Piece 9

COLOR: black (N2.5/)

PHENOCRYSTS:

Olivine 0.8 % 0.3 mm 100% altered to saponite

GROUNDMASS:

Grain size: cryptocrystalline

Texture: intergranular to variolitic

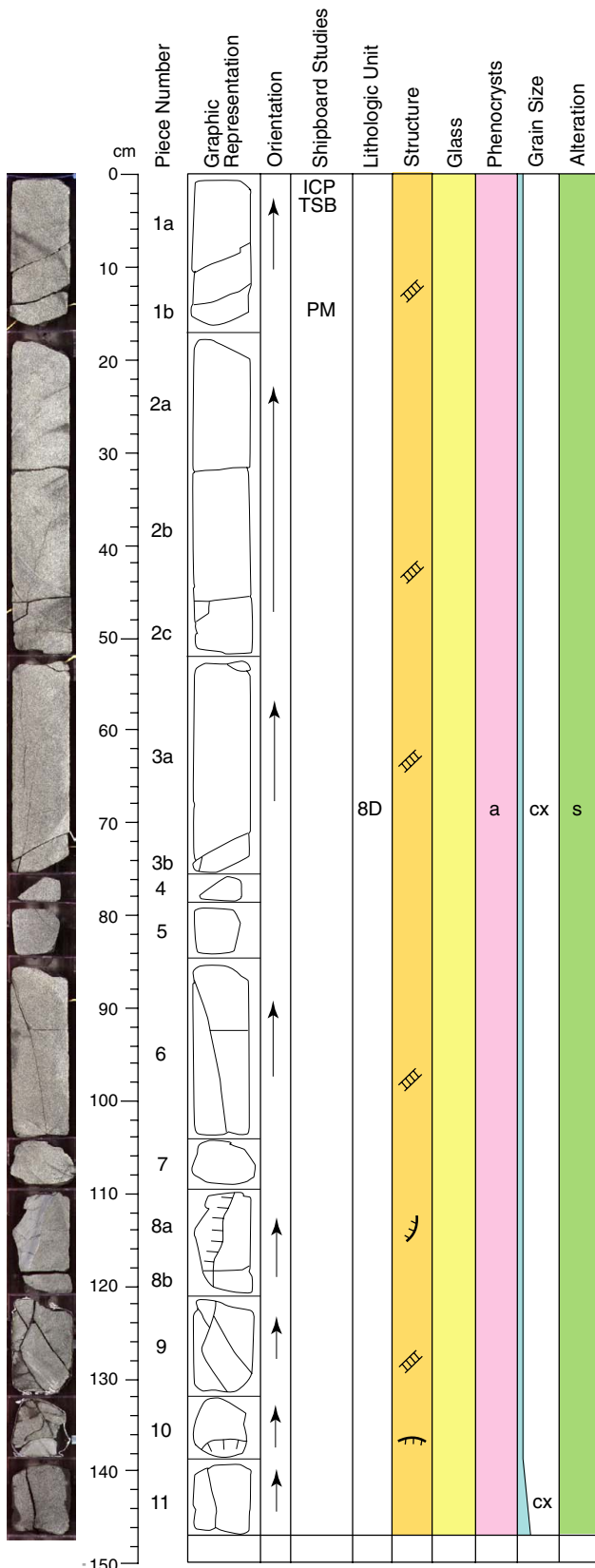
VESICLES: none

ALTERATION: Dark gray slightly altered basalt, with a 3 mm black alteration halos along a vein in Piece 2.

VEINS: 0.1-0.5 mm veins of saponite with carbonate and minor pyrite.

STRUCTURE: Conjugate planar veins in Pieces 2, 5, 6, and 7. Set of parallel veins with gentle dip in Piece 5. Shear vein with overlapping saponite fibers and reverse sense of shear in Piece 2.

Core Photo



206-1256D-32R-2 (Section top: 476.65 mbsf)

UNIT: 8D

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Massive aphyric cryptocrystalline basalt with small dike.

PIECES: 1-11 (igneous description based on Piece 11)

CONTACTS:

Upper: not recovered

Lower: chilled margin in 35R-2 Piece 9

COLOR: black (N2.5/)

PHENOCRYSTS:

Olivine 0.4 % 0.3 mm 100% altered to saponite

GROUNDMASS:

Grain size: cryptocrystalline

Texture: variolitic to intergranular

VESICLES: none

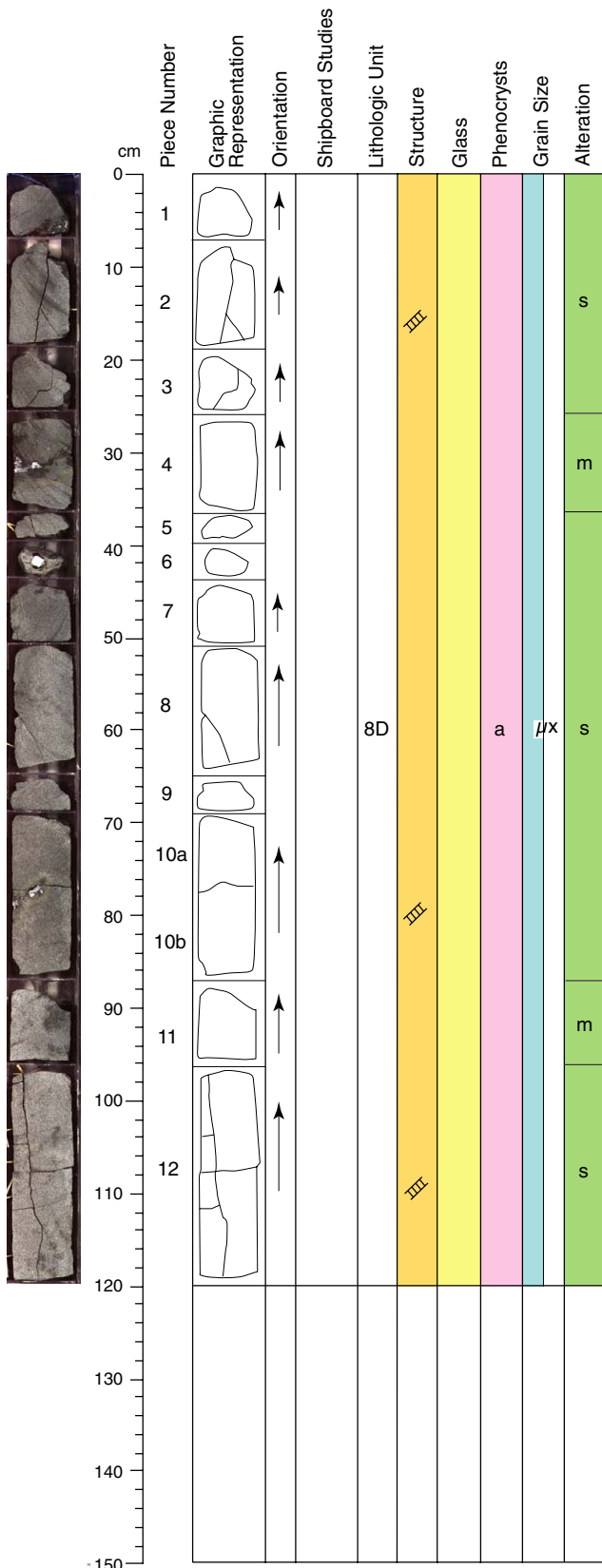
ALTERATION: Dark gray slightly altered basalt, with 3-12 mm black alteration halos along veins.

VEINS: 0.1-0.5 mm veins of saponite with carbonate and minor pyrite.

STRUCTURE: Subvertical veins in Pieces 2, 3, 6, and 9. Subhorizontal veins in Pieces 1, 2, 3, and 6. Subvertical (78/270) igneous contact in Piece 8.

ADDITIONAL COMMENTS: Pieces 8 and 10 contain small dikes of cryptocrystalline aphyric basalt with chilled margins in contact with the cryptocrystalline host rock.

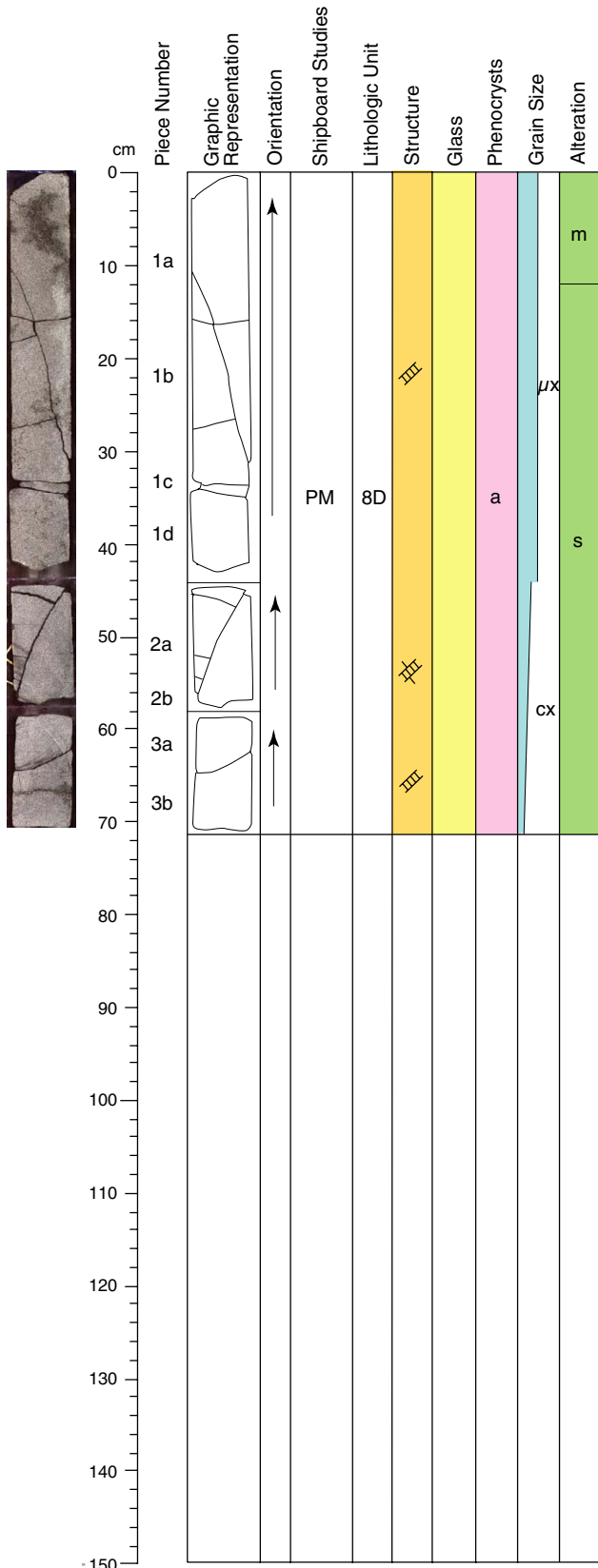
Core Photo



206-1256D-32R-3 (Section top: 478.12 mbsf)

UNIT: 8D
 ROCK NAME: Aphyric microcrystalline basalt
 SUMMARY DESCRIPTION: Massive aphyric microcrystalline basalt.
 PIECES: 1-12 (igneous description based on Piece 1)
 CONTACTS:
 Upper: not recovered
 Lower: chilled margin in Piece 9 35R-2
 COLOR: black (N2.5/)
 PHENOCRYSTS:
 Olivine 0.6 % 0.3 mm 100% altered to saponite
 GROUNDMASS:
 Grain size: microcrystalline
 Texture: variolitic to intergranular
 VESICLES: none
 ALTERATION: Dark gray slightly to moderately altered basalt, with one 5 mm and one 12 mm mixed black and brown alteration halo along veins.
 VEINS: 0.1-0.8 mm veins of saponite with iron oxyhydroxide and minor silica.
 STRUCTURE: Subvertical veins in Pieces 2, 3, 7, 8, 10, 11, and 12. Veins with Y-intersections in Piece 1.

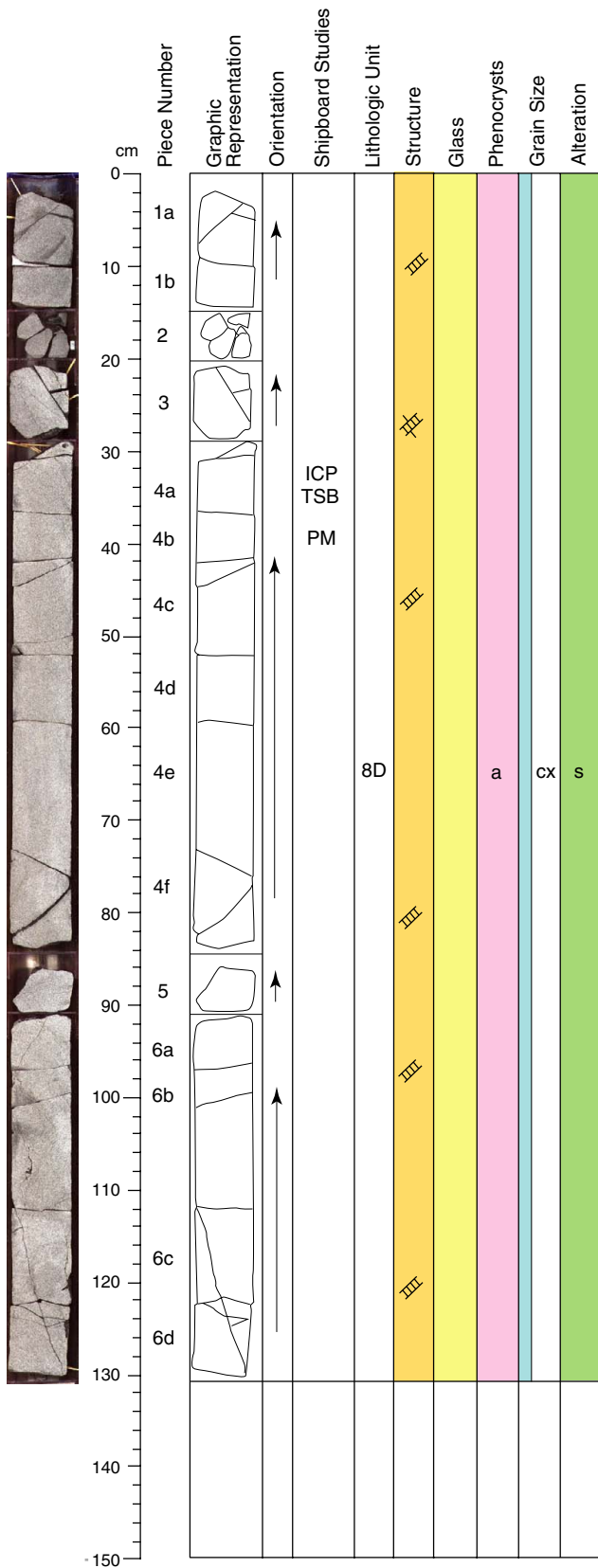
Core Photo



206-1256D-32R-4 (Section top: 479.32 mbsf)

UNIT: 8D
ROCK NAME: Aphyric microcrystalline basalt
SUMMARY DESCRIPTION: Massive aphyric microcrystalline to cryptocrystalline basalt.
PIECES: 1-3 (igneous description based on Piece 1a)
CONTACTS:
 Upper: not recovered
 Lower: chilled margin in 35R-2 Piece 9
COLOR: black (N2.5/)
PHENOCRYSTS:
 Olivine 0.6 % 0.3 mm 100% altered to saponite
GROUNDMASS:
 Grain size: microcrystalline to cryptocrystalline
 Texture: variolitic to intergranular
VESICLES: none
ALTERATION: Dark gray slightly to moderately altered basalt.
VEINS: 0.1-0.5 mm veins of saponite with carbonate.
STRUCTURE: Subvertical curved veins and gently dipping planar veins throughout the section.

Core Photo



206-1256D-33R-1 (Section top: 481.00 mbsf)

UNIT: 8D

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Massive aphyric cryptocrystalline basalt.

PIECES: 1-6 (igneous description based on Piece 1b)

CONTACTS:

Upper: not recovered

Lower: chilled margin in 35R-2 Piece 9

COLOR: black (N2.5/)

PHENOCRYSTS:

Olivine <1.0 % 0.2 mm 100% altered to saponite

GROUNDMASS:

Grain size: cryptocrystalline

Texture: variolitic to intergranular

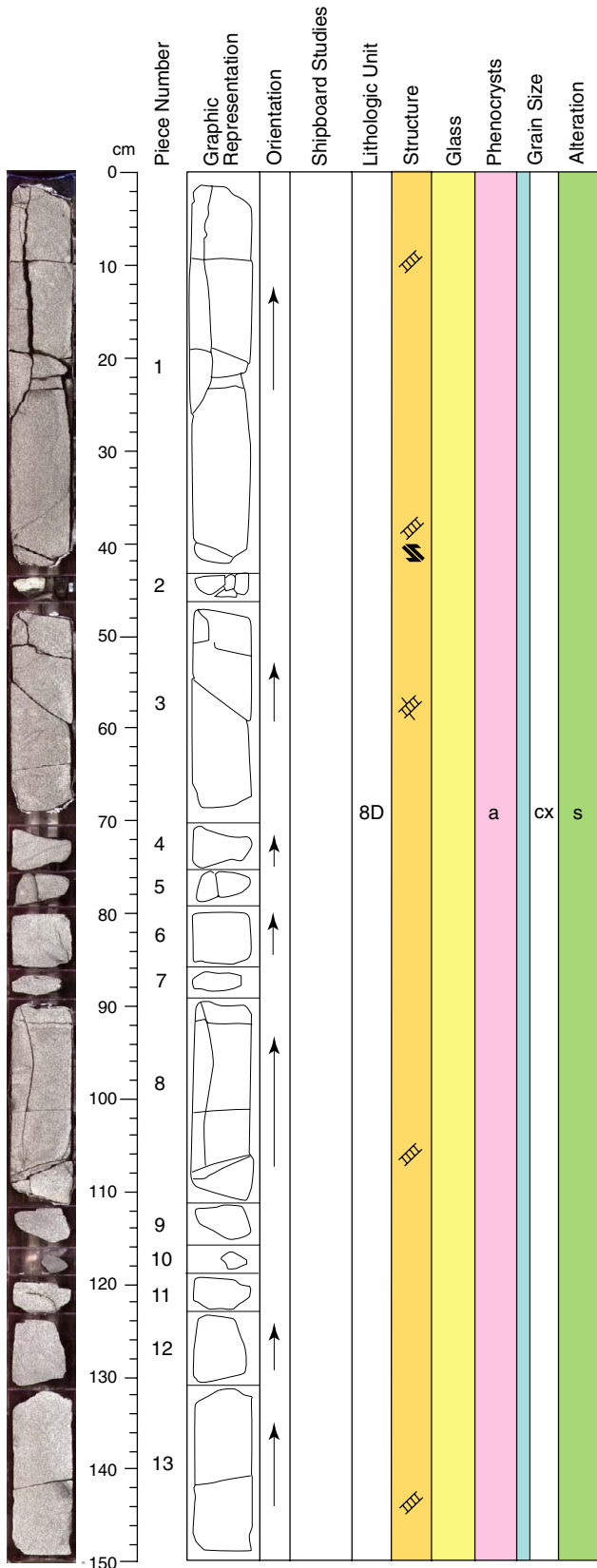
VESICLES: none

ALTERATION: Dark gray slightly altered basalt.

VEINS: 0.1-0.8 mm veins of saponite with rare carbonate and pyrite.

STRUCTURE: Subhorizontal parallel veins. Conjugate vein system in Piece 3

Core Photo



206-1256D-33R-2 (Section top: 482.30 mbsf)

UNIT: 8D

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Massive aphyric cryptocrystalline basalt.

PIECES: 1-13 (igneous description based on Piece 1)

CONTACTS:

Upper: not recovered

Lower: chilled margin in 35R-2 Piece 9

COLOR: very dark grey (N 3/)

PHENOCRYSTS:

Olivine 0.8 % 0.2 mm 100% altered to saponite

GROUNDMASS:

Grain size: cryptocrystalline

Texture: variolitic to intergranular

VESICLES: none

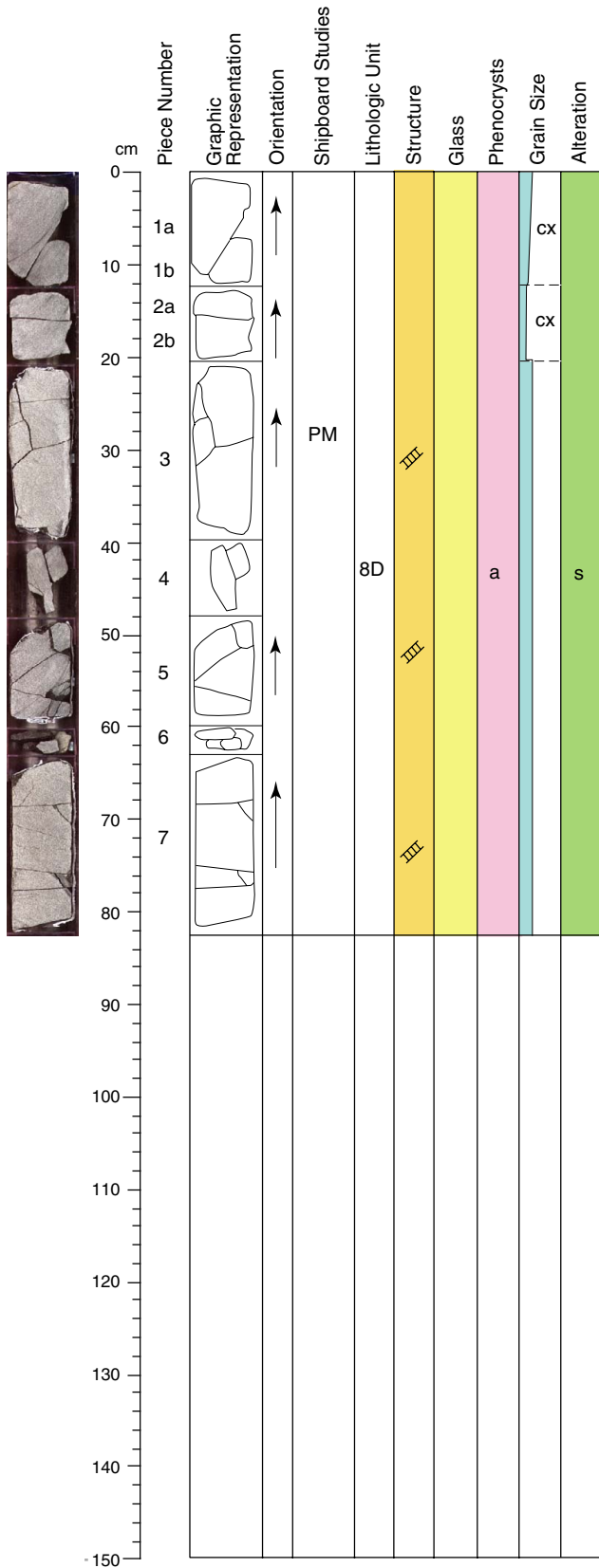
ALTERATION: Dark gray slightly altered basalt.

VEINS: 0.1-1.0 mm veins of saponite and pyrite.

STRUCTURE: Subvertical curved and sinuous veins in Pieces 1 and 8.

Conjugate veins in Pieces 1 and 3. Apparent vein offset (3.6 mm) in Piece 13.

Core Photo



206-1256D-33-3 (Section top: 483.80 mbsf)

UNIT: 8D

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Massive aphyric cryptocrystalline basalt flow.

PIECES: 1-7 (igneous description based on 33R-1 Piece 1)

CONTACTS:

Upper: not recovered

Lower: not recovered

COLOR: very dark grey (N 3/)

PHENOCRYSTS:

Olivine 0.8 % 0.2 mm 100% altered to saponite

GROUNDMASS:

Grain size: cryptocrystalline

Texture: variolitic to intergranular

VESICLES: none

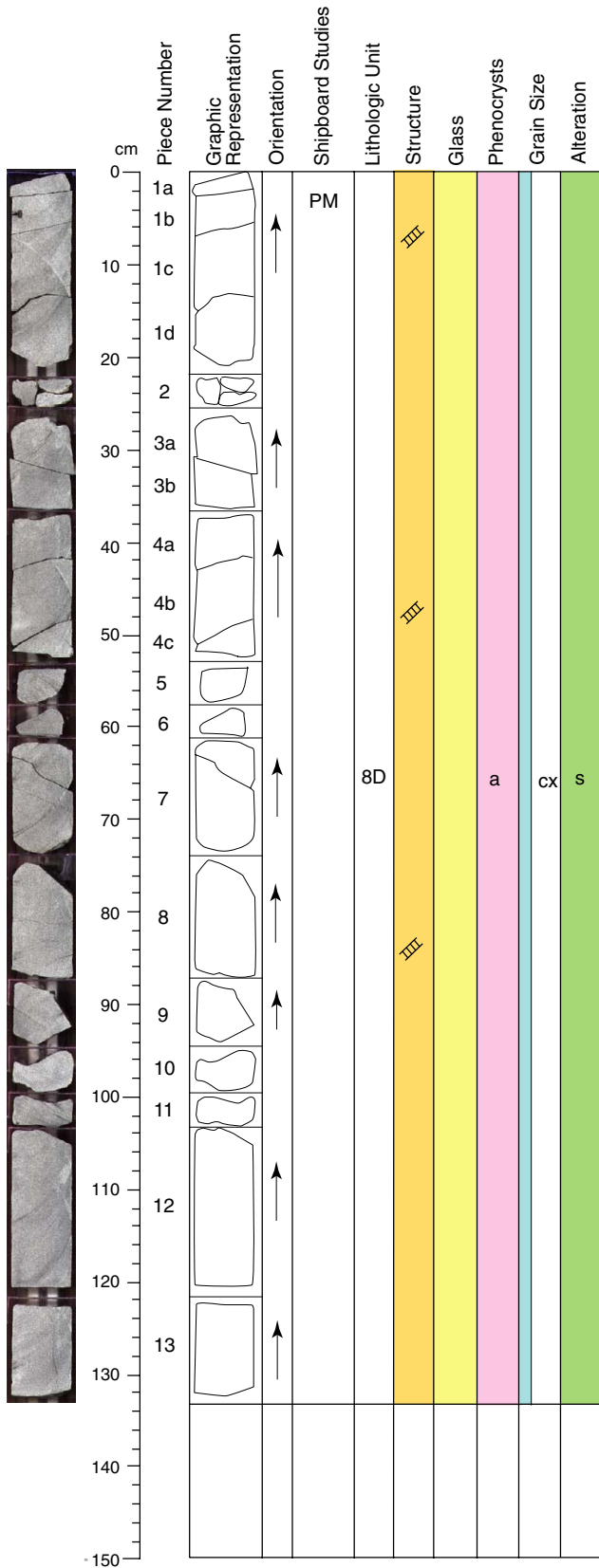
ALTERATION: Dark gray slightly altered basalt with one 6 mm black alteration halo along a vein in Piece 1.

VEINS: 0.1-0.5 mm veins of saponite with pyrite and rare carbonate.

STRUCTURE: Curved radial and concentric veins in Piece 3. Conjugate veins in Piece 5. Set of subparallel veins with gentle dip in Piece 7.

ADDITIONAL COMMENTS:

Core Photo



206-1256D-34R-1 (Section top: 484.40 mbsf)

UNIT: 8D

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Massive aphyric cryptocrystalline basalt.

PIECES: 1-13 (igneous description based on Piece 1d)

CONTACTS:

Upper: not recovered

Lower: chilled margin in 35R-2 Piece 9

COLOR: black (N 2.5/)

PHENOCRYSTS:

Olivine 0.8 % <0.3 mm 100% altered to saponite

GROUNDMASS:

Grain size: cryptocrystalline

Texture: intergranular to variolitic

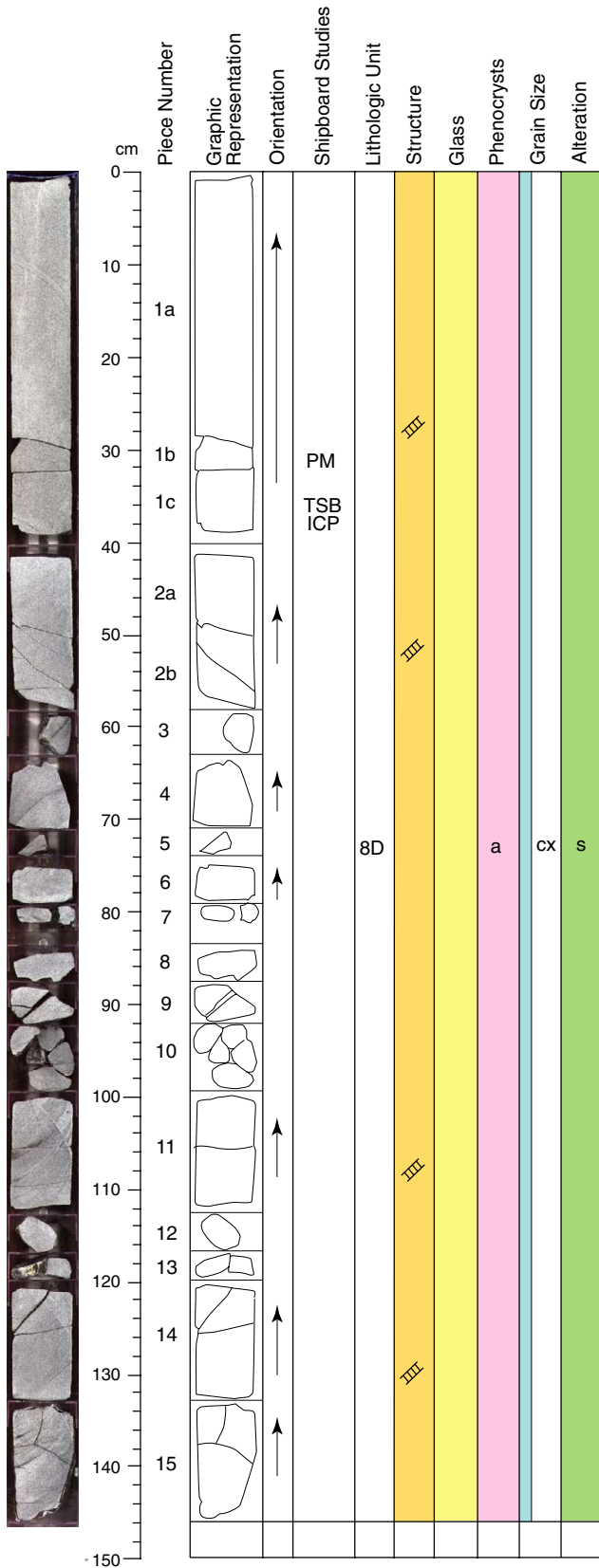
VESICLES: none

ALTERATION: Dark gray slightly altered basalt with rare 3-4 mm black alteration halos in Piece 5.

VEINS: 0.1-0.3 mm veins of saponite with pyrite and rare carbonate.

STRUCTURE: Mostly gently dipping veins throughout the Section.

Core Photo



206-1256D-34R-2 (Section top: 485.73 mbsf)

UNIT: 8D

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Massive aphyric cryptocrystalline basalt.

PIECES: 1-15 (igneous description based on Piece 1)

CONTACTS:

Upper: not recovered

Lower: chilled margin in 35R-2 Piece 9

COLOR: black (N 2.5/)

PHENOCRYSTS:

Olivine 0.4 % 0.2 mm 100% altered to saponite

GROUNDMASS:

Grain size: cryptocrystalline

Texture: intergranular

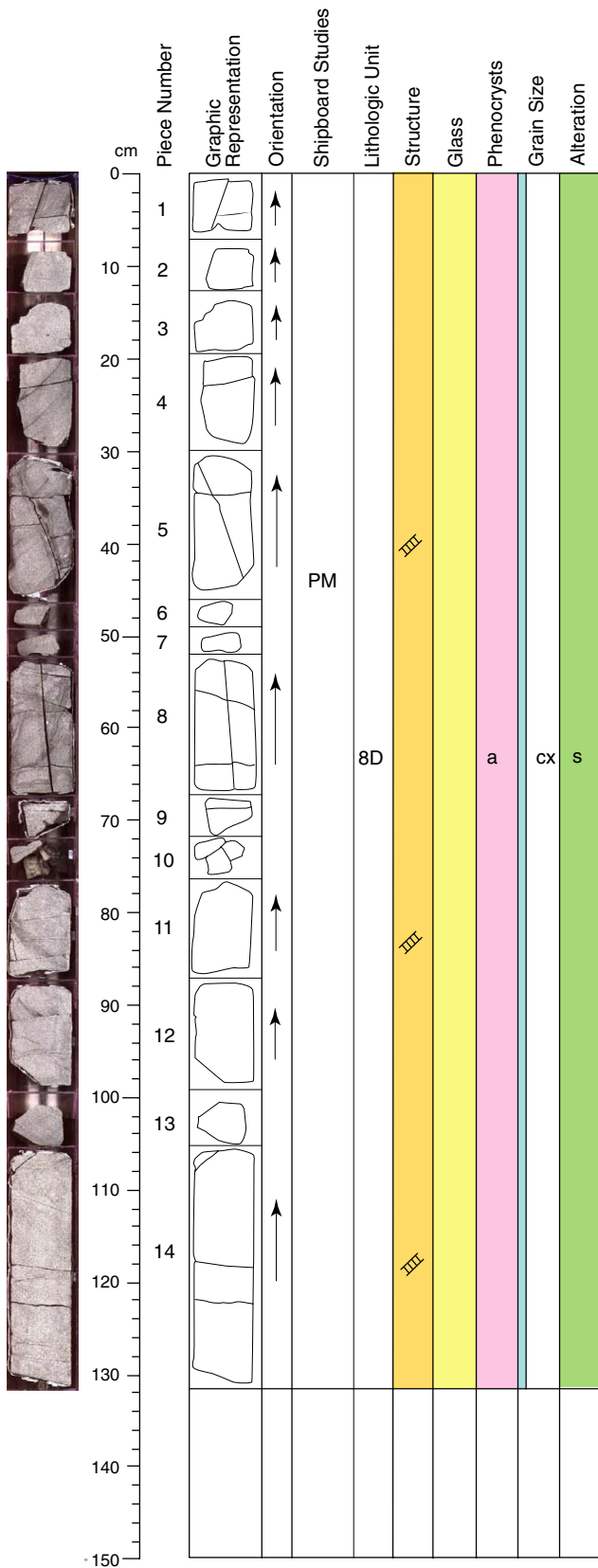
VESICLES: none

ALTERATION: Dark gray slightly altered basalt with one 4 mm black alteration halo in Piece 15.

VEINS: 0.1-0.2 mm veins of saponite with pyrite.

STRUCTURE: Veins with Y-shaped intersection in Piece 15.

Core Photo



206-1256D-34R-3 (Section top: 487.19 mbsf)

UNIT: 8D

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Massive aphyric cryptocrystalline basalt flow.

PIECES: 1-14 (igneous description based on Piece 4b)

CONTACTS:

Upper: not recovered

Lower: chilled margin in 35R-2 Piece 9

COLOR: black (N 2.5/)

PHENOCRYSTS:

Olivine 0.5 % 0.2 mm 100% altered to saponite

GROUNDMASS:

Grain size: cryptocrystalline

Texture: intergranular

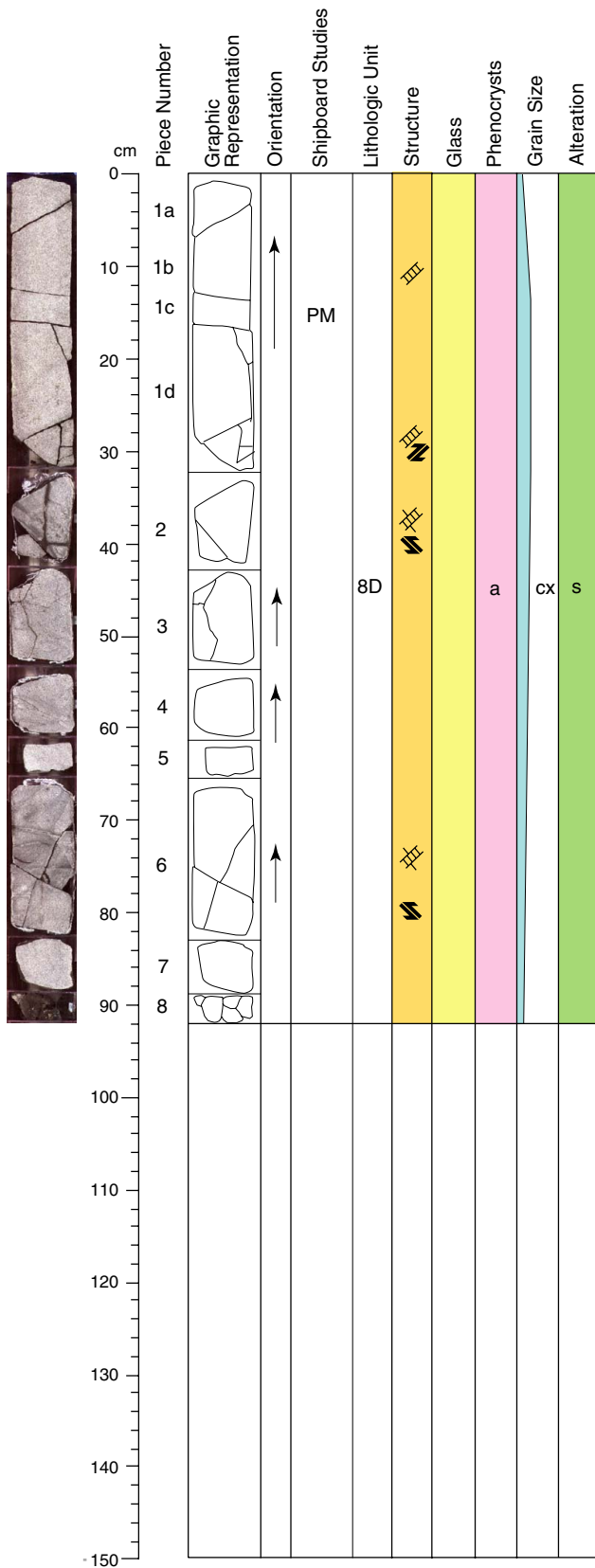
VESICLES: none

ALTERATION: Dark gray slightly altered basalt with 2-5 mm black alteration halos along veins.

VEINS: 0.1-0.8 mm veins of saponite with pyrite and rare carbonate.

STRUCTURE: Subvertical planar veins in Pieces 5 and 8. Mostly planar veins with gentle dip in other pieces. Conjugate veins in Piece 14.

Core Photo



206-1256D-34R-4 (Section top: 488.50 mbsf)

UNIT: 8D

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Massive aphyric cryptocrystalline basalt.

PIECES: 1-8 (igneous description based on Piece 1d)

CONTACTS:

Upper: not recovered

Lower: chilled margin in 35R-2 Piece 9

COLOR: black (N 2.5/)

PHENOCRYSTS:

Olivine 0.8 % 0.3 mm 100% altered to saponite

GROUNDMASS:

Grain size: cryptocrystalline

Texture: intergranular to variolitic

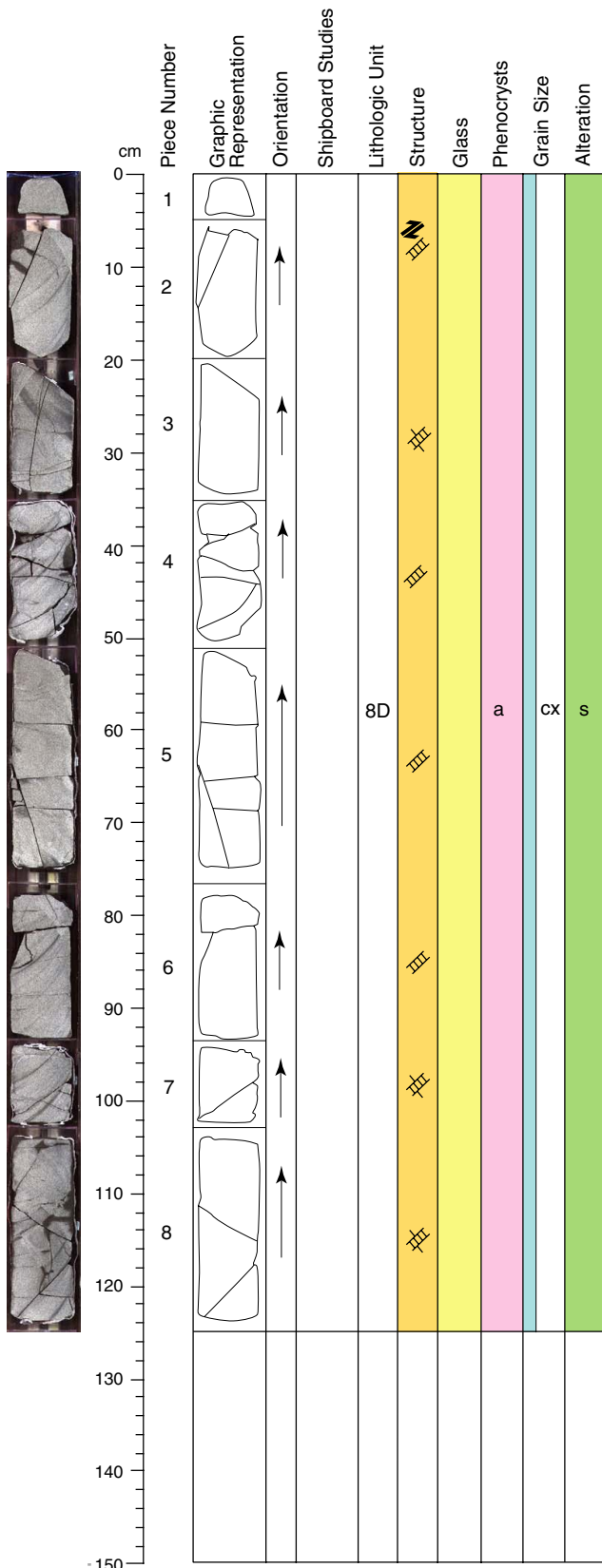
VESICLES: none

ALTERATION: Dark gray slightly altered basalt with rare 1-4 mm black alteration halos along veins.

VEINS: 0.1-0.8 mm veins of saponite with rare carbonate and pyrite.

STRUCTURE: Set of subhorizontal planar veins in Piece 1. Conjugate veins in Pieces 1, 2, and 6. Shear veins with reverse sense of shear in Pieces 1, 2, and 6.

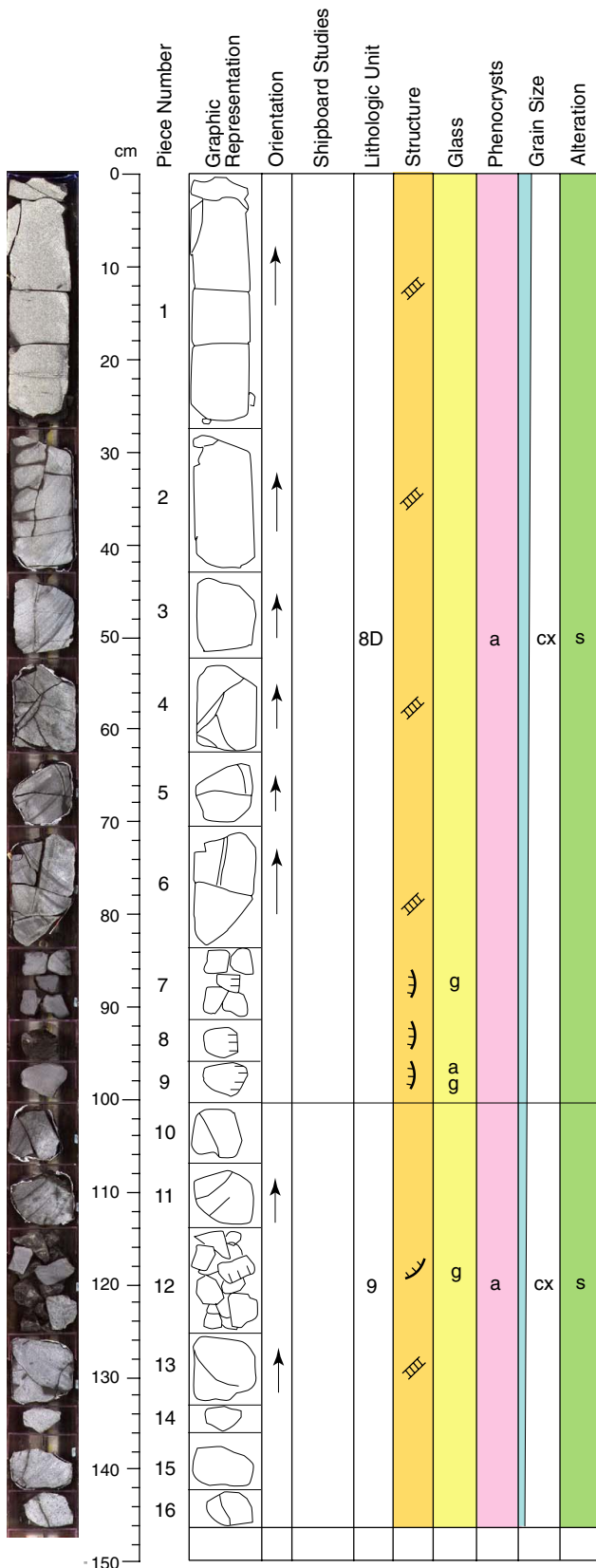
Core Photo



206-1256D-35R-1 (Section top: 489.00 mbsf)

UNIT: 8D
 ROCK NAME: Aphyric cryptocrystalline basalt
 SUMMARY DESCRIPTION: Massive aphyric cryptocrystalline basalt.
 PIECES: 1-8 (igneous description based on Piece 2)
 CONTACTS:
 Upper: not recovered
 Lower: chilled margin in 35R-2 Piece 9
 COLOR: very dark gray (N 3/)
 PHENOCRYSTS:
 Olivine 0.5 % 0.1-0.2 mm 100% altered to saponite
 GROUNDMASS:
 Grain size: cryptocrystalline
 Texture: intergranular to variolitic
 VESICLES: none
 ALTERATION: Dark gray slightly altered basalt with rare 1-2 mm black alteration halos along veins.
 VEINS: 0.1-0.6 mm veins of saponite with pyrite.
 STRUCTURE: Conjugate systems of veins in Pieces 3, 5, 7 and 8. One shear vein with down dip overlapping fibers and reverse sense of shear in Piece 2.

Core Photo



206-1256D-35R-2 (Section top: 490.25 mbsf)

UNIT: 8d

ROCK NAME: Aphyric cryptocrystalline basalt
 SUMMARY DESCRIPTION: Massive aphyric cryptocrystalline basalt flow.
 PIECES: 1-9 (igneous description based on Piece 2)
 CONTACTS:
 Upper: not recovered
 Lower: chilled margin in Piece 9 35R-2

COLOR: very dark gray (N 3/)

PHENOCRYSTS:
 Olivine <0.2 % <0.1 mm 100% altered to saponite

GROUNDMASS:
 Grain size: cryptocrystalline
 Texture: intergranular to variolitic

VESICLES: none
 ALTERATION: Dark gray slightly altered basalt with rare 1.5-3 mm black alteration halos along veins.

VEINS: 0.1-1.0 mm veins of saponite with pyrite and rare silica.
 STRUCTURE: Shallowly dipping parallel veins in Pieces 1, 2, and 3. Nearly vertical veins in Pieces 1, 2, 3, and 6.

UNIT: 9

ROCK NAME: Aphyric cryptocrystalline basalt
 SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flow.
 PIECES: 10-16 (igneous description based on Piece 13)

CONTACTS:
 Upper: not recovered
 Lower: not recovered

COLOR: black (N 2.5/)

PHENOCRYSTS:
 Olivine <1 % 0.1-0.3 mm 100% altered to saponite
 Clinopyroxene <1 % <0.3 mm

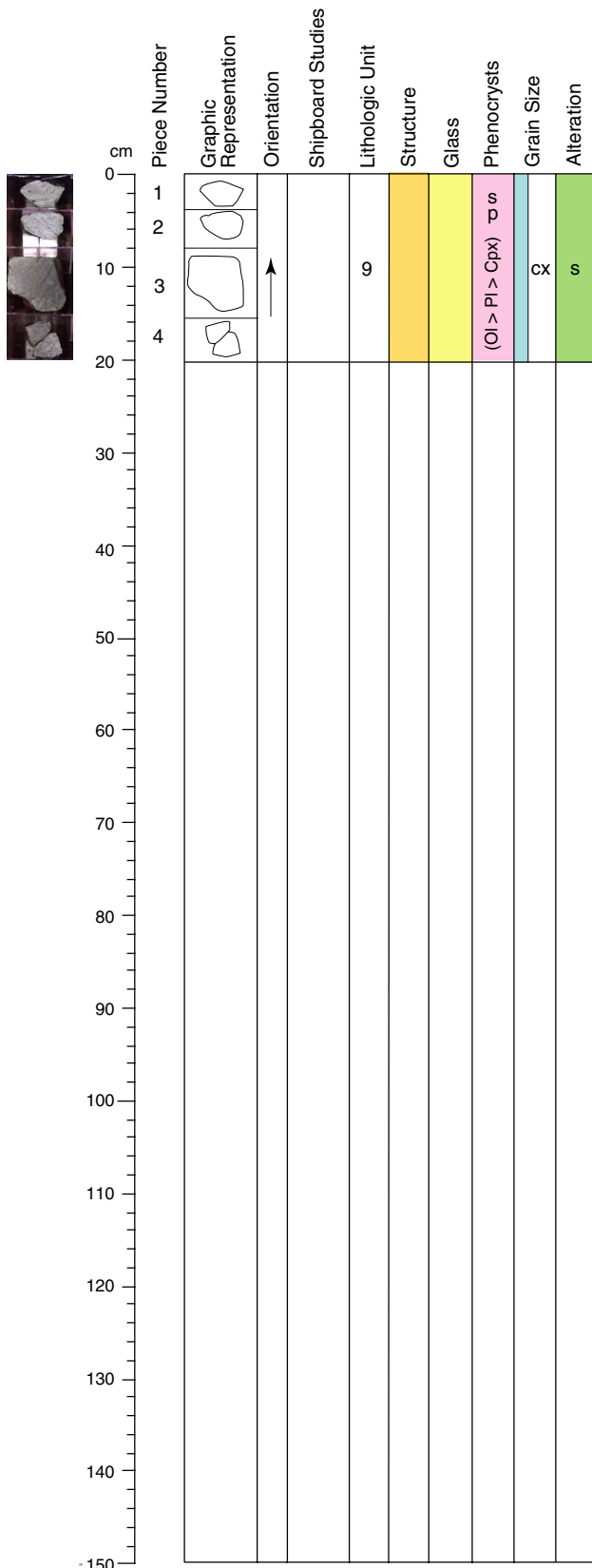
GROUNDMASS:
 Grain size: cryptocrystalline
 Texture: intergranular to variolitic

VESICLES: none
 ALTERATION: Dark gray slightly altered basalt.
 VEINS: 0.1-0.4 mm veins of saponite with rare iron oxyhydroxide.

STRUCTURE: Veins with Y-shaped intersection in Piece 13. One oriented vein in Piece 11.

ADDITIONAL COMMENTS: <1% microgabbroic inclusions and crystal clots 0.5-1.0 mm diameter consisting of plagioclase plus clinopyroxene (some pale green pyroxene in microgabbroic inclusions - pigeonite?).

Core Photo



206-1256D-35R-3 (Section top: 491.71 mbsf)

UNIT: 9

ROCK NAME: Sparsely clinopyroxene-olivine-phyric cryptocrystalline basalt
 SUMMARY DESCRIPTION: Sparsely-phyric cryptocrystalline basalt sheet flow.
 PIECES: 1-4 (igneous description based on Piece 3)

CONTACTS:

Upper: not recovered
 Lower: not recovered

COLOR: black (N 2.5/)

PHENOCRYSTS:

Plagioclase	0.2 %	0.1 mm	
Olivine	1 %	0.1-1.0 mm	100% altered to saponite
Clinopyroxene	<1 %	1.0-2.0 mm	

GROUNDMASS:

Grain size: cryptocrystalline
 Texture: intergranular to variolitic

VESICLES: none

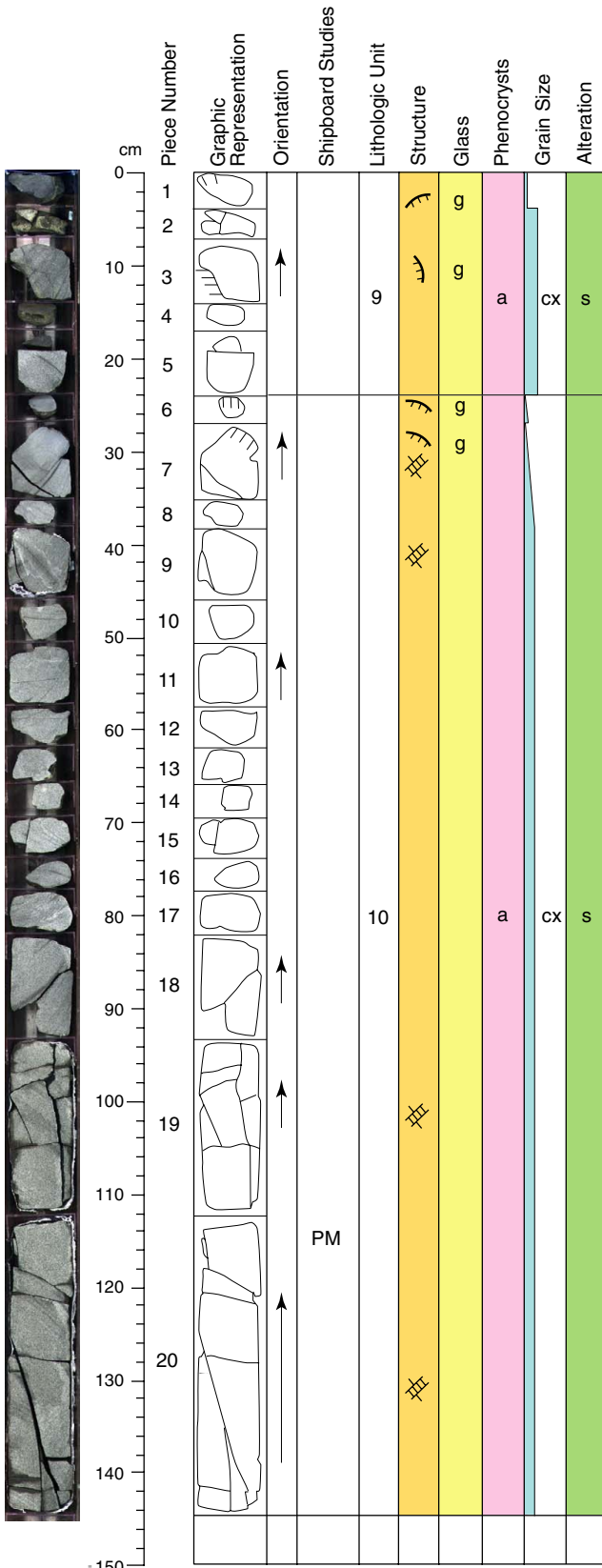
ALTERATION: Dark gray slightly altered basalt one 3 mm black alteration halo along a vein in Piece 2.

VEINS: 0.2-0.3 mm veins of saponite.

STRUCTURE: no oriented structures.

ADDITIONAL COMMENTS: <1% microgabbroic inclusions and crystal clots 0.5-1.0 mm diameter consisting of plagioclase plus clinopyroxene (some pale green pyroxene in microgabbroic inclusions - pigeonite?). A few large pale green clinopyroxene phenocrysts.

Core Photo



206-1256D-36R-1 (Section top: 494.00 mbsf)

UNIT: 9

ROCK NAME: Aphyric cryptocrystalline basalt
SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flow.
PIECES: 1-5 (igneous description based on Piece 3)
CONTACTS:
Upper: not recovered
Lower: not recovered

COLOR: greenish black (10Y 2.5/1)

PHENOCRYSTS:

Olivine <1% 0.3 mm 100% altered to saponite
Clinopyroxene tr% 0.8 mm

GROUNDMASS:

Grain size: cryptocrystalline
Texture: intergranular

VESICLES: rare

ALTERATION: Dark gray slightly altered basalt with one 2 mm black alteration halo along a vein in Piece 3.

VEINS: 0.1-0.6 mm veins of saponite with rare iron oxyhydroxide.

STRUCTURE: Two crosscutting veins in Piece 3.

ADDITIONAL COMMENTS: Rare (<1%) microgabbroic inclusions and crystal clots <1.2 mm diameter consisting of plagioclase plus clinopyroxene. A few large pale green clinopyroxene phenocrysts. Groundmass grain size in Piece 3 does not decrease towards glassy margin, indicating that the glass represents a chilled margin on the adjacent (unrecovered) piece, and possibly an intrusive contact.

UNIT: 10

ROCK NAME: Aphyric cryptocrystalline basalt
SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flow.
PIECES: 6-20 (igneous description based on Piece 7)
CONTACTS:
Upper: chilled margin
Lower: not recovered

COLOR: black (N 2.5/)

PHENOCRYSTS:

Plagioclase tr% 0.1 mm
Olivine 0.1% 0.1-0.2 mm 100% altered to saponite
Clinopyroxene tr% 0.2 mm

GROUNDMASS:

Grain size: cryptocrystalline
Texture: variolitic

VESICLES: none

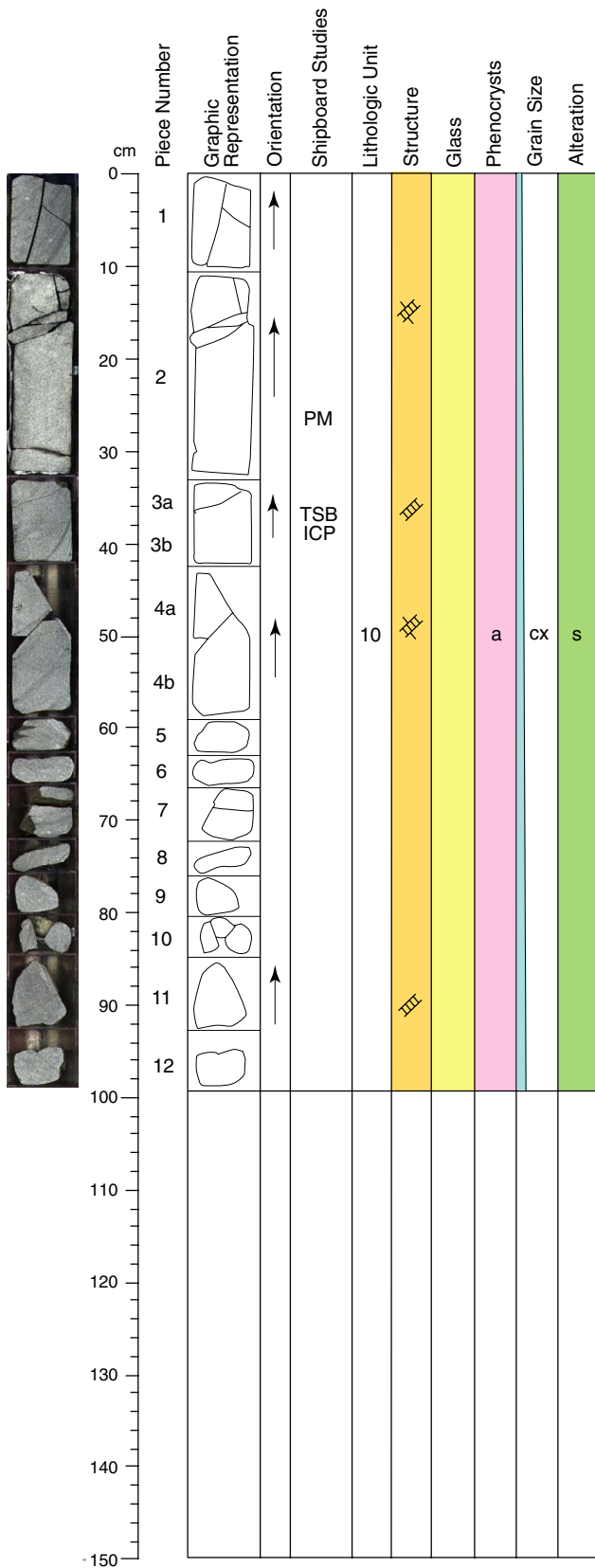
ALTERATION: Dark gray slightly altered basalt with rare 5 mm black alteration halos along veins.

VEINS: 0.1-0.5 mm veins of saponite with pyrite and rare carbonate.

STRUCTURE: Conjugate veins in Pieces 7, 8, 19, and 20.

ADDITIONAL COMMENTS: Rare tiny crystal clots of plagioclase plus clinopyroxene.

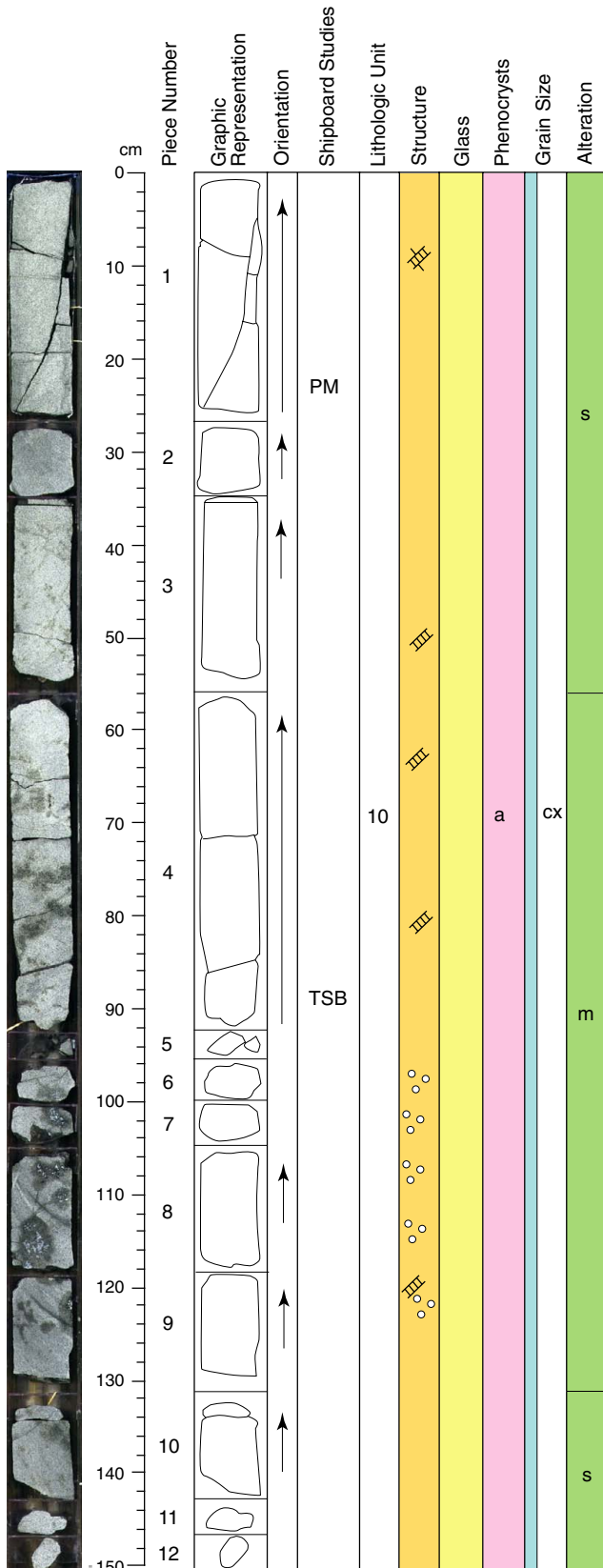
Core Photo



206-1256D-36R-2 (Section top: 495.45 mbsf)

UNIT: 10
 ROCK NAME: Aphyric cryptocrystalline basalt
 SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flow.
 PIECES: 1-12 (igneous description based on Piece 3)
 CONTACTS:
 Upper: chilled margin
 Lower: not recovered
 COLOR: black (N 2.5/)
 PHENOCRYSTS:
 Olivine < 1.0 % 0.3 mm 100% altered to saponite
 GROUNDMASS:
 Grain size: cryptocrystalline
 Texture: intergranular to variolitic
 VESICLES: none
 ALTERATION: Dark gray slightly altered basalt with rare 3-5 mm black alteration halos along veins.
 VEINS: 0.1-0.5 mm veins of saponite with pyrite and rare carbonate.
 STRUCTURE: Conjugate vein system in Pieces 2 and 4.
 ADDITIONAL COMMENTS: Rare crystal clots up to 1.2 mm diameter of plagioclase plus clinopyroxene.

Core Photo



206-1256D-37R-1 (Section top: 500.10 mbsf)

UNIT: 10

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Massive aphyric cryptocrystalline basalt.

PIECES: 1-12 (igneous description based on Piece 3)

CONTACTS:

Upper: chilled margin

Lower: not recovered

COLOR: very dark gray (N 3/)

PHENOCRYSTS:

Olivine < 1.0 % 0.3 mm 100% altered to saponite

GROUNDMASS:

Grain size: cryptocrystalline

Texture: intergranular

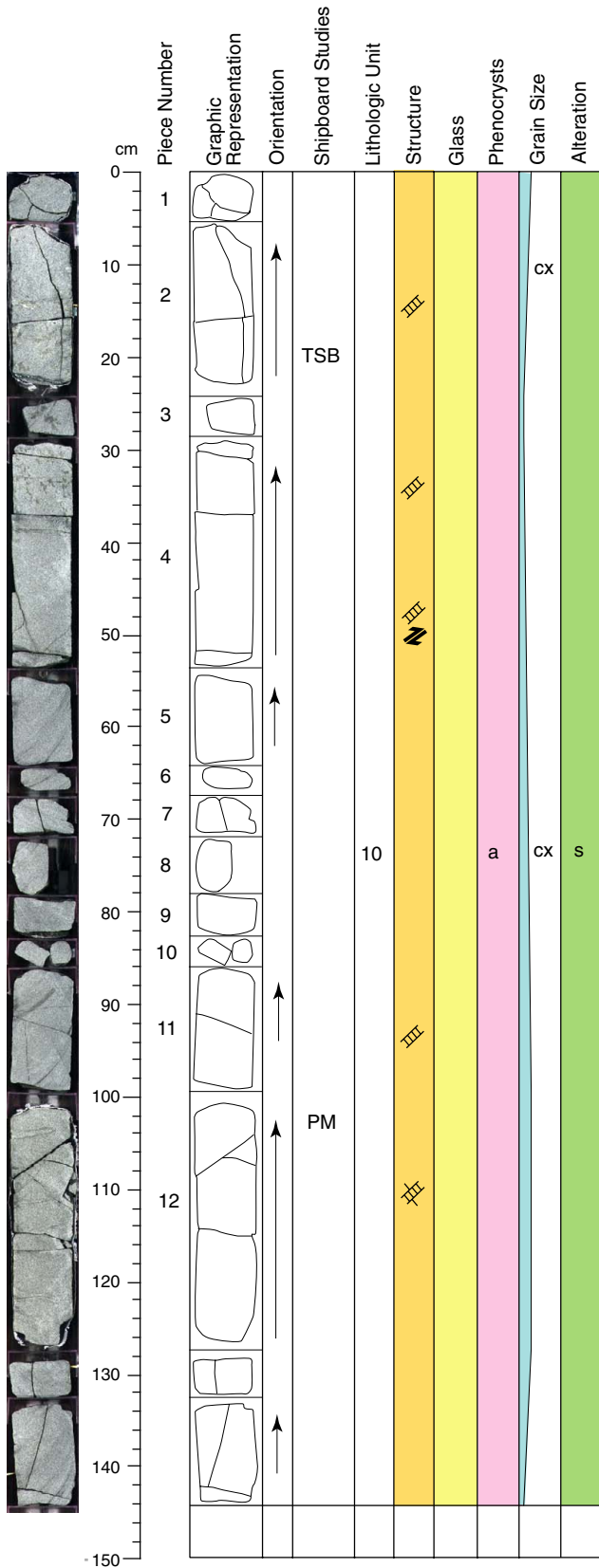
VESICLES: none

ALTERATION: Dark gray slightly to moderately altered basalt.

VEINS: 0.1-0.5 mm veins of saponite with pyrite.

STRUCTURE: Set of parallel subhorizontal veins in Pieces 1, 3, and 4. Weak preferred orientation and of steeply dipping dark green alteration patches in Pieces 3,4, and 10.

Core Photo



206-1256D-37R-2 (Section top: 501.60 mbsf)

UNIT: 10

ROCK NAME: Massive aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt.

PIECES: 1-14 (igneous description based on Piece 4A)

CONTACTS:

Upper: chilled margin

Lower: not recovered

COLOR: greenish black (10Y 2.5/1)

PHENOCRYSTS:

Olivine 0.5 % 0.1-0.2 mm 100% altered to saponite

GROUNDMASS:

Grain size: cryptocrystalline

Texture: variolitic to intergranular

VESICLES: none

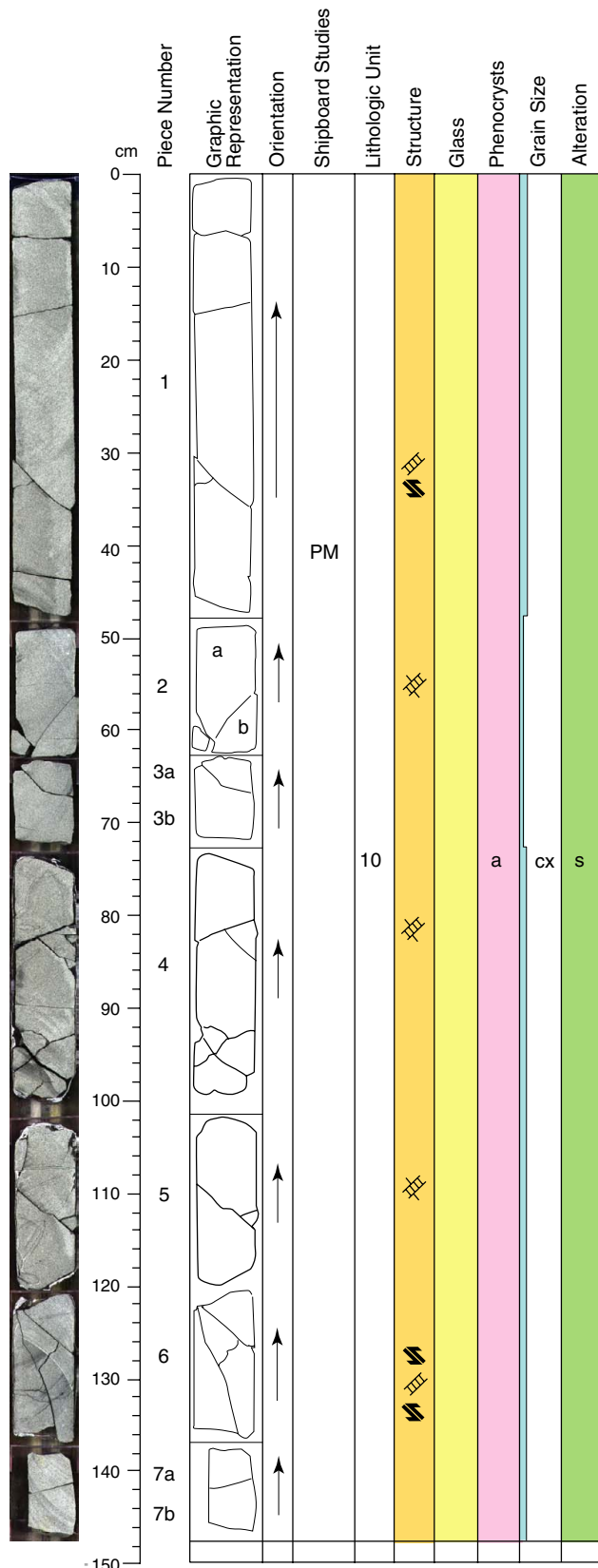
ALTERATION: Dark gray slightly altered basalt with rare 2-6 mm black alteration halos along veins.

VEINS: 0.1-0.5 mm veins of saponite with pyrite and rare silica

STRUCTURE: Conjugate veins in Piece 12. One shear vein with overlapping saponite fibers and reverse sense of shear in Piece 4. Weak preferred orientation of steeply dipping dark green alteration patches in Pieces 2 and 4.

ADDITIONAL COMMENTS: Piece 4 contains sporadic dark green altered patches where clinopyroxene is more intensely altered.

Core Photo



206-1256D-37R-3 (Section top: 503.05 mbsf)

UNIT: 10

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Massive aphyric cryptocrystalline basalt sheet flow.

PIECES: 1-7 (igneous description based on Piece 1b)

CONTACTS:

Upper: chilled margin

Lower: not recovered

COLOR: greenish black (10Y 2.5/1)

PHENOCRYSTS:

Olivine <1.0 % 0.2-0.3 mm 100% altered to saponite

GROUNDMASS:

Grain size: cryptocrystalline

Texture: intergranular

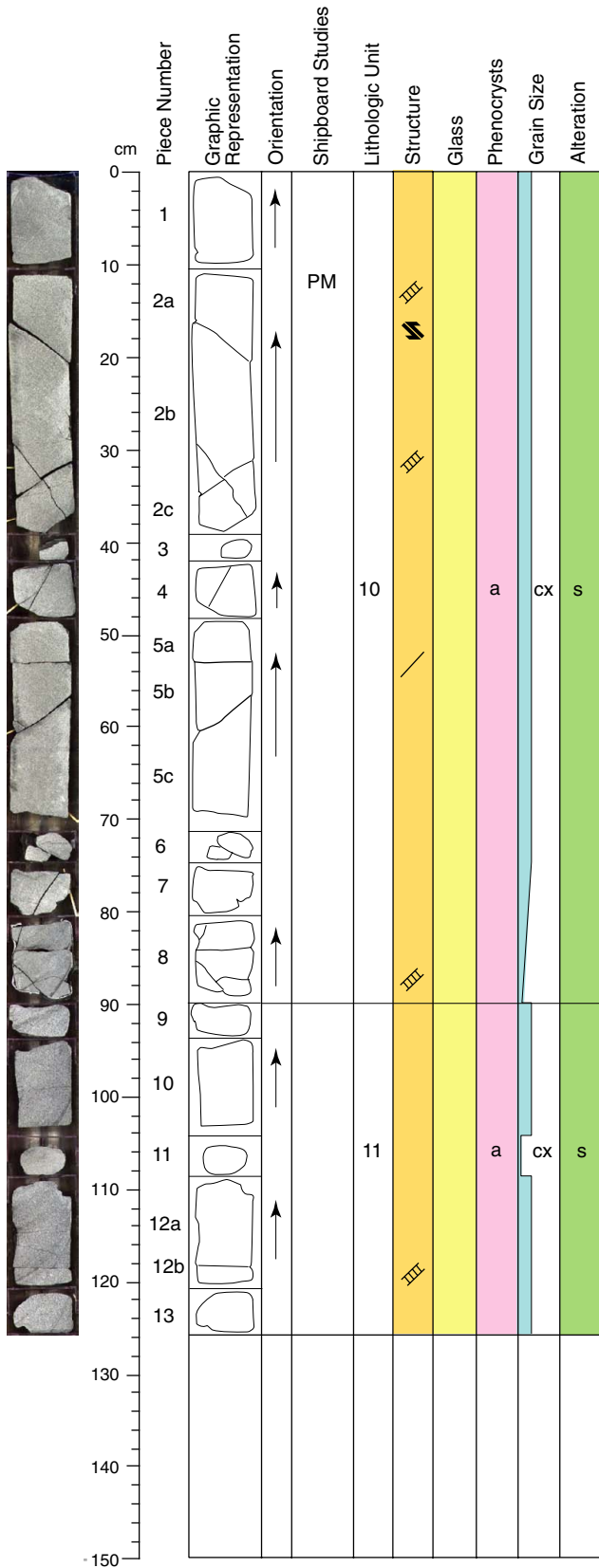
VESICLES: none

ALTERATION: Dark gray slightly altered basalt with rare 6-8 mm black alteration halos along veins.

VEINS: 0.1-0.8 mm veins of saponite with pyrite and rare carbonate.

STRUCTURE: Conjugate vein systems throughout the section. Two shear veins with overlapping saponite fibers and reverse sense of shear in Pieces 1 and 6.

Core Photo



206-1256D-37R-4 (Section top: 504.53 mbsf)

UNIT: 10

ROCK NAME: Aphyric cryptocrystalline basalt
 SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flow.
 PIECES: 1-8 (igneous description based on Piece 8)

CONTACTS:

Upper: chilled margin
 Lower: not recovered

COLOR: black (N 2.5)

PHENOCRYSTS:

Plagioclase	tr %	0.3 mm	
Olivine	tr %	0.1 mm	100% altered to saponite
Clinopyroxene	tr %	0.3 mm	

GROUNDMASS:

Grain size: cryptocrystalline
 Texture: variolitic to intergranular

VESICLES: none

ALTERATION: Dark gray slightly altered basalt with rare 4-6 mm black alteration halos along veins in Piece 8.

VEINS: 0.1-0.4 mm veins of saponite with rare carbonate.

STRUCTURE: Conjugate vein system in Pieces 2, 5, and 8. One shear vein with overlapping saponite fibers and reverse sense of shear in Piece 2. Two joints in Piece 5.

ADDITIONAL COMMENTS: Rare clots of clinopyroxene plus plagioclase.

UNIT: 11

ROCK NAME: Aphyric cryptocrystalline basalt
 SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flow.
 PIECES: 9-13 (igneous description based on Piece 10)

CONTACTS:

Upper: not recovered
 Lower: not recovered

COLOR: greenish black (10Y 2.5/1)

PHENOCRYSTS:

Olivine	<1.0 %	0.1 mm	100% altered to saponite
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GROUNDMASS:

Grain size: cryptocrystalline
 Texture: variolitic to intergranular

VESICLES: none

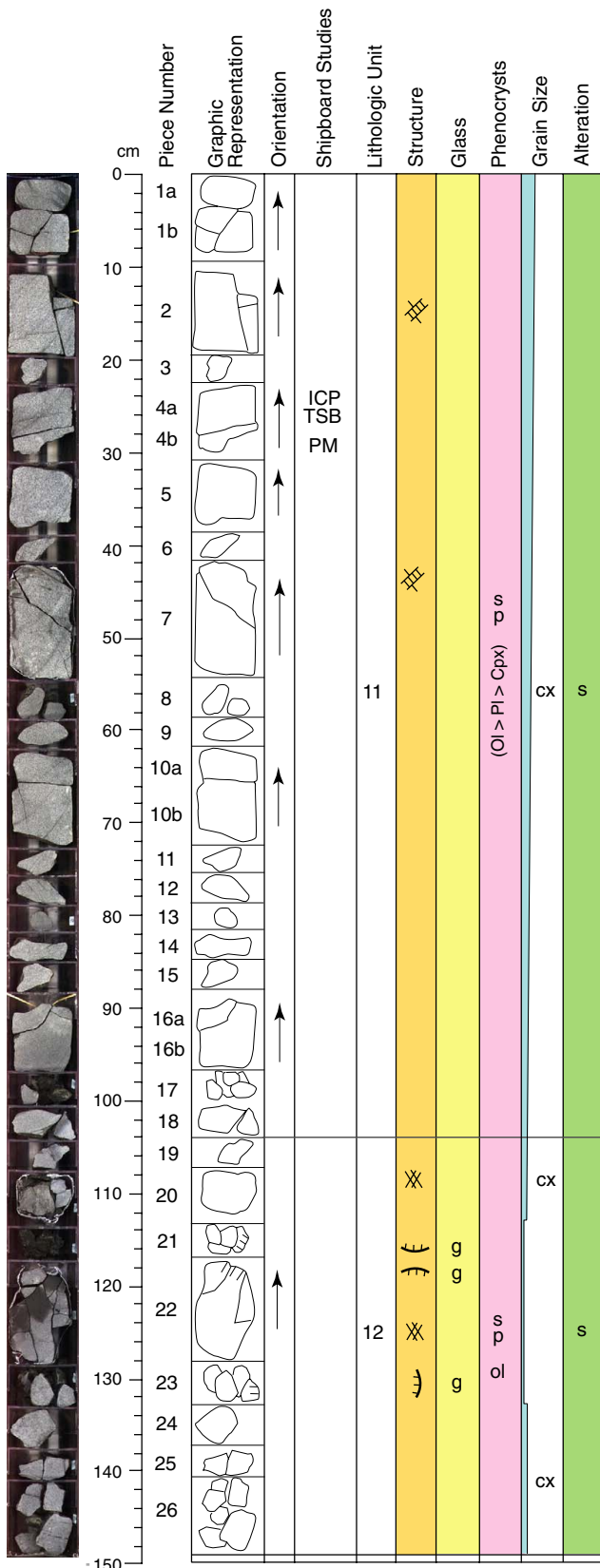
ALTERATION: Dark gray slightly altered basalt.

VEINS: 0.1-0.8 mm veins of saponite.

STRUCTURE: Set of subhorizontal veins and three vertical veins in Pieces 10 and 12.

ADDITIONAL COMMENTS: Rare (<1%) clots up to 1.2 mm diameter of clinopyroxene plus plagioclase.

Core Photo



206-1256D-38R-1 (Section top: 504.30 mbsf)

UNIT: 11

ROCK NAME: Sparsely plagioclase-clinopyroxene-olivine-phyric
cryptocrystalline basalt

SUMMARY DESCRIPTION: Sparsely-phyric cryptocrystalline basalt sheet flow.

PIECES: 1-18 (igneous description based on Piece 5)

CONTACTS:

Upper: not recovered

Lower: not recovered

COLOR: black (N 2.5/1)

PHENOCRYSTS:

Plagioclase <0.1 % <0.1 mm

Olivine 0.8 % 0.1-0.2 mm 100% altered to saponite

Clinopyroxene 0.2% 0.1-0.2 mm

GROUNDMASS:

Grain size: cryptocrystalline

Texture: variolitic

VESICLES: none

ALTERATION: Dark gray slightly altered basalt with a 2 mm brown alteration halo along a vein in Piece 7.

VEINS: 0.1-0.8 mm veins of saponite with pyrite, iron oxyhydroxide and rare carbonate.

STRUCTURE: Conjugate vein system in Pieces 2 and 7. Y-intersection of veins in Piece 1.

UNIT: 12

ROCK NAME: Sparsely olivine-phyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Sparsely-phyric cryptocrystalline basalt sheet flow with glass at upper margin.

PIECES: 19-26 (igneous description based on Piece 22)

CONTACTS:

Upper: chilled margin

Lower: not recovered

COLOR: black (N 2.5/1)

PHENOCRYSTS:

Plagioclase tr % 0.1-0.2 mm

Olivine ~1 % 0.2-0.3 mm 100% altered to saponite

Clinopyroxene tr % 0.2 mm

GROUNDMASS:

Grain size: cryptocrystalline

Texture: intergranular to variolitic

VESICLES: none

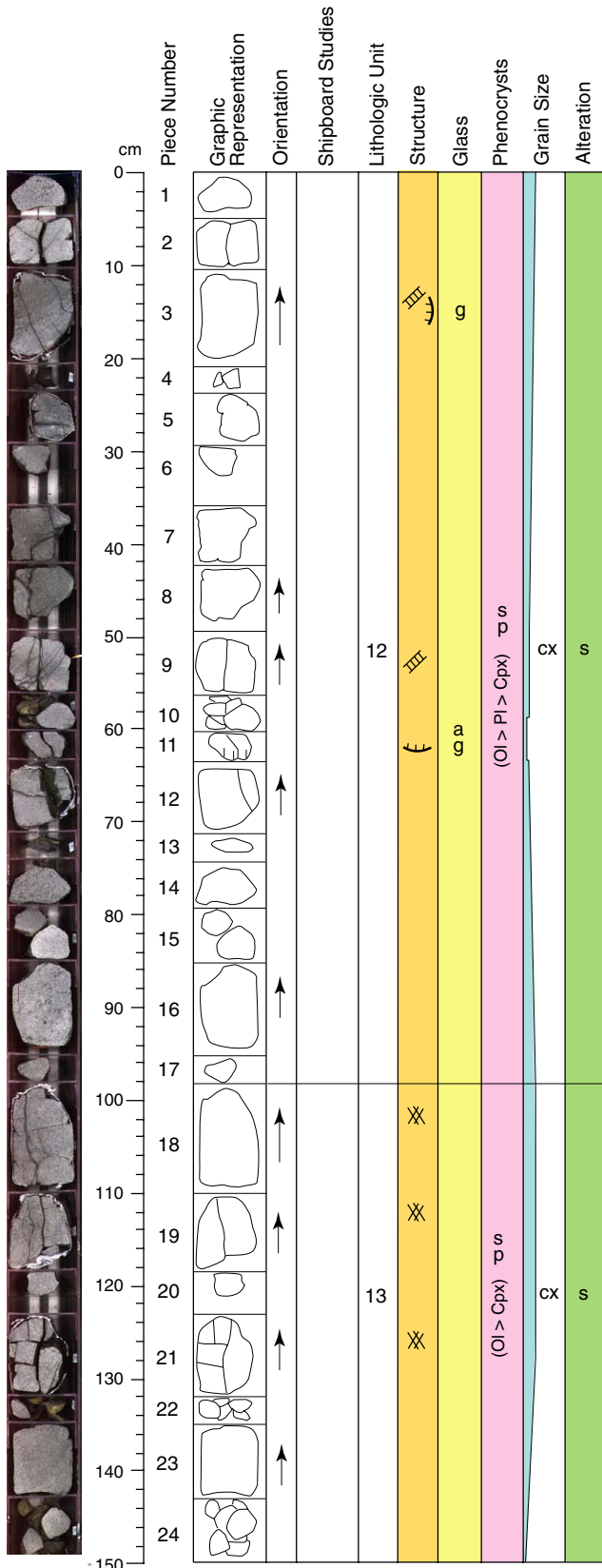
ALTERATION: Dark gray slightly altered basalt with a 3 mm black alteration halo.

VEINS: 0.1-0.8 mm veins of saponite with iron oxyhydroxide.

STRUCTURE: Vein network in Pieces 20 and 22.

ADDITIONAL COMMENTS: Plagioclase and clinopyroxene phenocrysts occur together in clusters of a few crystals, with a few separate phenocrysts. Sparse (<1%), large (up to 2 mm) microgabbro xenoliths with rounded edges consisting of plagioclase plus clinopyroxene are also present.

Core Photo

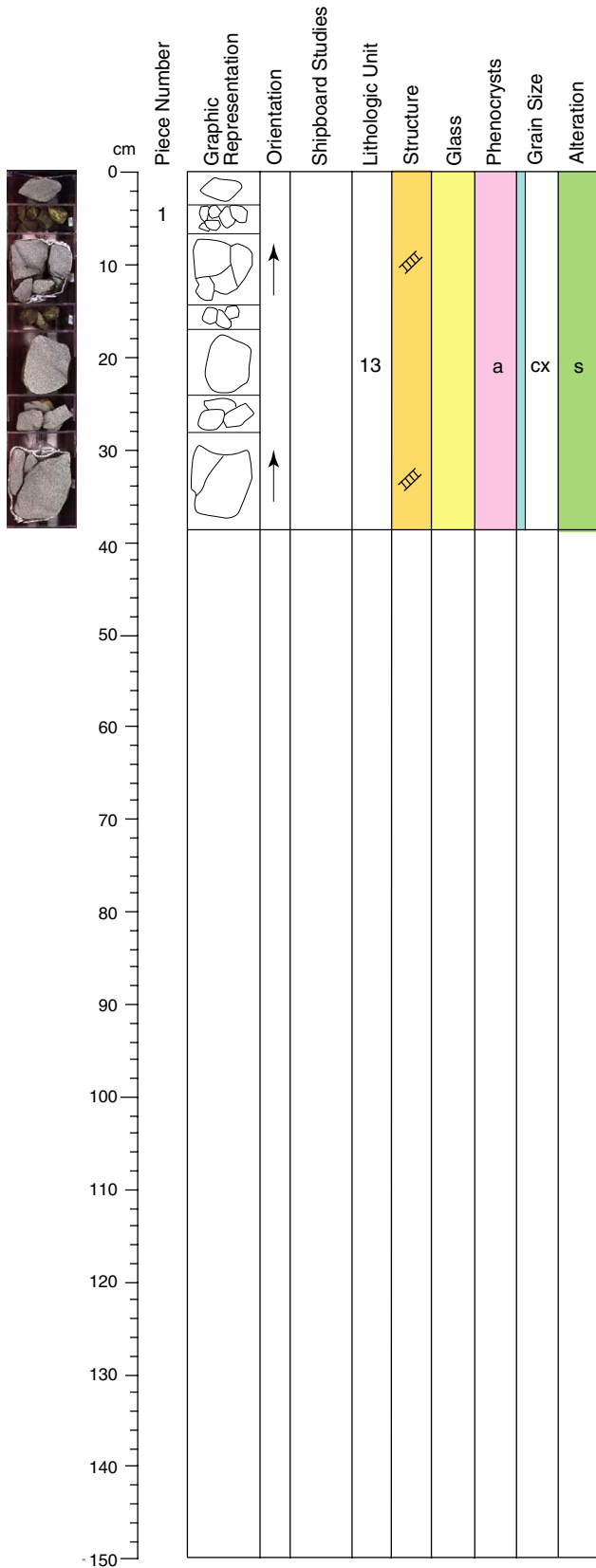


206-1256D-38R-2 (Section top: 505.80 mbsf)

UNIT: 12
ROCK NAME: Sparsely olivine-phyric cryptocrystalline basalt
SUMMARY DESCRIPTION: Sparsely-phyric cryptocrystalline basalt sheet flow.
PIECES: 1-17 (igneous description based on Piece 3)
CONTACTS:
 Upper: chilled margin
 Lower: not recovered
COLOR: black (N 2.5/1)
PHENOCRYSTS:
 Plagioclase <1% 0.1 mm
 Olivine ~1% 0.2-0.3 mm 100% altered to saponite
 Clinopyroxene tr% 0.2 mm
GROUNDMASS:
 Grain size: cryptocrystalline
 Texture: intergranular to variolitic
VESICLES: none
ALTERATION: Dark gray slightly altered basalt.
VEINS: 0.1-1.5 mm veins of saponite with pyrite, iron oxyhydroxide and rare carbonate and silica.
STRUCTURE: Veins with Y-shaped intersections in Pieces 2, 8, and 12. Radial veins with respect to chilled margin in Pieces 3 and 5.
ADDITIONAL COMMENTS: Plagioclase and clinopyroxene phenocrysts occur together in clusters of a few crystals, with a few separate grains of plagioclase. Sparse (<1%), large (up to 1.5 mm) microgabbro xenoliths with rounded edges consisting of plagioclase plus clinopyroxene are also present, some with pale green clinopyroxene (pigeonite?).

UNIT: 13
ROCK NAME: Clinopyroxene-bearing, sparsely olivine-phyric cryptocrystalline basalt
SUMMARY DESCRIPTION: Sparsely-phyric cryptocrystalline basalt sheet flow.
PIECES: 18-24 (igneous description based on Piece 23)
CONTACTS:
 Upper: not recovered
 Lower: not recovered
COLOR: black (N 2.5/1)
PHENOCRYSTS:
 Olivine 1.0% 0.2 mm 100% altered to saponite
 Clinopyroxene tr% 3.0 mm
GROUNDMASS:
 Grain size: cryptocrystalline
 Texture: variolitic
VESICLES: none
ALTERATION: Dark gray slightly altered basalt.
VEINS: 0.1-1.5 mm veins of saponite with pyrite and iron oxyhydroxide.
STRUCTURE: Vein networks in Pieces 18, 19, and 21.

Core Photo



206-1256D-38R-3 (Section top: 507.30 mbsf)

UNIT: 13

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flow.

PIECES: 1-7 (igneous description based on Piece 5)

CONTACTS:

Upper: not recovered

Lower: not recovered

COLOR: black (N 2.5/1)

PHENOCRYSTS:

Olivine 0.8 % 0.1-0.3 mm 100% altered to saponite

Clinopyroxene tr % 1.0-3.0 mm

GROUNDMASS:

Grain size: cryptocrystalline

Texture: variolitic

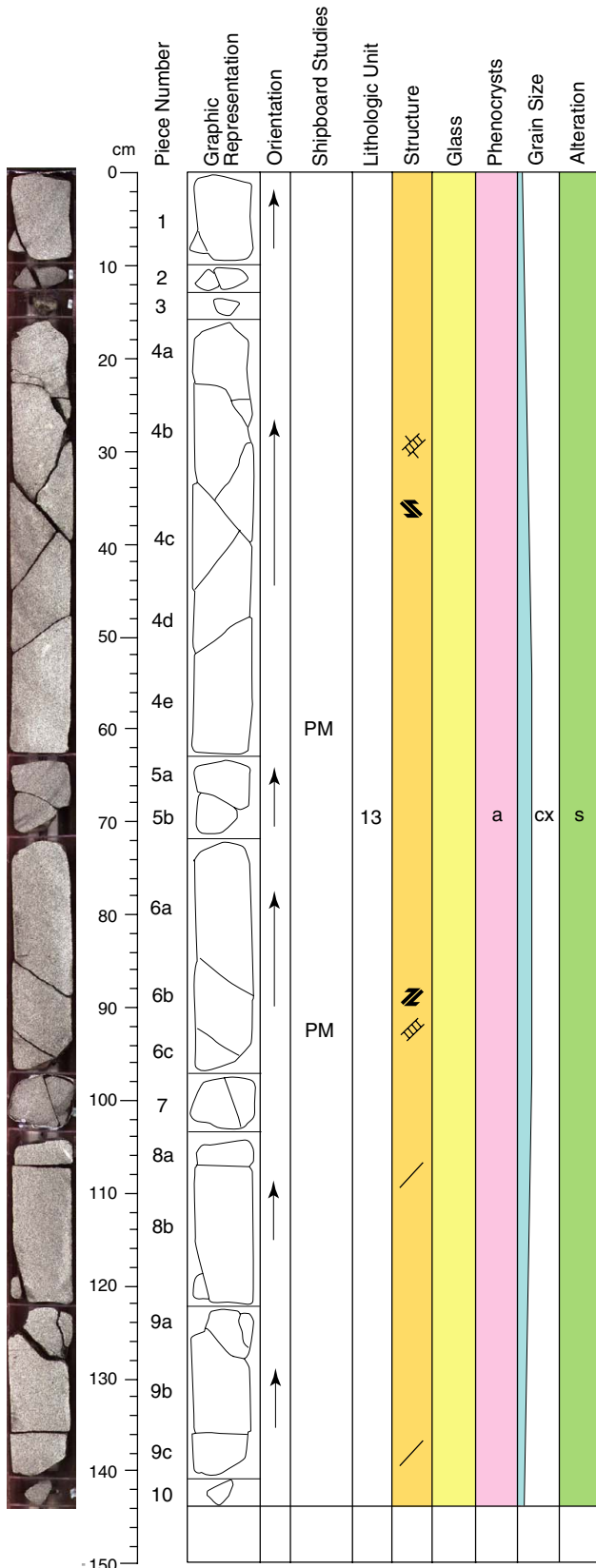
VESICLES: none

ALTERATION: Dark gray slightly altered basalt.

VEINS: 0.2-0.6 mm veins of saponite with pyrite and iron oxyhydroxide.

STRUCTURE: Irregular veins in Pieces 5 and 7..

Core Photo



206-1256D-39R-1 (Section top: 513.50 mbsf)

UNIT: 13

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flow.

PIECES: 1-10 (igneous description based on Piece 4d)

CONTACTS:

Upper: not recovered

Lower: not recovered

COLOR: black (N 2.5/1)

PHENOCRYSTS:

Olivine 0.8 % 0.1-0.3 mm 100% altered to saponite

Clinopyroxene tr % 1.0-2.0 mm

GROUNDMASS:

Grain size: cryptocrystalline

Texture: variolitic

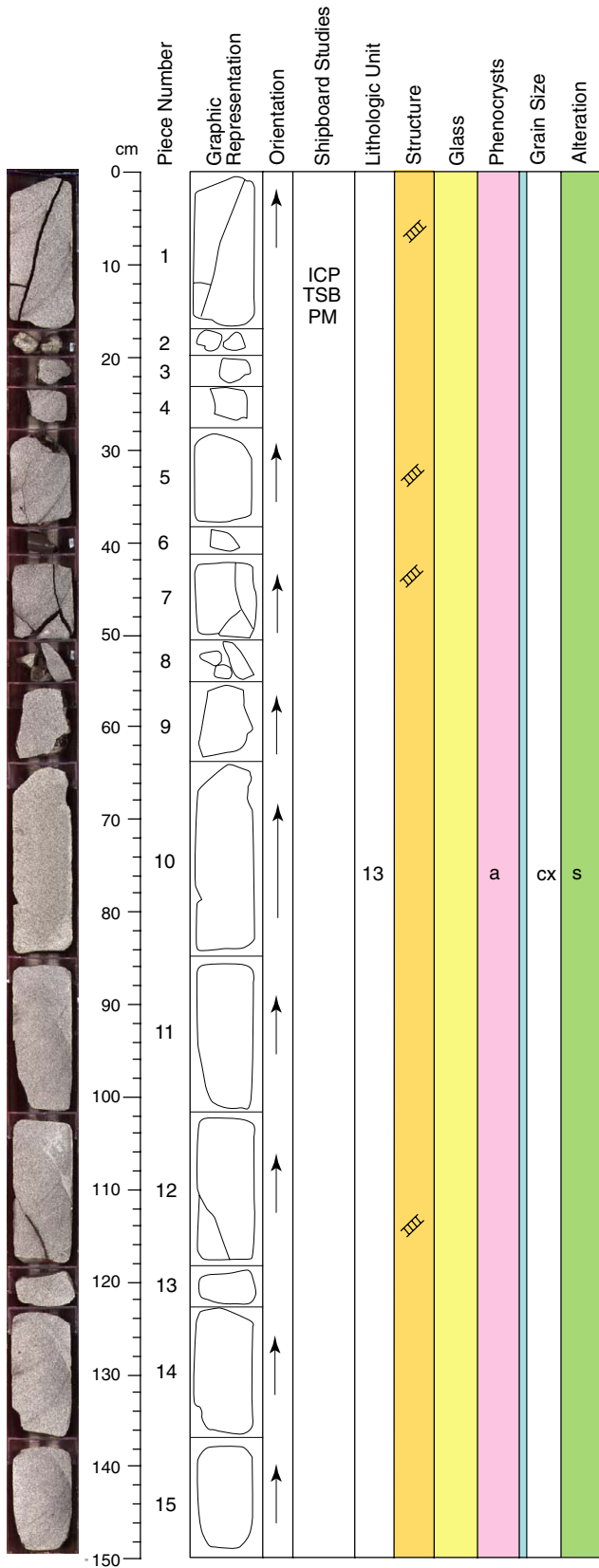
VESICLES: none

ALTERATION: Dark gray slightly altered basalt with one 5 mm black alteration halo along a vein in Piece 1.

VEINS: 0.2-0.4 mm veins of saponite with rare pyrite.

STRUCTURE: Conjugate vein systems in Pieces 4, 6, and 9. Two shear veins with overlapping saponite fibers and reverse sense of shear in Pieces 4 and 6. Two horizontal joints in Pieces 8 and 10.

Core Photo



206-1256D-39R-2 (Section top: 514.93 mbsf)

UNIT: 13

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flow.

PIECES: 1-15 (igneous description based on Piece 5)

CONTACTS:

Upper: not recovered

Lower: not recovered

COLOR: black (N 2.5/1)

PHENOCRYSTS:

Plagioclase tr % 0.1 mm

Olivine 0.8 % 0.1-0.2 mm 100% altered to saponite

Clinopyroxene tr % 0.1-3.0 mm

GROUNDMASS:

Grain size: cryptocrystalline

Texture: variolitic

VESICLES: none

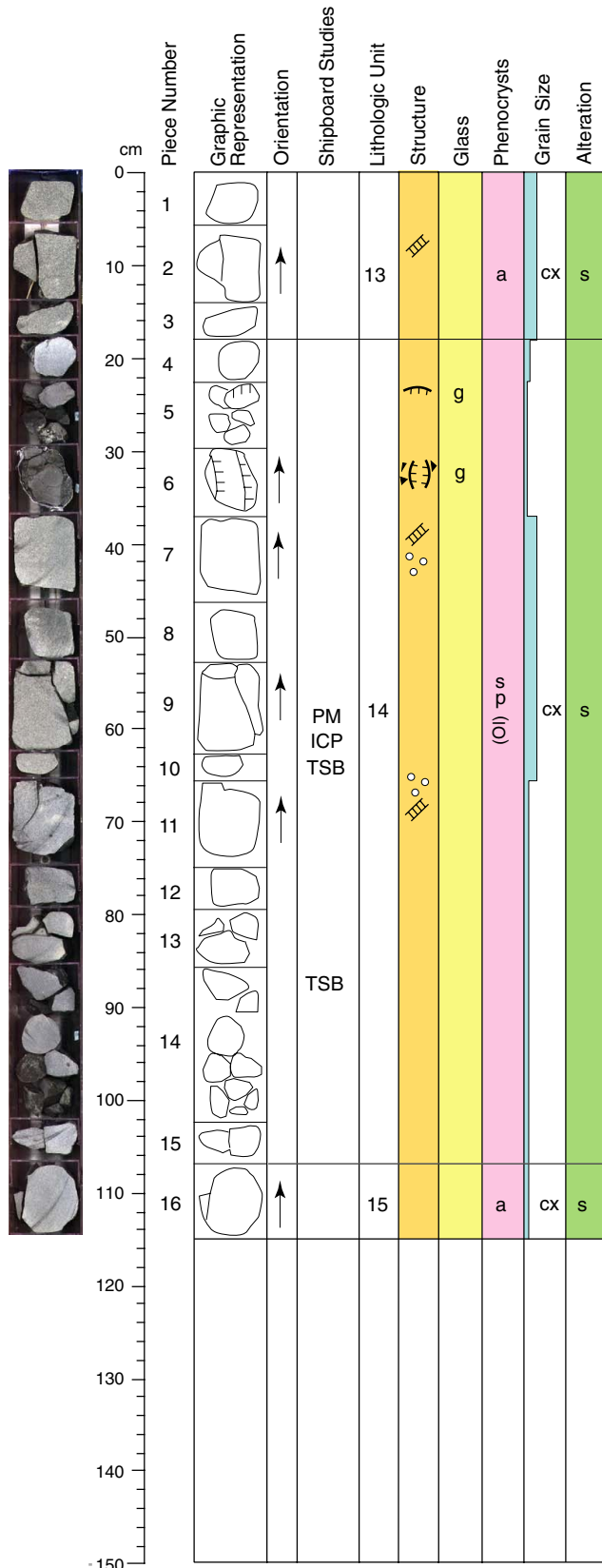
ALTERATION: Dark gray slightly altered basalt.

VEINS: 0.1-0.4 mm veins of saponite.

STRUCTURE: Steeply dipping veins in Pieces 1, 5, 7, 10, and 12.

ADDITIONAL COMMENTS: Small plagioclase and clinopyroxene crystals form glomerocrysts. Rare large (up to 3.0 mm) clinopyroxene phenocrysts.

Core Photo



206-1256D-40R-1 (Section top: 517.50 mbsf)

UNIT: 13

ROCK NAME: Aphyric cryptocrystalline basalt
SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flow.
PIECES: 1-3 (igneous description based on Piece 2)

CONTACTS:
Upper: not recovered
Lower: not recovered

COLOR: black (N 2.5/1)

PHENOCRYSTS:

Plagioclase	tr %	0.1 mm	
Olivine	0.8 %	0.1-0.3 mm	100% altered to saponite
Clinopyroxene	tr %	0.3 mm	

GROUNDMASS:

Grain size: cryptocrystalline
Texture: variolitic

VESICLES: none

ALTERATION: Dark gray slightly altered basalt.

VEINS: One 0.3 mm vein of saponite in Piece 2.

STRUCTURE: One vertical vein in Piece 2.

UNIT: 14

ROCK NAME: Sparsely olivine-phyric cryptocrystalline basalt
SUMMARY DESCRIPTION: Sparsely-phyric cryptocrystalline basalt sheet flow.
PIECES: 4-15 (igneous description based on Piece 7)

CONTACTS:
Upper: not recovered
Lower: not recovered

COLOR: greenish black (10Y 2.5/1)

PHENOCRYSTS:

Olivine	~1.0 %	0.1-0.3 mm	100% altered to saponite
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GROUNDMASS:

Grain size: cryptocrystalline
Texture: intergranular to variolitic

VESICLES: sparse

ALTERATION: Dark gray slightly altered basalt.

VEINS: 0.1-0.4 mm veins of saponite with iron oxyhydroxide and rare pyrite.

STRUCTURE: Curved and T-intersection veins in Pieces 9, 11, and 13.
Vesicles with steeply dipping preferred orientation in Pieces 7 and 11.

ADDITIONAL COMMENTS: Piece 6 is an angular clast of cryptocrystalline basalt with glassy margins (partly altered). Rare (<1%) crystal clots or microgabbros (0.5-1.5 mm diameter) composed of plagioclase plus clinopyroxene with rare pale green clinopyroxene (pigeonite?).

UNIT: 15

ROCK NAME: Aphyric cryptocrystalline basalt
SUMMARY DESCRIPTION: Massive aphyric cryptocrystalline basalt sheet flow.
PIECES: 16 (igneous description based on Piece 16)

CONTACTS:
Upper: not recovered
Lower: not recovered

COLOR: black (N 2.5/)

PHENOCRYSTS:

Olivine	<1.0 %	0.1-0.2 mm	100% altered to saponite
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GROUNDMASS:

Grain size: cryptocrystalline
Texture: intergranular

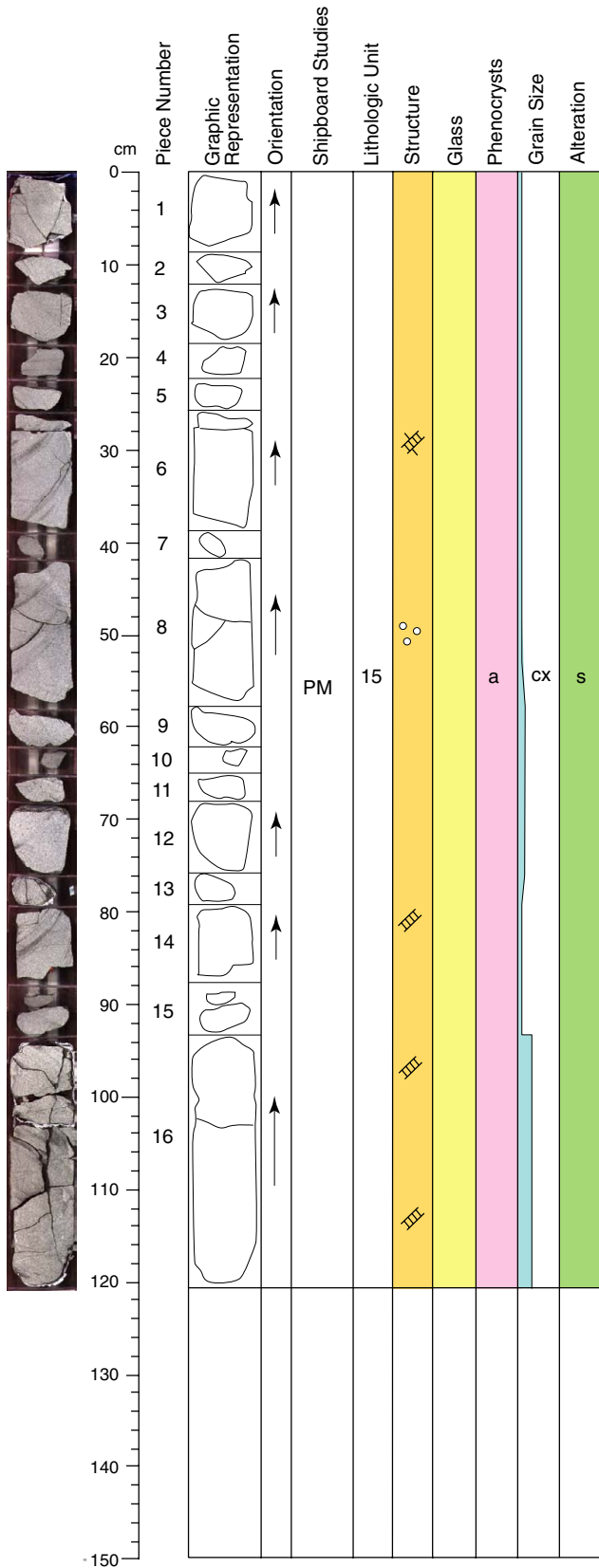
VESICLES: rare

ALTERATION: Dark gray slightly altered basalt.

VEINS: One 0.2 mm vein of saponite with iron oxyhydroxide.

STRUCTURE: One vertical vein.

Core Photo



206-1256D-41R-1 (Section top: 524.80 mbsf)

UNIT: 15

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Massive aphyric cryptocrystalline basalt sheet flow.

PIECES: 1-16 (igneous description based on Piece 6b)

CONTACTS:

Upper: not recovered

Lower: not recovered

COLOR: black (N 2.5)

PHENOCRYSTS:

Olivine <1.0 % 0.1-0.2 mm 100% altered to saponite

GROUNDMASS:

Grain size: cryptocrystalline

Texture: variolitic to intergranular

VESICLES: rare

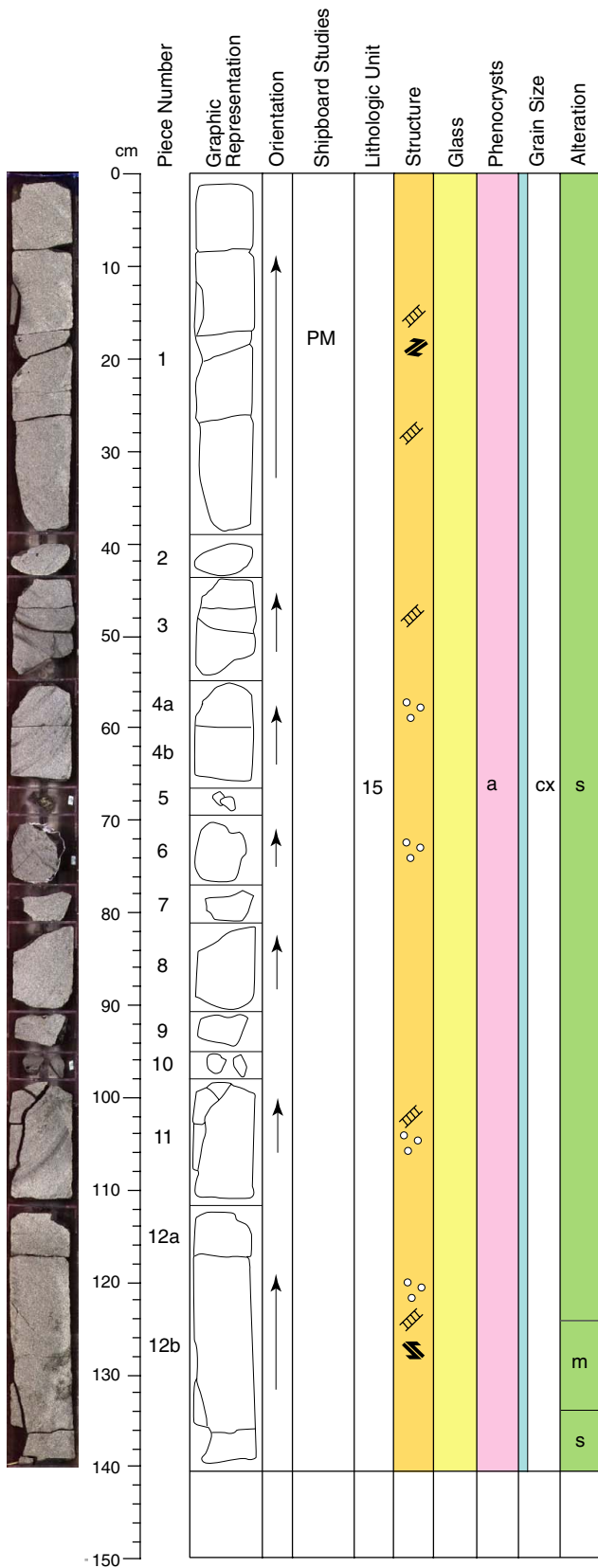
ALTERATION: Dark gray slightly altered basalt.

VEINS: 0.1-0.6 mm veins of saponite with pyrite and rare carbonate.

STRUCTURE: Conjugate vein system in Piece 6. Parallel veins with gentle dip in

Piece 8. Subvertical curved vein and radial veins in Piece 16. Vesicles with steeply dipping preferred orientation in Piece 8.

Core Photo



206-1256D-41R-2 (Section top: 526.00 mbsf)

UNIT: 15

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Massive aphyric cryptocrystalline basalt sheet flow.

PIECES: 1-12 (igneous description based on Piece 8a)

CONTACTS:

Upper: not recovered

Lower: not recovered

COLOR: greenish black (10Y 2.5/1)

PHENOCRYSTS:

Olivine <1.0 % 0.1-0.2 mm 100% altered to saponite

GROUNDMASS:

Grain size: cryptocrystalline

Texture: intergranular

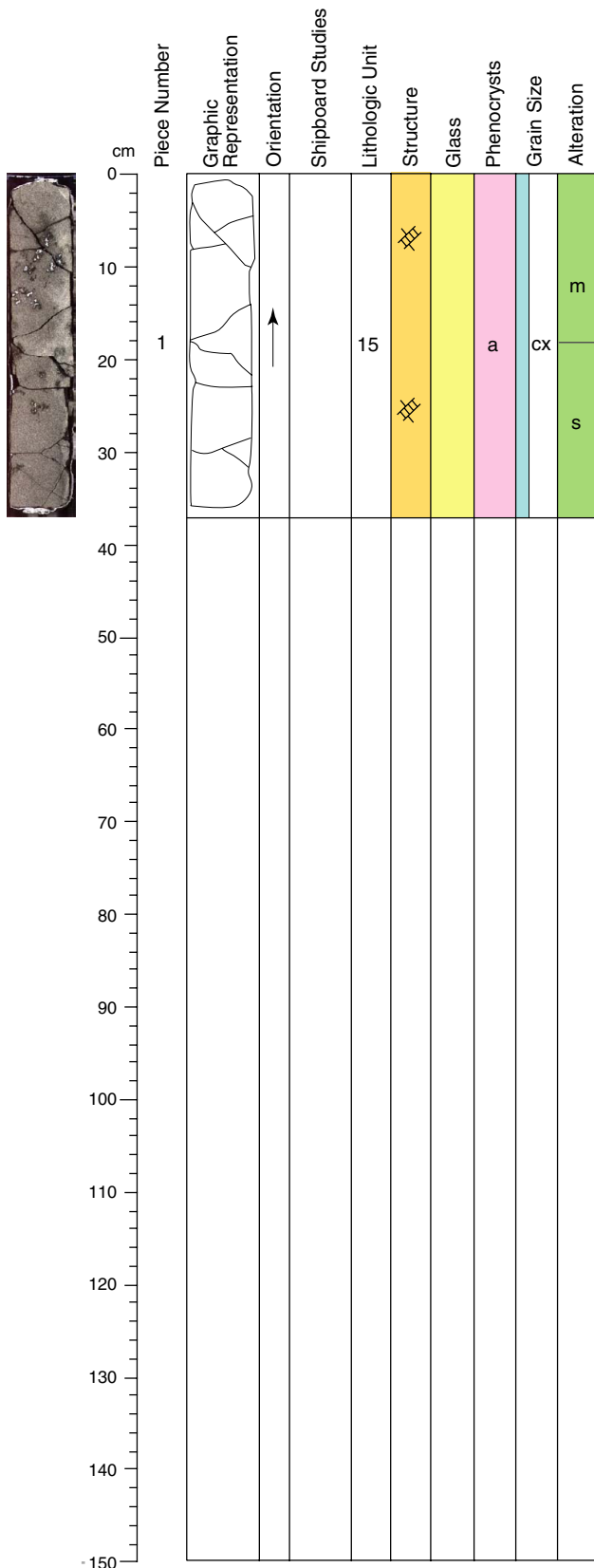
VESICLES: rare

ALTERATION: Dark gray slightly to moderately altered basalt.

VEINS: 0.1-1.0 mm veins of saponite with pyrite and rare carbonate.

STRUCTURE: Set of parallel subhorizontal veins in Piece 1. One shear vein with saponite overlapping fibers and reverse sense of shear in Pieces 1 and 12. Steeply dipping preferred orientation of vesicles and alteration patches in Pieces 4, 6, 8, and 11.

Core Photo



206-1256D-41R-3 (Section top: 527.40 mbsf)

UNIT: 15

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Massive aphyric cryptocrystalline basalt sheet flow.

PIECES: 1 (igneous description based on Piece 1)

CONTACTS:

Upper: not recovered

Lower: not recovered

COLOR: black (N 2.5/)

PHENOCRYSTS:

Olivine 0.2 % 0.2-0.3 mm 100% altered to saponite

GROUNDMASS:

Grain size: cryptocrystalline

Texture: variolitic

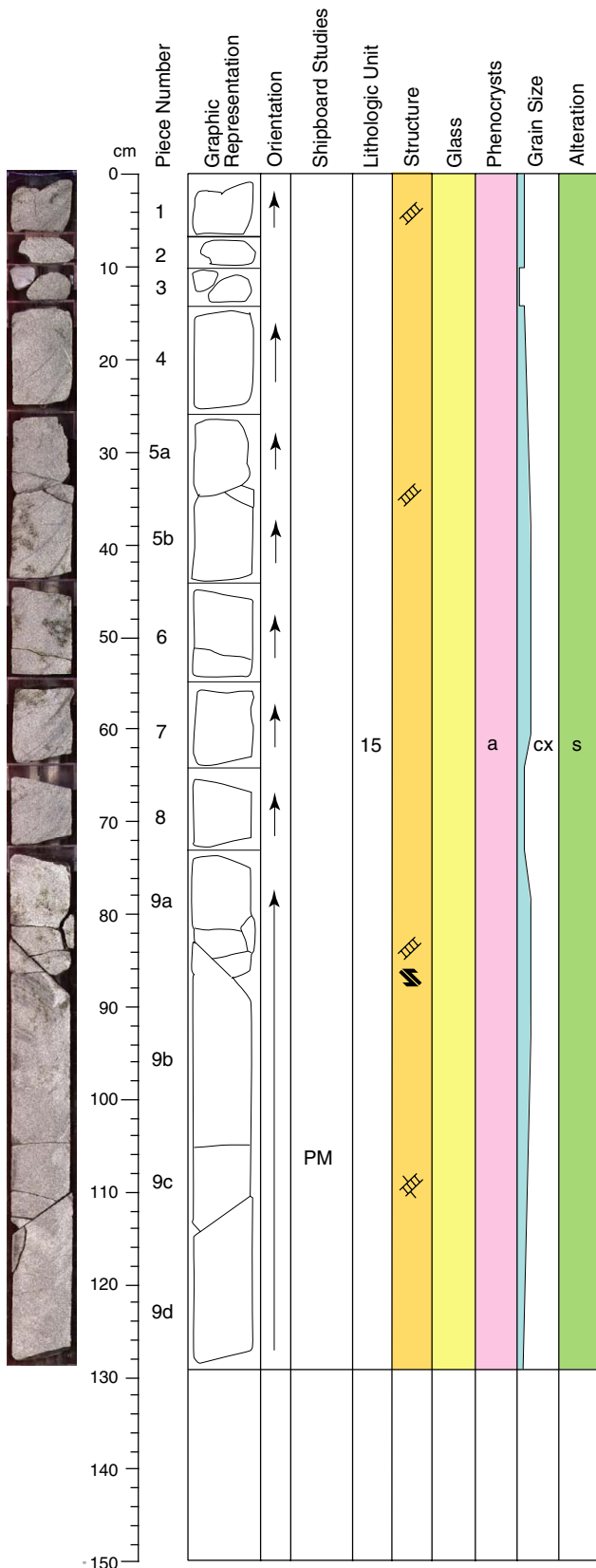
VESICLES: Irregular vugs filled with secondary minerals

ALTERATION: Dark gray slightly to moderately altered basalt.

VEINS: 0.2-0.5 mm veins of saponite with pyrite and carbonate.

STRUCTURE: Conjugate vein system cutting amygdales filled with saponite and silica.

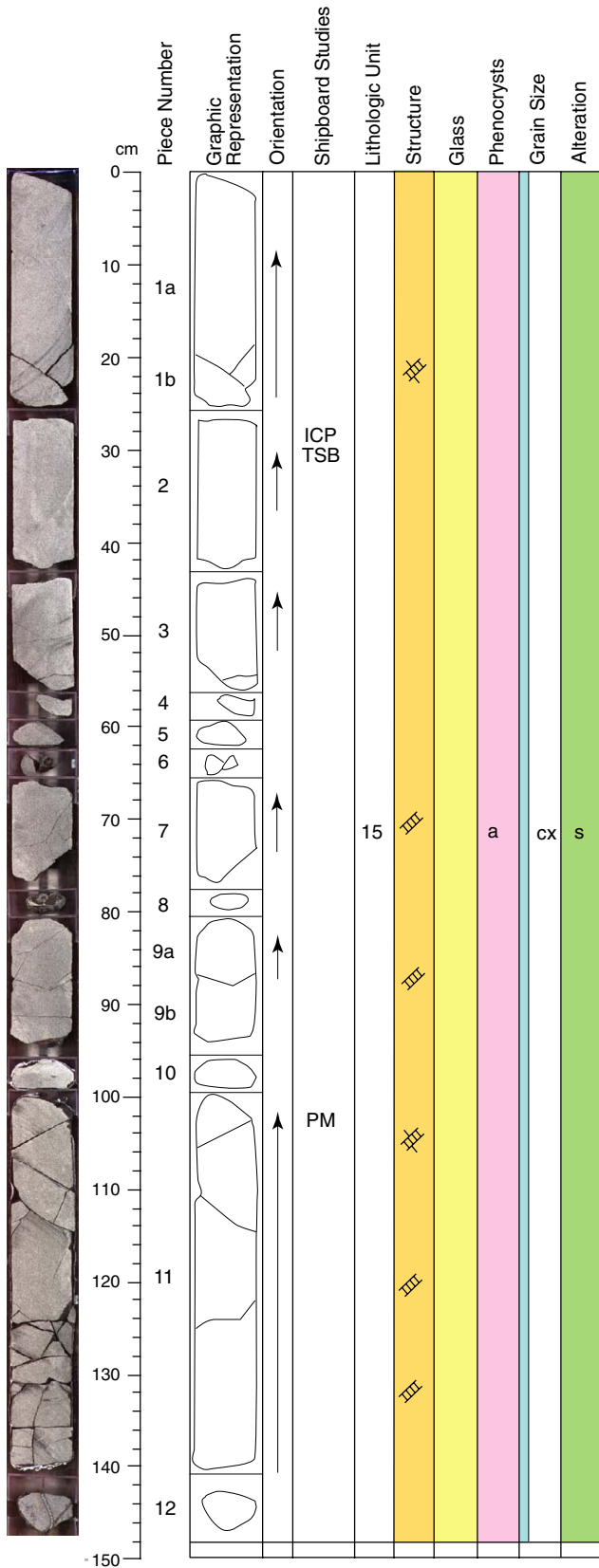
Core Photo



206-1256D-42R-1 (Section top: 529.40 mbsf)

UNIT: 15
 ROCK NAME: Aphyric cryptocrystalline basalt
 SUMMARY DESCRIPTION: Massive aphyric cryptocrystalline basalt sheet flow.
 PIECES: 1-9 (igneous description based on Piece 4)
 CONTACTS:
 Upper: not recovered
 Lower: not recovered
 COLOR: black (N 2.5/)
 PHENOCRYSTS:
 Olivine <1.0 % 0.1-0.2 mm 100% altered to saponite
 GROUNDMASS:
 Grain size: cryptocrystalline
 Texture: variolitic to intergranular
 VESICLES: Patches of irregular vesicles filled with saponite
 ALTERATION: Dark gray slightly altered basalt.
 VEINS: 0.1-0.8 mm veins of saponite with pyrite and rare carbonate.
 STRUCTURE: Conjugate vein system in Piece 9. Gently dipping veins in Pieces 5, 6, 7, and 8. Shear vein with saponite overlapping fibers and reverse sense of shear in Piece 9. Steeply dipping preferred orientation of alteration patches in Pieces 4, 5, 6, and 9.

Core Photo



206-1256D-42R-2 (Section top: 530.68 mbsf)

UNIT: 15

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Massive aphyric cryptocrystalline basalt.

PIECES: 1-12 (igneous description based on Piece 2)

CONTACTS:

Upper: not recovered

Lower: not recovered

COLOR: black (N 2.5/)

PHENOCRYSTS:

Olivine 0.2 % 0.2-0.3 mm 100% altered to saponite

GROUNDMASS:

Grain size: cryptocrystalline

Texture: variolitic

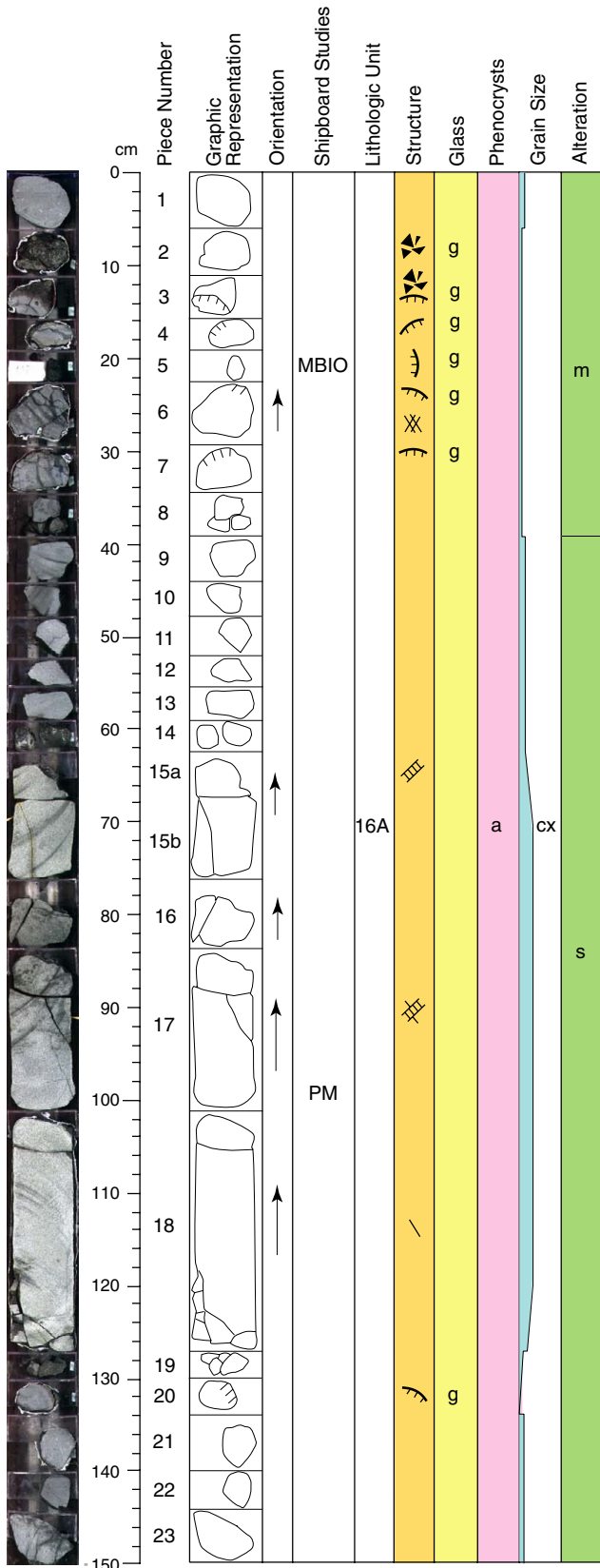
VESICLES: none

ALTERATION: Dark gray slightly altered basalt with one 3 mm mixed black and brown alteration halo along a vein in Piece 12.

VEINS: 0.1-0.5 mm veins of saponite with pyrite and rare carbonate, celadonite, iron oxyhydroxide, and silica.

STRUCTURE: Conjugate vein system in Pieces 1 and 11. Steeply dipping curved and radial veins in Piece 7.

Core Photo



206-1256D-43R-1 (Section top: 533.90 mbsf)

UNIT: 16A

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flow with glassy margin and flow-top breccia.

PIECES: 1-23 (igneous description based on Piece 15)

CONTACTS:

Upper: glassy breccia and chilled margin
 Lower: not recovered

COLOR: very dark gray (N 3/)

PHENOCRYSTS:

Plagioclase	tr %	0.2 mm	
Olivine	0.2 %	0.1-0.5 mm	100 % altered to saponite
Clinopyroxene	tr %	0.2 mm	

GROUNDMASS:

Grain size: cryptocrystalline
 Texture: variolitic

VESICLES: none

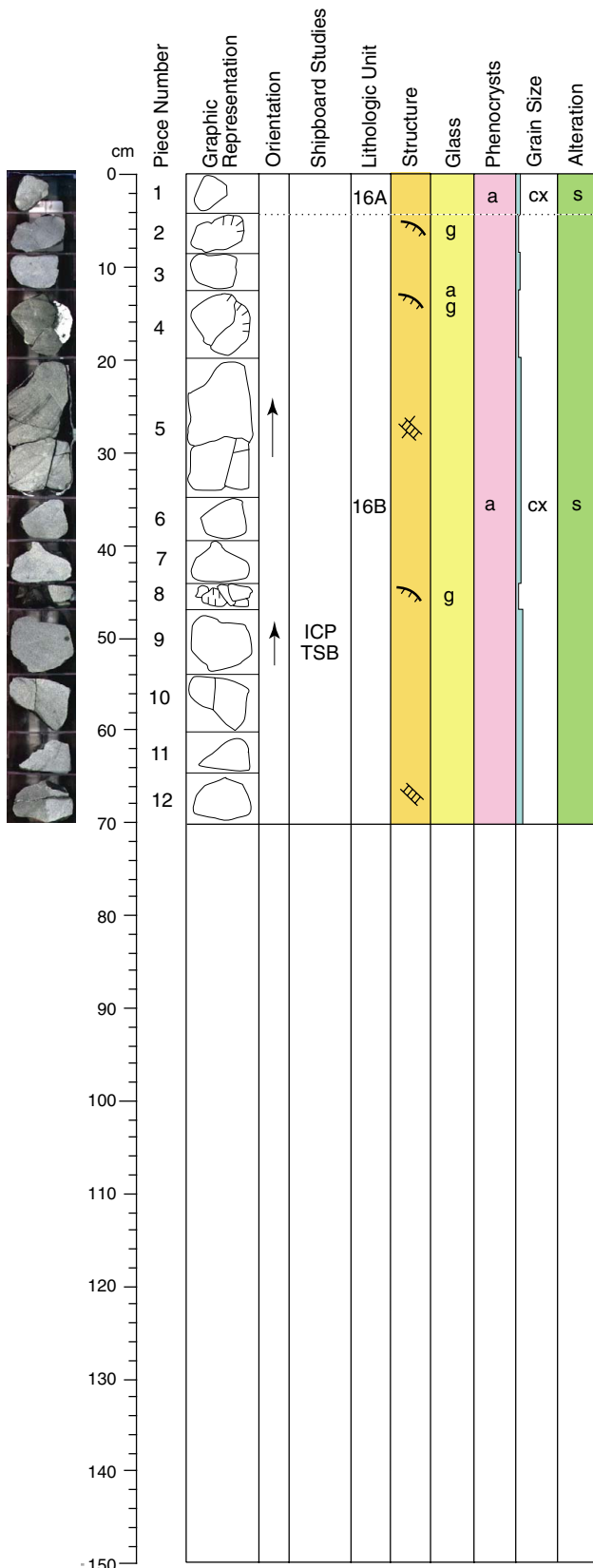
ALTERATION: Dark gray slightly to moderately altered basalt with rare 3 mm mixed black and brown alteration halos along veins.

VEINS: 0.1-0.5 mm veins of saponite with pyrite, iron oxyhydroxide, and rare silica.

STRUCTURE: Steeply dipping veins and subhorizontal veins in Pieces 17 and 18. Veins radiating from curved chilled margins in Pieces 3 and 7. Vein network with incipient breccia in Piece 6. Ductile structures linked to the lava flow in Pieces 3 and 7. One joint in Piece 18.

ADDITIONAL COMMENTS: Plagioclase plus clinopyroxene appear as rare crystal clots. Pieces 3, 4, 6, and 7 show deformed crust of lava flow, with angular thin glass shards adjacent to the lava which are subparallel to the surface and have spalled off of it. Pieces 2 and 5 consist entirely of glassy clasts that are either polygonal and relatively equant or thin curved shards in a matrix of altered glass.

Core Photo



206-1256D-43R-2 (Section top: 535.40 mbsf)

UNIT: 16A

ROCK NAME: Aphyric cryptocrystalline basalt
 SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flow with glassy margin at top.

PIECES: 1 (igneous description based on Piece 1)

CONTACTS:

Upper: glassy breccia and chilled margin
 Lower: not recovered

COLOR: black (N 2.5/)

PHENOCRYSTS:

Plagioclase	tr %	0.2 mm	
Olivine	tr %	0.1 mm	100 % altered to saponite
Clinopyroxene	tr %	0.1 mm	

GROUNDMASS:

Grain size: cryptocrystalline
 Texture: variolitic

VESICLES: none

ALTERATION: Dark gray slightly altered basalt.

VEINS: One 0.2 mm vein of saponite.

STRUCTURE: none

UNIT: 16B

ROCK NAME: Aphyric cryptocrystalline basalt
 SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flow with glassy margins at top and base.

PIECES: 2-12 (igneous description based on Piece 6)

CONTACTS:

Upper: glassy margin
 Lower: glassy margin

COLOR: black (N 2.5/)

PHENOCRYSTS:

Plagioclase	tr %	0.2 mm	
Olivine	tr %	0.1 mm	100 % altered to saponite
Clinopyroxene	tr %	0.1 mm	

GROUNDMASS:

Grain size: cryptocrystalline
 Texture: variolitic

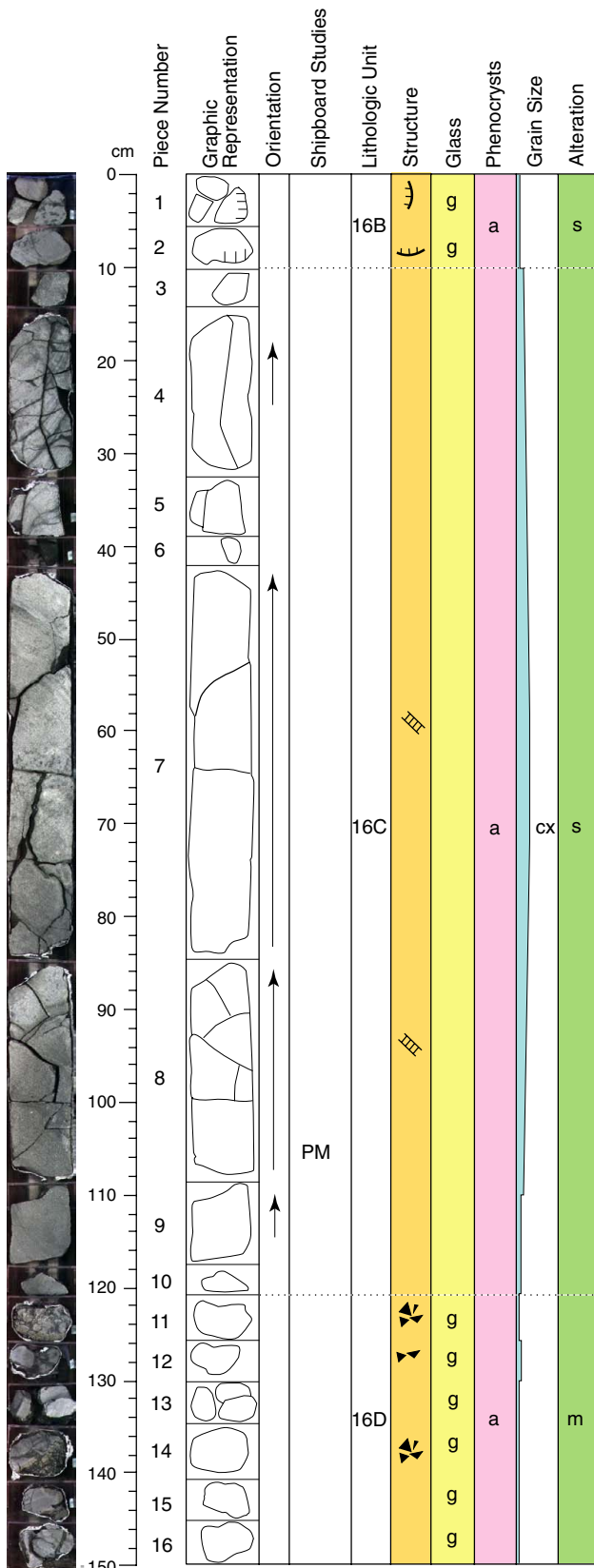
VESICLES: Rare spherical vesicles 0.5 mm diameter filled with saponite.

ALTERATION: Dark gray slightly altered basalt with one 10 mm black alteration halo along a vein in Piece 12.

VEINS: 0.1-15 mm veins of saponite with pyrite and rare silica.

STRUCTURE: Conjugate system of veins in Piece 5. One composite (saponite + silica) vein with irregular morphology in Piece 12.

Core Photo



206-1256D-44R-1 (Section top: 543.10 mbsf)

UNIT: 16B

ROCK NAME: Aphyric cryptocrystalline basalt
SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flow with glassy margins at top and base.

PIECES: 1-2 (igneous description based on Piece 2)

CONTACTS:

Upper: glassy margin
Lower: glassy margin

COLOR: black (N 2.5/)

PHENOCRYSTS: none

GROUNDMASS:

Grain size: cryptocrystalline
Texture: variolitic

VESICLES: none

ALTERATION: Dark gray slightly altered basalt.

VEINS: One 0.2 mm vein of saponite in Piece 2.

STRUCTURE: Y-shaped intersection veins perpendicular to the glassy margin in Piece 2.

UNIT: 16C

ROCK NAME: Aphyric cryptocrystalline basalt
SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flow.

PIECES: 3-10 (igneous description based on Piece 7)

CONTACTS:

Upper: not recovered
Lower: not recovered

COLOR: very dark gray (N 3/)

PHENOCRYSTS:

Olivine 0.2 % 0.1-0.2 mm 100% altered to saponite

GROUNDMASS:

Grain size: cryptocrystalline
Texture: variolitic

VESICLES: none

ALTERATION: Dark gray slightly altered basalt with 2-5 mm black alteration halos along veins.

VEINS: 0.1-0.5 mm veins of saponite.

STRUCTURE: Subvertical sinuous veins with related radial curved veins in Pieces 4, 7 and 8.

UNIT: 16D

ROCK NAME: Hyaloclastite

SUMMARY DESCRIPTION: Hyaloclastite with clasts of aphyric cryptocrystalline basalt.

PIECES: 11-16 (igneous description based on Piece 14)

CONTACTS:

Upper: glassy margin with hyaloclastite
Lower: not recovered

COLOR: black (N 2.5/)

PHENOCRYSTS: none

GROUNDMASS:

Grain size: cryptocrystalline
Texture: intergranular

VESICLES: none

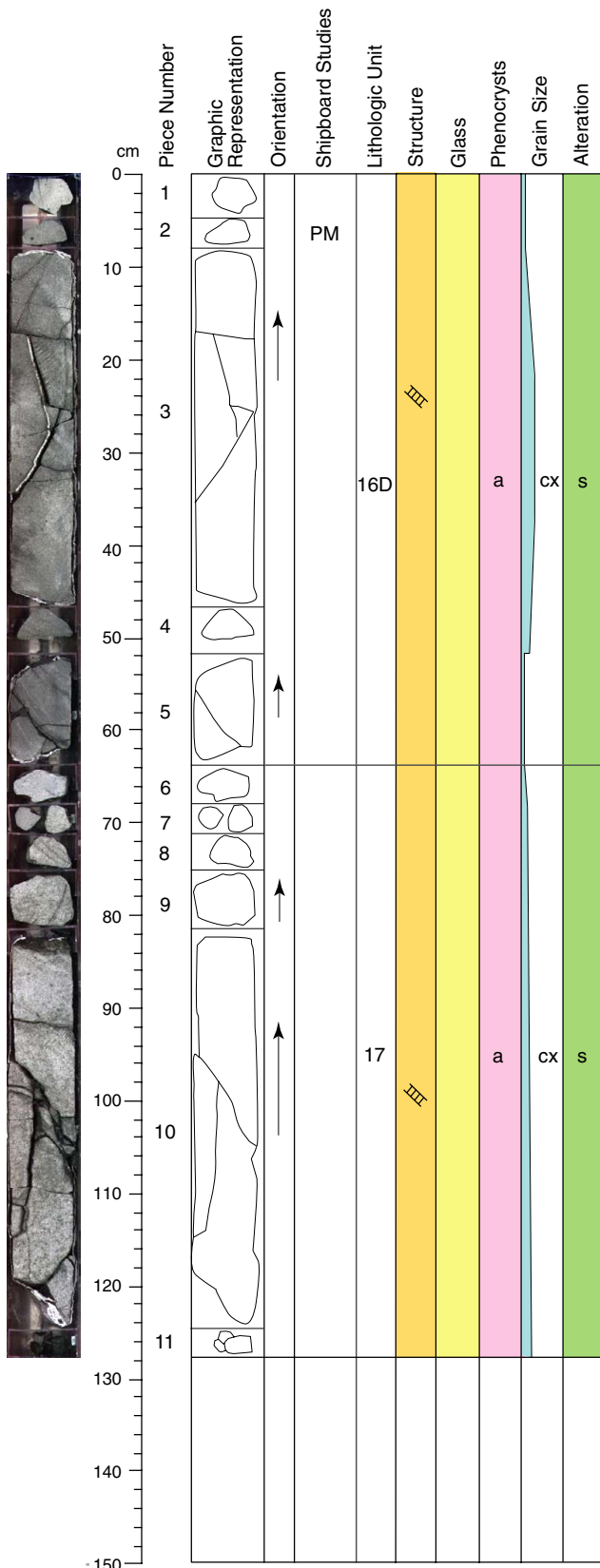
ALTERATION: Moderately altered hyaloclastite breccia with fragments of dark gray slightly altered basalt and slightly altered glass cemented with saponite and rare silica.

VEINS: none

STRUCTURE: none

ADDITIONAL COMMENTS: Pieces 11-16 consist of angular clasts of aphyric cryptocrystalline basalt (described above) and fragments of glass within a matrix of altered glass.

Core Photo

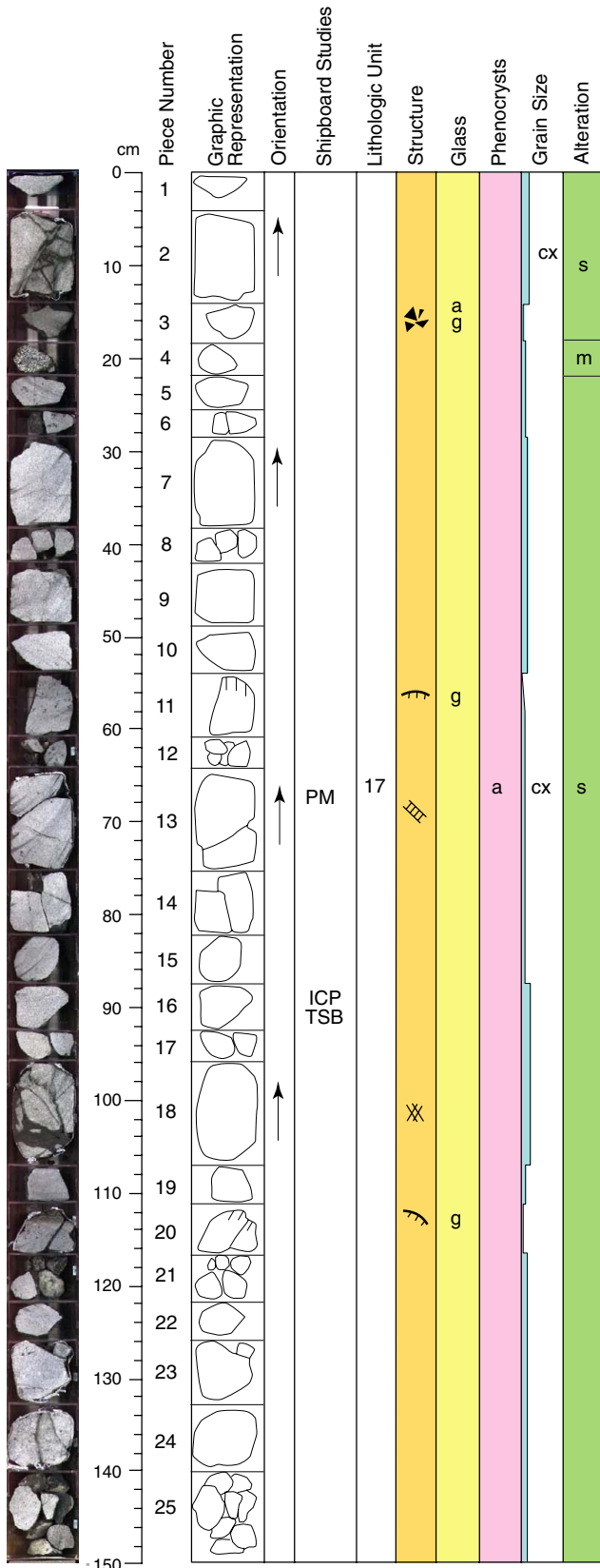


206-1256D-44R-2 (Section top: 544.60 mbsf)

UNIT: 16D
 ROCK NAME: Aphyric cryptocrystalline basalt
 SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flow with hyaloclastite at top.
 PIECES: 1-5 (igneous description based on Piece 5)
 CONTACTS:
 Upper: glassy margin with hyaloclastite
 Lower: not recovered
 COLOR: black (N 2.5/)
 PHENOCRYSTS:
 Olivine: tr % 0.2 mm 100% altered to saponite
 GROUNDMASS:
 Grain size: cryptocrystalline
 Texture: intergranular
 VESICLES: none
 ALTERATION: Dark gray slightly altered basalt with 2-3 mm black alteration halos along veins.
 VEINS: 0.1-1.0 mm veins of saponite with pyrite and rare silica.
 STRUCTURE: Subvertical sinuous veins with relative radial curved veins in Pieces 3 and 5. Vein in Piece 3 is a 2.5 mm composite vein filled with saponite + silica.
 ADDITIONAL COMMENTS: Sparse (~1%) microgabbro xenoliths (0.5-1.5 mm diameter) of plagioclase plus clinopyroxene, with some pale green pyroxene (pigeonite?).

UNIT: 17
 ROCK NAME: Aphyric cryptocrystalline basalt
 SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flow.
 PIECES: 6-11 (igneous description based on Piece 10)
 CONTACTS:
 Upper: not recovered
 Lower: not recovered
 COLOR: black (N 2.5/)
 PHENOCRYSTS:
 Olivine <1 % 0.2-0.3 mm 100% altered to saponite
 GROUNDMASS:
 Grain size: cryptocrystalline
 Texture: intergranular to variolitic
 VESICLES: Sparse irregular vesicles filled with saponite
 ALTERATION: Dark gray slightly altered basalt.
 VEINS: 0.1-0.5 mm veins of saponite with rare pyrite.
 STRUCTURE: Subvertical sinuous veins with related radial curved veins in Pieces 3, 5 and 10.

Core Photo



206-1256D-45R-1 (Section top: 552.50 mbsf)

UNIT: 17

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flow.

PIECES: 1-25 (igneous description based on Piece 7)

CONTACTS:

Upper: not recovered

Lower: not recovered

COLOR: very dark gray (N 3/)

PHENOCRYSTS:

Plagioclase tr % 0.2 mm

Olivine <1 % 0.2-0.3 mm 100% altered to saponite

GROUNDMASS:

Grain size: cryptocrystalline

Texture: intergranular to variolitic

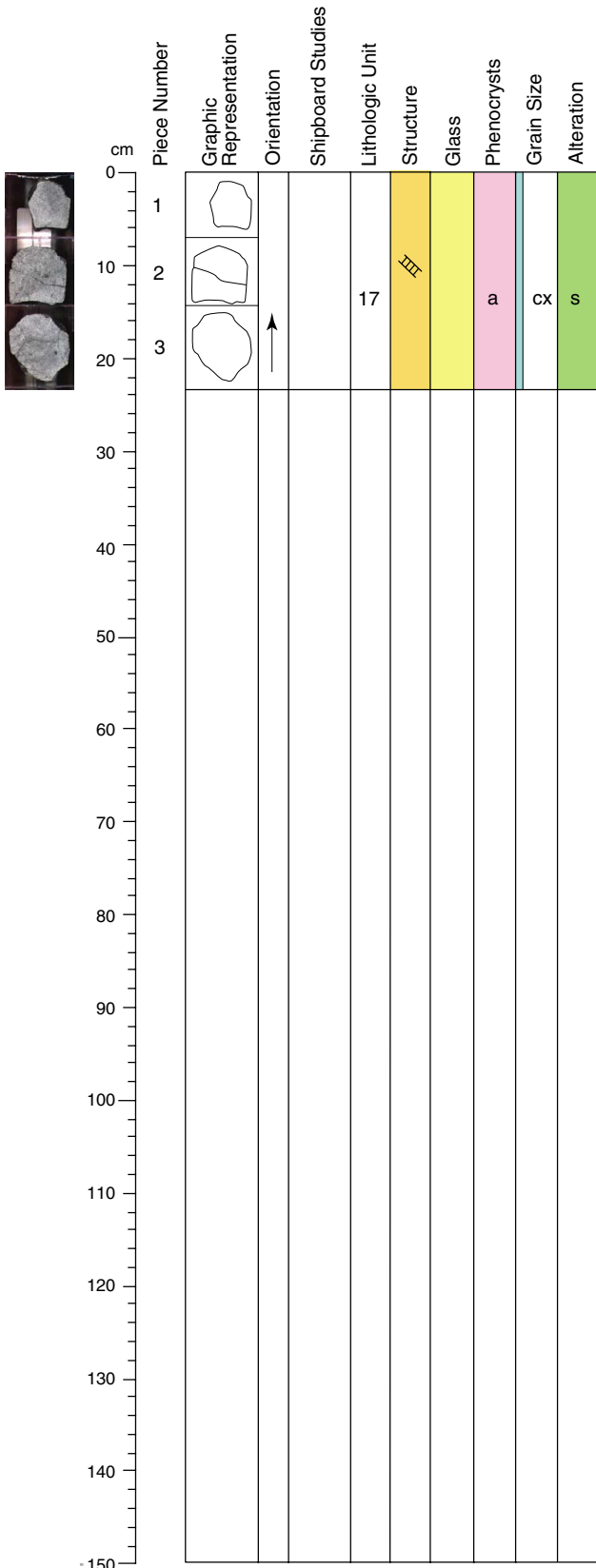
VESICLES: Sparse irregular vesicles filled with saponite

ALTERATION: Dark gray slightly to moderately altered basalt with 1-5 mm black alteration halos along veins.

VEINS: 0.1-1.5 mm veins of saponite with pyrite and rare silica.

STRUCTURE: Y-shaped intersection veins in Pieces 2, 7, and 9. Vein network in Piece 18. Radial vein perpendicular to glassy margin in Piece 20. Curved veins in Pieces 13, 14 and 24.

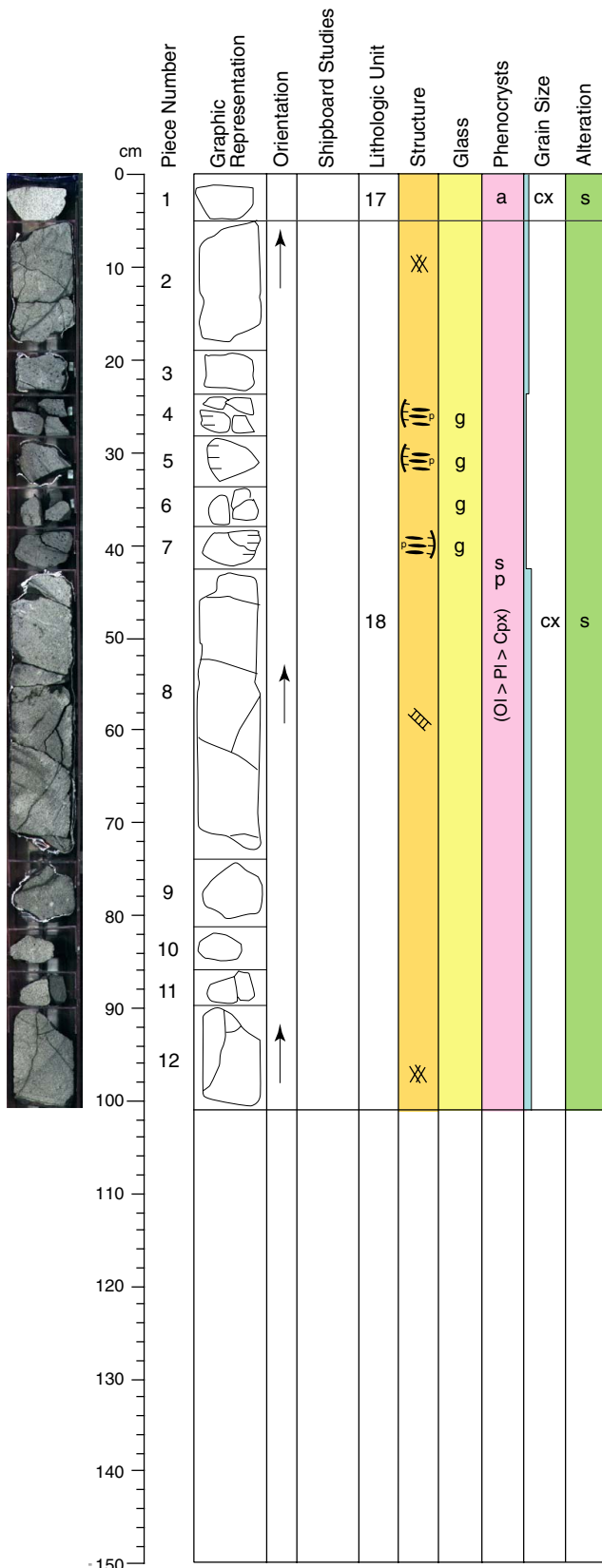
Core Photo



206-1256D-45R-2 (Section top: 554.00 mbsf)

UNIT: 17
ROCK NAME: Aphyric cryptocrystalline basalt
SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flow.
PIECES: 1-3 (igneous description based on Piece 3)
CONTACTS:
 Upper: not recovered
 Lower: not recovered
COLOR: black (N 2.5/)
PHENOCRYSTS:
 Olivine <1 % 0.1-1.6 mm 100% altered to saponite
GROUNDMASS:
 Grain size: cryptocrystalline
 Texture: intergranular to variolitic
VESICLES: Sparse irregular vesicles filled with saponite
ALTERATION: Dark gray slightly altered basalt.
VEINS: 0.1-0.2 mm veins of saponite with pyrite.
STRUCTURE: Curved veins with y-shaped intersection in Piece 3.
ADDITIONAL COMMENTS: One large cluster of olivine phenocrysts (altered to saponite) with grains up to 1.6 mm; all other phenocrysts are 0.1-0.2 mm.

Core Photo

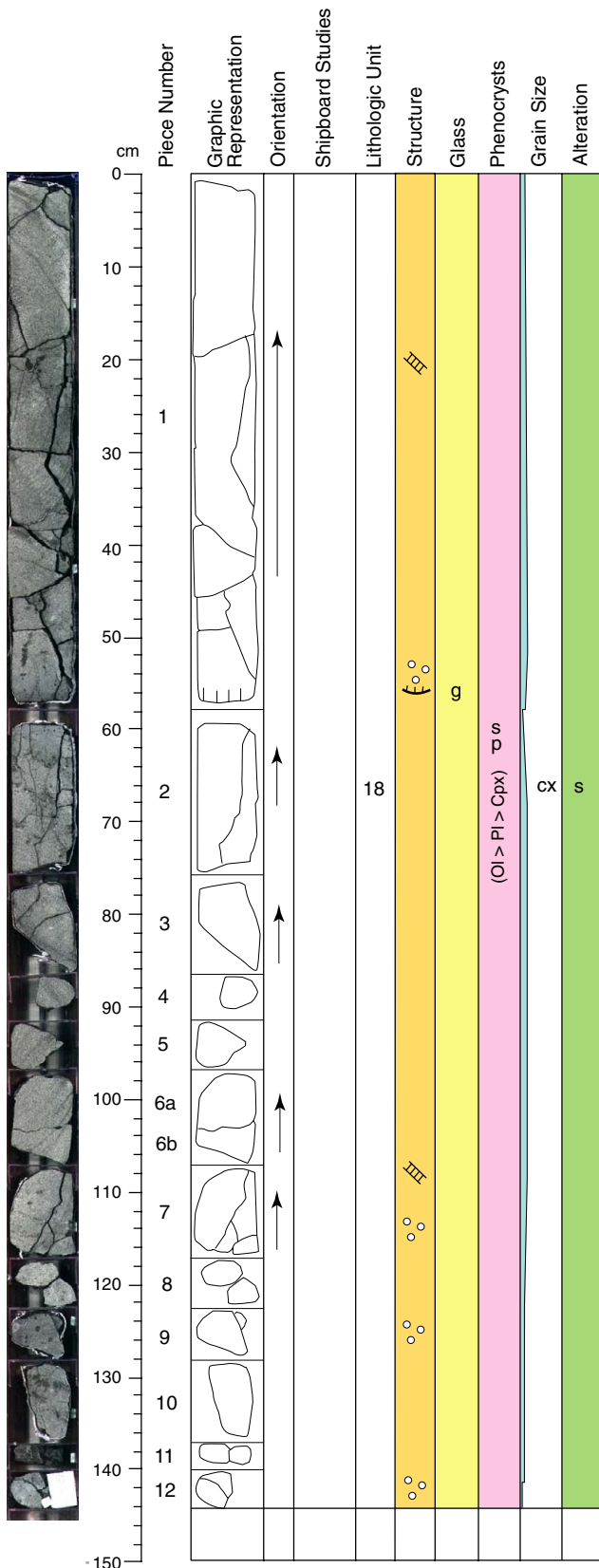


206-1256D-46R-1 (Section top: 561.50 mbsf)

UNIT: 17
 ROCK NAME: Aphyric cryptocrystalline basalt
 SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flow.
 PIECES: 1 (igneous description based on Piece 1)
 CONTACTS:
 Upper: not recovered
 Lower: not recovered
 COLOR: very dark gray (N 3/)
 PHENOCRYSTS:
 Olivine 0.3 % 0.1-0.2 mm 100% altered to saponite
 GROUNDMASS:
 Grain size: cryptocrystalline
 Texture: variolitic
 VESICLES:
 ALTERATION: Dark gray slightly altered basalt.
 VEINS: none
 STRUCTURE: No oriented structures.

UNIT: 18
 ROCK NAME: Sparsely clinopyroxene-plagioclase-olivine-phyric
 cryptocrystalline basalt
 SUMMARY DESCRIPTION: Sparsely-phyric cryptocrystalline basalt sheet flows.
 PIECES: 2-12 (igneous description based on Piece 5)
 CONTACTS:
 Upper: not recovered
 Lower: not recovered
 COLOR: black (N 2.5/)
 PHENOCRYSTS:
 Plagioclase 0.3 % 0.2-0.6 mm
 Olivine 1.0 % 0.2-0.3 mm 100 % altered to saponite
 Clinopyroxene 0.2 % 0.3-0.4 mm
 GROUNDMASS:
 Grain size: cryptocrystalline
 Texture: variolitic
 VESICLES: Pipe vesicles in Pieces 4, 5, and 7. Empty or now filled with saponite.
 ALTERATION: Dark gray slightly altered basalt.
 VEINS: 0.1-1.5 mm veins of saponite.
 STRUCTURE: Vein network in Pieces 2 and 12. Subvertical sinuous vein and radial veins in Piece 8. Set of 1 mm parallel and curved veins in Piece 8, probably linked to the flow and cooling of lava.

Core Photo



206-1256D-46R-2 (Section top: 562.51 mbsf)

UNIT: 18

ROCK NAME: Sparsely clinopyroxene-plagioclase-olivine-phyric
 cryptocrystalline basalt

SUMMARY DESCRIPTION: Sparsely-phyric cryptocrystalline basalt sheet flows.

PIECES: 1-12 (igneous description based on Piece 1)

CONTACTS:

Upper: not recovered

Lower: not recovered

COLOR: very dark gray (N 3/)

PHENOCRYSTS:

Plagioclase 0.3% 0.4-0.6 mm

Olivine 1.0% 0.2-0.6 mm 100% altered to saponite

Clinopyroxene 0.2% 0.2-0.4 mm

GROUNDMASS:

Grain size: cryptocrystalline

Texture: variolitic

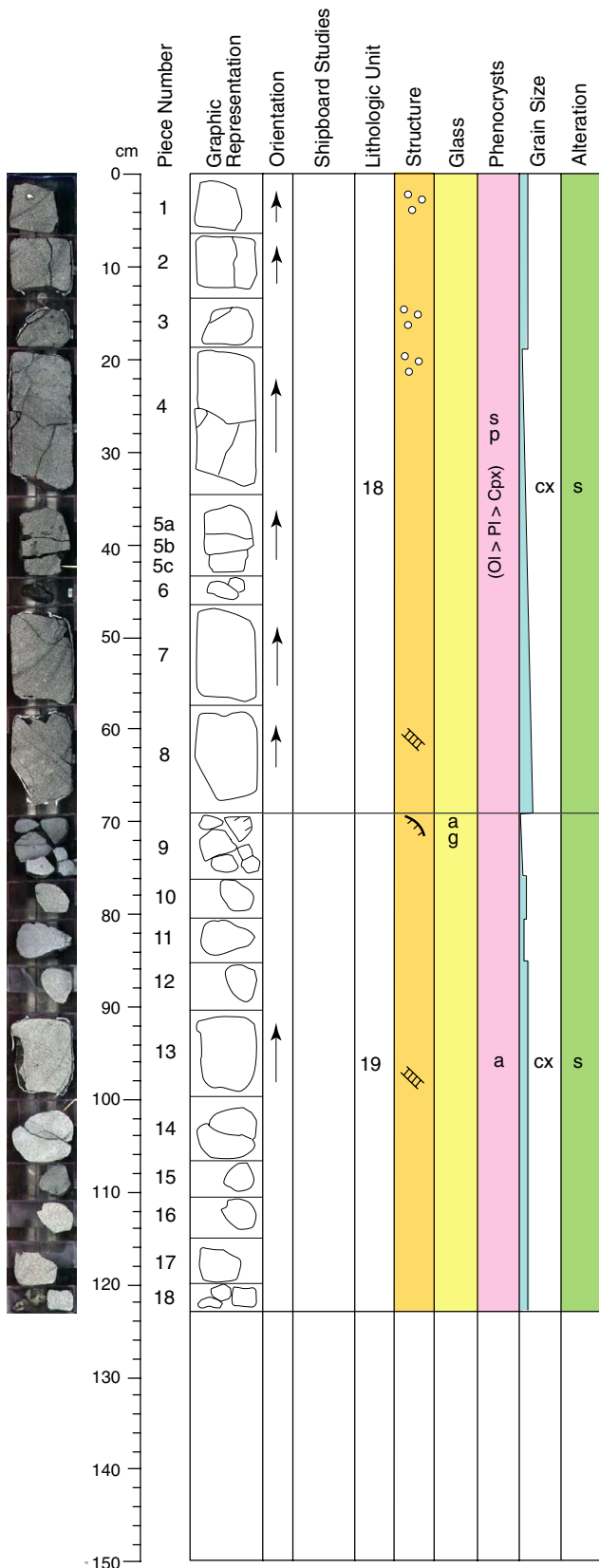
VESICLES: Large spherical vesicles in Pieces 1, 7, 9, and 12.

ALTERATION: Dark gray slightly altered basalt with one 4 mm black alteration halo along a vein in Piece 1.

VEINS: 0.1-2.0 mm veins of saponite with pyrite and rare silica.

STRUCTURE: Subvertical sinuous veins and radial veins in Pieces 1 and 2. Y-shaped intersection veins in Pieces 1 and 7.

Core Photo



206-1256D-46R-3 (Section top: 563.95 mbsf)

UNIT: 18

ROCK NAME: Sparsely clinopyroxene-plagioclase-olivine-phyric
cryptocrystalline basalt

SUMMARY DESCRIPTION: Sparsely-phyric cryptocrystalline basalt sheet flows.

PIECES: 1-8 (igneous description based on Piece 7)

CONTACTS:

Upper: not recovered

Lower: not recovered

COLOR: very dark gray (N 3/)

PHENOCRYSTS:

Plagioclase 0.2 % 0.1-0.6 mm

Olivine 1.0 % 0.2-0.8 mm 100 % altered to saponite

Clinopyroxene 0.1 % 0.2-0.6 mm

GROUNDMASS:

Grain size: cryptocrystalline

Texture: variolitic

VESICLES: Large (3 mm) spherical vesicles in Pieces 1,3, and 4.

ALTERATION: Dark gray slightly altered basalt with 1-3 mm black alteration halos along veins.

VEINS: 0.1-0.4 mm veins of saponite with pyrite.

STRUCTURE: Set of 1 mm parallel and curved veins in Piece 8, probably linked to the flow and cooling of lava.

UNIT: 19

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows.

PIECES: 9-18 (igneous description based on Piece 11)

CONTACTS:

Upper: not recovered

Lower: glassy margin

COLOR: very dark gray (N 3/)

PHENOCRYSTS:

Plagioclase tr % 0.2 mm

Olivine 0.4 % 0.1-0.2 mm 100 % altered to saponite

Clinopyroxene tr % 0.2 mm

GROUNDMASS:

Grain size: cryptocrystalline

Texture: variolitic

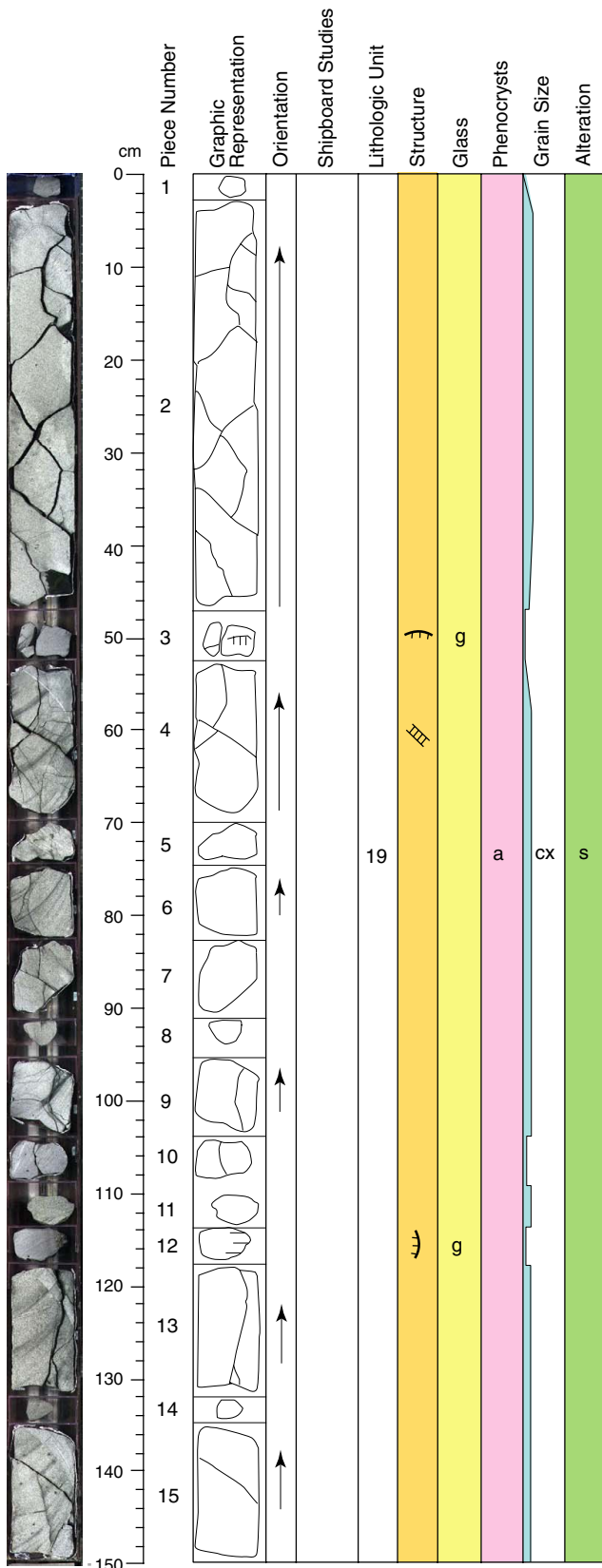
VESICLES: none

ALTERATION: Dark gray slightly altered basalt with 1 mm black alteration halos along veins.

VEINS: 0.1-0.2 mm veins of saponite with pyrite.

STRUCTURE: Y-shaped intersection veins in Piece 14.

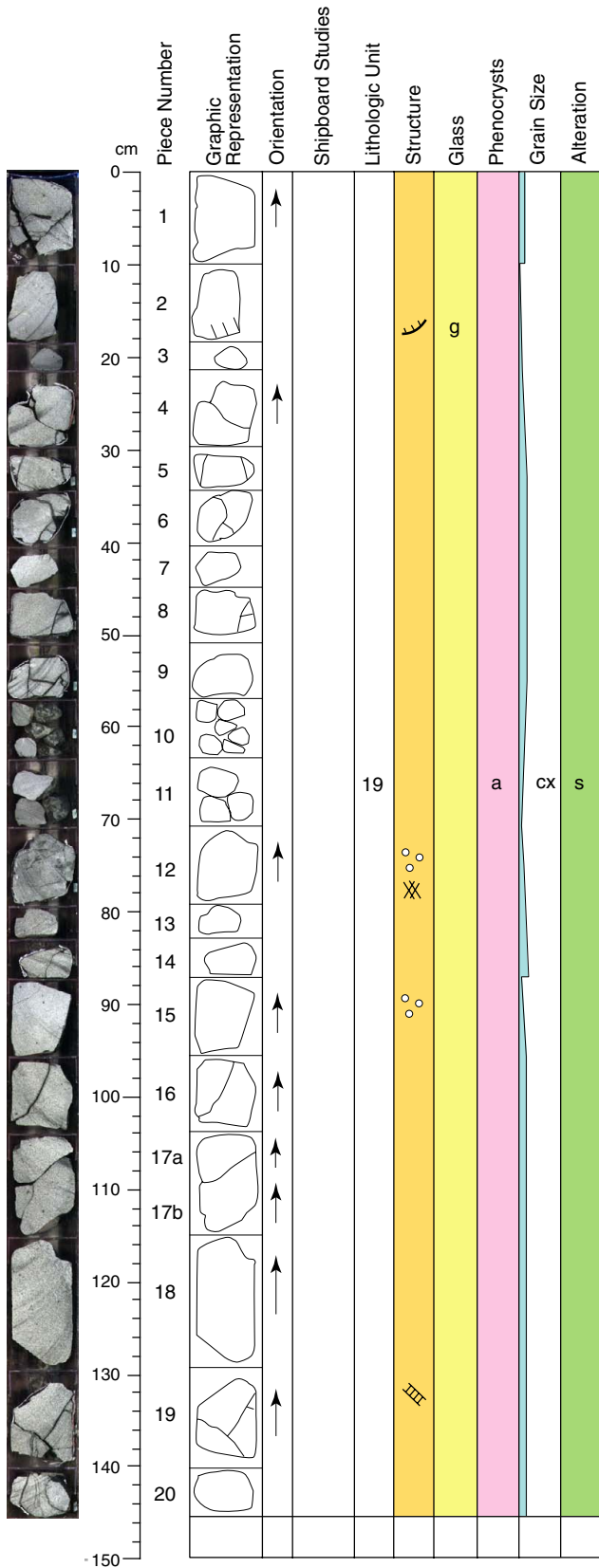
Core Photo



206-1256D-47R-1 (Section top: 571.00 mbsf)

UNIT: 19
 ROCK NAME: Aphyric cryptocrystalline basalt
 SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows.
 PIECES: 1-15 (igneous description based on Piece 2)
 CONTACTS:
 Upper: not recovered
 Lower: glassy margin
 COLOR: very dark gray (N 3/)
 PHENOCRYSTS:
 Olivine 0.2% 0.2-1.7 mm 100% altered to saponite
 Clinopyroxene tr% 0.1 mm
 GROUNDMASS:
 Grain size: cryptocrystalline
 Texture: variolitic
 VESICLES: none
 ALTERATION: Dark gray slightly altered basalt with 1-2 mm black alteration halos along veins.
 VEINS: 0.1-1.0 mm veins of saponite with pyrite and rare silica.
 STRUCTURE: Subvertical sinuous veins and radial curved veins linked to the cooling of lava. Y-shaped intersection veins in Pieces 1, 4, 6, 7, 9, and 13. Three planar saponite and pyrite bearing veins in Piece 15.

Core Photo



206-1256D-47R-2 (Section top: 572.50 mbsf)

UNIT: 19

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows.

PIECES: 1-20 (igneous description based on Piece 17)

CONTACTS:

Upper: not recovered

Lower: not recovered

COLOR: very dark gray (N 3/)

PHENOCRYSTS:

Olivine 0.2 % 1.0 mm 100 % altered to saponite

GROUNDMASS:

Grain size: cryptocrystalline

Texture: variolitic

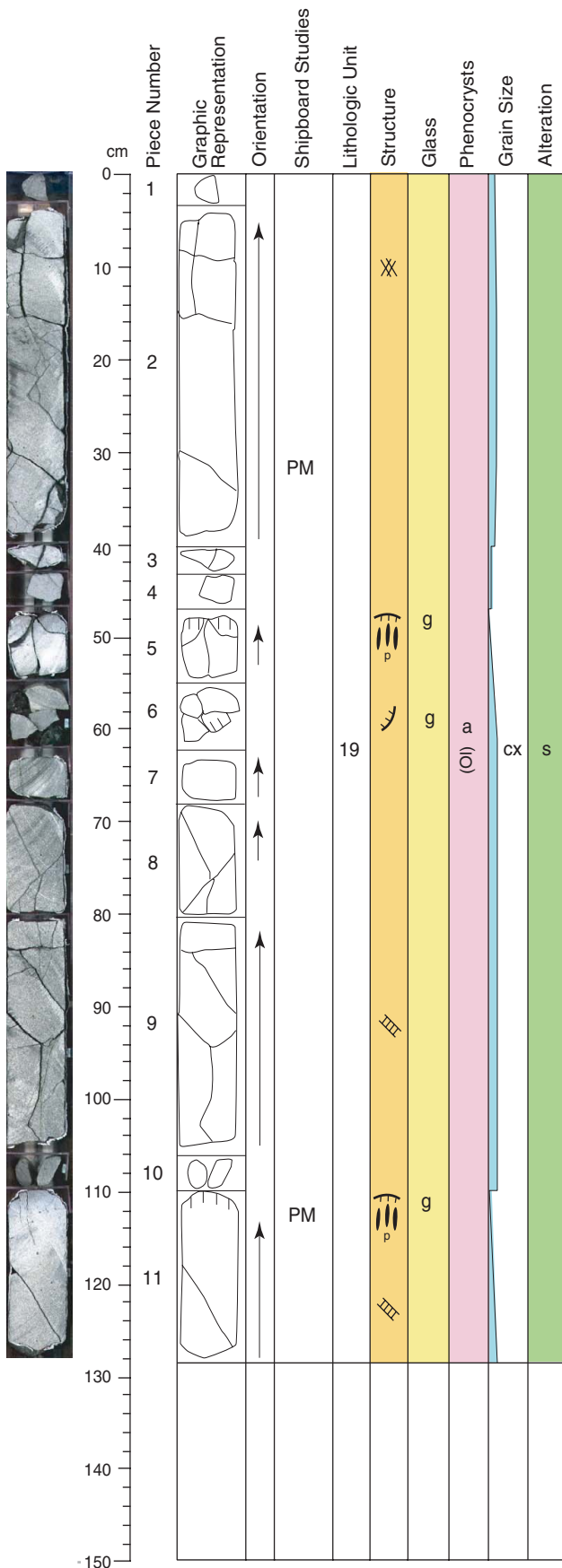
VESICLES: Sparse vesicles in Pieces 12 and 15.

ALTERATION: Dark gray slightly altered basalt with 1-2 mm black alteration halos along veins.

VEINS: 0.1-2.0 mm veins of saponite with pyrite.

STRUCTURE: Subvertical sinuous veins and radial curved veins linked to the cooling of lava, Y-shaped intersection veins in Pieces 1, 2, 4, 7, 8, 9, 17, and 20. Curved veins with alteration halo in Pieces 16 and 19. Vein network in Piece 12. Planar 0.1 mm saponite and pyrite bearing veins in Piece 18.

Core Photo



206-1256D-48R-1 (Section top: 577.00 mbsf)

UNIT: 19

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows.

PIECES: 1-11 (igneous description based on Piece 2)

CONTACTS:

Upper: not recovered

Lower: glassy margins

COLOR: very dark gray (N 3/)

PHENOCRYSTS:

Plagioclase tr % 0.1 mm

Olivine 0.2 % 1.0 mm 100 % altered to saponite

Clinopyroxene tr % 0.1 mm

GROUNDMASS:

Grain size: cryptocrystalline

Texture: variolitic

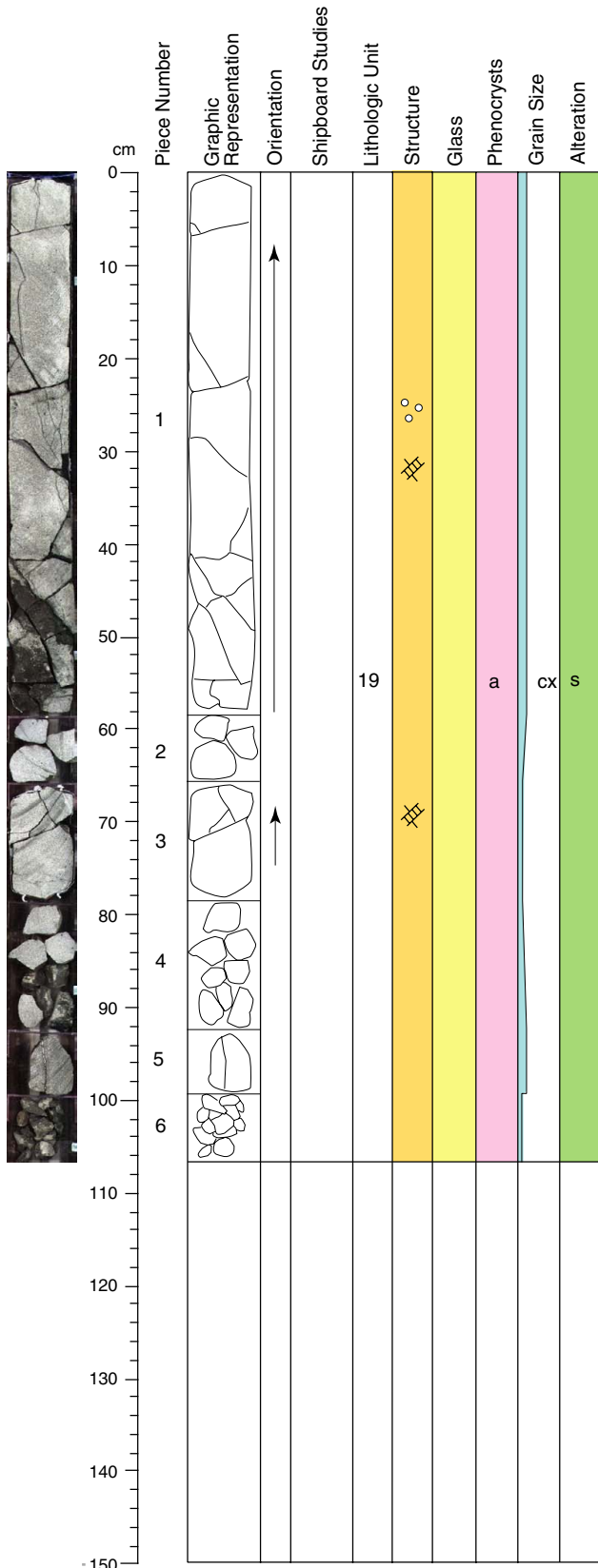
VESICLES: Pipe vesicles in Pieces 5 and 11.

ALTERATION: Dark gray slightly altered basalt with 1-3 mm black alteration halos along veins.

VEINS: 0.1-1.0 mm veins of saponite with silica.

STRUCTURE: Vein network with subvertical sinuous veins and radial curved veins linked to the cooling of lava in Piece 2. Y-shaped intersection veins in Pieces 5, 8, and 9. Vertical veins perpendicular to chilled margin in Piece 11. 2 mm vertical vein of saponite with subangular relics of the wallrock.

Core Photo



206-1256D-48R-2 (Section top: 578.28 mbsf)

UNIT: 19

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows.

PIECES: 1-6 (igneous description based on Piece 1)

CONTACTS:

Upper: not recovered

Lower: glassy margin

COLOR: very dark gray (N 3/)

PHENOCRYSTS:

Olivine 0.1 % 0.2-0.4 mm 100 % altered to saponite

GROUNDMASS:

Grain size: cryptocrystalline

Texture: variolitic

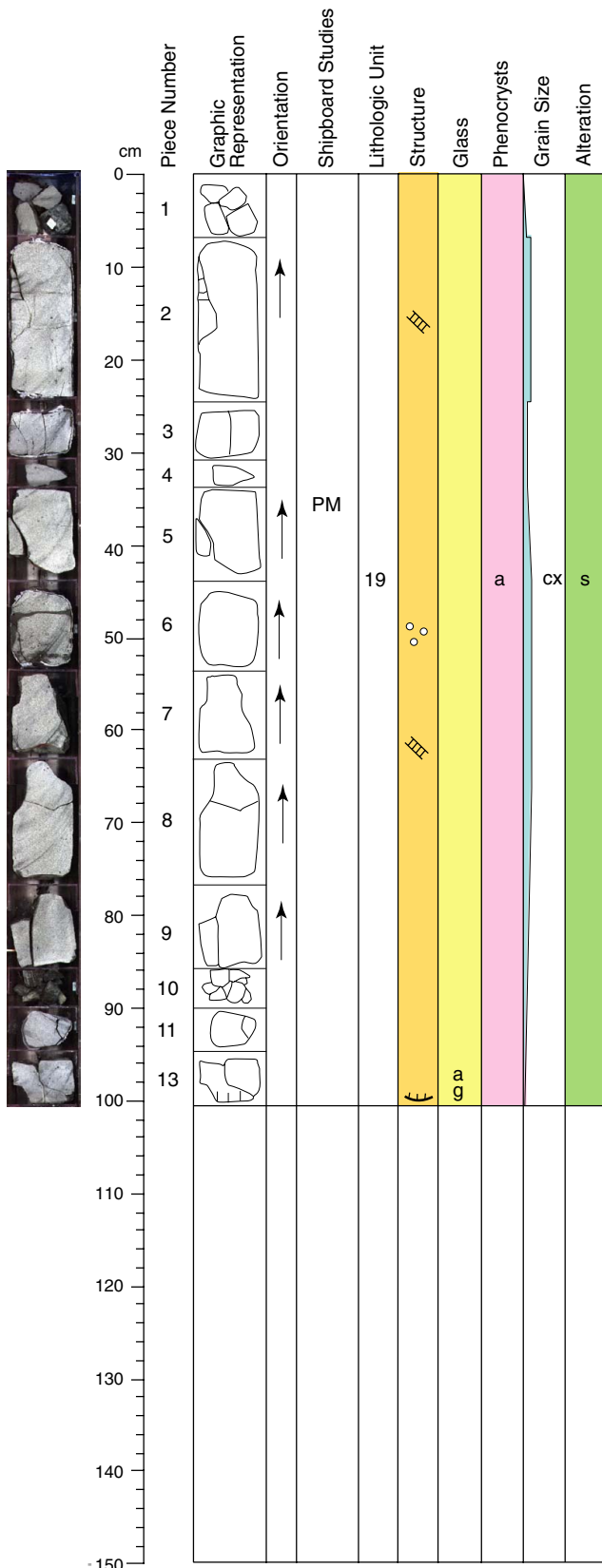
VESICLES: Subhorizontal elongated irregular vesicles filled with saponite in Piece 1.

ALTERATION: Dark gray slightly altered basalt with 2-4 mm black alteration halos along veins.

VEINS: 0.1-0.8 mm veins of saponite with pyrite and rare silica.

STRUCTURE: Subvertical veins and vein net linked to the cooling of lava in Piece 1. Y-shaped intersection veins in Piece 3. Conjugate system of saponite bearing veins in Pieces 1 and 3. Composite saponite and silica vein with alteration halo and pyrite front in Piece 5.

Core Photo



206-1256D-49R-1 (Section top: 582.10 mbsf)

UNIT: 19

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows.

PIECES: 1-12 (igneous description based on Piece 3)

CONTACTS:

Upper: not recovered

Lower: glassy margin

COLOR: very dark gray (N 3/)

PHENOCRYSTS:

Plagioclase tr % 0.1 mm

Olivine 0.2 % 0.2-1.8 mm 100 % altered to saponite

Clinopyroxene tr % 0.1 mm

GROUNDMASS:

Grain size: cryptocrystalline

Texture: variolitic

VESICLES: Sparse vesicles in Piece 6.

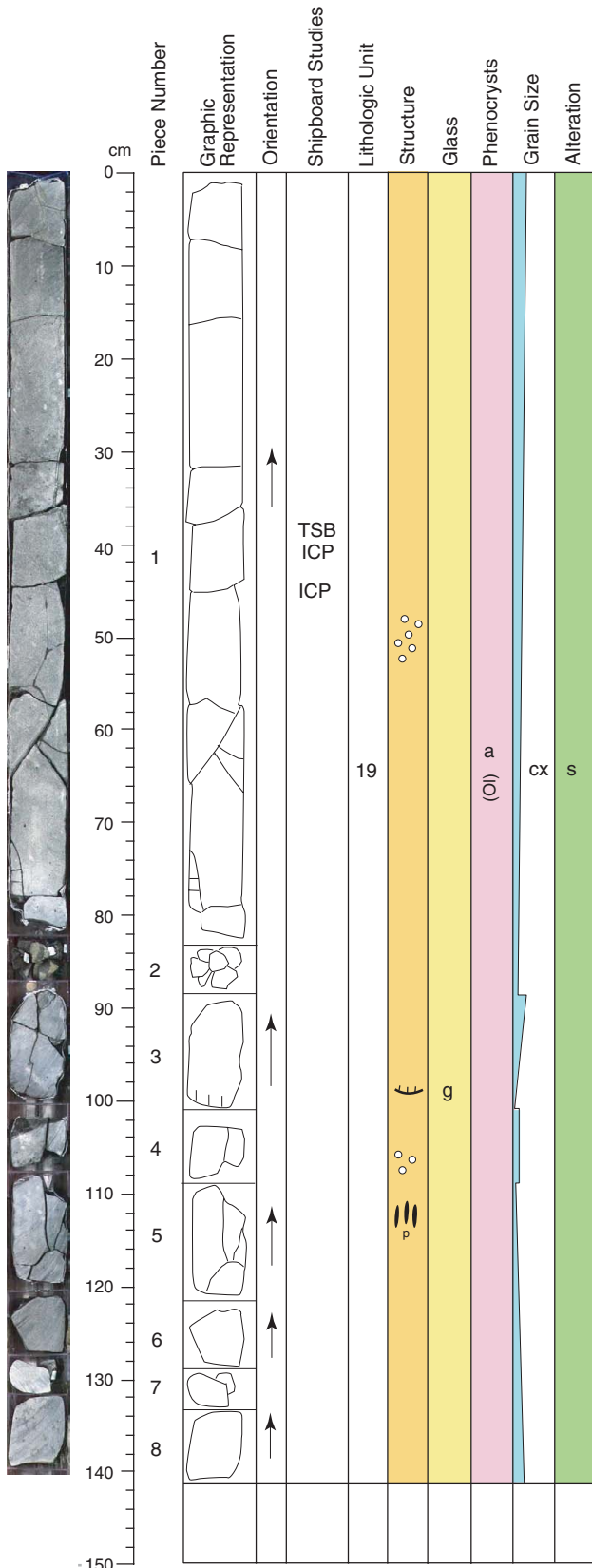
ALTERATION: Dark gray slightly altered basalt with 1.5-2 mm black alteration halos along veins.

VEINS: 0.1-1.0 mm veins of saponite with pyrite.

STRUCTURE: Subvertical curved veins and Y-shaped intersection veins in Pieces 2, 3, 7, 8, 11 and 12. Crosscutting veins of saponite and pyrite in Pieces 2, 5, and 7.

ADDITIONAL COMMENTS: Clinopyroxene and plagioclase form crystal clots.

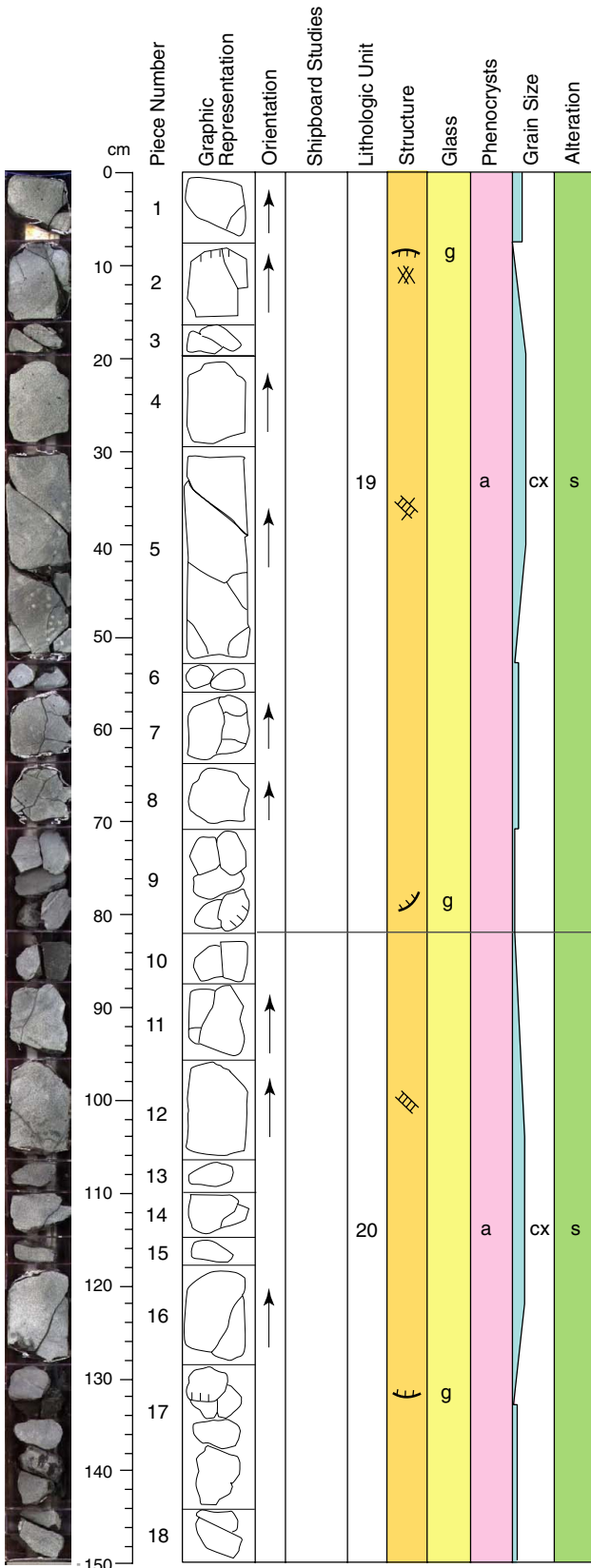
Core Photo



206-1256D-49R-2 (Section top: 583.11 mbsf)

UNIT: 19
ROCK NAME: Aphyric cryptocrystalline basalt
SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows.
PIECES: 1-9 (igneous description based on Piece 4)
CONTACTS:
 Upper: not recovered
 Lower: not recovered
COLOR: very dark gray (N 3/)
PHENOCRYSTS:
 Olivine 0.2 % 0.2-1.4 mm 100 % altered to saponite
GROUNDMASS:
 Grain size: cryptocrystalline
 Texture: variolitic
VESICLES: Pipe vesicles in Piece 5.
ALTERATION: Dark gray slightly altered basalt with 1-2 mm black alteration halos along veins.
VEINS: 0.1-0.5 mm veins of saponite with pyrite.
STRUCTURE: Vein network linked to the cooling of lava in Piece 2. Conjugate system of saponite veins in Piece 5. Curved veins and Y-shaped intersection veins in Pieces 7, 8, and 9.

Core Photo



206-1256D-50R-1 (Section top: 591.50 mbsf)

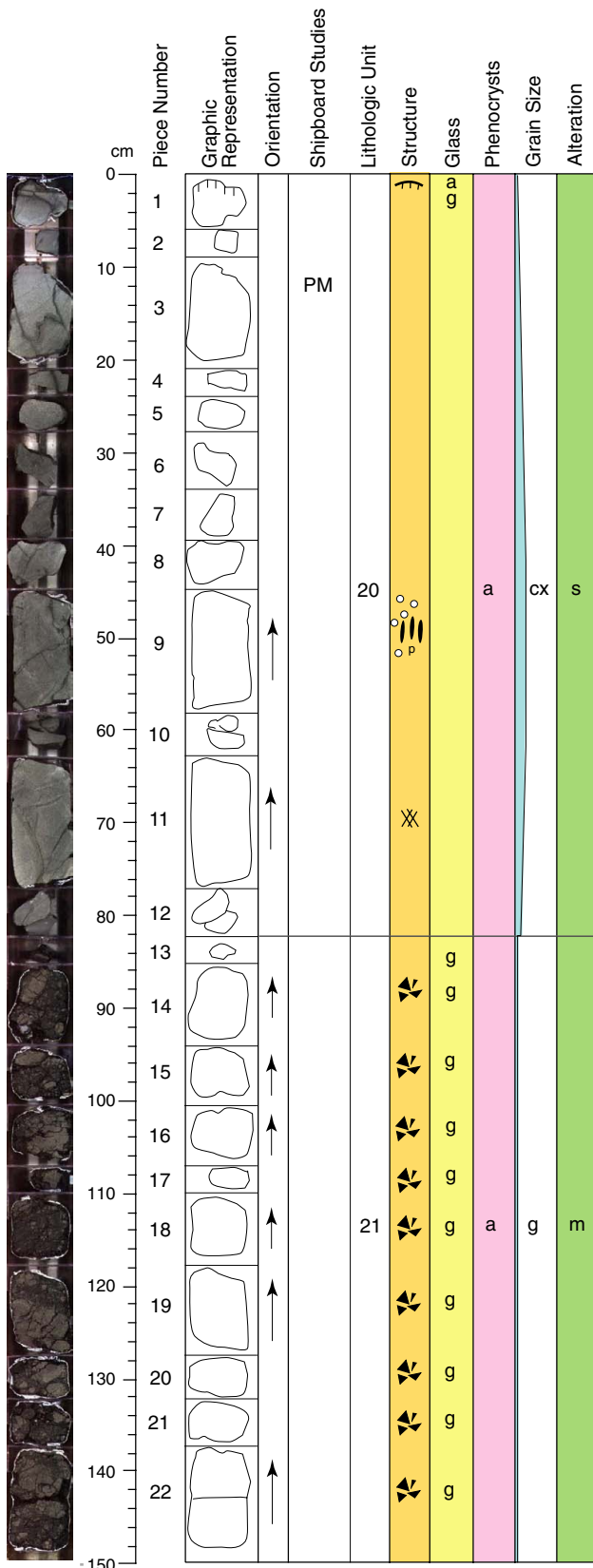
UNIT: 19

ROCK NAME: Aphyric cryptocrystalline basalt
 SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows.
 PIECES: 1-9 (igneous description based on Piece 4)
 CONTACTS:
 Upper: not recovered
 Lower: glassy margin
 COLOR: very dark gray (N 3/)
 PHENOCRYSTS:
 Olivine 0.2 % 0.2-1.4 mm 100 % altered to saponite
 GROUNDMASS:
 Grain size: cryptocrystalline
 Texture: variolitic
 VESICLES: none
 ALTERATION: Dark gray slightly altered basalt with 1-2 mm black alteration halos along veins.
 VEINS: 0.1-0.5 mm veins of saponite with pyrite.
 STRUCTURE: Vein network linked to the cooling of lava in Piece 2. Conjugate system of saponite veins in Piece 5. Curved veins and veins with Y-shaped intersections in Pieces 7, 8, and 9.

UNIT: 20

ROCK NAME: Aphyric cryptocrystalline basalt
 SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows with glass in Piece 17.
 PIECES: 10-18 (igneous description based on Piece 16)
 CONTACTS:
 Upper: not recovered
 Lower: not recovered
 COLOR: greenish black (10Y 2.5/1)
 PHENOCRYSTS:
 Olivine tr % 0.2 mm 100 % altered to saponite
 GROUNDMASS:
 Grain size: cryptocrystalline
 Texture: intergranular
 VESICLES: none
 ALTERATION: Dark gray slightly altered basalt with 2-3 mm black alteration halos along veins.
 VEINS: 0.1-0.3 mm veins of saponite with pyrite.
 STRUCTURE: Curved veins and veins with Y-shaped intersections.

Core Photo



206-1256D-51R-1 (Section top: 596.10 mbsf)

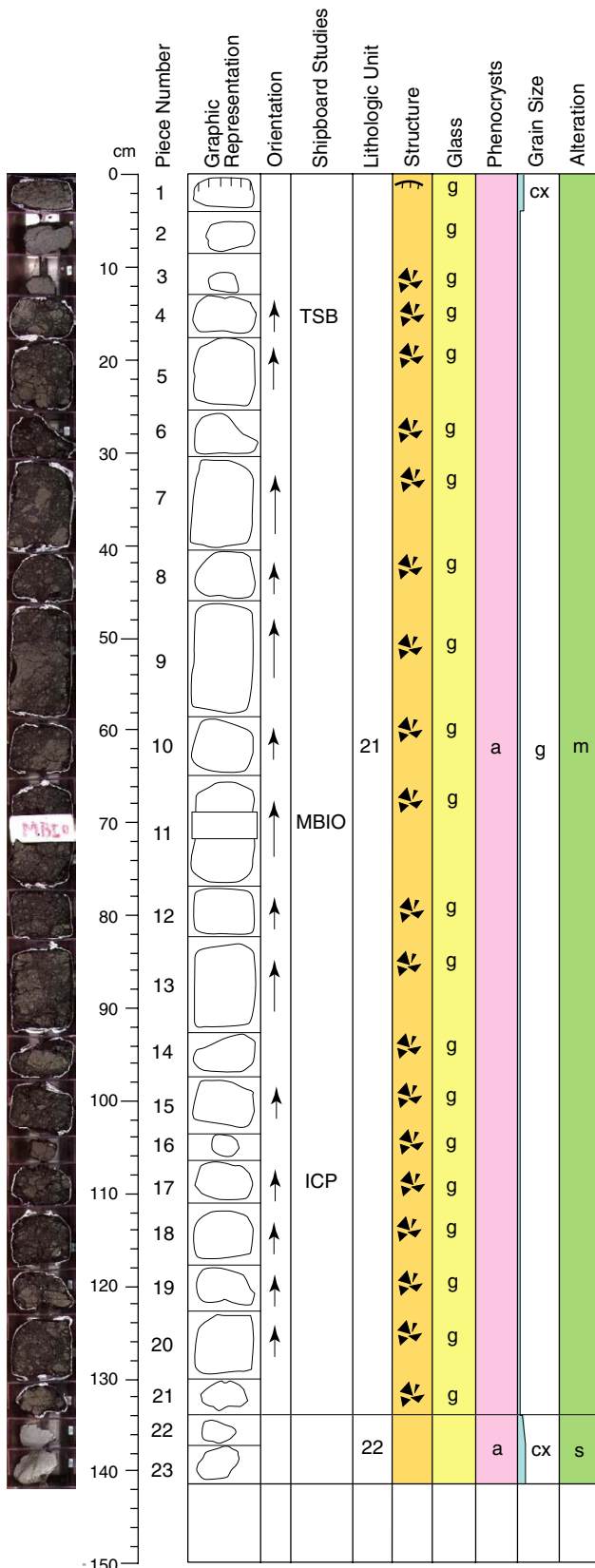
UNIT: 20

ROCK NAME: Aphyric cryptocrystalline basalt
 SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows.
 PIECES: 1-12 (igneous description based on Piece 9)
 CONTACTS:
 Upper: not recovered
 Lower: not recovered
 COLOR: black (N 2.5/)
 PHENOCRYSTS:
 Olivine tr % 0.1-0.2 mm 100 % altered to saponite
 GROUNDMASS:
 Grain size: cryptocrystalline
 Texture: intergranular
 VESICLES: Sparse irregular vesicles or pipe vesicles filled with saponite in Pieces 6, 8, and 9.
 ALTERATION: Dark gray slightly altered basalt with 1-6 mm black and mixed black and brown alteration halos along veins.
 VEINS: 0.1-2.0 mm veins of saponite with pyrite and rare iron oxyhydroxide and silica.
 STRUCTURE: Curved veins and veins with Y-shaped intersection. Vein network with incipient microbreccia in Piece 11.

UNIT: 21

ROCK NAME: Hyaloclastite
 SUMMARY DESCRIPTION: Hyaloclastite
 PIECES: 13-22 (igneous description based on Pieces 13-22)
 CONTACTS:
 Upper: not recovered
 Lower: not recovered
 COLOR: black (N 2.5/)
 PHENOCRYSTS: none
 GROUNDMASS:
 Grain size: glassy
 Texture: breccia
 VESICLES: none
 ALTERATION: Moderately altered hyaloclastite breccia cemented with saponite.
 VEINS: none
 STRUCTURE: Ductile and brittle-ductile structures due to lava flow inside breccia clasts of Pieces 1, 4, and 9.
 ADDITIONAL COMMENTS: Angular to subangular clasts of fresh to partly altered glass, from <1 cm up to the width of the core and platy glass shards are embedded in a matrix of altered glass.

Core Photo



206-1256D-51R-2 (Section top: 597.60 mbsf)

UNIT: 21

ROCK NAME: Hyaloclastite
 SUMMARY DESCRIPTION: Hyaloclastite
 PIECES: 1-21 (igneous description based on Pieces 1-21)
 CONTACTS:

Upper: not recovered
 Lower: not recovered

COLOR: black (N 2.5/)

PHENOCRYSTS: none

GROUNDMASS:
 Grain size: glassy
 Texture: breccia

VESICLES: none

ALTERATION: Moderately altered hyaloclastite breccia cemented with saponite.

VEINS: none

STRUCTURE: Ductile and brittle-ductile structures due to lava flow inside

breccia clasts of Pieces 1, 4, and 9.

ADDITIONAL COMMENTS: Angular to subangular clasts of fresh to partly altered glass, from <1 cm up to the width of the core and platy glass shards are embedded in a matrix of altered glass.

UNIT: 22

ROCK NAME: Aphyric cryptocrystalline basalt
 SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows.
 PIECES: 22-23 (igneous description based on Piece 23)
 CONTACTS:

Upper: not recovered
 Lower: not recovered

COLOR: black (N 2.5/)

PHENOCRYSTS: none

GROUNDMASS:
 Grain size: cryptocrystalline
 Texture: intergranular to variolitic

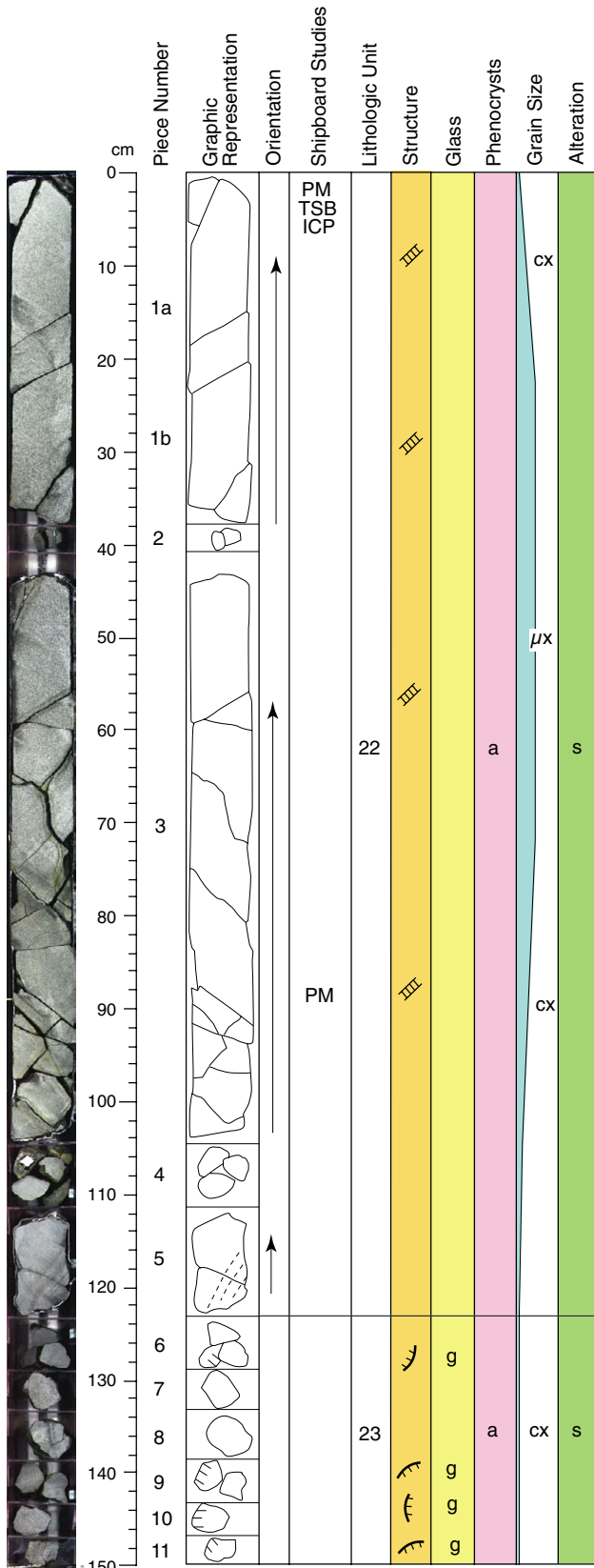
VESICLES: none

ALTERATION: Dark gray slightly altered basalt with one 3 mm black alteration halo along a vein in Piece 23.

VEINS: 0.1-1.6 mm veins of saponite with rare silica.

STRUCTURE: none

Core Photo



206-1256D-52R-1 (Section top: 600.70 mbsf)

UNIT: 22

ROCK NAME: Aphyric cryptocrystalline to microcrystalline basalt
 SUMMARY DESCRIPTION: Aphyric cryptocrystalline to microcrystalline basalt sheet flows.

PIECES: 1-5 (igneous description based on Piece 1)

CONTACTS:

Upper: not recovered
 Lower: not recovered

COLOR: very dark gray (N 3/)

PHENOCRYSTS: none

GROUNDMASS:

Grain size: cryptocrystalline to microcrystalline
 Texture: variolitic

VESICLES: Irregular patches up to 2 mm, elongate subvertically or subhorizontally.

ALTERATION: Dark gray slightly altered basalt with 3-6 mm black and mixed black and brown alteration halos along veins.

VEINS: 0.1-1.5 mm veins of saponite with pyrite and silica.

STRUCTURE: Moderately to steeply dipping saponite veins in Pieces 1 and 3. Subvertical sinuous veins and radial curved veins linked to cooling of lava in Piece 3 or Piece 5.

UNIT: 23

ROCK NAME: Aphyric cryptocrystalline to microcrystalline basalt
 SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows.

PIECES: 6-11 (igneous description based on Piece 7)

CONTACTS:

Upper: glassy margin
 Lower: not recovered

COLOR: greenish black (10Y 2.5/1)

PHENOCRYSTS: none

GROUNDMASS:

Grain size: cryptocrystalline
 Texture: intergranular

VESICLES: None.

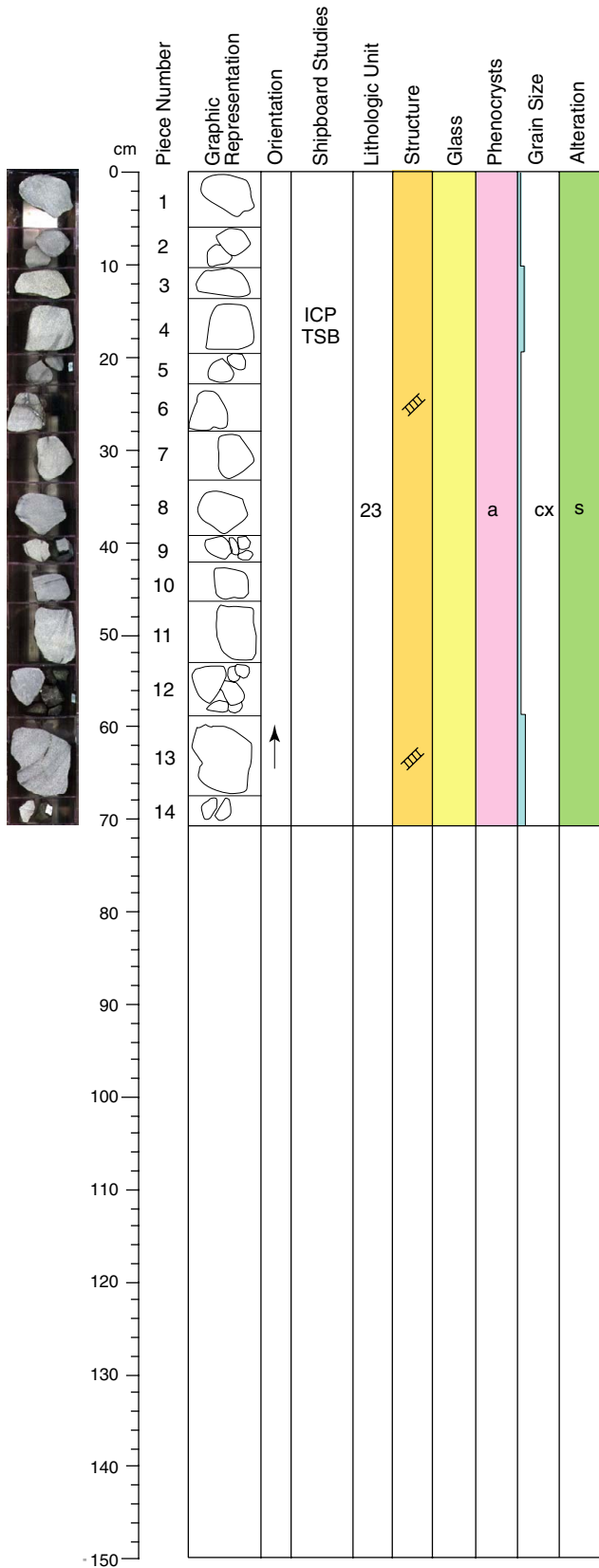
ALTERATION: Dark gray slightly altered basalt.

VEINS: 0.2-0.3 mm veins of saponite.

STRUCTURE: Ductile structure due to lava flow in Pieces 8, 9, 10, and 11.

ADDITIONAL COMMENTS: Unit consists of a sequence of thin (10's of cm recovered) sheet flows separated by glass and chilled margins. Rare (<1%) crystal clots of clinopyroxene plus plagioclase.

Core Photo



206-1256D-52R-2 (Section top: 602.20 mbsf)

UNIT: 23

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows.

PIECES: 1-14 (igneous description based on Piece 13)

CONTACTS:

Upper: glassy margin

Lower: not recovered

COLOR: black (N 2.5/)

PHENOCRYSTS:

Olivine tr % 0.1-0.3 mm 100% altered to saponite

Clinopyroxene tr % 0.2 mm

GROUNDMASS:

Grain size: cryptocrystalline

Texture: intergranular

VESICLES: none

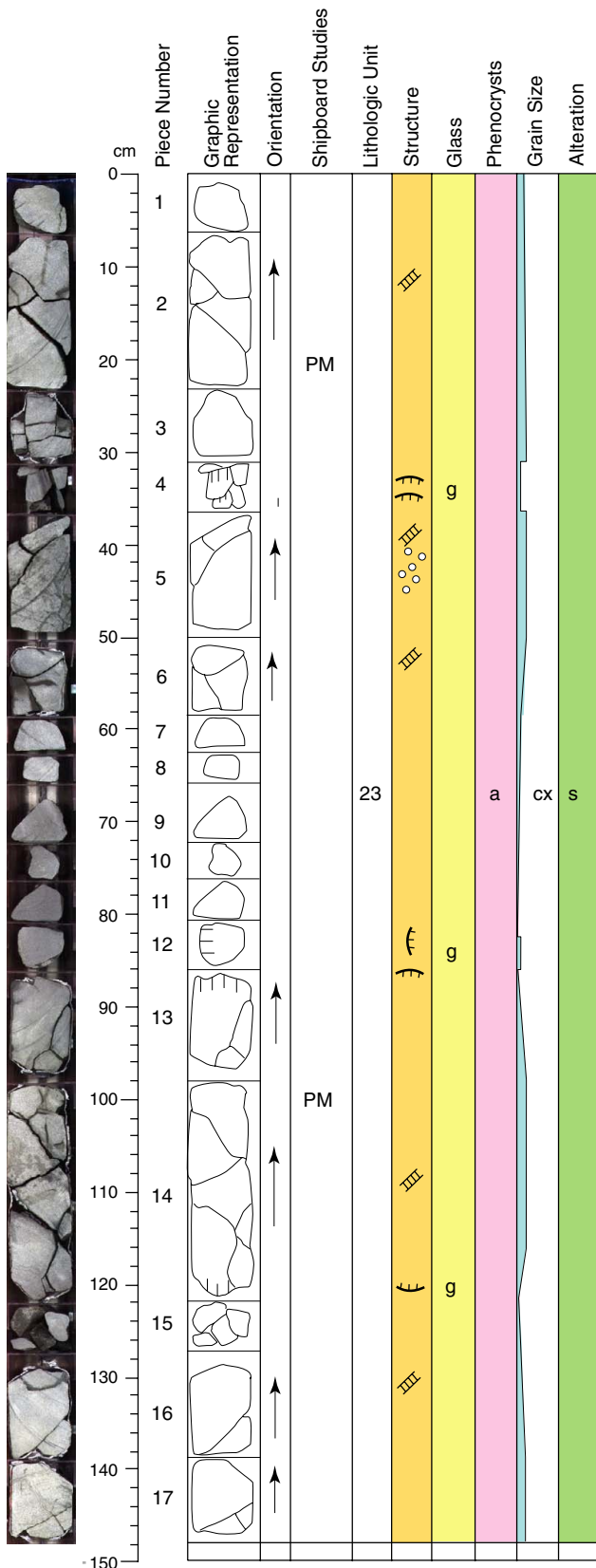
ALTERATION: Dark gray slightly altered basalt.

VEINS: 0.1-1.5 mm veins of saponite with pyrite and silica.

STRUCTURE: Y-shaped intersection composite veins in Piece 6. Y-shaped intersection veins in Piece 13.

ADDITIONAL COMMENTS: Rare (<1%) crystal clots up to 1 mm diameter of clinopyroxene plus plagioclase.

Core Photo



206-1256D-53R-1 (Section top: 609.80 mbsf)

UNIT: 23

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows.

PIECES: 1-14 (igneous description based on Piece 13)

CONTACTS:

Upper: glassy margin

Lower: not recovered

COLOR: black (N 2.5/)

PHENOCRYSTS: none

GROUNDMASS:

Grain size: cryptocrystalline

Texture: variolitic

VESICLES: Sparse filled with saponite

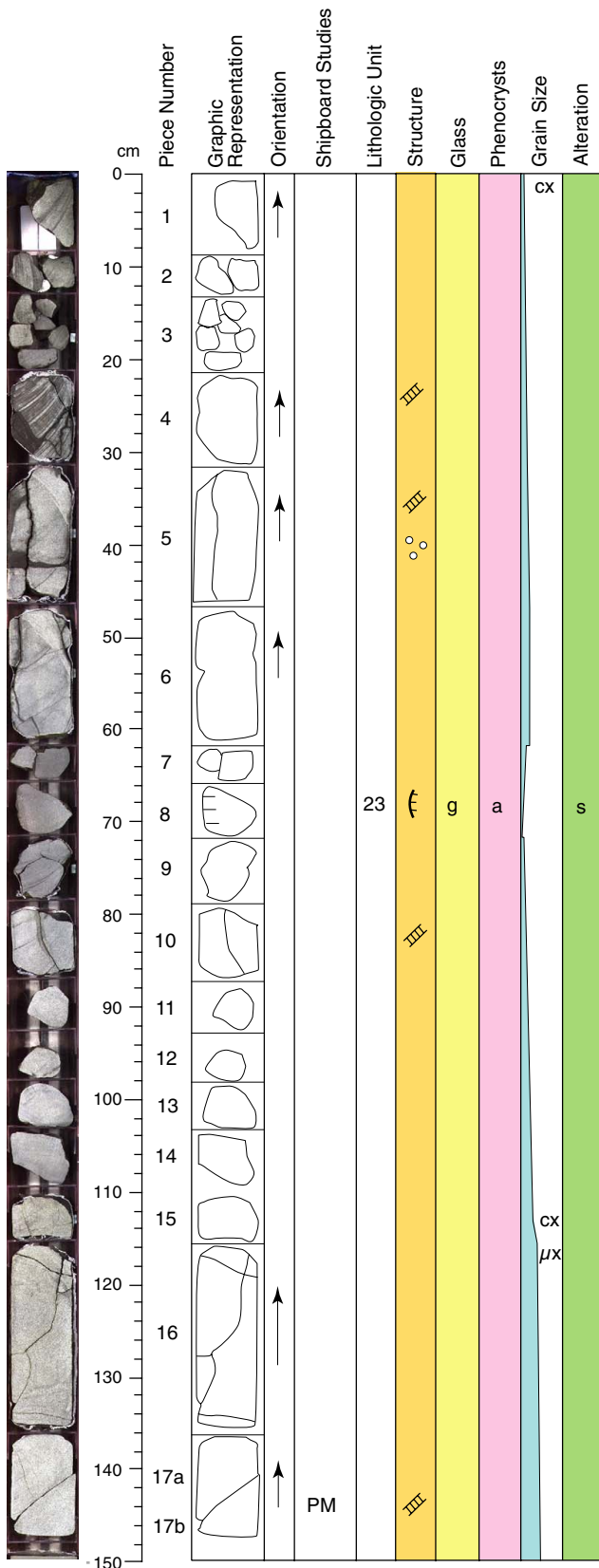
ALTERATION: Dark gray slightly altered basalt with 1-4 mm black alteration halos along veins.

VEINS: 0.1-1.0 mm veins of saponite with pyrite and rare silica.

STRUCTURE: Y-shaped intersection of veins and curved veins linked to the cooling of lava in Pieces 5, 6, 13, 14, and 16.

ADDITIONAL COMMENTS: Unit consists of a sequence of thin (10's of cm recovered) sheet flows separated by glass and chilled margins. Pieces 5 and 14 have dark green patches.

Core Photo



206-1256D-53R-2 (Section top: 611.27 mbsf)

UNIT: 23

ROCK NAME: Aphyric cryptocrystalline to microcrystalline basalt
 SUMMARY DESCRIPTION: Aphyric cryptocrystalline to microcrystalline basalt sheet flows.

PIECES: 1-17 (igneous description based on Piece 4)

CONTACTS:

Upper: glassy margin
 Lower: not recovered

COLOR: black (N 2.5)

PHENOCRYSTS: none

GROUNDMASS:

Grain size: cryptocrystalline
 Texture: intergranular to variolitic

VESICLES: Sparse

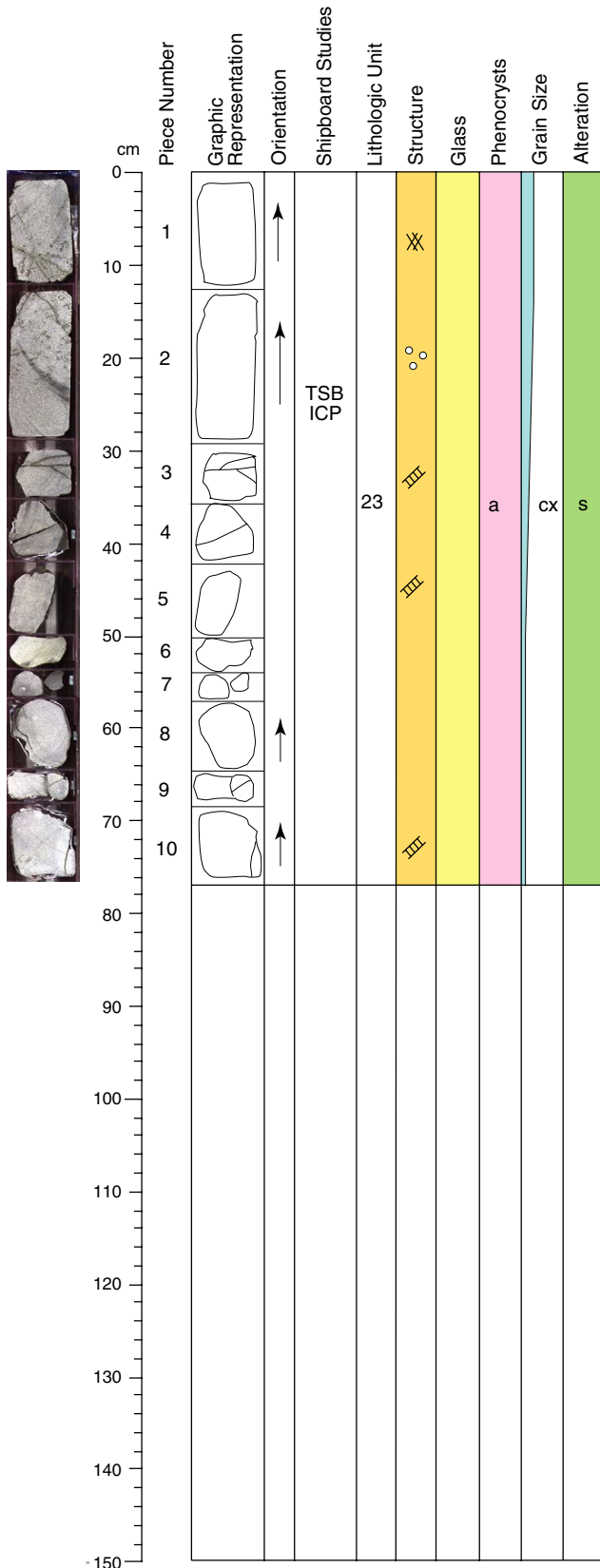
ALTERATION: Dark gray slightly altered basalt with 2-4 mm black alteration halos along veins.

VEINS: 0.1-0.6 mm veins of saponite with pyrite. One 5 mm silica vein in Piece 2.

STRUCTURE: Subvertical curved veins in Pieces 5, 6, 10, and 16. Y-shaped intersection of veins in Piece 9.

ADDITIONAL COMMENTS: Unit consists of a sequence of thin (10's of cm recovered) sheet flows separated by glass and chilled margins. Rare crystal clots (~1 mm diameter) of clinopyroxene plus plagioclase.

Core Photo



206-1256D-53R-3 (Section top: 612.74 mbsf)

UNIT: 23

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows.

PIECES: 1-10 (igneous description based on Piece 1)

CONTACTS:

Upper: glassy margin

Lower: not recovered

COLOR: black (N 2.5/)

PHENOCRYSTS:

Plagioclase tr % 2.0 mm

Olivine 0.1 % 0.1-0.2 100% altered to saponite

Clinopyroxene tr 0.6 mm

GROUNDMASS:

Grain size: cryptocrystalline

Texture: variolitic

VESICLES: Subhorizontally or subvertically elongate irregular vesicles

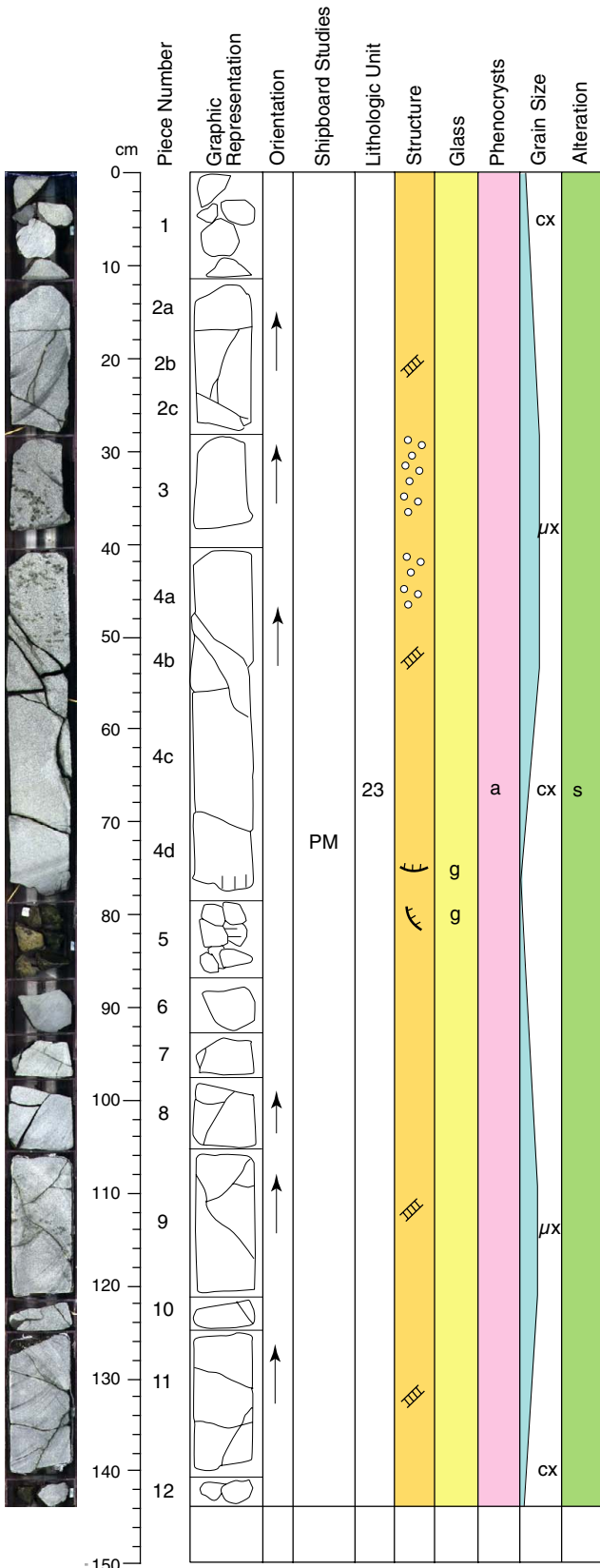
ALTERATION: Dark gray slightly altered basalt with 1-5 mm black alteration halos along veins.

VEINS: 0.1-0.6 mm veins of saponite with pyrite and rare iron oxyhydroxide and silica.

STRUCTURE: Vein network in Piece 1. Curved vein in Pieces 8 and 9. Non-oriented shear vein with overlapping saponite fibers in Piece 5.

ADDITIONAL COMMENTS: Unit consists of a sequence of thin (10's of cm recovered) sheet flows separated by glass and chilled margins. Piece 7 has a microgabbro xenolith (~2 mm) rounded cluster of plagioclase plus clinopyroxene.

Core Photo



206-1256D-54R-1 (Section top: 618.10 mbsf)

UNIT: 23

ROCK NAME: Aphyric cryptocrystalline to microcrystalline basalt
 SUMMARY DESCRIPTION: Aphyric cryptocrystalline to microcrystalline basalt sheet flows.

PIECES: 1-12 (igneous description based on Piece 4c)

CONTACTS:

Upper: glassy margin
 Lower: not recovered

COLOR: black (N 2.5)

PHENOCRYSTS:

Clinopyroxene tr % 0.2 mm

GROUNDMASS:

Grain size: cryptocrystalline to microcrystalline
 Texture: intergranular to variolitic

VESICLES: Sparse

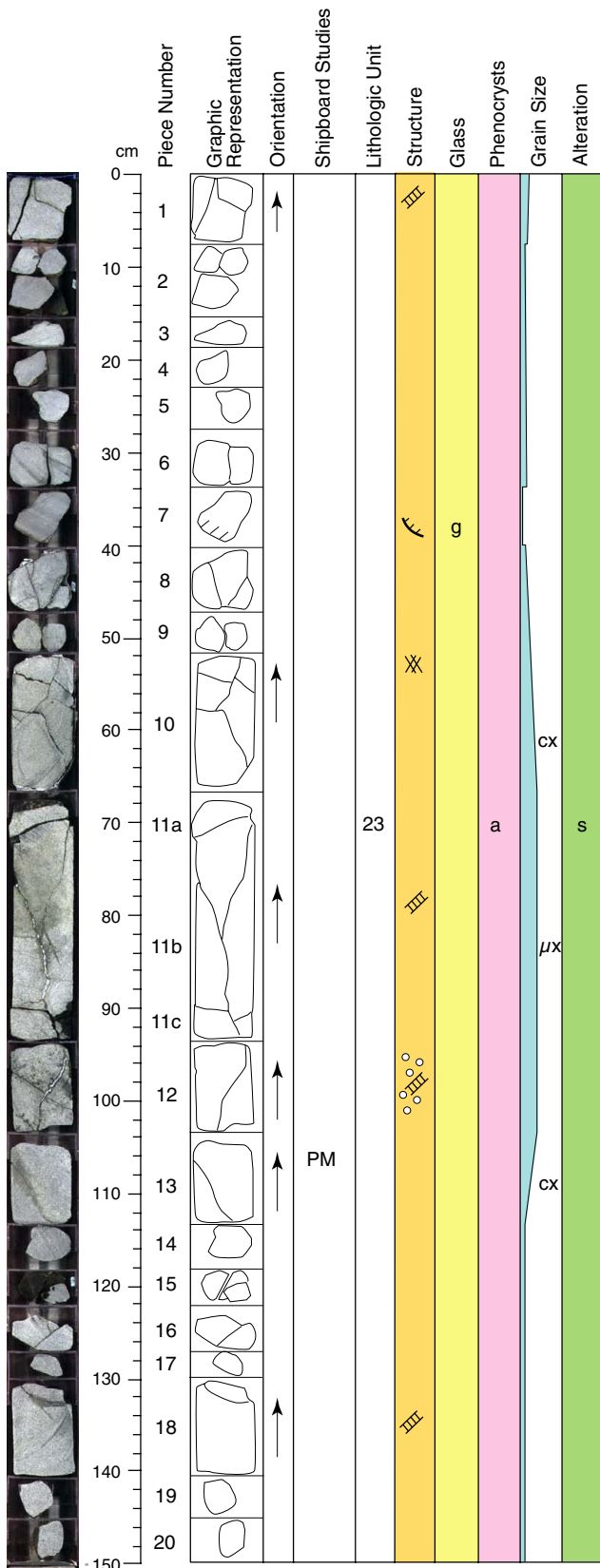
ALTERATION: Dark gray slightly altered basalt with 1 mm black alteration halos along veins.

VEINS: 0.1-0.8 mm veins of saponite with pyrite and rare silica.

STRUCTURE: Curved subvertical veins and radial veins in Pieces 4, 8, and 9. Y-shaped intersection of veins in Pieces 7 and 9. Moderately dipping and gently dipping preferred orientation of vesicles in Pieces 3 and 4.

ADDITIONAL COMMENTS: Unit consists of a sequence of thin (10's of cm recovered) sheet flows separated by glass and chilled margins. Dark green patchy alteration in Pieces 3 and 4. Sparse crystal clots or microgabbro xenoliths up to 2 mm diameter of plagioclase plus clinopyroxene.

Core Photo



206-1256D-54R-2 (Section top: 619.53 mbsf)

UNIT: 23

ROCK NAME: Aphyric cryptocrystalline to microcrystalline basalt
 SUMMARY DESCRIPTION: Aphyric cryptocrystalline to microcrystalline basalt sheet flows.

PIECES: 1-20 (igneous description based on Piece 10)

CONTACTS:

Upper: glassy margin
 Lower: not recovered

COLOR: black (N 2.5)

PHENOCRYSTS: none

GROUNDMASS:

Grain size: cryptocrystalline to microcrystalline
 Texture: intergranular to variolitic

VESICLES: Sparse

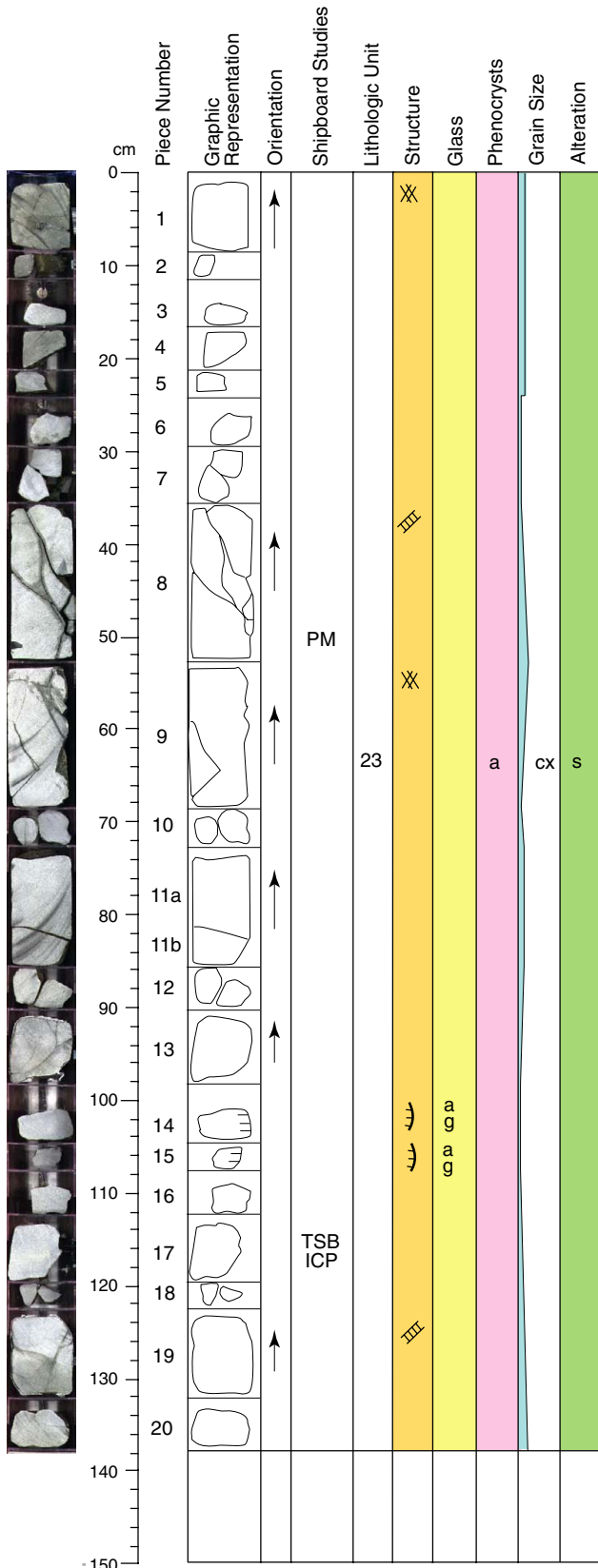
ALTERATION: Dark gray slightly altered basalt with 1-5 mm black alteration halos along veins.

VEINS: 0.1-1.5 mm veins of saponite with pyrite and silica.

STRUCTURE: Subvertical veins and radial vein in Pieces 10, 11B and 12. One subvertical vein with pull-aparts filled with silica in Piece 11B. Y-shaped intersection of veins in Piece 8. Vein network in Piece 10.

ADDITIONAL COMMENTS: Unit consists of a sequence of thin (10's of cm recovered) sheet flows separated by glass and chilled margins. Rare crystal clots or microgabbro xenoliths 1-2 mm diameter of plagioclase plus clinopyroxene.

Core Photo



206-1256D-54R-3 (Section top: 621.03 mbsf)

UNIT: 23

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows.

PIECES: 1-20 (igneous description based on Piece 11a)

CONTACTS:

Upper: glassy margin

Lower: not recovered

COLOR: black (N 2.5/)

PHENOCRYSTS: none

GROUNDMASS:

Grain size: cryptocrystalline

Texture: intergranular to variolitic

VESICLES: none

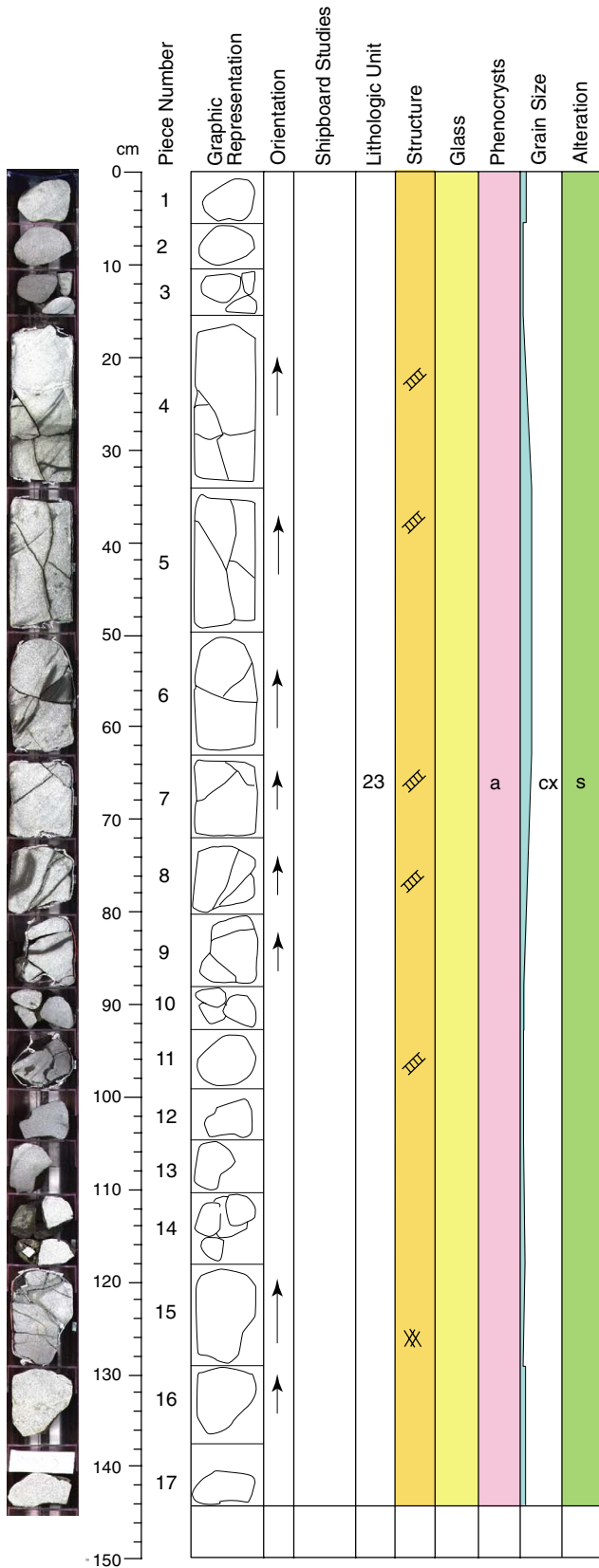
ALTERATION: Dark gray slightly altered basalt with 1-5 mm black alteration halos along veins.

VEINS: 0.1-1.0 mm veins of saponite with pyrite and rare silica.

STRUCTURE: Vein network with composite vein and incipient brecciation in Piece 1. Subvertical sinuous veins and radial veins in Piece 8. Vein network in Piece 9. Y-shaped intersection of veins in Piece 13.

ADDITIONAL COMMENTS: Unit consists of a sequence of thin (10's of cm recovered) sheet flows separated by glass and chilled margins. Rare crystal clots or microgabbro xenoliths 1-2 mm diameter of plagioclase plus clinopyroxene.

Core Photo



206-1256D-55R-1 (Section top: 627.40 mbsf)

UNIT: 23

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows.

PIECES: 1-17 (igneous description based on Piece 7)

CONTACTS:

Upper: glassy margin

Lower: not recovered

COLOR: black (N 2.5)

PHENOCRYSTS:

Olivine tr % 0.3-0.4 mm 100% altered to saponite

GROUNDMASS:

Grain size: cryptocrystalline

Texture: variolitic

VESICLES: none

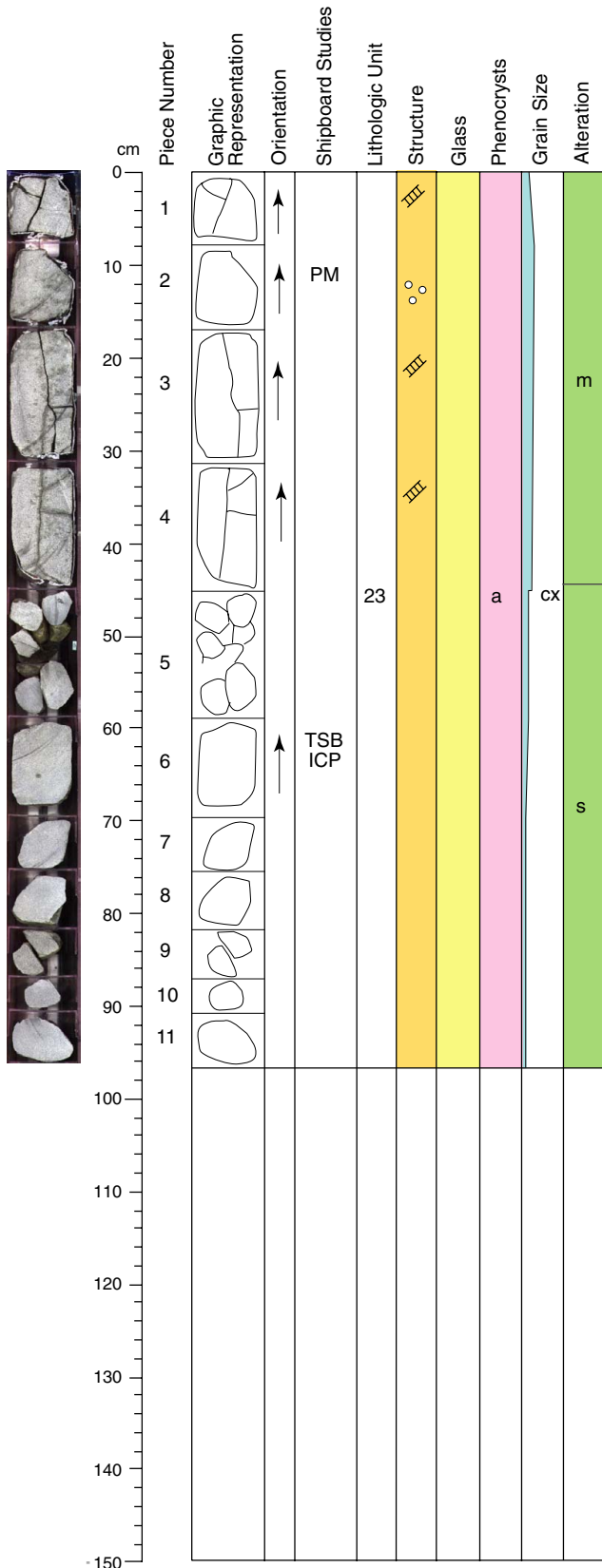
ALTERATION: Dark gray slightly altered basalt with 1-6 mm black alteration halos along veins.

VEINS: 0.1-1.5 mm veins of saponite with pyrite and silica.

STRUCTURE: Subvertical sinuous veins and radial veins in Piece 4, 5, and 6. Vein network in Piece 15.

ADDITIONAL COMMENTS: Unit consists of a sequence of thin (10's of cm recovered) sheet flows separated by glass and chilled margins. Rare crystal clots or microgabbro xenoliths ~1 mm diameter of plagioclase plus clinopyroxene.

Core Photo



206-1256D-55R-2 (Section top: 628.84 mbsf)

UNIT: 23

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows.

PIECES: 1-11 (igneous description based on Piece 6)

CONTACTS:

Upper: glassy margin

Lower: not recovered

COLOR: very dark gray (N 3/)

PHENOCRYSTS:

Olivine tr % 0.1-0.2 mm 100% altered to saponite

GROUNDMASS:

Grain size: cryptocrystalline

Texture: variolitic

VESICLES: Sparse

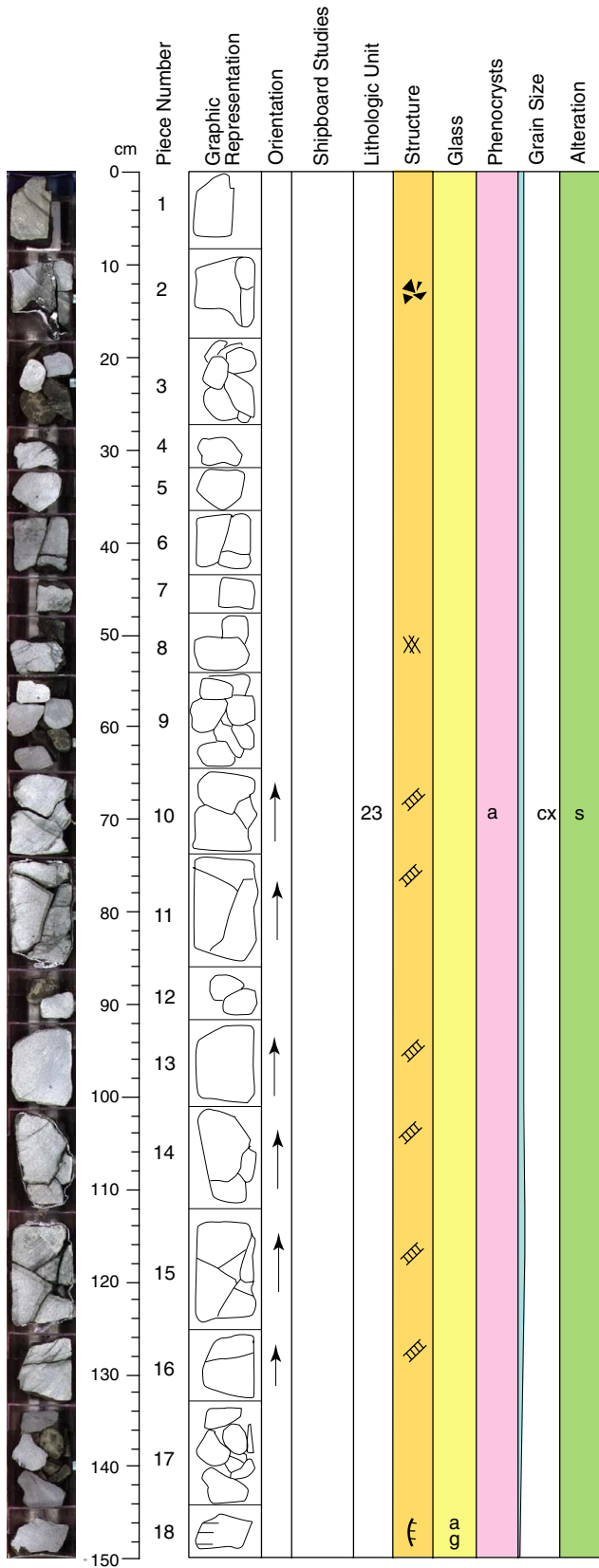
ALTERATION: Dark gray slightly to moderately altered basalt with 1-3 mm black alteration halos along veins.

VEINS: 0.1-1.0 mm veins of saponite with pyrite and silica.

STRUCTURE: Curved subvertical veins and radial veins in Pieces 3 and 4.

ADDITIONAL COMMENTS: Unit consists of a sequence of thin (10's of cm recovered) sheet flows separated by glass and chilled margins. Patchy alteration in Pieces 2-4. Rare crystal clots or microgabbro xenoliths ~1 mm diameter of plagioclase plus clinopyroxene.

Core Photo



206-1256D-56R-1 (Section top: 636.60 mbsf)

UNIT: 23

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows.

PIECES: 1-18 (igneous description based on Piece 13)

CONTACTS:

Upper: glassy margin

Lower: not recovered

COLOR: very dark gray (N 3/)

PHENOCRYSTS:

Olivine tr % 0.1-0.2 mm 100% altered to saponite

GROUNDMASS:

Grain size: cryptocrystalline

Texture: variolitic

VESICLES: none

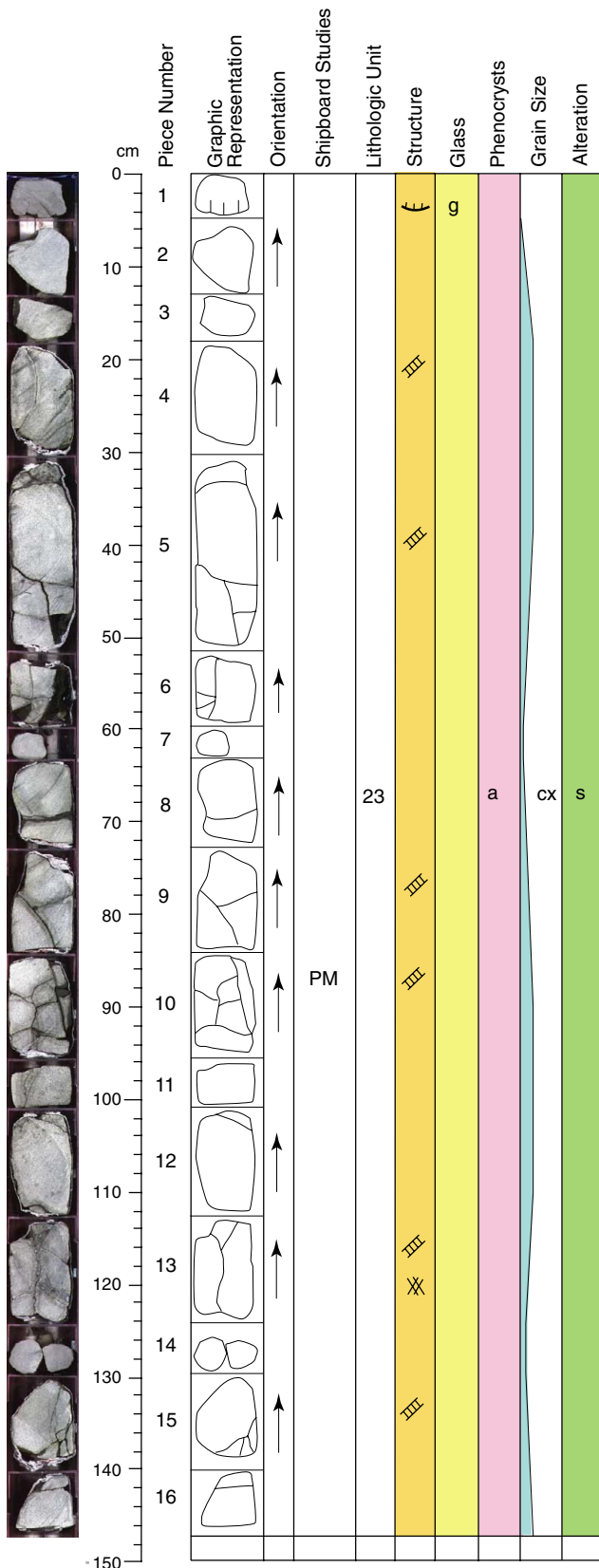
ALTERATION: Dark gray slightly altered basalt with 1-5 mm black alteration halos along veins.

VEINS: 0.1-2.0 mm veins of saponite with pyrite, carbonate, and silica.

STRUCTURE: Incipient brecciation along veins with dark alteration halo in Piece 2. Vein network in Piece 8. Y-shaped intersection of veins in Pieces 10, 11, 14, and 15.

ADDITIONAL COMMENTS: Unit consists of a sequence of thin (10's of cm recovered) sheet flows separated by glass and chilled margins. Rare crystal clots or microgabbro xenoliths ~1 mm diameter of plagioclase plus clinopyroxene.

Core Photo



206-1256D-56R-2 (Section top: 638.09 mbsf)

UNIT: 23

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows.

PIECES: 1-16 (igneous description based on 56R-1 Piece 13)

CONTACTS:

Upper: glassy margin

Lower: not recovered

COLOR: very dark gray (N 3/)

PHENOCRYSTS:

Olivine tr % 0.1-0.2 mm 100% altered to saponite

GROUNDMASS:

Grain size: cryptocrystalline

Texture: variolitic

VESICLES: none

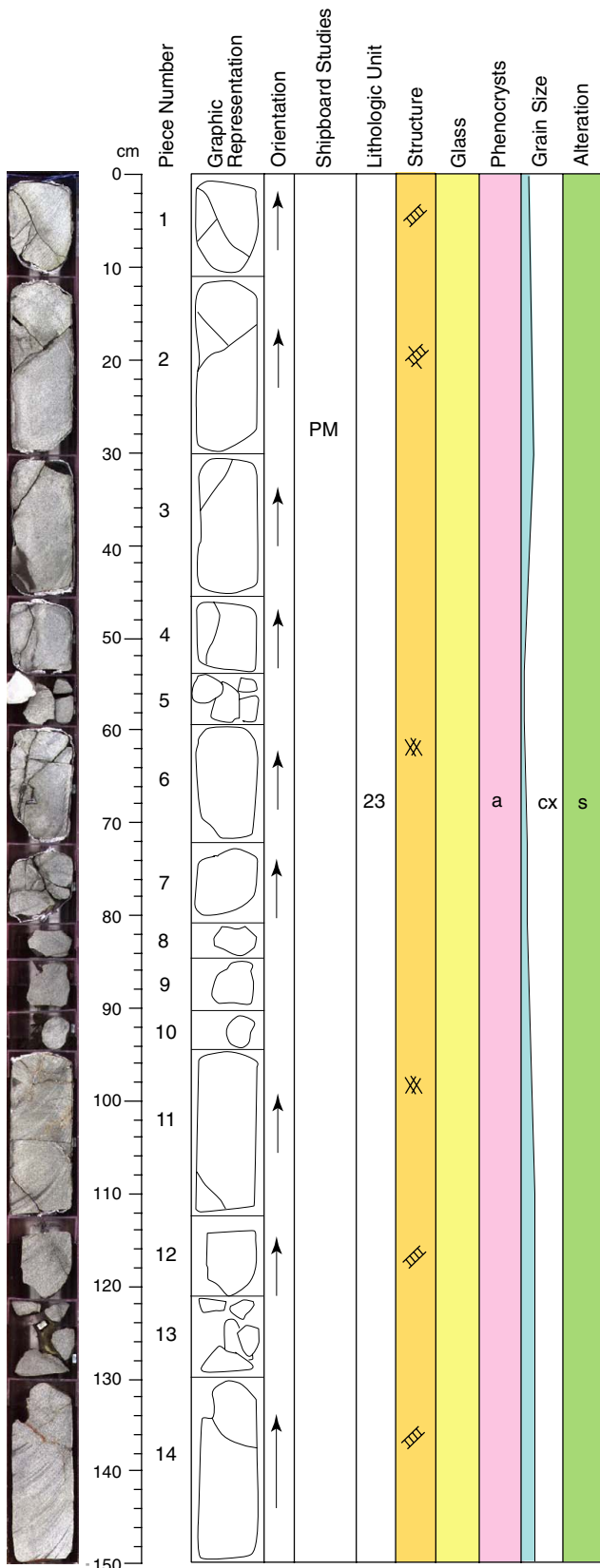
ALTERATION: Dark gray slightly altered basalt with 2-10 mm black alteration halos along veins.

VEINS: 0.1-1.0 mm veins of saponite with pyrite and silica.

STRUCTURE: Subvertical curved veins and radial veins in Pieces 4, 6, 9, 10, and 13. Vein network with incipient brecciation, filled with saponite and chalcedony in Piece 13.

ADDITIONAL COMMENTS: Unit consists of a sequence of thin (10's of cm recovered) sheet flows separated by glass and chilled margins. Rare crystal clots or microgabbro xenoliths ~1 mm diameter of plagioclase plus clinopyroxene.

Core Photo



206-1256D-56R-3 (Section top: 639.56 mbsf)

UNIT: 23

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows.

PIECES: 1-14 (igneous description based on Piece 3)

CONTACTS:

Upper: glassy margin

Lower: not recovered

COLOR: black (N 2.5/)

PHENOCRYSTS:

Olivine tr % 0.1-0.2 mm 100% altered to saponite

GROUNDMASS:

Grain size: cryptocrystalline

Texture: variolitic

VESICLES: Rare, filled with saponite.

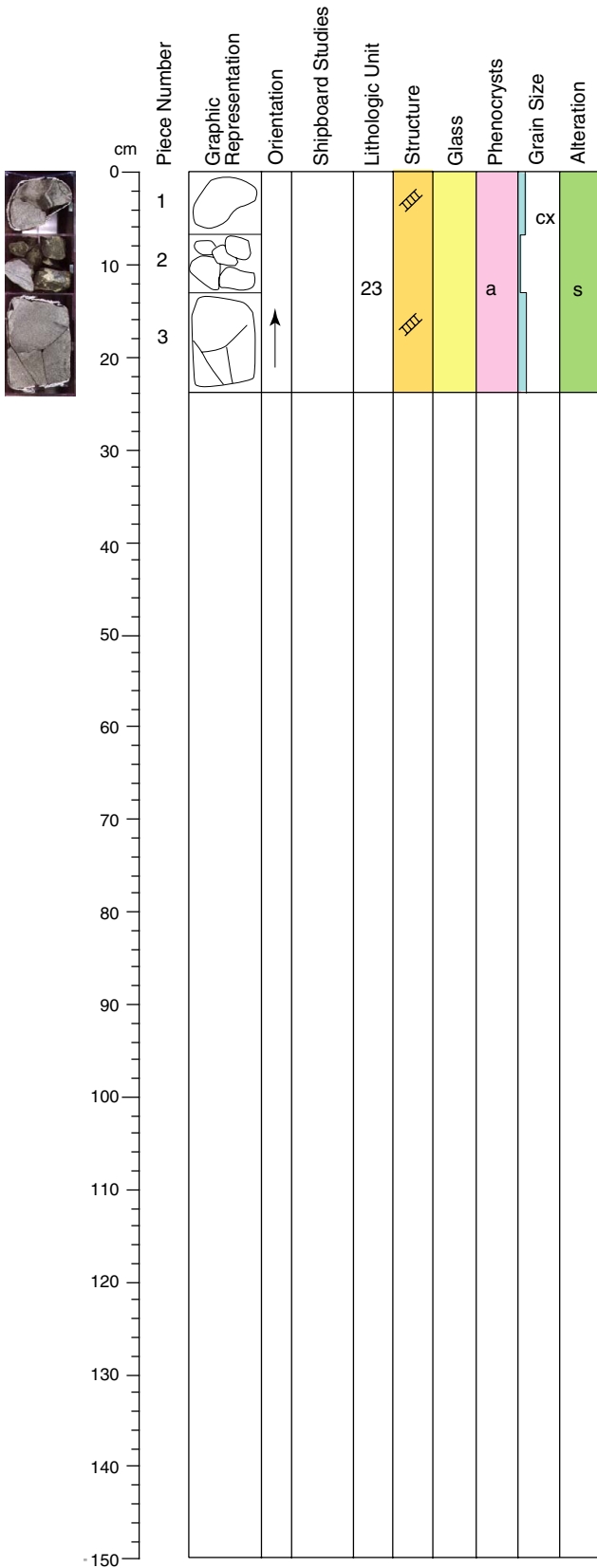
ALTERATION: Dark gray slightly altered basalt with 1-15 mm black and mixed black and brown alteration halos along veins.

VEINS: 0.1-2.0 mm veins of saponite with pyrite, iron oxyhydroxide, and silica.

STRUCTURE: Steeply dipping curved veins and radial veins in Pieces 1, 2, 4, and 7. Vein network in Pieces 6 and 11. Y-shaped intersection of veins in Piece 7. Conjugate sets of veins in Pieces 2 and 3.

ADDITIONAL COMMENTS: Unit consists of a sequence of thin (10's of cm recovered) sheet flows separated by glass and chilled margins. Rare crystal clots or microgabbro xenoliths ~1 mm diameter of plagioclase plus clinopyroxene.

Core Photo



206-1256D-56R-4 (Section top: 641.05 mbsf)

UNIT: 23

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows.

PIECES: 1-3 (igneous description based on 56R-3 Piece 3)

CONTACTS:

Upper: glassy margin

Lower: not recovered

COLOR: black (N 2.5/)

PHENOCRYSTS:

Olivine tr % 0.1-0.2 mm 100% altered to saponite

GROUNDMASS:

Grain size: cryptocrystalline

Texture: variolitic

VESICLES: Rare, filled with saponite.

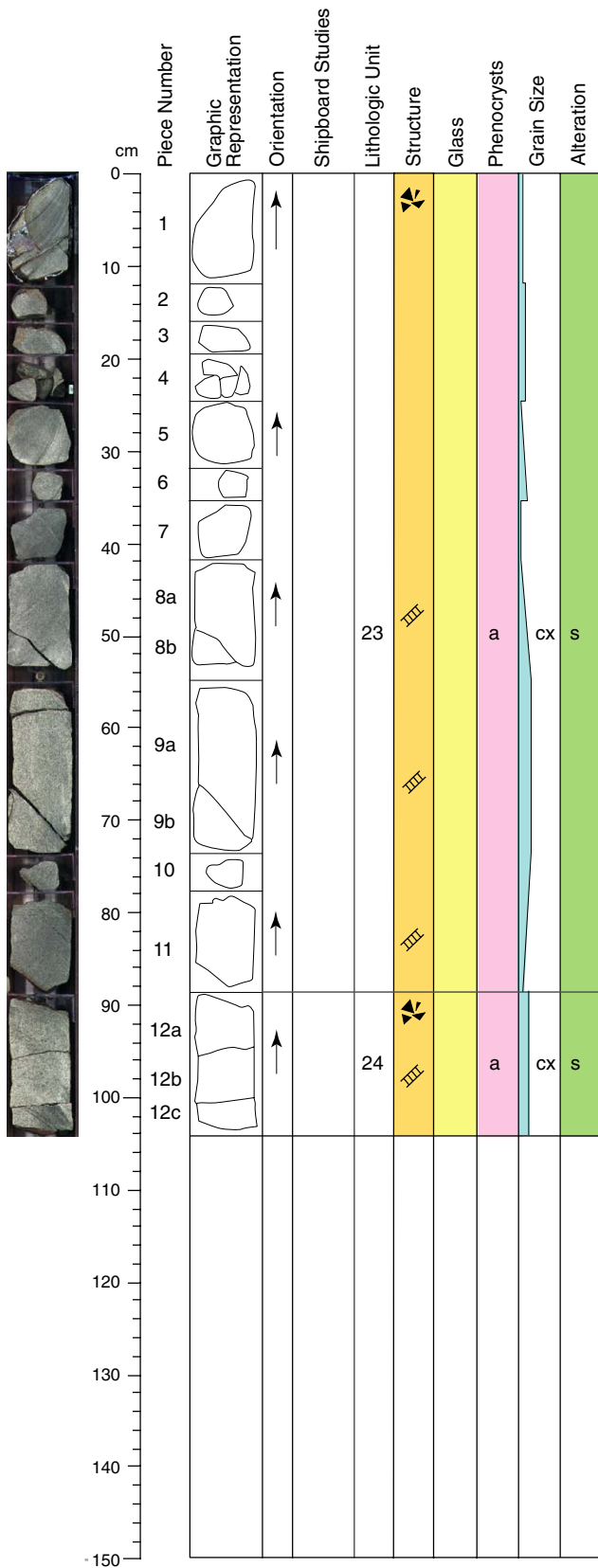
ALTERATION: Dark gray slightly altered basalt with 1-2 mm black alteration halos along veins.

VEINS: 0.1-0.3 mm veins of saponite with pyrite and silica.

STRUCTURE: Y-shaped intersection of veins in Piece 3. Steeply dipping preferred orientation of vesicles in Piece 1.

ADDITIONAL COMMENTS: Unit consists of a sequence of thin (10's of cm recovered) sheet flows separated by glass and chilled margins. Rare crystal clots or microgabbro xenoliths ~1 mm diameter of plagioclase plus clinopyroxene.

Core Photo



206-1256D-57R-1 (Section top: 645.80 mbsf)

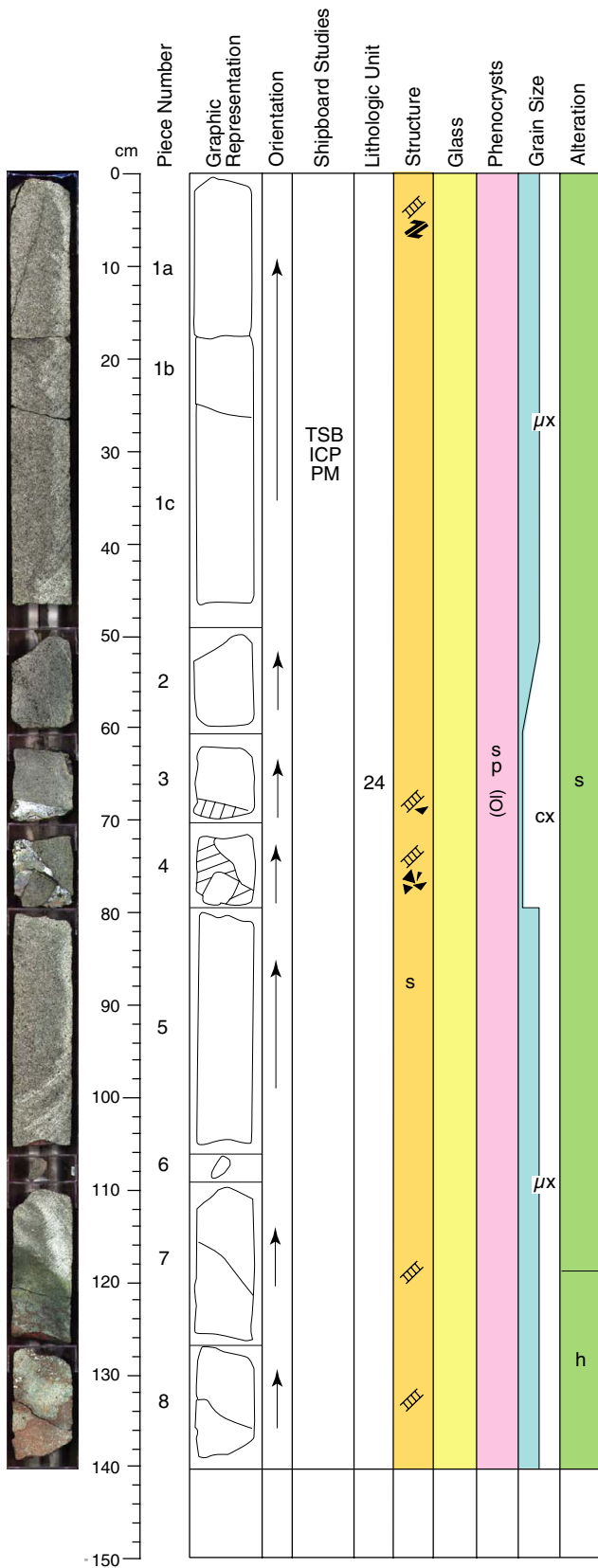
UNIT: 23

ROCK NAME: Aphyric cryptocrystalline basalt
 SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows.
 PIECES: 1-11 (igneous description based on Piece 8)
 CONTACTS:
 Upper: glassy margin
 Lower: not recovered
 COLOR: black (N 2.5/)
 PHENOCRYSTS:
 Olivine tr % 0.1-0.3 mm 100% altered to saponite
 GROUNDMASS:
 Grain size: cryptocrystalline
 Texture: variolitic
 VESICLES: none
 ALTERATION: Dark gray slightly altered basalt with 2-7 mm brown and mixed black and brown alteration halos along veins.
 VEINS: 0.1-0.5 mm veins of saponite with pyrite and local iron oxyhydroxide and silica.
 STRUCTURE: Subhorizontal and steeply dipping vein systems in Pieces 8, 9, and 11. Incipient brecciation with alteration in Piece 1.
 ADDITIONAL COMMENTS: Unit consists of a sequence of thin (10's of cm recovered) sheet flows separated by glass and chilled margins. Rare crystal clots or microgabbro xenoliths of plagioclase plus clinopyroxene.

UNIT: 24

ROCK NAME: Aphyric cryptocrystalline basalt
 SUMMARY DESCRIPTION: Aphyric massive lava.
 PIECES: 12 (igneous description based on Piece 12)
 CONTACTS:
 Upper: not recovered
 Lower: not recovered
 COLOR: dark greenish gray (10Y 3/1)
 PHENOCRYSTS:
 Olivine 0.8 % 1.0 mm 100% altered to saponite
 GROUNDMASS:
 Grain size: cryptocrystalline
 Texture: variolitic to intergranular
 VESICLES: none
 ALTERATION: Dark gray slightly altered basalt with one 3 mm mixed black and brown alteration halo along a vein.
 VEINS: 0.1-0.5 mm veins of saponite with pyrite.
 STRUCTURE: Nearly horizontal set of veins with incipient brecciation.

Core Photo



206-1256D-57R-2 (Section top: 646.85 mbsf)

UNIT: 24A

ROCK NAME: Sparsely olivine-phyric microcrystalline basalt

SUMMARY DESCRIPTION: Sparsely phyric massive lava.

PIECES: 1-8 (igneous description based on Piece 1)

CONTACTS:

Upper: not recovered

Lower: not recovered

COLOR: greenish black (10Y 2.5/1)

PHENOCRYSTS:

Olivine 2.0 % 1.2 mm 100% altered to saponite

GROUNDMASS:

Grain size: microcrystalline

Texture: variolitic to intergranular

VESICLES: Rare spherical vesicles up to 1 mm diameter, filled with saponite.

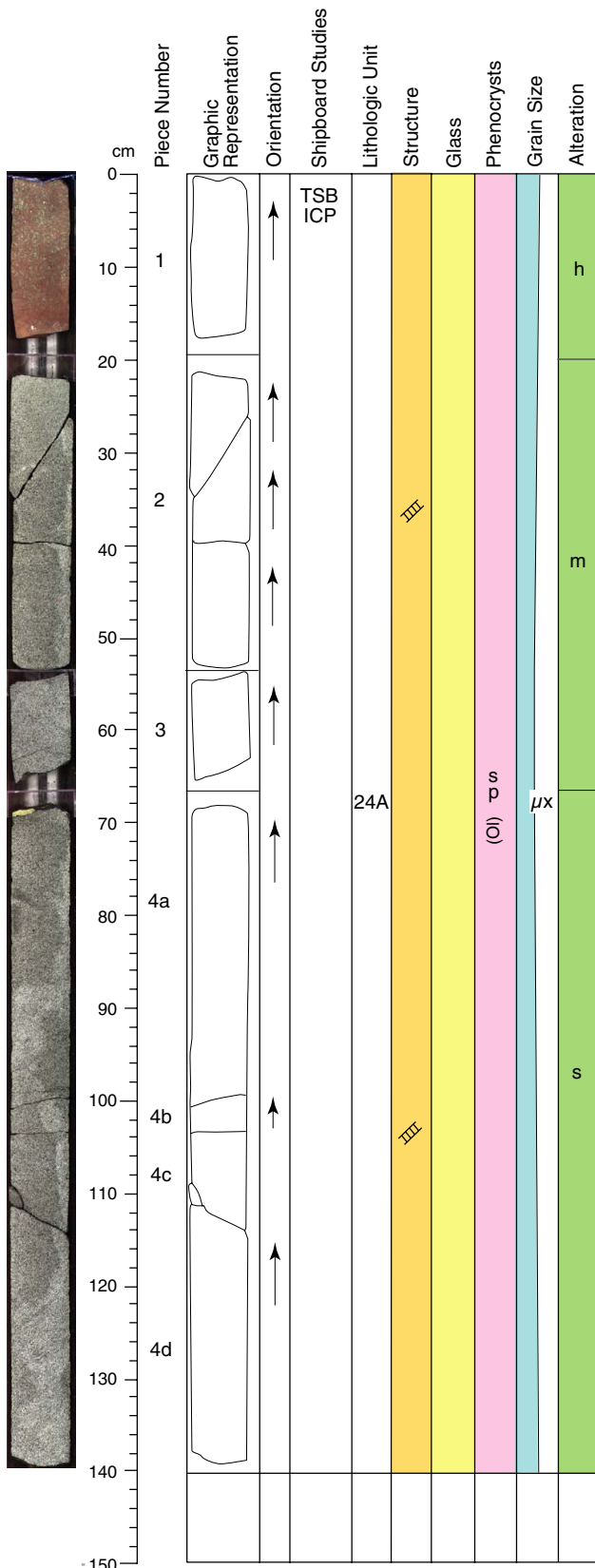
ALTERATION: Dark gray slightly to highly altered basalt.

VEINS: 0.1-1.0 mm veins of saponite and rare pyrite.

STRUCTURE: One steeply dipping shear vein with overlapping fibers and reverse sense of shear in Piece 1. Gently dipping veins in Pieces 1 and 7; one vertical vein in Piece 7. Brecciation in Pieces 3 and 4.

ADDITIONAL COMMENTS: The breccias in Pieces 3 and 4 contain abundant silica with celadonite, pyrite, iron oxyhydroxide, and anhydrite filling space between clasts. Pieces 7 and 8 are highly altered to celadonite and iron oxyhydroxide.

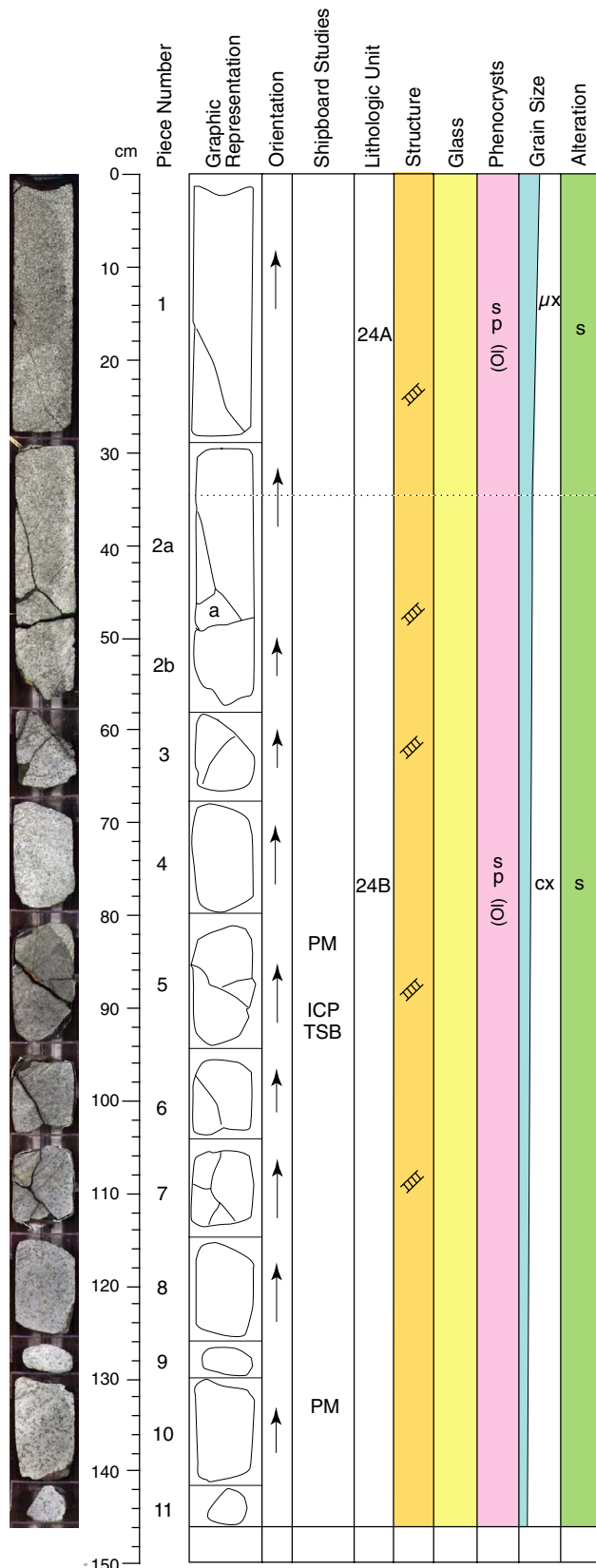
Core Photo



206-1256D-57R-3 (Section top: 648.25 mbsf)

UNIT: 24A
 ROCK NAME: Sparsely olivine-phyric microcrystalline basalt
 SUMMARY DESCRIPTION: Sparsely phyric massive lava.
 PIECES: 1-4 (igneous description based on Piece 3)
 CONTACTS:
 Upper: not recovered
 Lower: not recovered
 COLOR: greenish black (10Y 2.5/1)
 PHENOCRYSTS:
 Olivine 1.0-2.0 % 0.5-1.0 mm 100% altered to saponite
 GROUNDMASS:
 Grain size: microcrystalline
 Texture: variolitic to intergranular
 VESICLES: Rare irregular vesicles filled with saponite.
 ALTERATION: Dark gray slightly to highly altered basalt.
 VEINS: 0.1-0.6 mm veins of saponite with pyrite, and silica. Piece 4 contains a 6 mm silica vein that may have been part of a breccia.
 STRUCTURE: Gently dipping veins in Pieces 2, 3, and 4. One steeply dipping vein in Piece 2.
 ADDITIONAL COMMENTS: Piece 1 is highly altered to celadonite and iron oxyhydroxide.

Core Photo



206-1256D-57R-4 (Section top: 649.65 mbsf)

UNIT: 24A-24B

ROCK NAME: Sparsely olivine-phyric microcrystalline to cryptocrystalline basalt

SUMMARY DESCRIPTION: Sparsely phyric massive lava.

PIECES: 1-11 (igneous description based on Piece 2)

CONTACTS:

Upper: not recovered

Lower: not recovered

COLOR: greenish black (10Y 2.5/1)

PHENOCRYSTS:

Olivine 3.0 % 0.5-1.0 mm 100% altered to saponite

GROUNDMASS:

Grain size: microcrystalline to cryptocrystalline

Texture: variolitic to intergranular

ALTERATION: Dark gray slightly altered basalt with 4-6 mm mixed black and brown alteration halos along veins.

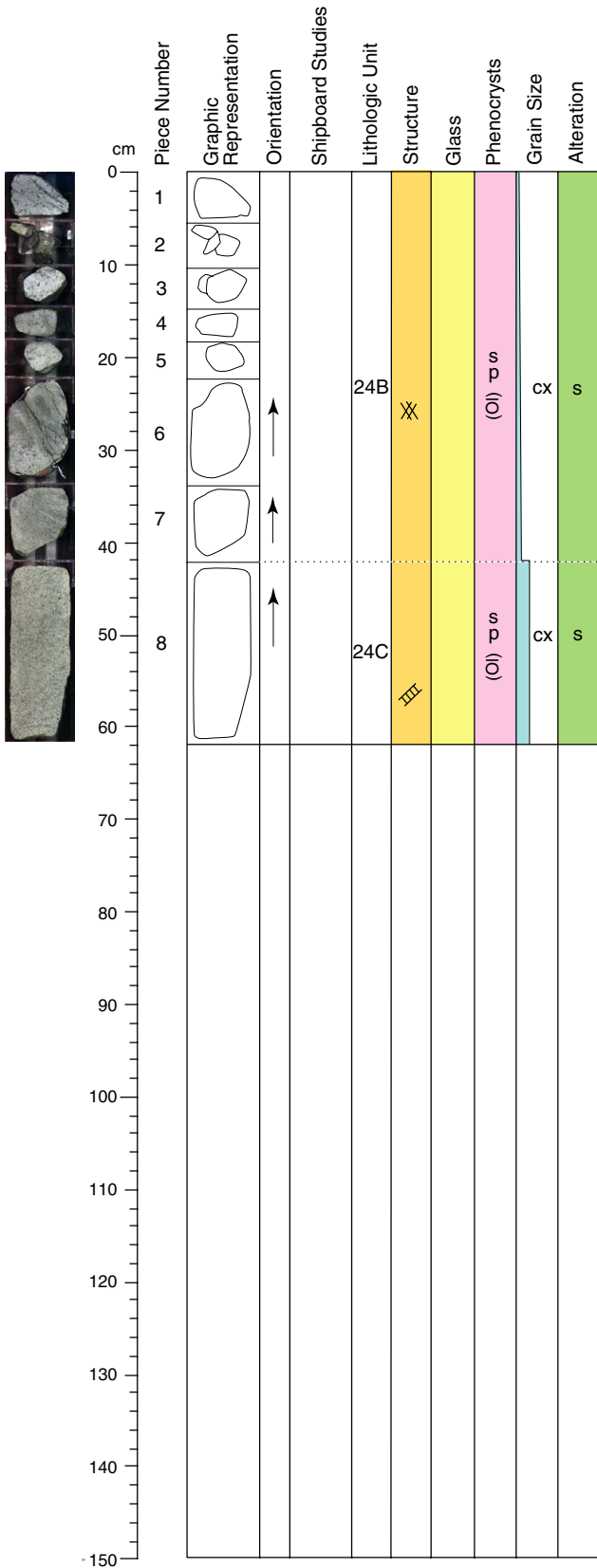
VEINS: 0.1-1.5 mm veins of saponite with pyrite, iron oxyhydroxide and silica.

STRUCTURE: Steeply dipping veins in Pieces 1, 2, 3, 5, 6, and 10.

Subhorizontal vein in Pieces 2, 3, and 5. Y-shaped intersection of veins in Piece 7.

ADDITIONAL COMMENTS: Boundary between subunits a and b is based on a change in texture. 24a has a common variolitic texture with granular to prismatic clinopyroxene and radiating plagioclase laths, while 24b has unusual varioles consisting of feathery, branching plagioclase with interstices filled by clinopyroxene crystals. These varioles form domains ~5 mm in diameter which are surrounded by coarser-grained intergranular material that contains the olivine phenocrysts.

Core Photo



206-1256D-57R-5 (Section top: 651.10 mbsf)

UNIT: 24B-24C

ROCK NAME: Sparsely olivine-phyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Sparsely phyric massive lava.

PIECES: 1-8 (igneous description based on Pieces 1 and 8)

CONTACTS:

Upper: not recovered

Lower: gradational change in grain size

COLOR: greenish black (10Y 2.5/1)

PHENOCRYSTS:

Plagioclase <1 % 0.1 mm

Olivine 1.0 % 0.2-1.0 mm 100% altered to saponite

GROUNDMASS:

Grain size: cryptocrystalline

Texture: variolitic to intergranular

VESICLES: Rare spherical vesicles 0.5 mm diameter filled with saponite

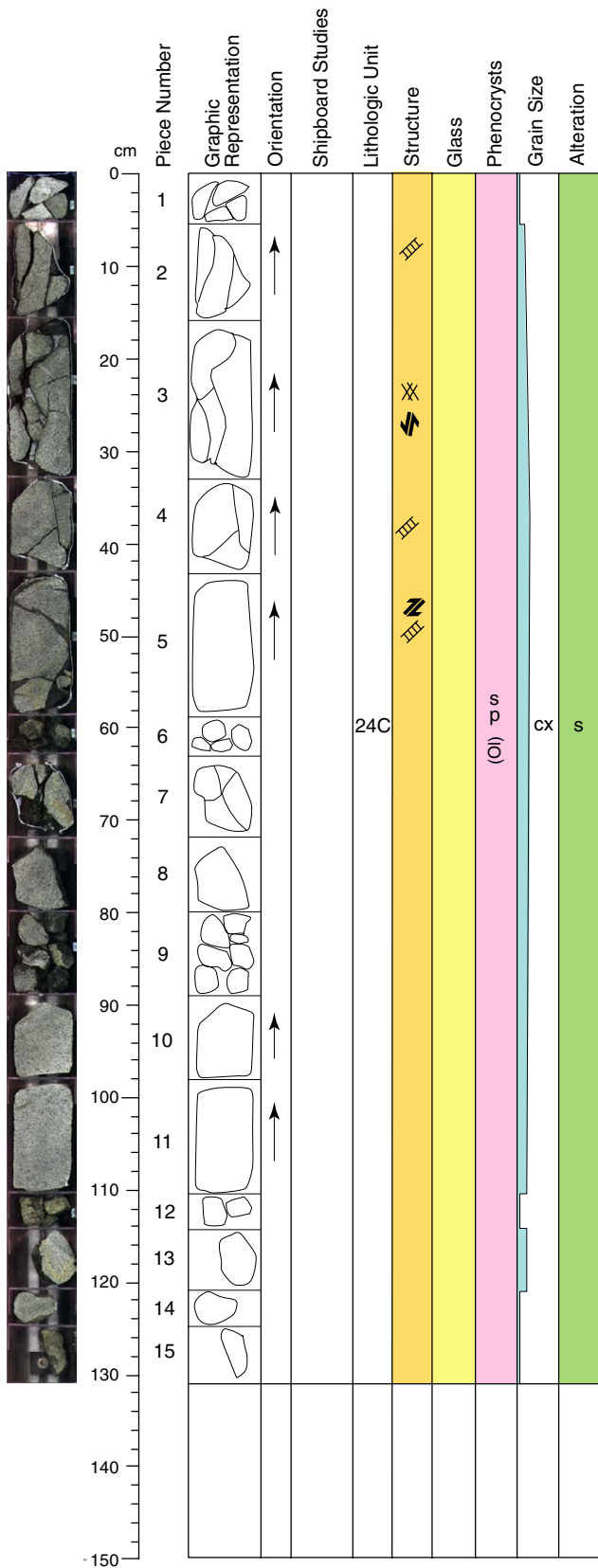
ALTERATION: Dark gray slightly altered basalt with 3-6 mm mixed black and brown alteration halos along veins.

VEINS: 0.1-1.5 mm veins of saponite with local iron oxyhydroxide.

STRUCTURE: Vein network in Piece 6. One steeply dipping vein in Piece 8.

ADDITIONAL COMMENTS: Boundary between subunits b and c is based on a change in texture. 24b has unusual varioles consisting of feathery, branching plagioclase with interstices filled by clinopyroxene crystals. These varioles form domains ~5 mm in diameter which are surrounded by coarser-grained intergranular material that contains the olivine phenocrysts. 24c has a common variolitic texture with granular to prismatic clinopyroxene and radiating plagioclase laths.

Core Photo



206-1256D-58R-1 (Section top: 655.00 mbsf)

UNIT: 24C

ROCK NAME: Sparsely olivine-phyric cryptocrystalline basalt
 SUMMARY DESCRIPTION: Sparsely phyric cryptocrystalline basalt sheet flows.
 PIECES: 1-15 (igneous description based on Piece 11)

CONTACTS:

Upper: not recovered
 Lower: gradational change in grain size

COLOR: greenish black (10Y 2.5/1)

PHENOCRYSTS:

Olivine 1.0-2.0 % 0.2-1.0 mm 100% altered to saponite

GROUNDMASS:

Grain size: cryptocrystalline
 Texture: variolitic to intergranular

VESICLES: Rare spherical vesicles 0.5 mm diameter filled with saponite

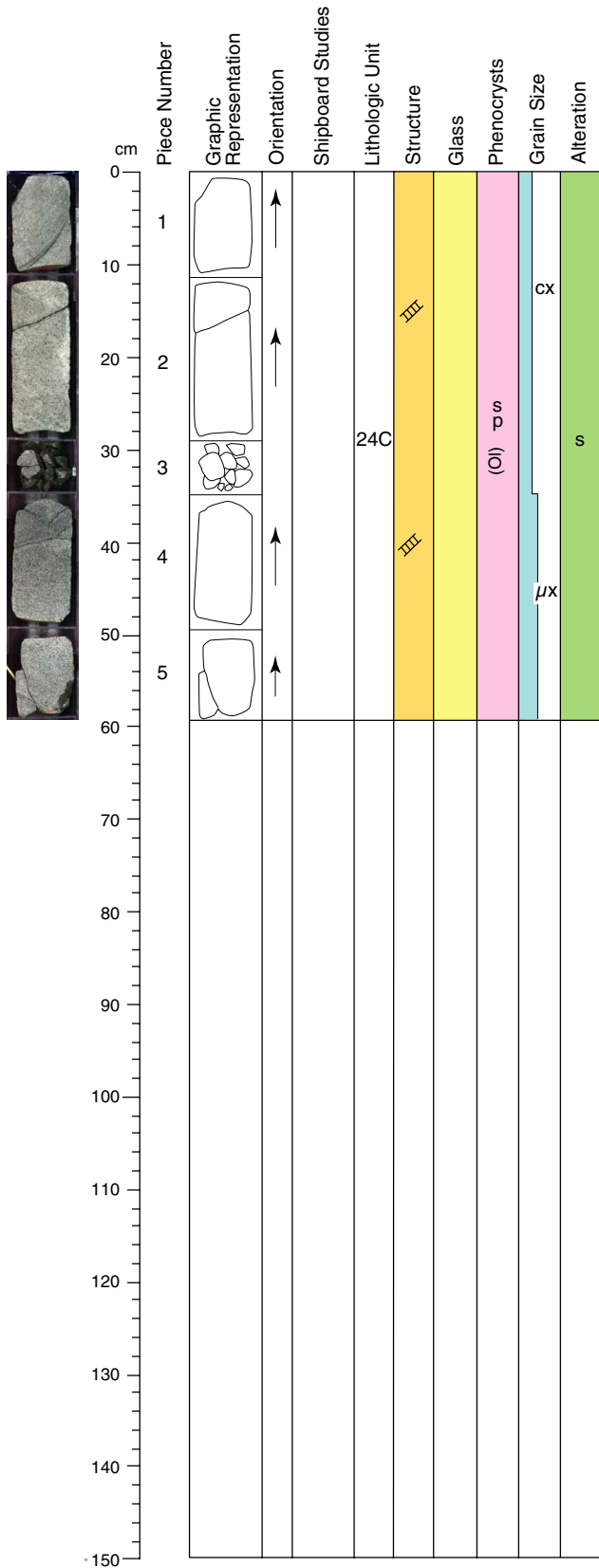
ALTERATION: Dark gray slightly altered basalt with 4-10 mm mixed black and brown alteration halos along veins.

VEINS: 0.1-1.0 mm veins of saponite with iron oxyhydroxide. Piece 3 contains a 5 mm saponite vein with iron oxyhydroxide and silica.

STRUCTURE: Vertical veins in Pieces 2, 3, and 4. Vein network with incipient brecciation in Piece 3. One shear vein with reverse sense of shear in Piece 5.

ADDITIONAL COMMENTS: Feathery, branching plagioclase in varioles. Olivine present in coarser, intergranular patches.

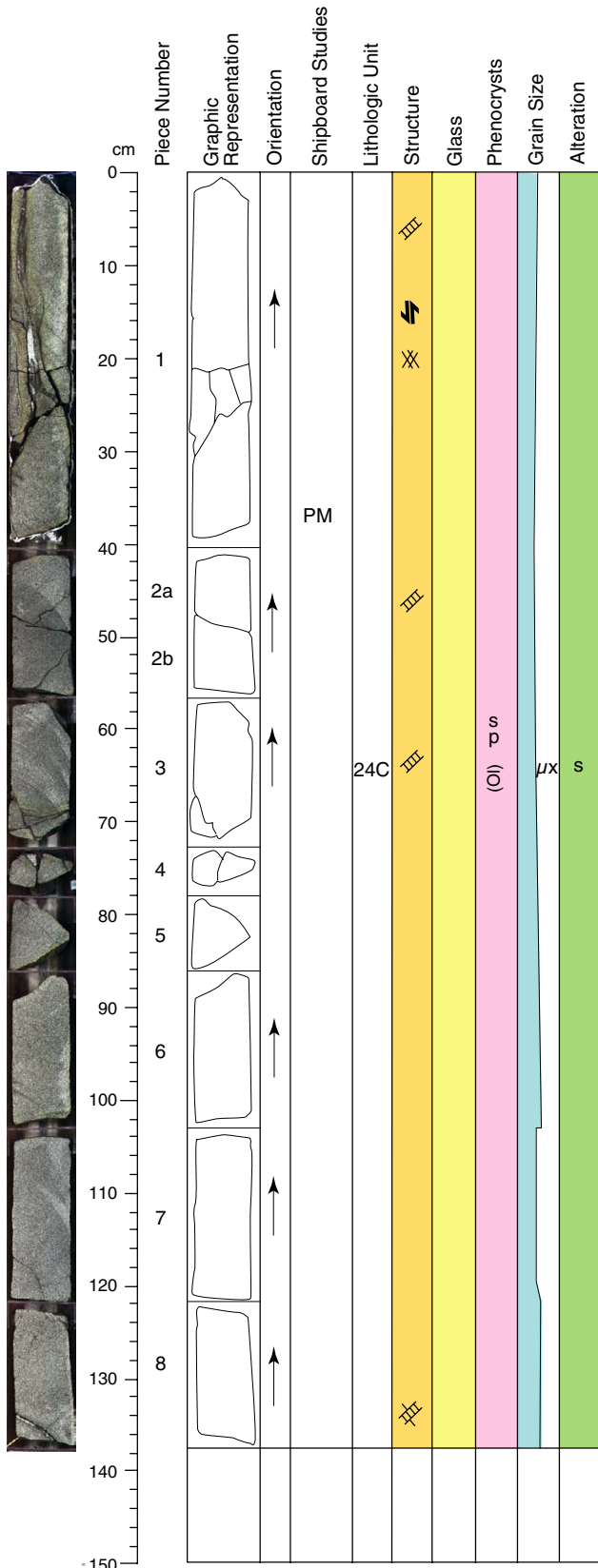
Core Photo



206-1256D-58R-2 (Section top: 656.30 mbsf)

UNIT: 24C
ROCK NAME: Sparsely olivine-phyric cryptocrystalline to microcrystalline basalt
SUMMARY DESCRIPTION: Sparsely phyric cryptocrystalline to microcrystalline basalt sheet flows.
PIECES: 1-5 (igneous description based on Piece 2b)
CONTACTS:
 Upper: not recovered
 Lower: gradational change in grain size
COLOR: greenish black (10Y 2.5/1)
PHENOCRYSTS:
 Olivine 1.0-2.0 % 0.5-1.0 mm 100% altered to saponite
GROUNDMASS:
 Grain size: cryptocrystalline to microcrystalline
 Texture: variolitic to intergranular
VESICLES: Rare spherical vesicles 0.5 mm diameter filled with saponite plus or minus carbonate.
ALTERATION: Dark gray slightly altered basalt.
VEINS: 0.1-1.0 mm veins of saponite with pyrite and iron oxyhydroxide.
STRUCTURE: Gently dipping veins in Pieces 2 and 4. Steep veins in Pieces 4 and 5.
ADDITIONAL COMMENTS: Feathery, branching plagioclase in varioles. Olivine present in coarser, intergranular patches.

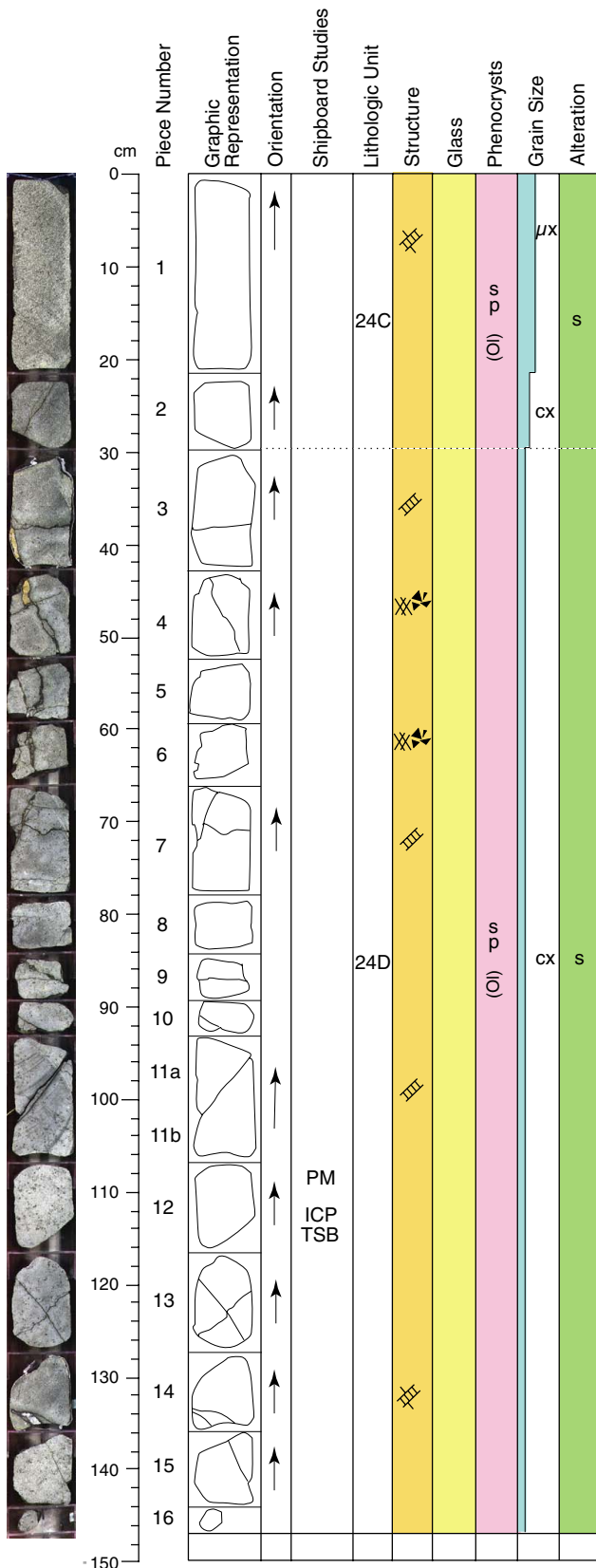
Core Photo



206-1256D-59R-1 (Section top: 659.00 mbsf)

UNIT: 24C
 ROCK NAME: Sparsely olivine-phyric microcrystalline basalt
 SUMMARY DESCRIPTION: Sparsely phyric microcrystalline basalt sheet flows.
 PIECES: 1-8 (igneous description based on Piece 6)
 CONTACTS:
 Upper: not recovered
 Lower: gradational change in grain size
 COLOR: greenish black (10Y 2.5/1)
 PHENOCRYSTS:
 Olivine 1.0-2.0 % 0.4-1.0 mm 100% altered to saponite
 GROUNDMASS:
 Grain size: microcrystalline
 Texture: variolitic to intergranular
 VESICLES: none
 ALTERATION: Dark gray slightly altered basalt with 3-25 mm mixed black and brown alteration halos along veins.
 VEINS: 0.1-3.0 mm veins of saponite with iron oxyhydroxide and silica. Piece 1 contains a complicated vein network (~20 mm wide) filled with saponite, silica, iron oxyhydroxide, pyrite, and carbonate.
 STRUCTURE: Vein network in Piece 1. Conjugate system of veins in Piece 2 and 8. Crosscutting veins with pull-apart in Piece 3.
 ADDITIONAL COMMENTS: Feathery, branching plagioclase in varioles. Olivine present in coarser, intergranular patches.

Core Photo



206-1256D-59R-2 (Section top: 660.37 mbsf)

UNIT: 24C

ROCK NAME: Sparsely olivine-phyric microcrystalline to cryptocrystalline basalt
SUMMARY DESCRIPTION: Sparsely phyric microcrystalline to cryptocrystalline basalt sheet flows.

PIECES: 1-2 (igneous description based on 59R-1 Piece 6)

CONTACTS:

Upper: not recovered
Lower: gradational change in grain size

COLOR: greenish black (10Y 2.5/1)

PHENOCRYSTS:

Olivine 1.0-2.0 % 0.4-1.0 mm 100% altered to saponite

GROUNDMASS:

Grain size: microcrystalline
Texture: variolitic to intergranular

VESICLES: none

ALTERATION: Dark gray slightly altered basalt with a 5 mm black alteration halo along a vein in Piece 2.

VEINS: 0.3-1.0 mm veins of saponite with pyrite and iron oxyhydroxide.

STRUCTURE: Conjugate system of veins in Piece 1. One vein with en-echelon overlapping segments in Piece 1.

ADDITIONAL COMMENTS: Feathery, branching plagioclase in varioles. Olivine present in coarser, intergranular patches.

UNIT: 24D

ROCK NAME: Sparsely olivine-phyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Sparsely phyric cryptocrystalline basalt sheet flows.

PIECES: 3-16 (igneous description based on Piece 7)

CONTACTS:

Upper: gradational change in grain size
Lower: gradational change in grain size

COLOR: dark greenish gray (10Y 3/1)

PHENOCRYSTS:

Olivine 2.0 % 1.0-5.0 mm 100% altered to saponite

GROUNDMASS:

Grain size: cryptocrystalline
Texture: variolitic to intergranular

VESICLES: none

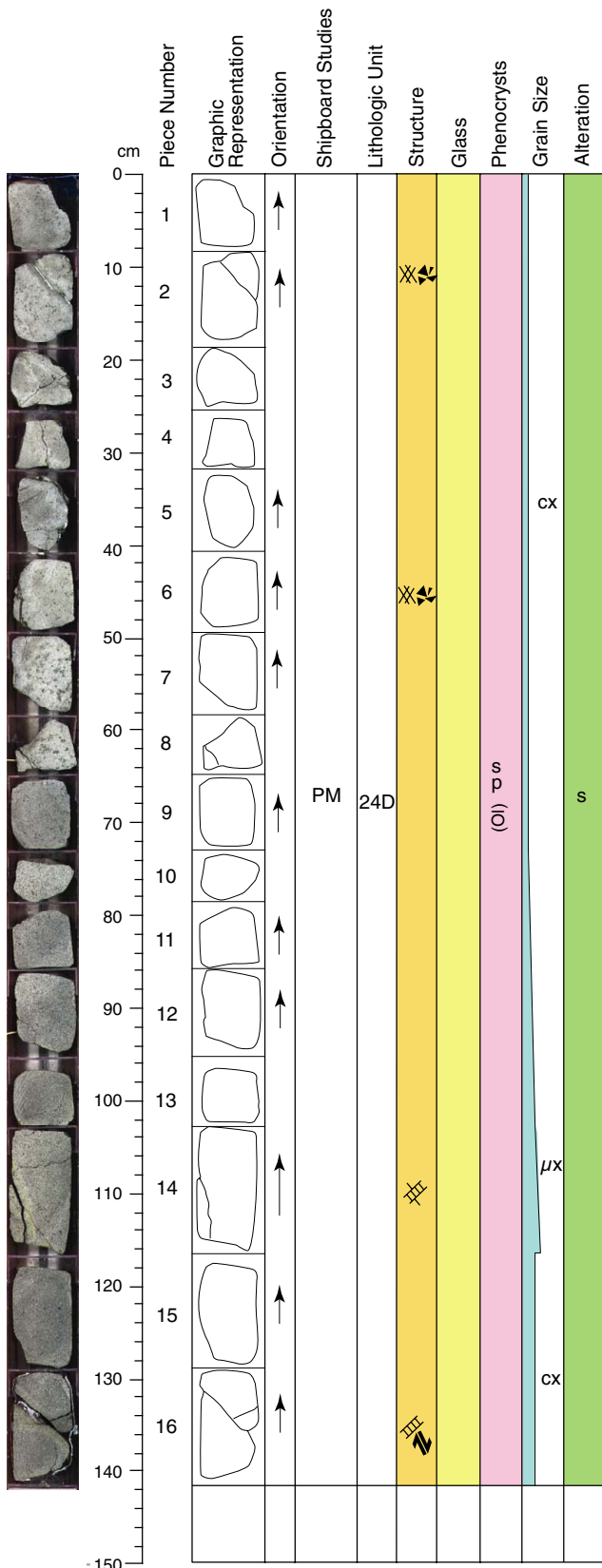
ALTERATION: Dark gray slightly altered basalt with 5-10 mm mixed black and brown alteration halos along veins.

VEINS: 0.1-8.0 mm veins of saponite with iron oxyhydroxide, silica, and rare carbonate and pyrite.

STRUCTURE: onjugate system of veins in Pieces 7, 11, and 13. Steeply dipping vein network with composite vein and incipient brecciation in Piece 4, 5, and 6.

ADDITIONAL COMMENTS: Feathery, branching plagioclase in varioles. Olivine present in coarser, intergranular patches.

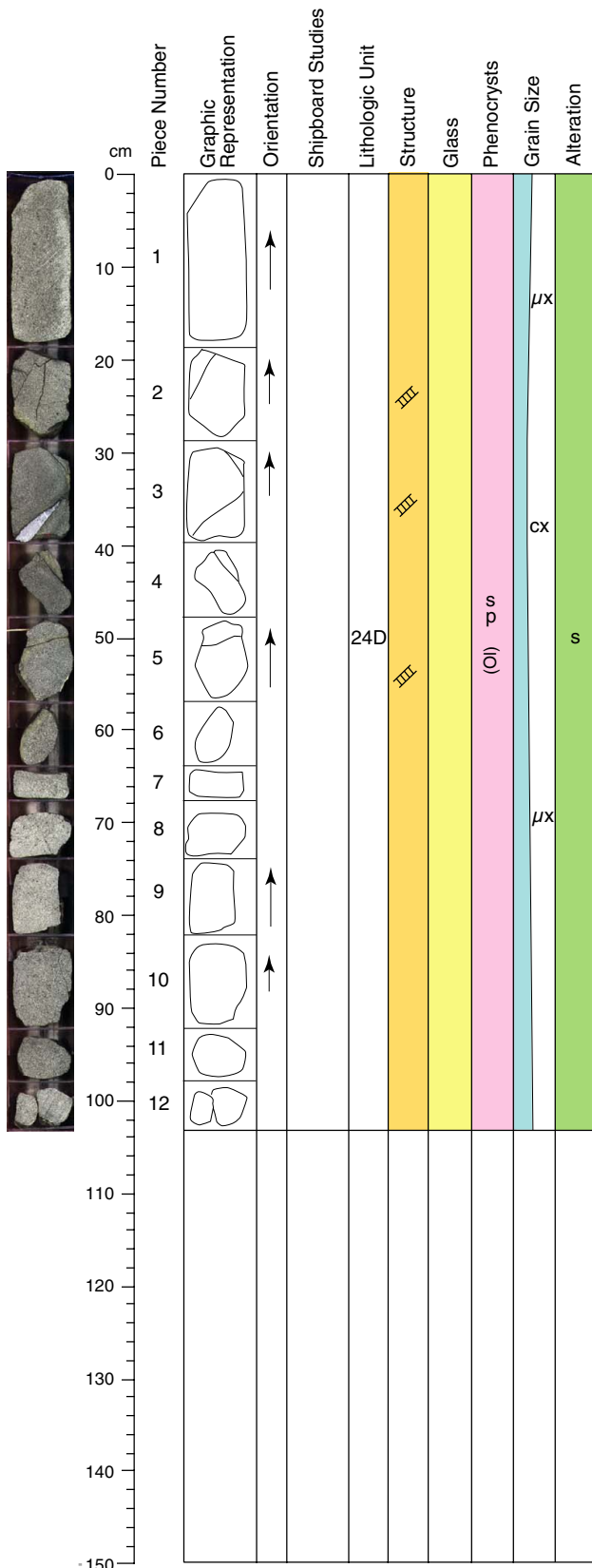
Core Photo



206-1256D-59R-3 (Section top: 661.84 mbsf)

UNIT: 24D
 ROCK NAME: Sparsely olivine-phyric cryptocrystalline basalt
 SUMMARY DESCRIPTION: Sparsely phyric cryptocrystalline basalt sheet flows.
 PIECES: 1-16 (igneous description based on Piece 7)
 CONTACTS:
 Upper: gradational change in grain size
 Lower: gradational change in grain size
 COLOR: dark greenish gray (10Y 3/1)
 PHENOCRYSTS:
 Olivine 2.0% 1.0-1.5 mm 100% altered to saponite
 GROUNDMASS:
 Grain size: cryptocrystalline
 Texture: variolitic to intergranular
 VESICLES: none
 ALTERATION: Dark gray slightly altered basalt with 2-8 mm black and mixed black and brown alteration halos along veins.
 VEINS: 0.1-3.0 mm veins of saponite with pyrite, iron oxyhydroxide, carbonate, and silica.
 STRUCTURE: Vein network with incipiently developed clastic texture in Piece 2 and 6. Conjugate system of vein in Piece 14. Shear vein with overlapping fibers and normal sense of shear in Piece 16.
 ADDITIONAL COMMENTS: Feathery, branching plagioclase in varioles. Olivine present in coarser, intergranular patches.

Core Photo



206-1256D-59R-4 (Section top: 663.26 mbsf)

UNIT: 24D

ROCK NAME: Sparsely olivine-phyric microcrystalline to cryptocrystalline basalt
 SUMMARY DESCRIPTION: Sparsely phyric microcrystalline to cryptocrystalline basalt sheet flows.

PIECES: 1-12 (igneous description based on Piece 1)

CONTACTS:

Upper: gradational change in grain size
 Lower: gradational change in grain size

COLOR: very dark gray (N 3/)

PHENOCRYSTS:

Olivine 2.0 % 1.0-1.5 mm 100% altered to saponite

GROUNDMASS:

Grain size: microcrystalline to cryptocrystalline
 Texture: intergranular

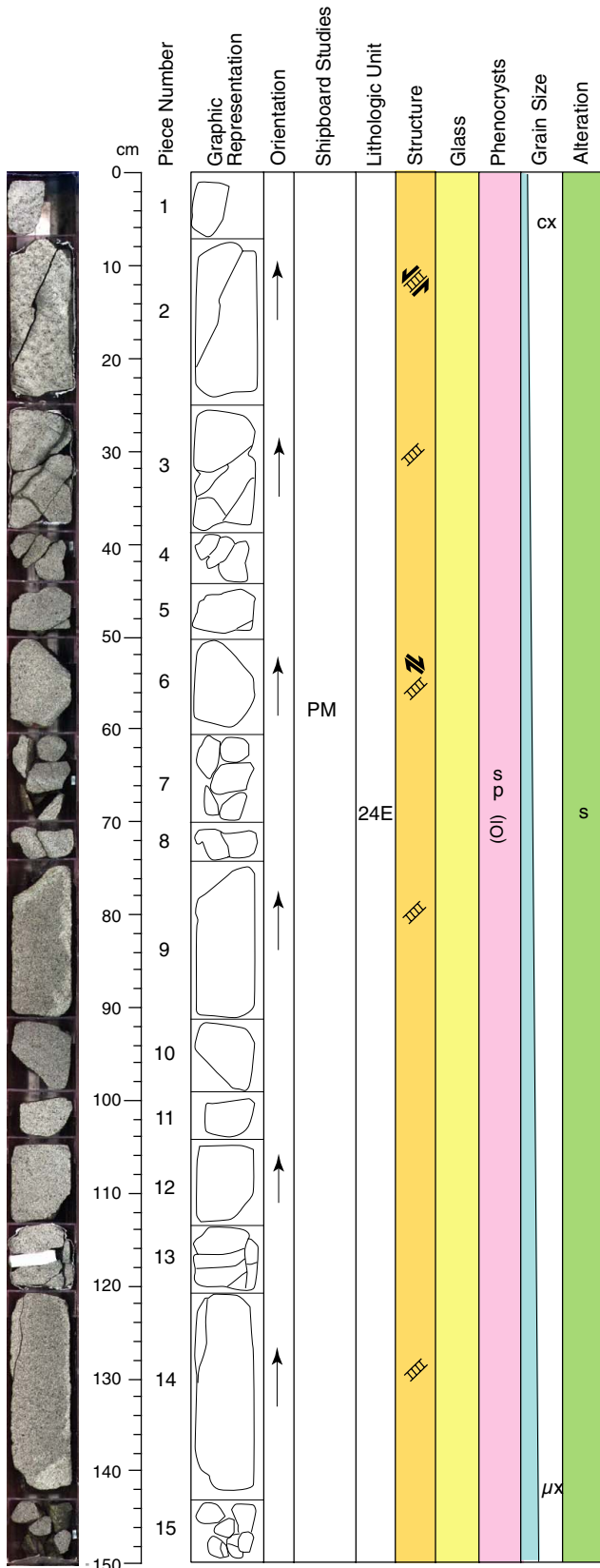
VESICLES: none

ALTERATION: Dark gray slightly altered basalt with 5-10 mm black and mixed black and brown alteration halos along veins.

VEINS: 0.2-10 mm veins of saponite with pyrite, iron oxyhydroxide and silica.
 STRUCTURE: Vein network in Piece 2. Steeply dipping irregular and composite vein in Piece 3, 5, 9, and 10.

ADDITIONAL COMMENTS: Feathery, branching plagioclase in varioles is less abundant than in sections 59R-2 and 59R-3 and is replaced by thin skeletal laths. Olivine present in coarser, intergranular patches.

Core Photo



206-1256D-60R-1 (Section top: 668.60 mbsf)

UNIT: 24E

ROCK NAME: Sparsely olivine-phyric cryptocrystalline to microcrystalline basalt
 SUMMARY DESCRIPTION: Sparsely phyric cryptocrystalline to microcrystalline basalt sheet flows.

PIECES: 1-15 (igneous description based on Piece 2)

CONTACTS:

Upper: gradational change in grain size
 Lower: not recovered

COLOR: dark greenish gray (10Y 3/1)

PHENOCRYSTS:

Olivine 3.0% 0.5-1.5 mm 100% altered to saponite

GROUNDMASS:

Grain size: cryptocrystalline
 Texture: variolitic to intergranular

VESICLES: none

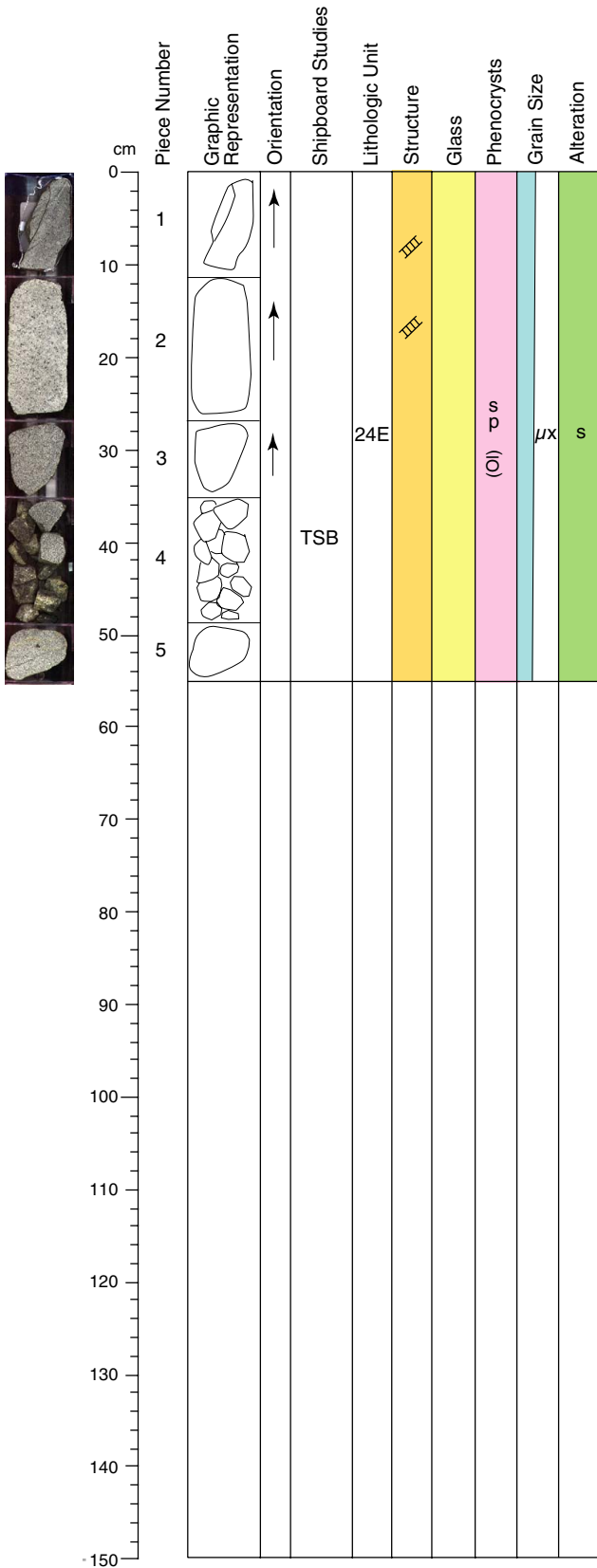
ALTERATION: Dark gray slightly altered basalt with 5-10 mm black alteration halos along veins.

VEINS: 0.2-10 mm veins of saponite with iron oxyhydroxide.

STRUCTURE: Shear veins with stepped morphology and normal sense of shear in Piece 2 and 6. Vertical veins in Pieces 9 and 14.

ADDITIONAL COMMENTS: Coarser-grained plagioclase plus clinopyroxene aggregates with large olivine phenocrysts occur as patches. There are also domains 5-10 mm diameter with feathery plagioclase.

Core Photo



206-1256D-60R-2 (Section top: 670.64 mbsf)

UNIT: 24E

ROCK NAME: Sparsely olivine-phyric microcrystalline basalt

SUMMARY DESCRIPTION: Sparsely phyric microcrystalline basalt sheet flows.

PIECES: 1-5 (igneous description based on 60R-1 Piece 2)

CONTACTS:

Upper: gradational change in grain size

Lower: not recovered

COLOR: dark greenish gray (10Y 3/1)

PHENOCRYSTS:

Olivine 3.0 % 0.5-1.5 mm 100% altered to saponite

GROUNDMASS:

Grain size: microcrystalline

Texture: variolitic to intergranular

VESICLES: none

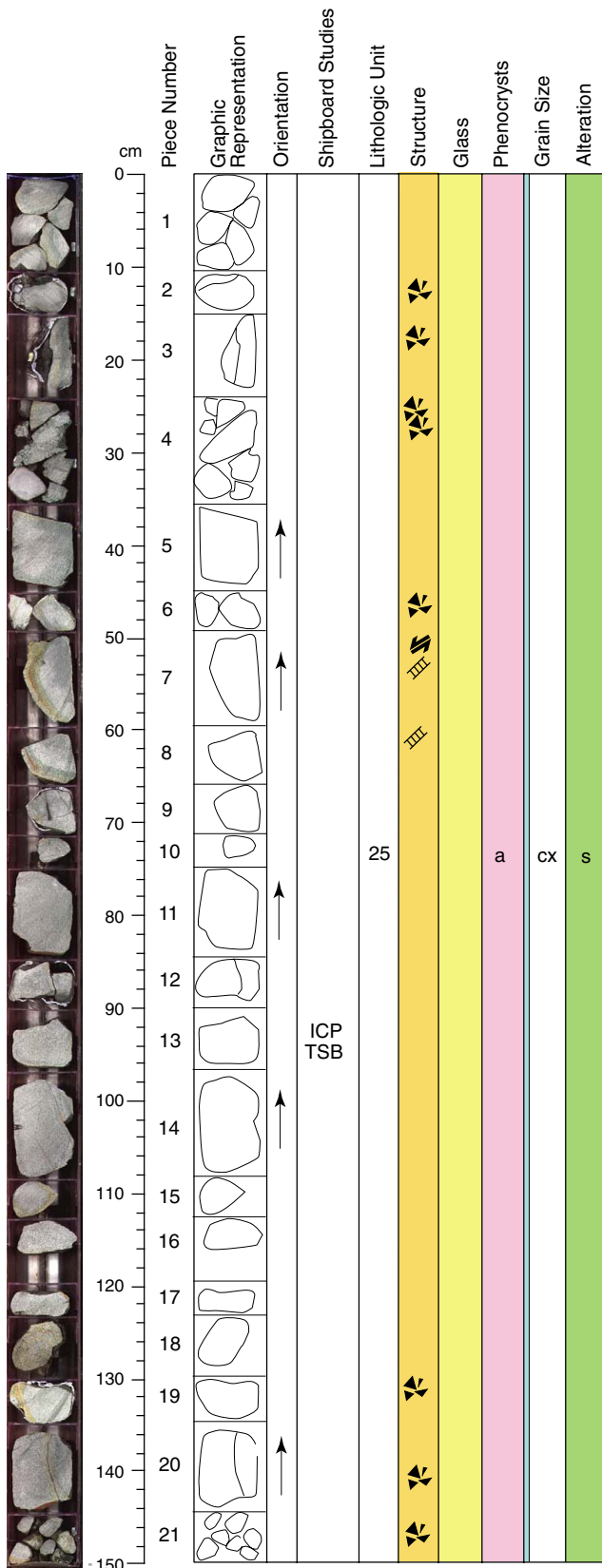
ALTERATION: Dark gray slightly altered basalt.

VEINS: 0.2-0.5 mm veins of saponite with iron oxyhydroxide.

STRUCTURE: Steeply dipping veins in Pieces 1 and 2.

ADDITIONAL COMMENTS: Coarser-grained plagioclase plus clinopyroxene aggregates with large olivine phenocrysts occur as patches. There are also domains 5-10 mm diameter with feathery plagioclase.

Core Photo



206-1256D-61R-1 (Section top: 679.50 mbsf)

UNIT: 25

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows.

PIECES: 1-21 (igneous description based on Piece 11)

CONTACTS:

Upper: not recovered

Lower: not recovered

COLOR: greenish black (10Y 2.5/1)

PHENOCRYSTS: none

GROUNDMASS:

Grain size: cryptocrystalline

Texture: intergranular to variolitic

VESICLES: none

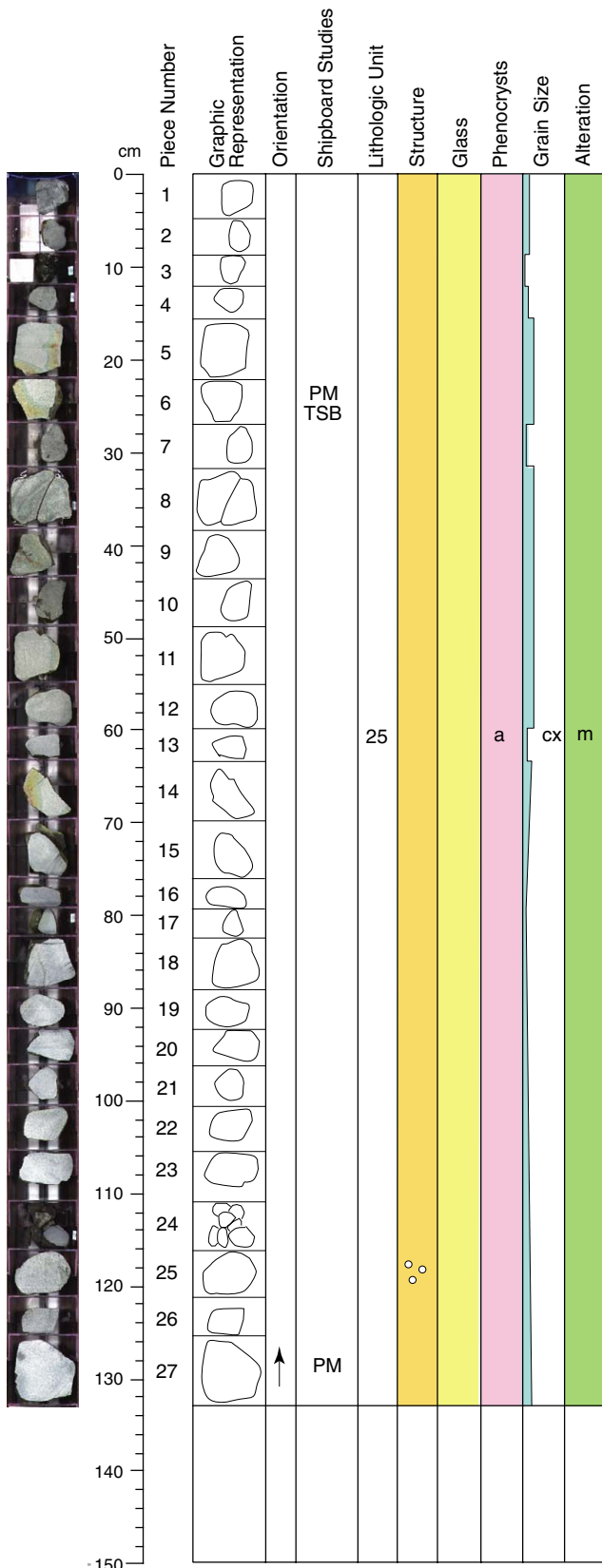
ALTERATION: Dark gray slightly altered basalt with 5-11 mm mixed black and brown alteration halos along veins.

VEINS: 0.1-1.5 mm veins of saponite with celadonite, pyrite, and iron oxyhydroxide.

STRUCTURE: Vein with incipiently developed clastic texture in Pieces 2, 3, 19, and 21. Highly curved iron oxyhydroxide vein with overlapping en-echelon segments and splayed morphology in Pieces 7 and 8.

ADDITIONAL COMMENTS: Pieces 2-4 and 6 are breccia with angular clasts of basalt in a matrix of celadonite and saponite.

Core Photo



206-1256D-62R-1 (Section top: 687.20 mbsf)

UNIT: 25

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows.

PIECES: 1-27 (igneous description based on Piece 27)

CONTACTS:

Upper: not recovered

Lower: not recovered

COLOR: black (N 2.5/)

PHENOCRYSTS:

Plagioclase tr % 0.2-0.4 mm

Olivine <1 % 0.2-0.4 mm 100% altered to saponite

GROUNDMASS:

Grain size: cryptocrystalline

Texture: variolitic

VESICLES: Rare spherical vesicles ~0.4 mm diameter filled with saponite

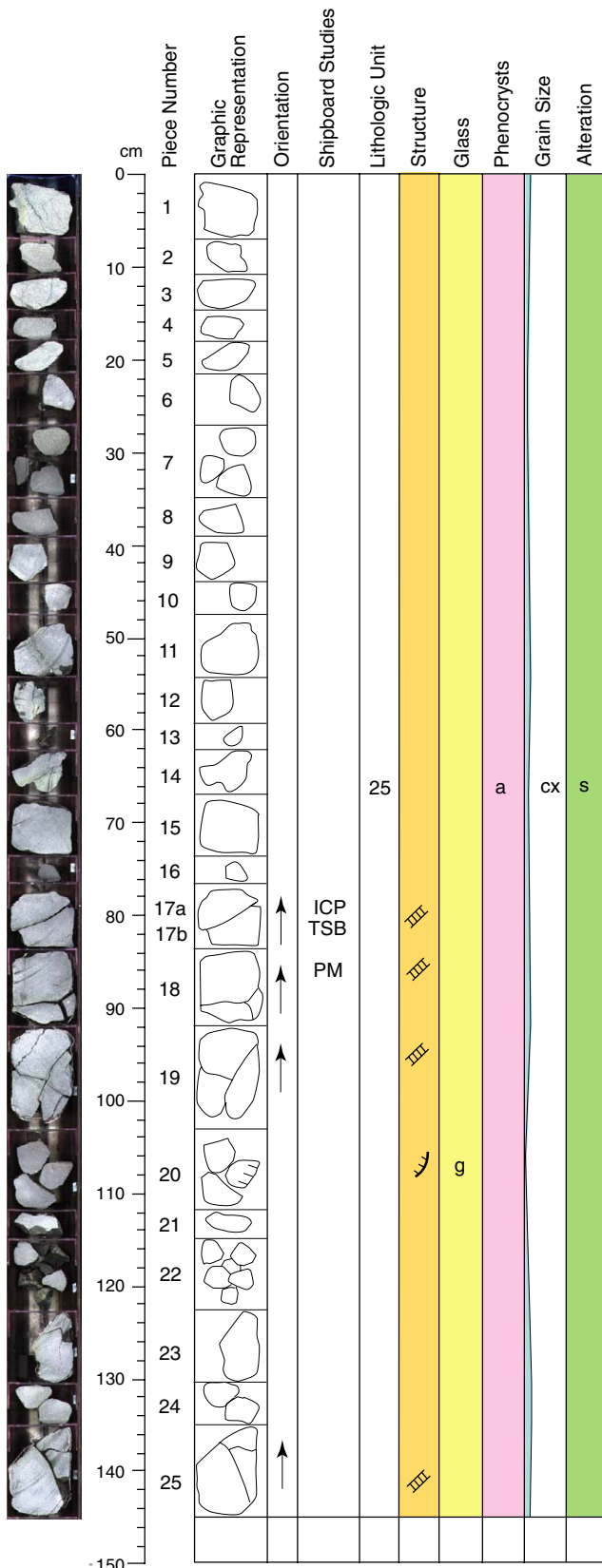
ALTERATION: Dark gray slightly altered basalt with 3-12 mm mixed black and brown alteration halos along veins.

VEINS: 0.2-1.7 mm veins of saponite with iron oxyhydroxide.

STRUCTURE: No oriented structures.

ADDITIONAL COMMENTS: Plagioclase occurs as trace discrete phenocrysts as well as in rare microgabbro inclusions (<0.5 mm) of plagioclase plus clinopyroxene.

Core Photo



206-1256D-63R-1 (Section top: 696.50 mbsf)

UNIT: 25
 ROCK NAME: Aphyric cryptocrystalline basalt
 SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows.
 PIECES: 1-25 (igneous description based on Piece 15)
 CONTACTS:
 Upper: not recovered
 Lower: not recovered
 COLOR: black (N 2.5/)
 PHENOCRYSTS:
 Olivine <1 % 0.2-0.4 mm 100% altered to saponite
 GROUNDMASS:
 Grain size: cryptocrystalline
 Texture: intergranular to variolitic
 VESICLES: none
 ALTERATION: Dark gray slightly altered basalt with 1-5 mm black and mixed black and brown alteration halos along veins.
 VEINS: 0.1-0.8 mm veins of saponite with celadonite, pyrite, iron oxyhydroxide and silica.
 STRUCTURE: Planar veins with alteration halos in Piece 17. Y-shaped intersection of veins and curved vein linked to the cooling of lava in Pieces 18 and 19.
 ADDITIONAL COMMENTS: Sparse microgabbro inclusions (0.5-1.0 mm) of plagioclase plus clinopyroxene.

Core Photo

cm	Piece Number	Graphic Representation	Orientation	Shipboard Studies	Lithologic Unit	Structure	Glass	Phenocrysts	Grain Size	Alteration
0	1		↑							
10	2				25			a	CX	s
20										
30										
40										
50										
60										
70										
80										
90										
100										
110										
120										
130										
140										
150										

206-1256D-63R-2 (Section top: 697.95 mbsf)

UNIT: 25

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows.

PIECES: 1-2 (igneous description based on Piece 1)

CONTACTS:

Upper: not recovered

Lower: not recovered

COLOR: black (N 2.5/)

PHENOCRYSTS:

Olivine <1 % 0.2-0.4 mm 100% altered to saponite

GROUNDMASS:

Grain size: cryptocrystalline

Texture: variolitic

VESICLES: Rare irregular vesicles filled with saponite

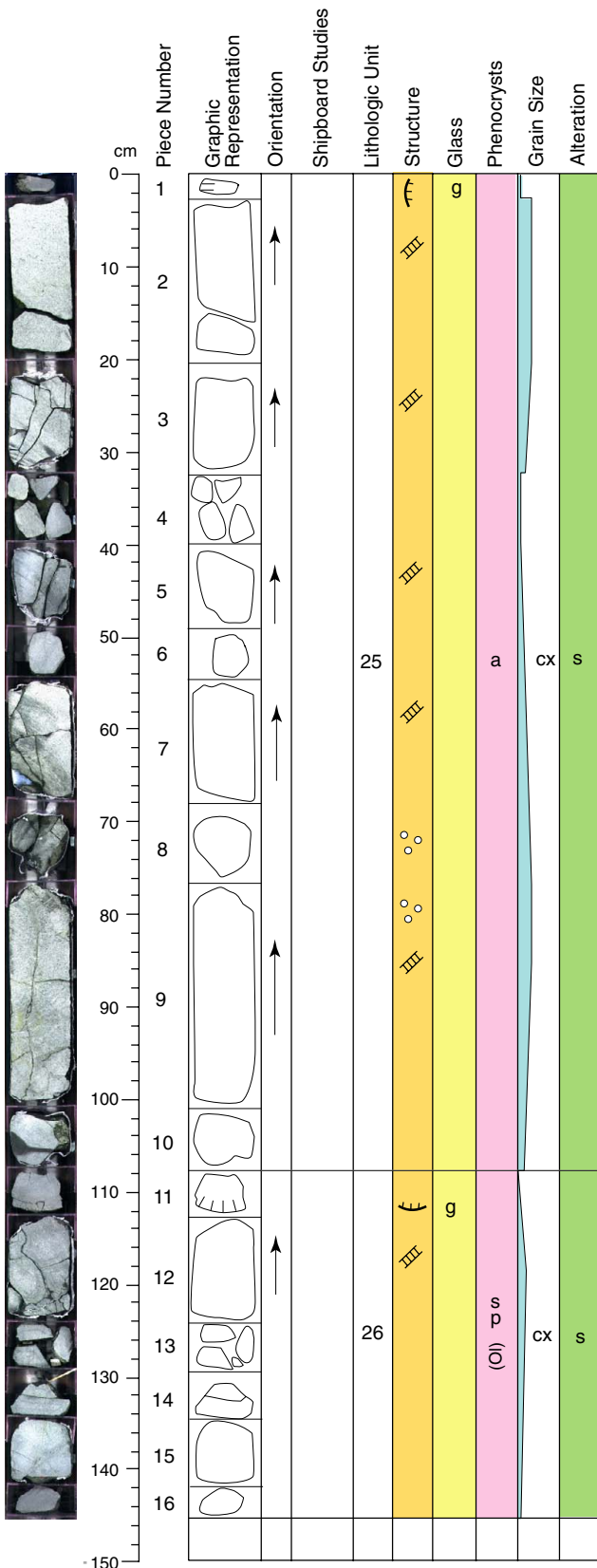
ALTERATION: Dark gray slightly altered basalt.

VEINS: 0.2 mm veins of saponite with pyrite.

STRUCTURE: No oriented structures.

ADDITIONAL COMMENTS: Sparse microgabbro inclusions (0.5-1.0 mm) of plagioclase plus clinopyroxene.

Core Photo



206-1256D-64R-1 (Section top: 701.10 mbsf)

UNIT: 25

ROCK NAME: Aphyric cryptocrystalline basalt
SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows.
PIECES: 1-10 (igneous description based on Piece 2)
CONTACTS:
Upper: not recovered
Lower: not recovered

COLOR: very dark gray (N 3/)

PHENOCRYSTS:

Olivine <1 % 0.2-1.0 mm 100% altered to saponite

GROUNDMASS:

Grain size: cryptocrystalline

Texture: variolitic

VESICLES: Sparse vesicles in Pieces 8 and 9.

ALTERATION: Dark gray slightly altered basalt with 1-10 mm black and mixed black and brown alteration halos along veins.

VEINS: 0.1-1.5 mm veins of saponite with pyrite, iron oxyhydroxide and silica. Piece 7 has a 9 mm silica vein with saponite and pyrite.

STRUCTURE: Concentric subvertical veins and gently dipping radial veins in Piece 3. Vertical composite vein in Piece 9.

ADDITIONAL COMMENTS: Sparse microgabbro inclusions (0.5-1.0 mm) of plagioclase plus clinopyroxene.

UNIT: 26

ROCK NAME: Sparsely olivine-phyric cryptocrystalline basalt
SUMMARY DESCRIPTION: Sparsely phyric cryptocrystalline basalt sheet flows.
PIECES: 11-16 (igneous description based on 64R-2 Piece 4)
CONTACTS:
Upper: glassy margin
Lower: not recovered

COLOR: black (N 2.5/)

PHENOCRYSTS:

Plagioclase tr % 0.2 mm

Olivine 2.0 % 0.3 mm 100% altered to saponite

Clinopyroxene tr % 0.5 mm

GROUNDMASS:

Grain size: cryptocrystalline

Texture: variolitic

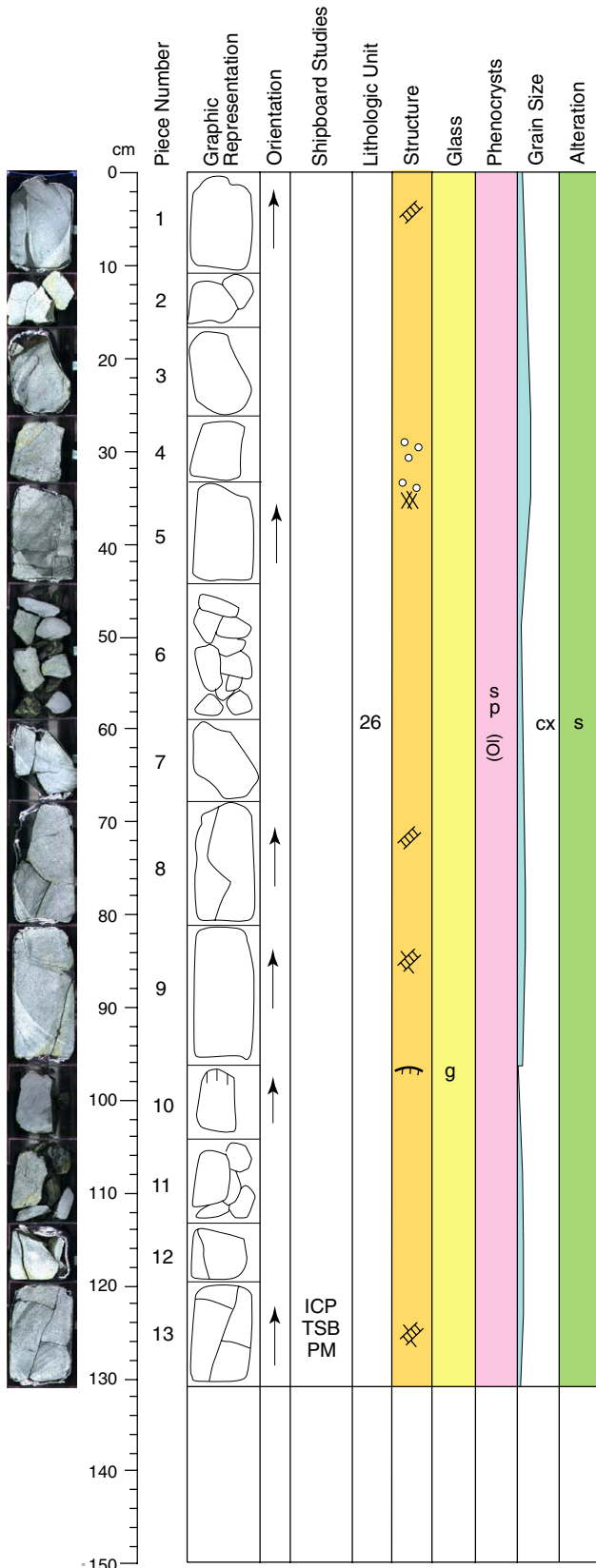
VESICLES: none

ALTERATION: Dark gray slightly altered basalt with 1-10 mm black alteration halos along veins.

VEINS: 0.1-1.0 mm veins of saponite with celadonite, iron oxyhydroxide and silica.

STRUCTURE: Sinuous vein and radial curved veins in Piece 12.

Core Photo



206-1256D-64R-2 (Section top: 702.55 mbsf)

UNIT: 26

ROCK NAME: Sparsely olivine-phyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Sparsely phyric cryptocrystalline basalt sheet flows.

PIECES: 1-13 (igneous description based on Piece 4)

CONTACTS:

Upper: glassy margin

Lower: not recovered

COLOR: black (N 2.5/)

PHENOCRYSTS:

Plagioclase tr % 0.2 mm

Olivine 2.0 % 0.3 mm 100% altered to saponite

Clinopyroxene tr % 0.5 mm

GROUNDMASS:

Grain size: cryptocrystalline

Texture: variolitic

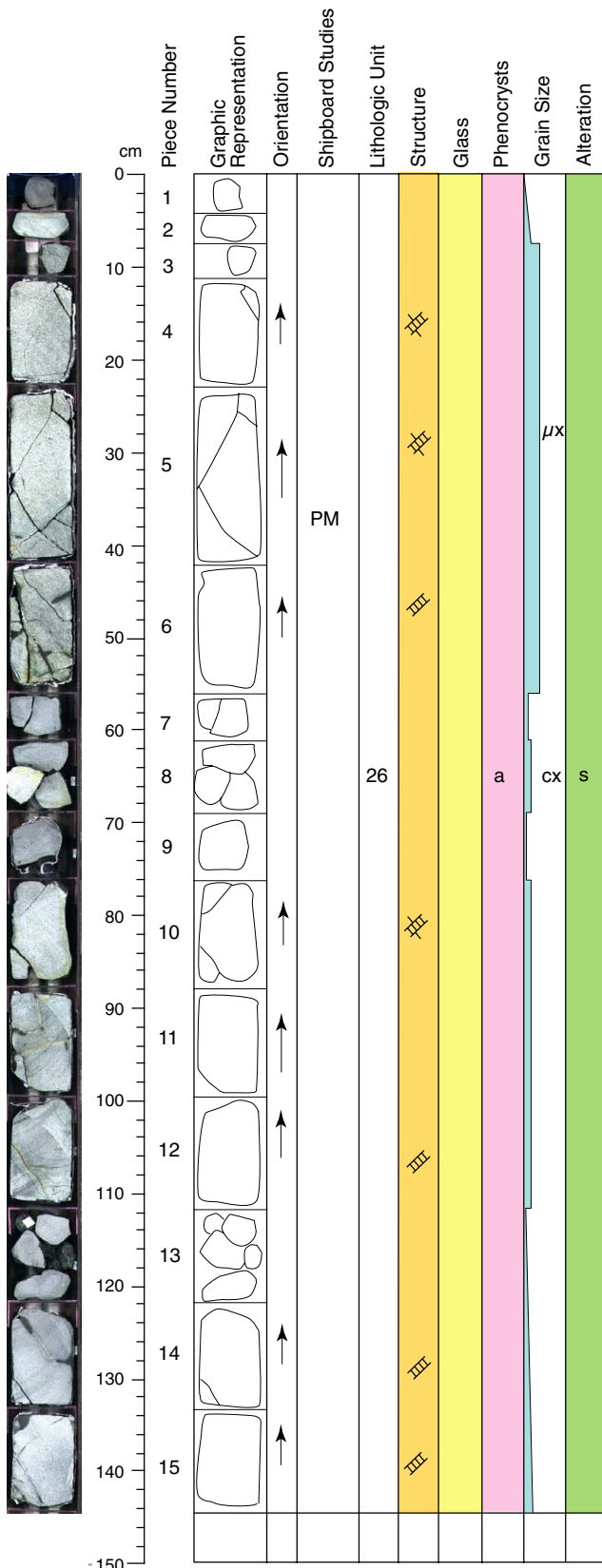
VESICLES: Sparse filled with saponite.

ALTERATION: Dark gray slightly altered basalt with 1-12 mm black and mixed black and brown alteration halos along veins.

VEINS: 0.1-1.0 mm veins of saponite with celadonite, iron oxyhydroxide, silica, and rare pyrite.

STRUCTURE: Vertical veins in Pieces 1, 5, 7, 9, and 13. Conjugate system of veins in Pieces 9, and 13. Vein network in Piece 5. Y-shaped intersection of veins in Piece 8.

Core Photo



206-1256D-65R-1 (Section top: 705.70 mbsf)

UNIT: 26

ROCK NAME: Aphyric cryptocrystalline to microcrystalline basalt
 SUMMARY DESCRIPTION: Aphyric cryptocrystalline to microcrystalline basalt sheet flows.

PIECES: 1-15 (igneous description based on Piece 4)

CONTACTS:

Upper: glassy margin
 Lower: not recovered

COLOR: black (N 2.5/)

PHENOCRYSTS:

Plagioclase tr % 0.2 mm
 Olivine 0.2 % 0.2 mm 100% altered to saponite
 Clinopyroxene tr % 0.4 mm

GROUNDMASS:

Grain size: cryptocrystalline to microcrystalline
 Texture: variolitic to intergranular

VESICLES: none

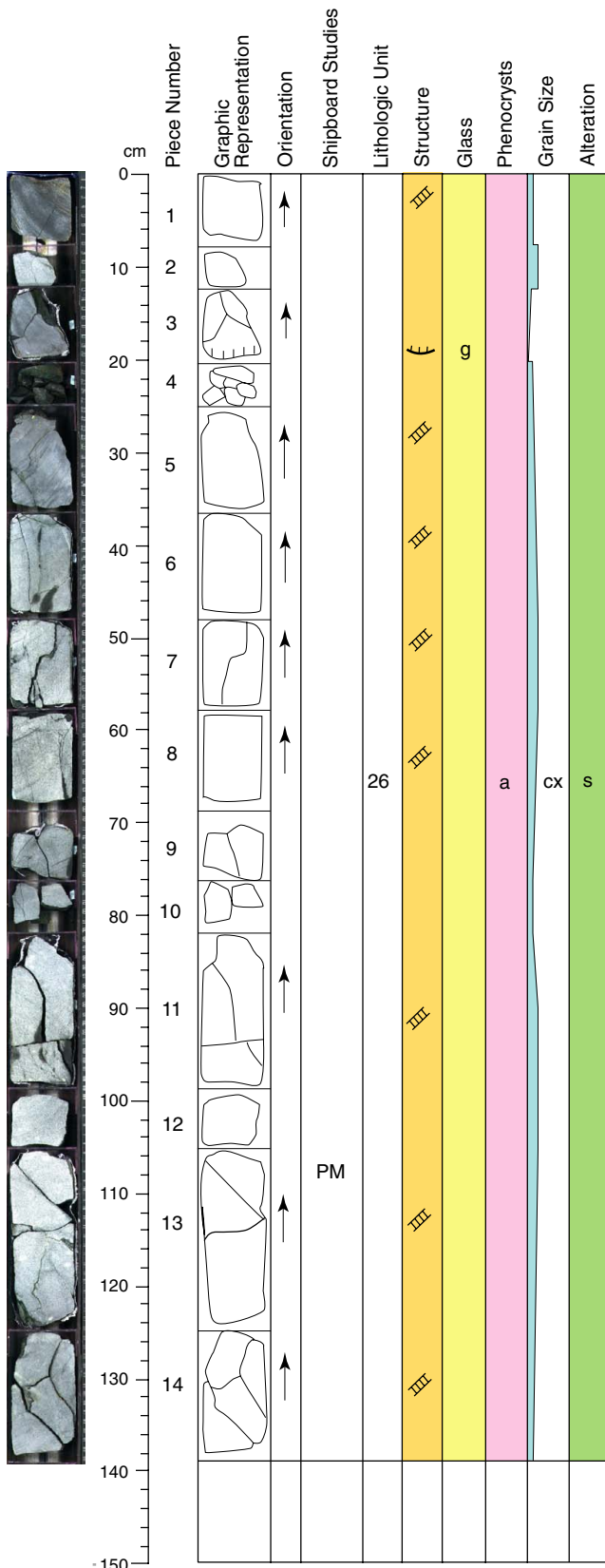
ALTERATION: Dark gray slightly altered basalt with 3-12 mm black and mixed black and brown alteration halos along veins.

VEINS: 0.1-1.5 mm veins of saponite with iron oxyhydroxide and minor celadonite, pyrite, and silica.

STRUCTURE: Conjugate vein sets in Pieces 4, 5 and 10.

ADDITIONAL COMMENTS: Rare clots of large clinopyroxene plus or minus plagioclase.

Core Photo



206-1256D-65R-2 (Section top: 704.14 mbsf)

UNIT: 26

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows.

PIECES: 1-14 (igneous description based on Piece 6)

CONTACTS:

Upper: glassy margin

Lower: not recovered

COLOR: black (N 2.5/)

PHENOCRYSTS:

Olivine <1 % 0.2-0.4 mm 100% altered to saponite

Clinopyroxene tr % 0.4 mm

GROUNDMASS:

Grain size: cryptocrystalline

Texture: variolitic to intergranular

VESICLES: Sparse irregular vesicles filled with saponite

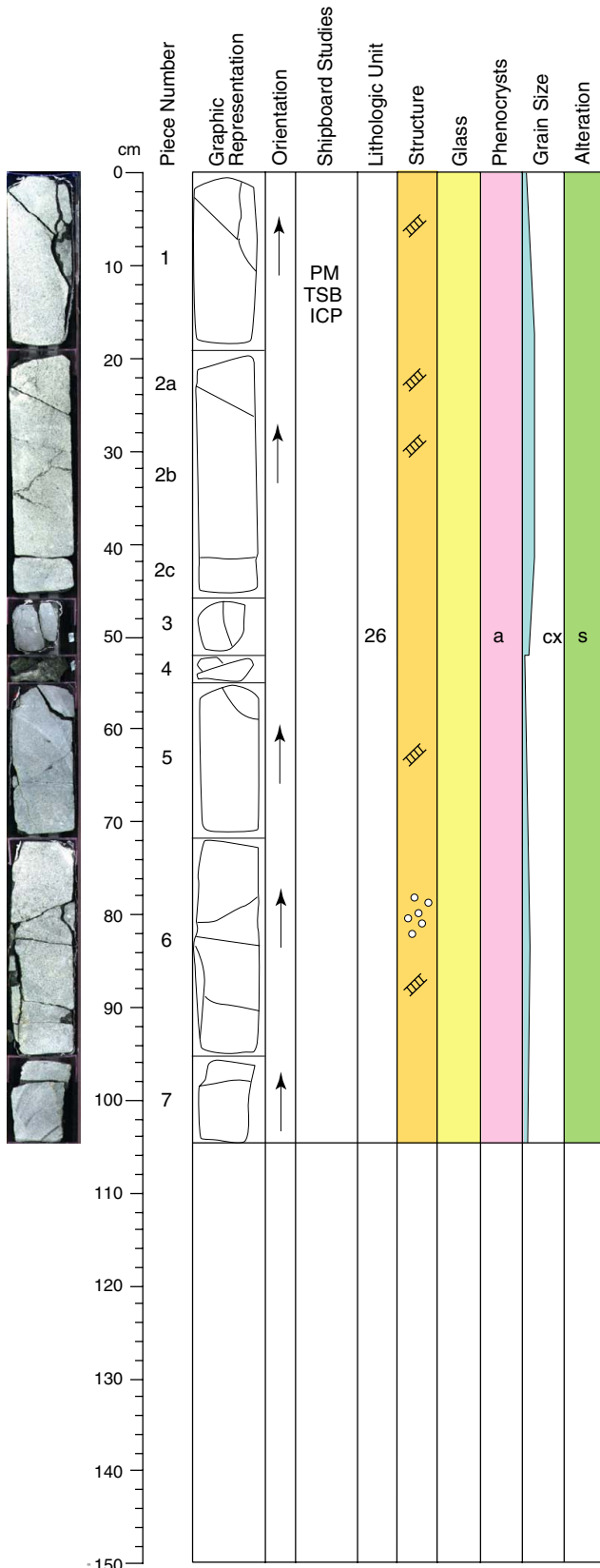
ALTERATION: Dark gray slightly altered basalt with 1-8 mm black and mixed black and brown alteration halos along veins.

VEINS: 0.1-1.0 mm veins of saponite with iron oxyhydroxide and minor celadonite, pyrite, and silica.

STRUCTURE: Curved subvertical veins in Pieces 5, 6, 7, 8, 11, and 14. Y-shaped intersection of veins in Pieces 5, 13, and 14.

ADDITIONAL COMMENTS: Sparse microgabbro xenoliths of plagioclase plus clinopyroxene plus or minus olivine.

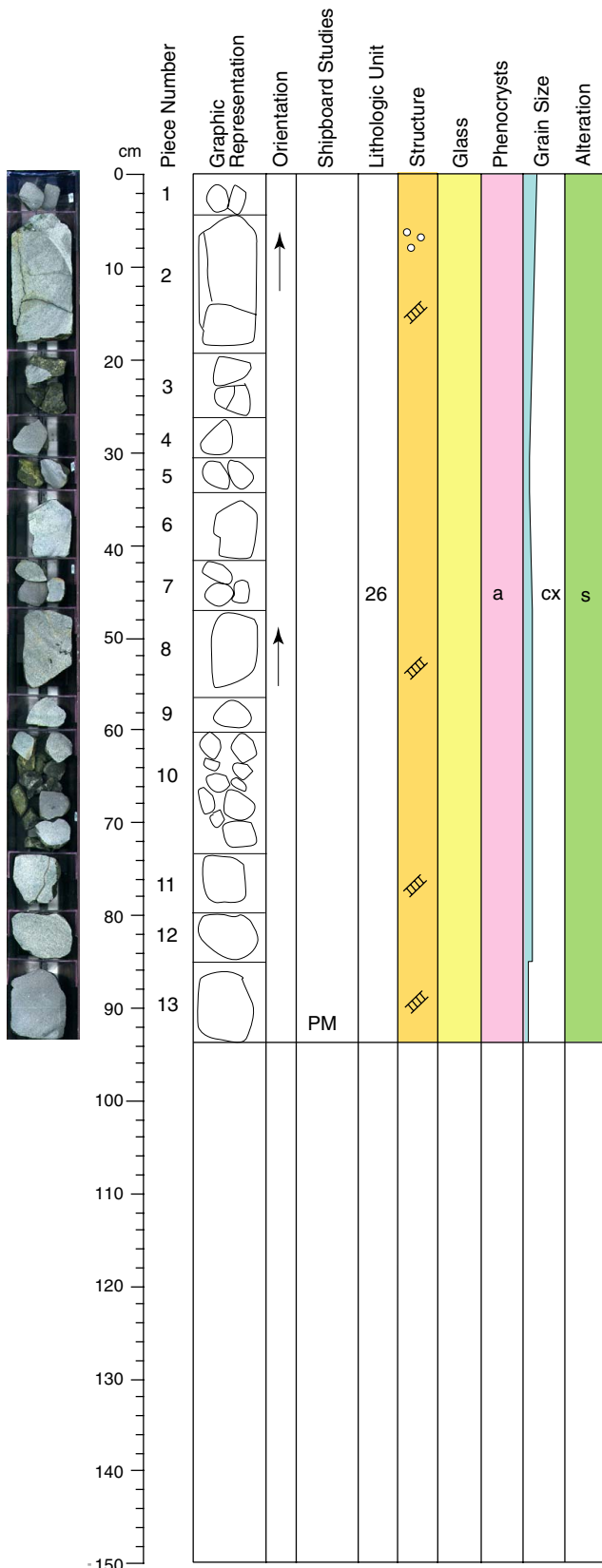
Core Photo



206-1256D-65R-3 (Section top: 708.52 mbsf)

UNIT: 26
 ROCK NAME: Aphyric cryptocrystalline basalt
 SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows.
 PIECES: 1-7 (igneous description based on Piece 5)
 CONTACTS:
 Upper: glassy margin
 Lower: not recovered
 COLOR: greenish black (10Y 2.5/1)
 PHENOCRYSTS:
 Olivine <1% 0.2-0.5 mm 100% altered to saponite
 GROUNDMASS:
 Grain size: cryptocrystalline
 Texture: variolitic
 VESICLES: Sparse irregular vesicles filled with saponite
 ALTERATION: Dark gray slightly altered basalt with 4-10 mm black and mixed black and brown alteration halos along veins.
 VEINS: 0.1-1.0 mm veins of saponite with iron oxyhydroxide and minor celadonite, pyrite, and silica.
 STRUCTURE: Set of subvertical, parallel veins in Piece 2. Subvertical curved veins and radial veins in Pieces 1 and 5.
 ADDITIONAL COMMENTS: Sparse microgabbro xenoliths of plagioclase plus clinopyroxene plus or minus olivine.

Core Photo



206-1256D-66R-1 (Section top: 710.40 mbsf)

UNIT: 26

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows.

PIECES: 1-13 (igneous description based on Piece 2)

CONTACTS:

Upper: glassy margin

Lower: not recovered

COLOR: black (N 2.5/1)

PHENOCRYSTS:

Olivine <1 % 0.2-0.4 mm 100% altered to saponite

GROUNDMASS:

Grain size: cryptocrystalline

Texture: variolitic

VESICLES: Rare irregular vesicles filled with saponite.

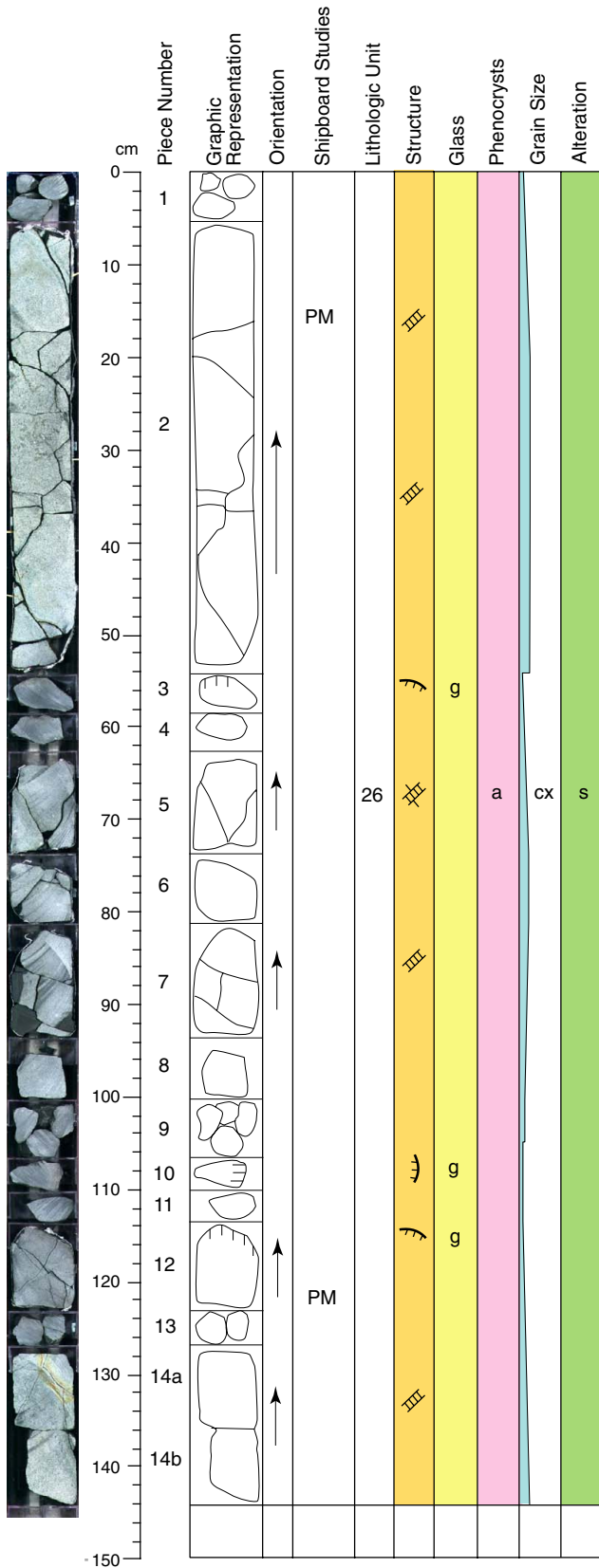
ALTERATION: Dark gray slightly altered basalt with 3-10 mm mixed black and brown alteration halos along veins.

VEINS: 0.1-0.8 mm veins of saponite with iron oxyhydroxide and minor celadonite and silica.

STRUCTURE: Subvertical and radial veins in Piece 2. Y-shaped intersection of veins in Piece 13.

ADDITIONAL COMMENTS: Sparse microgabbro xenoliths of plagioclase plus clinopyroxene.

Core Photo



206-1256D-67R-1 (Section top: 714.80 mbsf)

UNIT: 26

ROCK NAME: Aphyric cryptocrystalline basalt
 SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows separated by glassy margins.

PIECES: 1-14 (igneous description based on Piece 2)

CONTACTS:

Upper: glassy margin
 Lower: not recovered

COLOR: greenish black (10Y 2.5/1)

PHENOCRYSTS:

Olivine <1% 0.2-0.4 mm 100% altered to saponite

GROUNDMASS:

Grain size: cryptocrystalline
 Texture: variolitic

VESICLES: Rare irregular vesicles filled with saponite.

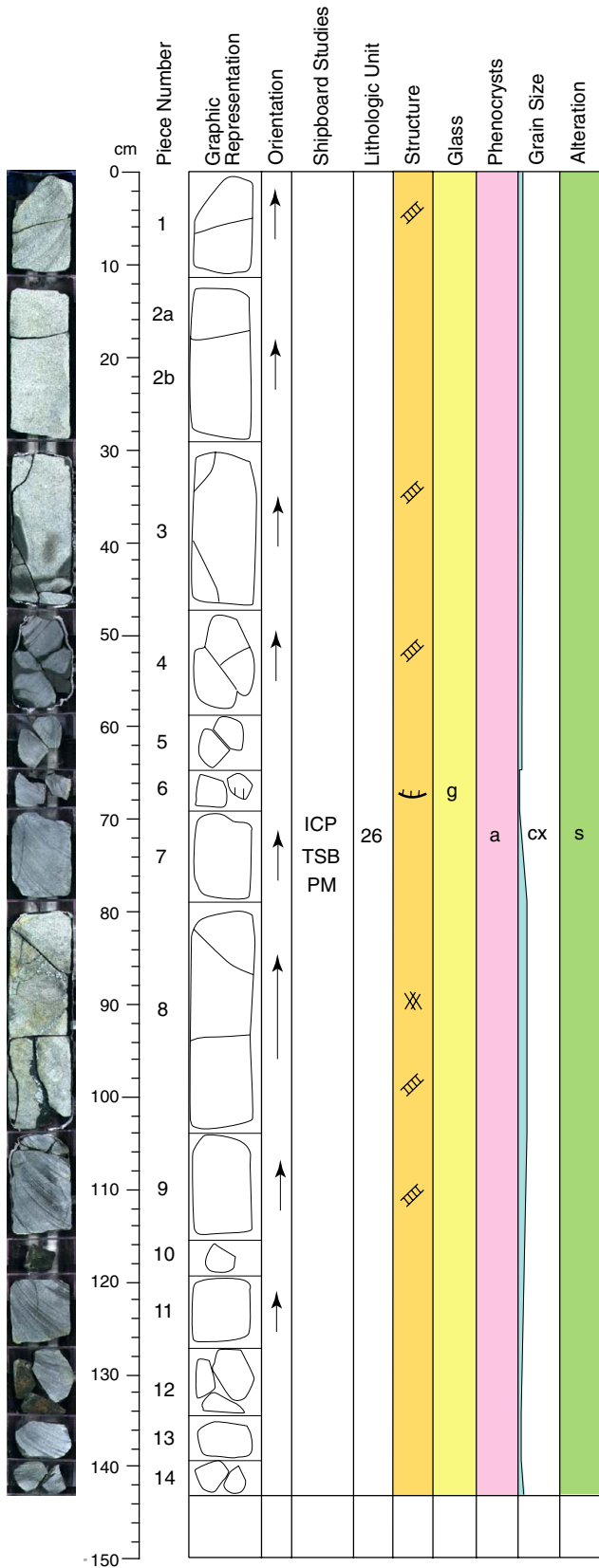
ALTERATION: Dark gray slightly altered basalt with 1-9 mm black and mixed black and brown alteration halos along veins.

VEINS: 0.1-1.0 mm veins of saponite with iron oxyhydroxide, celadonite, and minor pyrite and silica.

STRUCTURE: Curved and radial veins in Piece 2. Conjugate vein set in Pieces 5 and 12.

ADDITIONAL COMMENTS: Sparse microgabbro xenoliths of plagioclase plus clinopyroxene.

Core Photo



206-1256D-67R-2 (Section top: 716.24 mbsf)

UNIT: 26

ROCK NAME: Aphyric cryptocrystalline basalt
 SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows separated by glassy margins.

PIECES: 1-14 (igneous description based on Piece 7)

CONTACTS:

Upper: glassy margin
 Lower: not recovered

COLOR: black (N 2.5/)

PHENOCRYSTS:

Olivine <1 % 0.1-0.3 mm 100% altered to saponite
 Clinopyroxene <1 % 0.1 mm

GROUNDMASS:

Grain size: cryptocrystalline
 Texture: variolitic to intergranular

VESICLES: Rare spherical to irregular vesicles filled with saponite.

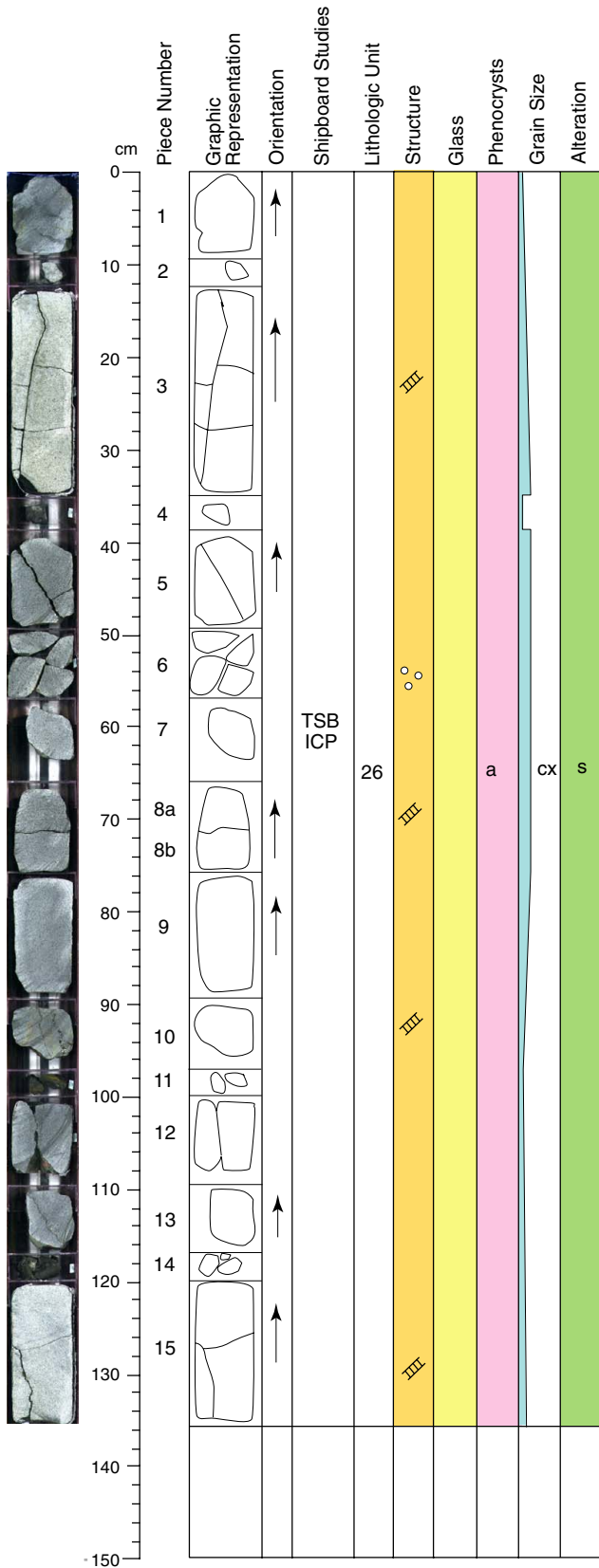
ALTERATION: Dark gray slightly altered basalt with 1-10 mm black and mixed black and brown alteration halos along veins.

VEINS: 0.1-2.0 mm veins of saponite with iron oxyhydroxide and rare celadonite, pyrite, and silica.

STRUCTURE: Vein network in Piece 8.

ADDITIONAL COMMENTS: Sparse (~1%) microgabbro xenoliths of plagioclase plus clinopyroxene plus or minus olivine.

Core Photo



206-1256D-67R-3 (Section top: 717.67 mbsf)

UNIT: 26

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows.

PIECES: 1-15 (igneous description based on Piece 9)

CONTACTS:

Upper: glassy margin

Lower: not recovered

COLOR: black (N 2.5/)

PHENOCRYSTS:

Plagioclase <1 % 0.2 mm

Olivine <1 % 0.2-0.4 mm 100% altered to saponite

GROUNDMASS:

Grain size: cryptocrystalline

Texture: intergranular to variolitic

VESICLES: Rare spherical to irregular vesicles filled with saponite.

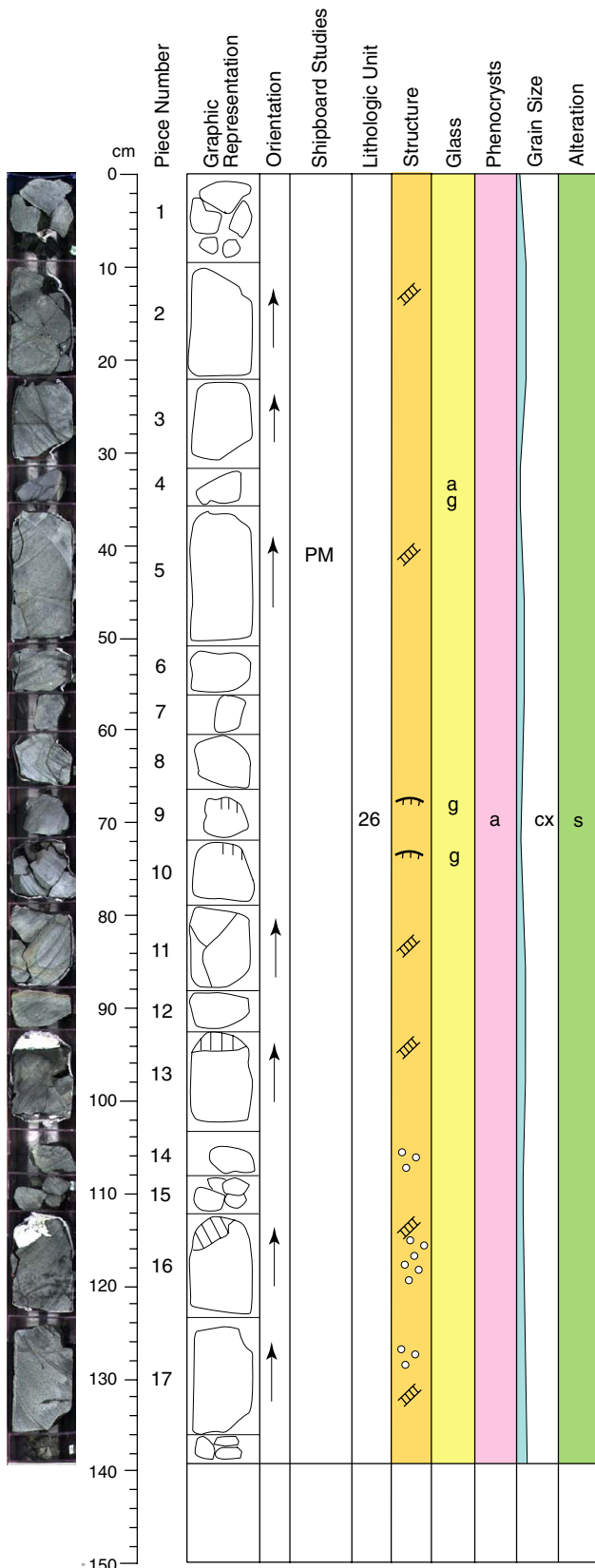
ALTERATION: Dark gray slightly altered basalt with 3-8 mm black and mixed black and brown alteration halos along veins.

VEINS: 0.1-1.0 mm veins of saponite with iron oxyhydroxide and minor celadonite, pyrite, and silica.

STRUCTURE: Subvertical veins and radial veins in Pieces 3 and 15.

ADDITIONAL COMMENTS: Sparse (~1%) microgabbro xenoliths of plagioclase plus clinopyroxene.

Core Photo



206-1256D-68R-1 (Section top: 719.5 mbsf)

UNIT: 26

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows separated by glassy margins.

PIECES: 1-18 (igneous description based on Piece 16)

CONTACTS:

Upper: glassy margin
 Lower: not recovered

COLOR: black (N 2.5/)

PHENOCRYSTS:

Olivine 0.2 % 0.2 mm 100% altered to saponite

GROUNDMASS:

Grain size: cryptocrystalline
 Texture: variolitic

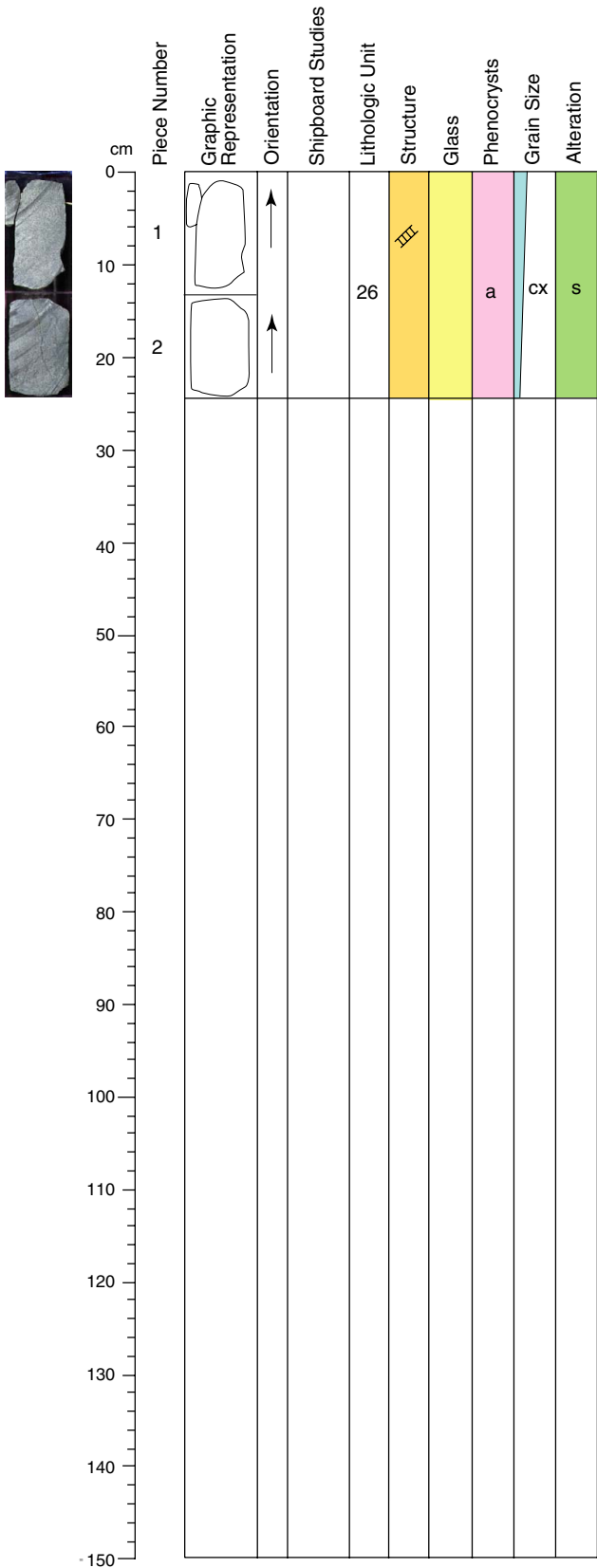
VESICLES: Sparse vesicles filled with saponite.

ALTERATION: Dark gray slightly altered basalt with 0.5-12 mm black and mixed black and brown alteration halos along veins.

VEINS: 0.1-2.0 mm veins of saponite with iron oxyhydroxide, celadonite, and silica. Three 15 mm silica veins with minor saponite in Pieces 13 (2 veins) and 16 (1 vein).

STRUCTURE: Curved veins and radial veins in Pieces 2, 3, 5, and 11. Y-shaped intersection of veins in Piece 1.

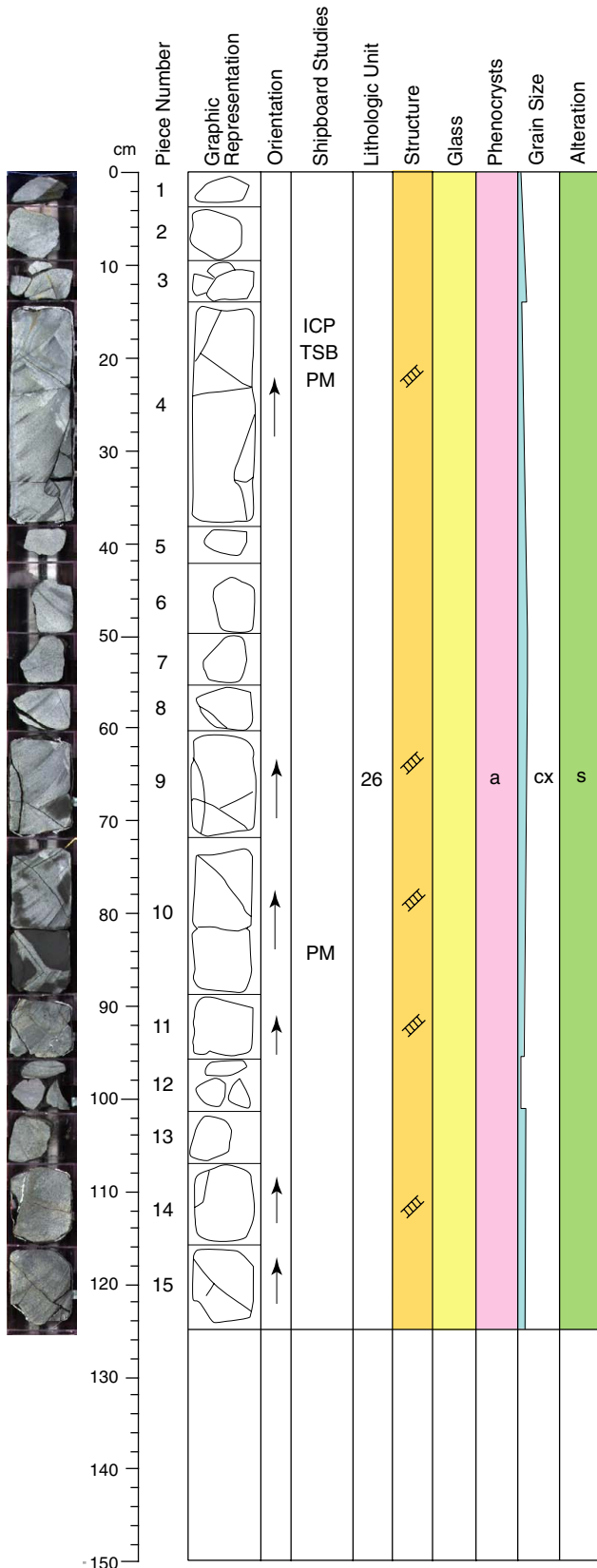
Core Photo



206-1256D-68R-2 (Section top: 720.89 mbsf)

UNIT: 26
ROCK NAME: Aphyric cryptocrystalline basalt
SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows.
PIECES: 1-2 (igneous description based on 68R-1 Piece 16)
CONTACTS:
 Upper: glassy margin
 Lower: not recovered
COLOR: black (N 2.5/)
PHENOCRYSTS:
 Olivine 0.2 % 0.2 mm 100% altered to saponite
GROUNDMASS:
 Grain size: cryptocrystalline
 Texture: variolitic
VESICLES: none
ALTERATION: Dark gray slightly altered basalt.
VEINS: 0.1-0.2 mm veins of saponite and pyrite with iron oxyhydroxide and silica.
STRUCTURE: Y-shaped intersection of veins in Piece 2.

Core Photo



206-1256D-69R-1 (Section top: 724.10 mbsf)

UNIT: 26

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows.

PIECES: 1-15 (igneous description based on Piece 9)

CONTACTS:

Upper: glassy margin

Lower: not recovered

COLOR: black (N 2.5/)

PHENOCRYSTS:

Olivine <1 % 0.2-0.3 mm 100% altered to saponite

GROUNDMASS:

Grain size: cryptocrystalline

Texture: intergranular to variolitic

VESICLES: Rare spherical to irregular vesicles filled with saponite

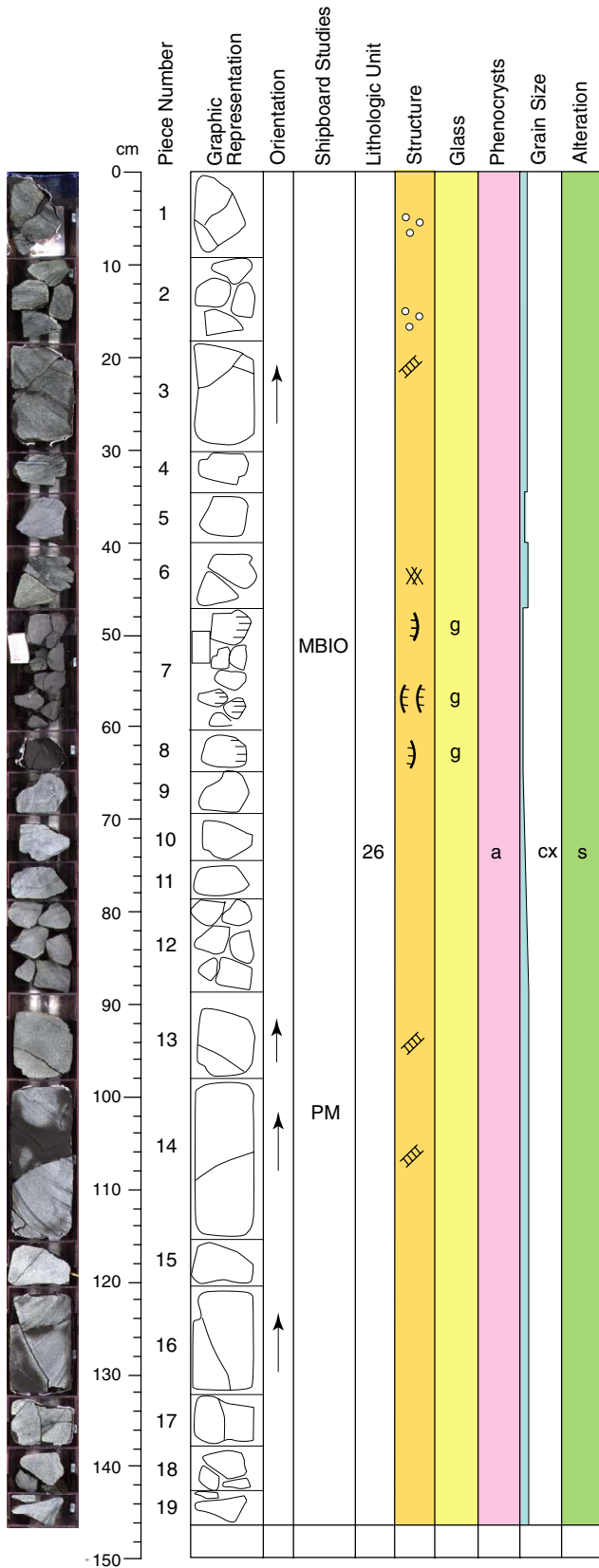
ALTERATION: Dark gray slightly altered basalt with 2-10 mm black and mixed black and brown alteration halos along veins.

VEINS: 0.1-2.0 mm veins of saponite with iron oxyhydroxide, pyrite, silica, and minor celadonite.

STRUCTURE: Curved veins and radial veins in Pieces 9 and 10.

ADDITIONAL COMMENTS: Sparse (<1%) microgabbro xenoliths (~0.5 mm) of plagioclase plus clinopyroxene.

Core Photo



206-1256D-70R-1 (Section top: 728.70 mbsf)

UNIT: 26

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows separated by glassy margins.

PIECES: 1-19 (igneous description based on Piece 3)

CONTACTS:

Upper: glassy margin
 Lower: not recovered

COLOR: black (N 2.5/)

PHENOCRYSTS:

Olivine 0.2% 0.5 mm 100% altered to saponite

GROUNDMASS:

Grain size: cryptocrystalline
 Texture: variolitic

VESICLES: none

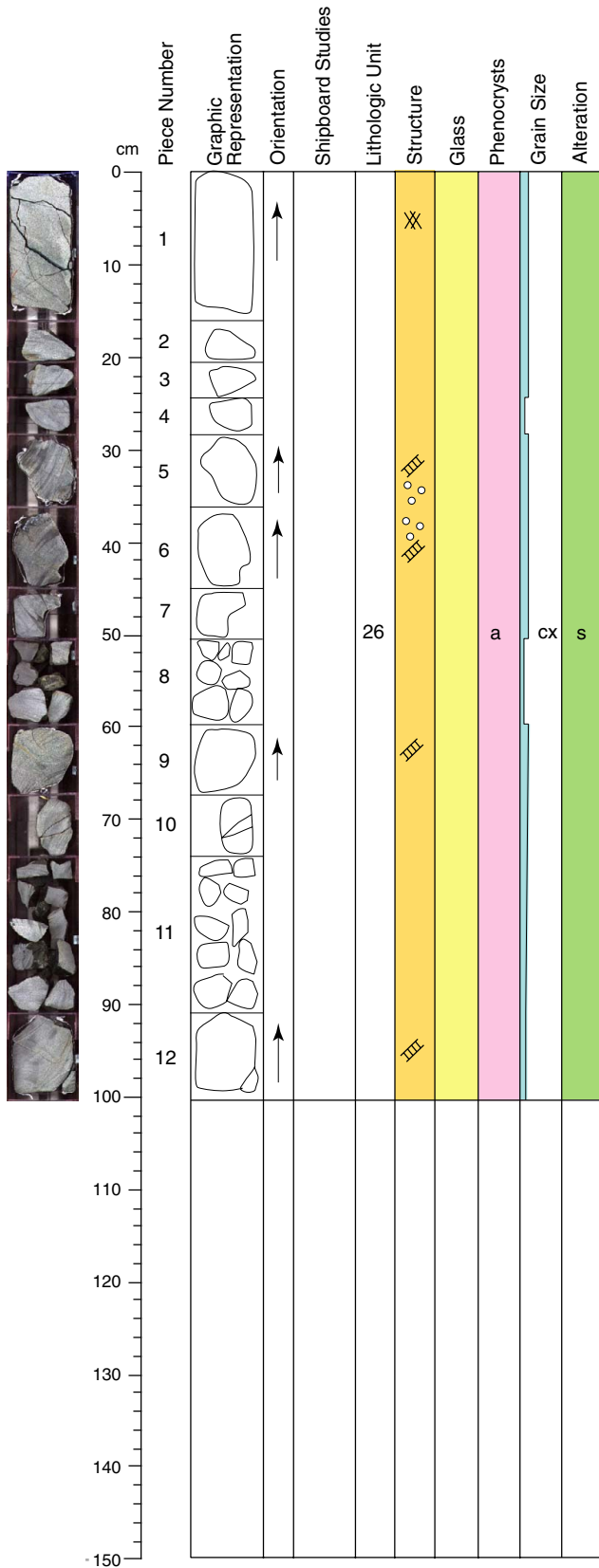
ALTERATION: Dark gray slightly altered basalt with 3-7 mm black and mixed black and brown alteration halos along veins.

VEINS: 0.1-1.5 mm veins of saponite with iron oxyhydroxide, celadonite, pyrite, and silica.

STRUCTURE: Vein network with incipient brecciation in Pieces 4 and 6.

ADDITIONAL COMMENTS: Rare microgabbro xenoliths (~0.5 mm) of plagioclase plus clinopyroxene.

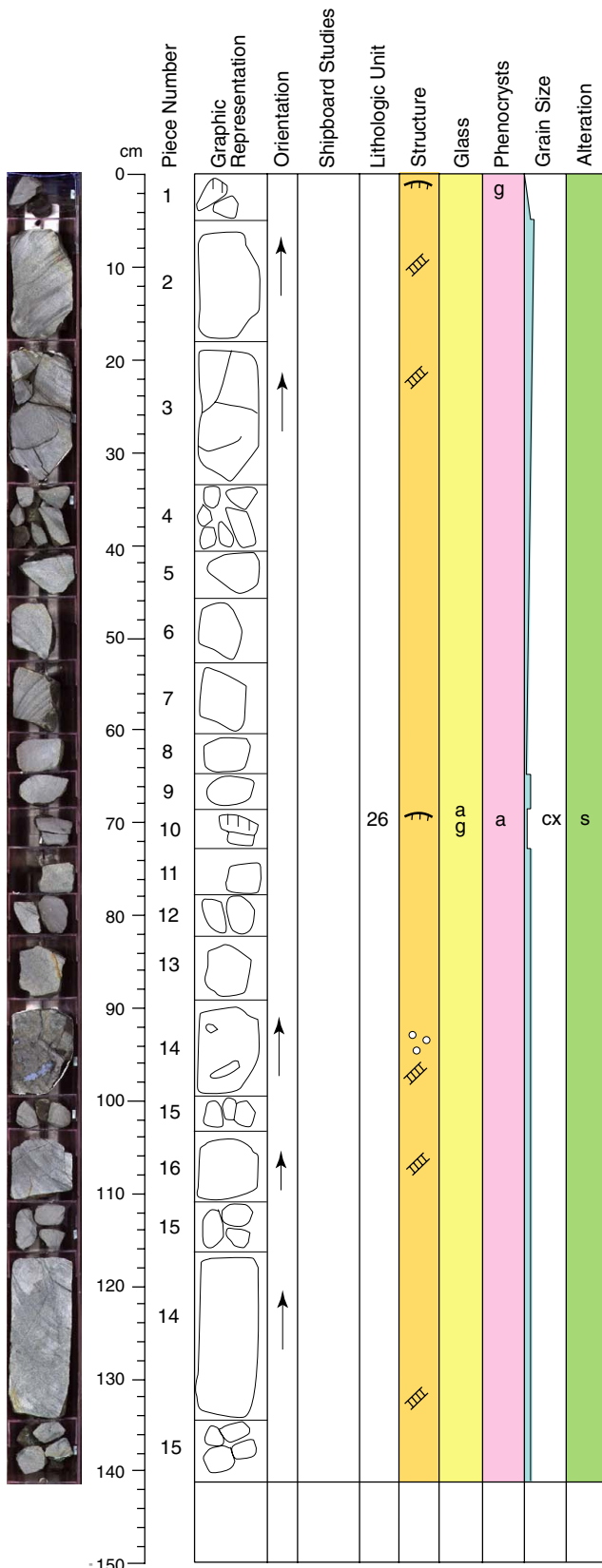
Core Photo



206-1256D-70R-2 (Section top: 730.16 mbsf)

UNIT: 26
ROCK NAME: Aphyric cryptocrystalline basalt
SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows.
PIECES: 1-12 (igneous description based on Piece 1)
CONTACTS:
 Upper: glassy margin
 Lower: not recovered
COLOR: black (N 2.5/)
PHENOCRYSTS:
 Olivine 0.2 % 0.2-0.3 mm 100% altered to saponite
GROUNDMASS:
 Grain size: cryptocrystalline
 Texture: variolitic
VESICLES: Rare.
ALTERATION: Dark gray slightly altered basalt with 2-5 mm black and mixed black and brown alteration halos along veins.
VEINS: 0.1-1.5 mm veins of saponite with iron oxyhydroxide celadonite, and minor silica.
STRUCTURE: Vein network in Piece 1. Curved veins in Pieces 5, 6, and 9. Y-shaped intersection veins in Piece 12.
ADDITIONAL COMMENTS: Sparse (<1%) microgabbro xenoliths (0.5-1.0 mm) of plagioclase plus clinopyroxene.

Core Photo



206-1256D-71R-1 (Section top: 733.30 mbsf)

UNIT: 26

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows separated by glassy margins.

PIECES: 1-15 (igneous description based on Piece 2)

CONTACTS:

Upper: glassy margin

Lower: not recovered

COLOR: black (N 2.5/)

PHENOCRYSTS:

Plagioclase tr % 0.05 mm

Olivine tr % ~0.2 mm 100% altered to saponite

Clinopyroxene 0.1 % 0.5-1.0 mm

GROUNDMASS:

Grain size: cryptocrystalline

Texture: variolitic

VESICLES: Sparse

ALTERATION: Dark gray slightly altered basalt with 1-18 mm black and mixed black and brown alteration halos along veins.

VEINS: 0.1-1.0 mm veins of saponite with iron oxyhydroxide celadonite, and silica. One 5 mm vein of silica with saponite in Piece 14.

STRUCTURE: Y-shaped intersection of veins in Pieces 2 and 18. Curved veins and radial veins in Pieces 3 and 14.

ADDITIONAL COMMENTS: Sparse (<1%) microgabbro xenoliths (0.5-1.0 mm) of plagioclase plus clinopyroxene. Also distinct augite crystals with inclusions of fine plagioclase plus clinopyroxene.

Core Photo

Piece Number	Graphic Representation	Orientation	Shipboard Studies	Lithologic Unit	Structure	Glass	Phenocrysts	Grain Size	Alteration
0									
1		↑			III				
2									
3		↑		26	XX		a	cx	s
4		↑	PM						
150									



206-1256D-71R-2 (Section top: 734.70 mbsf)

UNIT: 26

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flow.

PIECES: 1-4 (igneous description based on Piece 3)

CONTACTS:

Upper: glassy margin

Lower: not recovered

COLOR: black (N 2.5/)

PHENOCRYSTS:

Olivine tr % 0.1 mm 100% altered to saponite

Clinopyroxene tr % 0.1-1.0 mm

GROUNDMASS:

Grain size: cryptocrystalline

Texture: variolitic

VESICLES: none

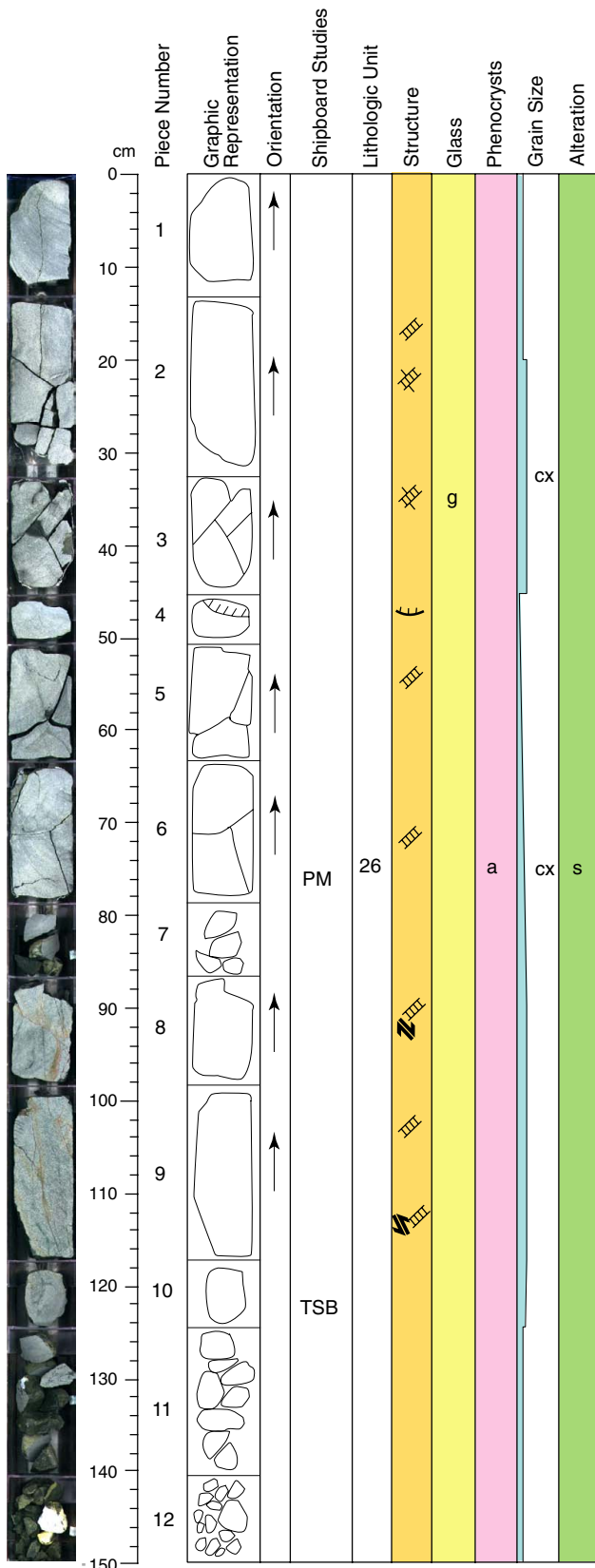
ALTERATION: Dark gray slightly altered basalt with a 4 mm mixed black and brown alteration halos along a vein in Piece 1.

VEINS: 0.1-0.5 mm veins of saponite with iron oxyhydroxide, celadonite, pyrite, and silica.

STRUCTURE: Curved veins and radial veins in Piece 1. Vein network in piece 3.

ADDITIONAL COMMENTS: Elongate dark green pyroxene (augite) and stubby pale green pyroxene (pigeonite?) present as phenocrysts.

Core Photo



206-1256D-72R-1 (Section top: 737.90 mbsf)

UNIT: 26

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows separated by glassy margins.

PIECES: 1-12 (igneous description based on Piece 9)

CONTACTS:

Upper: glassy margin

Lower: not recovered

COLOR: greenish black (10Y 2.5/1)

PHENOCRYSTS:

Olivine <1 % 0.3-0.5 mm 100% altered to saponite

GROUNDMASS:

Grain size: cryptocrystalline

Texture: intergranular to variolitic

VESICLES: none

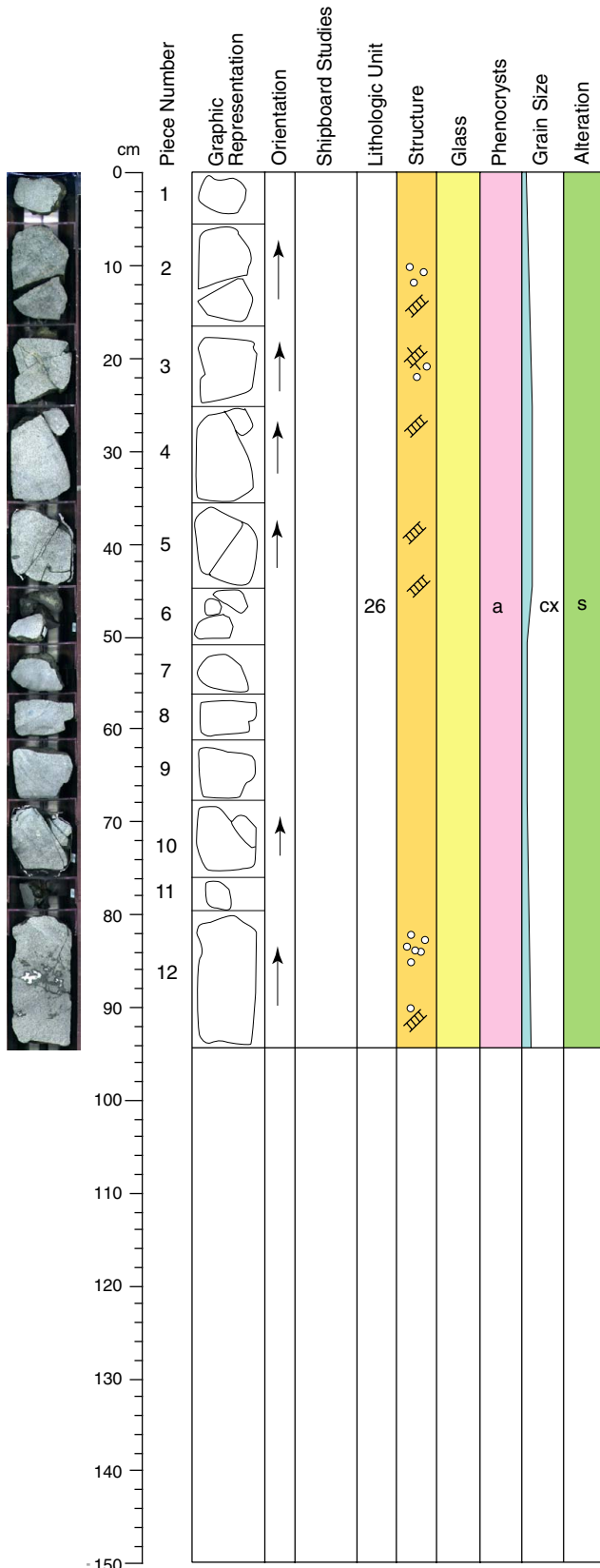
ALTERATION: Dark gray slightly altered basalt with 2-4 mm black and mixed black and brown alteration halos along veins.

VEINS: 0.1-0.3 mm veins of saponite with iron oxyhydroxide, celadonite, pyrite, and silica.

STRUCTURE: Curved veins and Y-shaped intersection veins in Pieces 5 and 6. Conjugate veins in Pieces 2 and 3. Set of parallel subvertical veins in Pieces 8 and 9. Shear veins in Pieces 8 and 9.

ADDITIONAL COMMENTS: Sparse (<1%) microgabbro xenoliths 0.5-1.5 mm diameter of clinopyroxene plus plagioclase.

Core Photo



206-1256D-72R-2 (Section top: 739.40 mbsf)

UNIT: 26

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows.

PIECES: 1-12 (igneous description based on Piece 4)

CONTACTS:

Upper: glassy margin

Lower: not recovered

COLOR: black (N 2.5/)

PHENOCRYSTS:

Olivine <1 % 0.2-0.4 mm 100% altered to saponite

GROUNDMASS:

Grain size: cryptocrystalline

Texture: intergranular to variolitic

VESICLES: Irregular vugs 1.0-12 mm in Piece 12. Sparse vesicles in Pieces 2-3.

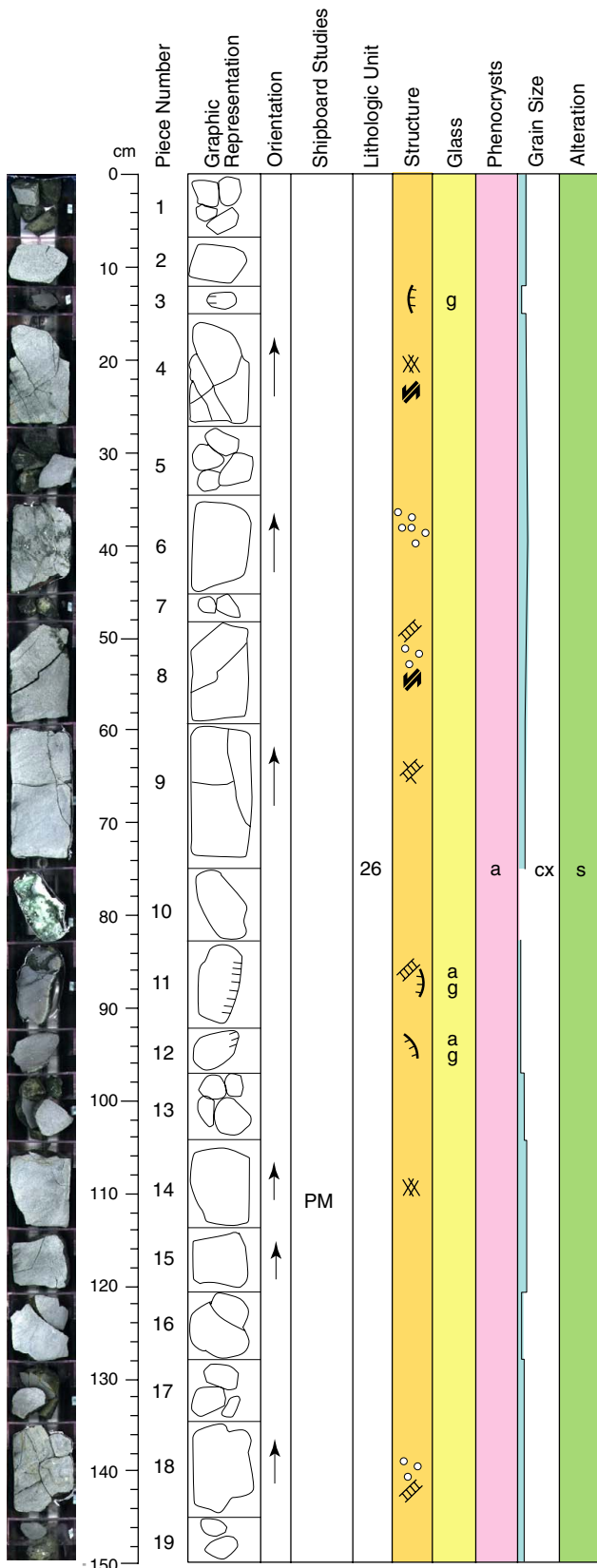
ALTERATION: Dark gray slightly altered basalt with 0.5-5 mm black and mixed black and brown alteration halos along veins.

VEINS: 0.1-0.5 mm veins of saponite with iron oxyhydroxide, celadonite, and minor pyrite and silica.

STRUCTURE: Conjugate set of veins in Pieces 2 and 3. Sets of steeply dipping parallel veins in Pieces 5 and 10.

ADDITIONAL COMMENTS: Sparse (<1%) microgabbro xenoliths 0.5-1.5 mm diameter of clinopyroxene plus plagioclase.

Core Photo



206-1256D-73R-1 (Section top: 742.40 mbsf)

UNIT: 26

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows separated by glassy margins.

PIECES: 1-19 (igneous description based on Piece 9)

CONTACTS:

Upper: glassy margin
 Lower: not recovered

COLOR: black (N 2.5/)

PHENOCRYSTS:

Olivine <1% 0.3 mm 100% altered to saponite

GROUNDMASS:

Grain size: cryptocrystalline
 Texture: variolitic

VESICLES: none

ALTERATION: Dark gray slightly altered basalt with 0.5-15 mm black and mixed black and brown alteration halos along veins.

VEINS: 0.1-0.8 mm veins of saponite with iron oxyhydroxide, celadonite, and minor pyrite and silica.

STRUCTURE: Shear veins in Pieces 4 and 8. Vein network in Piece 4 and 14. Curved veins and radial veins in Piece 18.

ADDITIONAL COMMENTS: Sparse (<1%) microgabbro xenoliths 0.5-1.5 mm diameter of clinopyroxene plus plagioclase. Pieces 11 and 12 have curved altered glass margins and appear to be parts of a flow top or base.

Core Photo

Piece Number	Graphic Representation	Orientation	Shipboard Studies	Lithologic Unit	Structure	Glass	Phenocrysts	Grain Size	Alteration
1					III				
2									
3				26			a	CX	s
4									
5									

206-1256D-73R-2 (Section top: 743.90 mbsf)

UNIT: 26

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows.

PIECES: 1-5 (igneous description based on Piece 5)

CONTACTS:

Upper: glassy margin

Lower: not recovered

COLOR: black (N 2.5/)

PHENOCRYSTS:

Olivine <1 % 0.2 mm 100% altered to saponite

Clinopyroxene tr % 0.2 mm

GROUNDMASS:

Grain size: cryptocrystalline

Texture: intergranular to variolitic

VESICLES: none

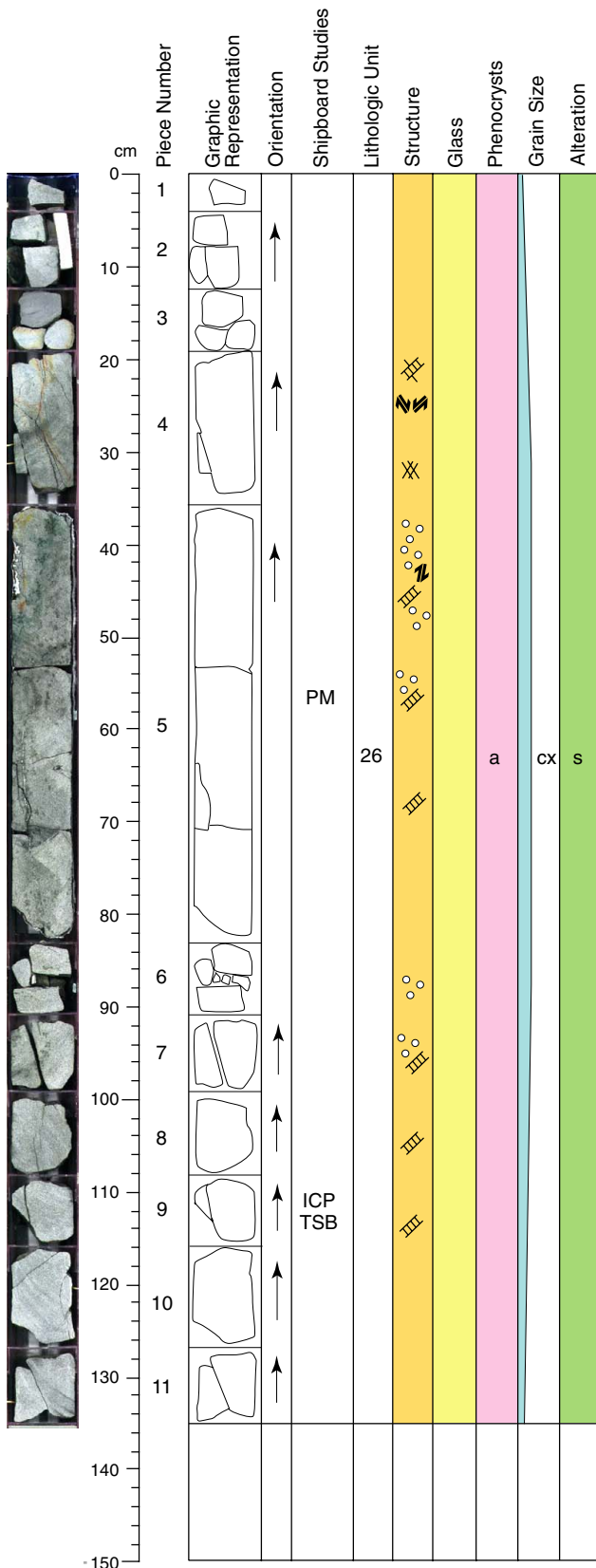
ALTERATION: Dark gray slightly altered basalt with a 2 mm black alteration halo along a vein in Piece 1.

VEINS: 0.1-0.5 mm veins of saponite with iron oxyhydroxide, celadonite, and minor silica.

STRUCTURE: Curved veins in Piece 1.

ADDITIONAL COMMENTS: Sparse (<1%) microgabbro xenoliths up to 2.0 mm diameter of clinopyroxene plus plagioclase. One discrete dark green pyroxene crystal 0.2 mm wide.

Core Photo



206-1256D-74R-1 (Section top: 747.20 mbsf)

UNIT: 26

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows.

PIECES: 1-11 (igneous description based on Piece 5)

CONTACTS:

Upper: glassy margin

Lower: not recovered

COLOR: very dark gray (N 3/)

PHENOCRYSTS:

Plagioclase tr % 0.1 mm

Olivine 0.8 % 0.2-0.6 mm 100% altered to saponite

Clinopyroxene tr % 0.1 mm

GROUNDMASS:

Grain size: cryptocrystalline

Texture: intergranular to variolitic

VESICLES: Concentration of irregular vesicles in Pieces 5 to 7.

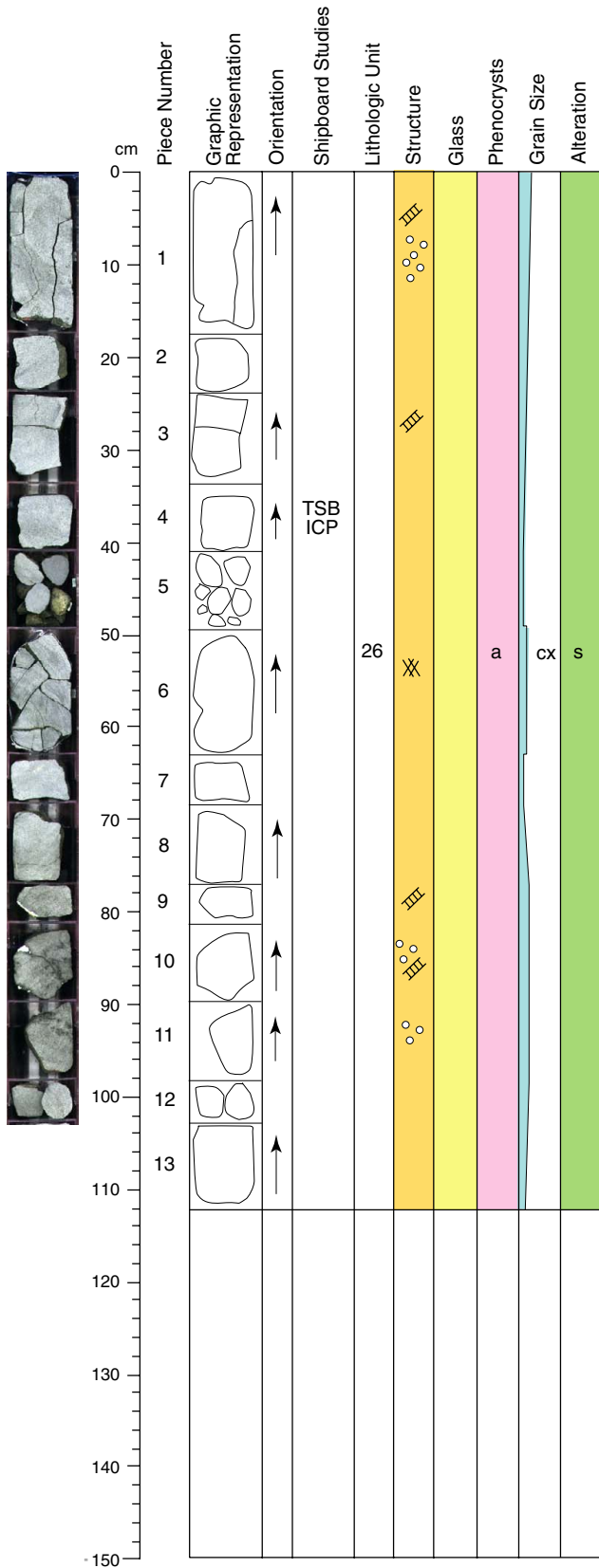
ALTERATION: Dark gray slightly altered basalt with 2-8 mm black and mixed black and brown alteration halos along veins.

VEINS: 0.1-1.0 mm veins of saponite with iron oxyhydroxide, celadonite, pyrite, and silica.

STRUCTURE: Conjugate set of veins with stepped morphology and pull-aparts in Piece 4. Subvertical sinuous veins and radial veins in Piece 5.

ADDITIONAL COMMENTS: Rare microgabbro xenoliths up to 2.0 mm diameter of clinopyroxene plus plagioclase.

Core Photo



206-1256D-74R-2 (Section top: 748.54 mbsf)

UNIT: 26

ROCK NAME: Aphyric cryptocrystalline basalt

SUMMARY DESCRIPTION: Aphyric cryptocrystalline basalt sheet flows.

PIECES: 1-13 (igneous description based on Piece 2)

CONTACTS:

Upper: glassy margin

Lower: not recovered

COLOR: very dark gray (N 3/)

PHENOCRYSTS:

Plagioclase tr % <0.1 mm

Olivine 0.8 % 0.1-0.4 mm 100% altered to saponite

Clinopyroxene tr % <0.1 mm

GROUNDMASS:

Grain size: cryptocrystalline

Texture: variolitic to intergranular

VESICLES: Irregular vesicles in Pieces 1, 10, and 11.

ALTERATION: Dark gray slightly altered basalt with a 2 mm mixed black and brown alteration halo along a vein in Piece 6.

VEINS: 0.1-1.0 mm veins of saponite with iron oxyhydroxide, celadonite, pyrite, and silica.

STRUCTURE: Vertical sinuous irregular veins associated with subhorizontal radial veins in Piece 1. Vein network in Piece 6.

ADDITIONAL COMMENTS: Sparse (<1%) microgabbro xenoliths up to 2 mm diameter of clinopyroxene plus plagioclase.

Sample					Grainsize (vol%)			Non-biogenic (vol%)		Biogenic (no%)							Comments
Core	Type	Section	Top (cm)	Depth (mbsf)	Sand	Silt	Clay	Glass	Others	Diatoms	Foraminifers	Nannofossils	Radiolarians	Silicoflagellates	Sponge Spicules		
Hole A																	
1	H	1	65	0.65	1	49	50	2	98	10	0	85	3	2	0	Nannofossil-rich silty clay	
1	H	2	50	2.00	2	40	58	2	98	40	3	45	8	4	0	Nannofossil-diatom-bearing silty clay	
Hole B																	
1	H	4	60	5.10	5	25	70	1	99	23	1	68	6	2	0	Nannofossil-rich silty clay	
2	H	2	113	8.70	20	16	64	0	100	9	0	89	1	0	1	Nannofossil-rich silty clay	
3	H	2	35	17.45	90	8	2	96	4	0	0	0	0	0	0	Clear glass shards, quartz, feldspar, opaque minerals	
3	H	5	83	22.43	20	16	64	2	98	5	1	90	2	0	2	Nannofossil-rich sandy clay	
4	H	4	100	30.60	20	20	40	2		85	0	0	10	5	0	Diatom-bearing silty clay	
5	H	1	122	35.82	30	55	15	2	98	6	0	89	2	2	1	Nannofossil-rich sandy silt	
5	H	6	93	43.03	30	60	10	1	99	9	0	86	10	2	2	Nannofossil-rich sandy silt	
6	H	3	60	47.70	40	40	20	1	99	10	0	88	1	0.5	0.5	Nannofossil-rich sandy silt	
7	H	3	55	57.15	20	60	20	2	98	32	1	62	1	6	0	Nannofossil-rich sandy silt	
8	H	2	67	65.27	15	60	25	2	98	12	0	83	1	3	1	Nannofossil-rich clayey clay, including pumice, platy and cusate glass shards	
9	H	2	80	74.90	10	25	65	1	99	4	0	91	0	2	3	Nannofossil-rich silty clay	
10	H	4	100	87.60	40	35	25	1	99	52	0	40	1	5	2	Nannofossil-rich sandy clay	
12	H	5	52	107.62	0	0	0	100	0	20	0	75	0	0	5	Pebble of vesicular brown glass	
13	H	2	102	112.42						85	0	15	0	0	0	Diatomite	
13	H	2	106	112.46						78	0	20	0	2	0	Diatomite	
14	H	4	80	125.40						5	0	95	0	0	0	Nannofossil ooze	
15	H	3	40	133.00												Diatom-nannofossil ooze. (Not examined)	
15	H	4	57	134.67	1	60	39	1	99	12	0	86	0	1	1	Diatom-nannofossil-filled burrows. Nannofossil ooze	
15	H	5	129	136.89	1	39	60	0	100	17	0	77	1	2	3	Contain 1-5% plagioclase crystals. Nannofossil ooze	
16	H	3	141	143.51	0	15	85	0	100							Opaque minerals (sulfide or pyrite?). Eustress-black at binocular	
16	H	3	142	143.52												Nannofossil silty clay. (Not examined)	
17	H	3	112	152.72	5	50	49	tr	100	10	0	87	0	2	1	Phyllosie. Nannofossil ooze	
19	X	2	53	162.13	5	30	65	0	100	20	0	78	0	1	1	ca. 1% plagioclase. Nannofossil-rich silty clay	
20	X	5	102	172.22	5	20	75			7	0	92	0	1	0	Nannofossil-bearing clay	
21	X	2	96	177.26	1	19	80			13	0	83	0	2	2	Nannofossil ooze	
22	X	2	46	185.96	20	40	40			4	0	96	0	0	0	ca. 1% plagioclase. Nannofossil ooze	
23	X	3	97	197.67	8	10	82	0	100							Clay	
24	X	3	80	207.20												Silty clay	

THIN SECTION:	206-1256B-29X-1,0-4 cm	Piece No.: 1	Unit: S1	ODP TS#: 1
ROCK NAME:	Chert			
WHERE SAMPLED:				
GRAIN SIZE:				
TEXTURE:				

THIN SECTION:	206-1256B-29X-1,6-8 cm	Unit: S1	Piece No.: 1	ODP TS#: 2
ROCK NAME:	Chert			
WHERE SAMPLED:				
GRAIN SIZE:				
TEXTURE:				

THIN SECTION:	206-1256C-5R-1, 4-6 cm					Piece No.: 2	Unit: 1	ODP TS#: 3
ROCK NAME:	Moderately ol-pl-phyric cryptocrystalline basalt							
WHERE SAMPLED:								
GRAIN SIZE:	0.04 mm							
TEXTURE:	Intergranular							
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS	
			min.	max.	av.			
PHENOCRYSTS								
ol	0.00	0.90	0.10	0.20	0.15	Equant, euhedral	Replaced by clay minerals.	
pl	2.00	2.00	0.10	0.20	0.15	Platy, euhedral-subhedral		
GROUNDMASS								
cpx						Prismatic euhedral		
pl						Laths, euhedral		
Fe-Ti ox						Skeletal-equant polyhedral		
SECONDARY MINERALOGY	PERCENT	SIZE (mm)			REPLACING / FILLING	COMMENTS		
		min.	max.	av.				
saponite	1.50				olivine/pores	veinlets in plagioclase		
pyrite	<1				replacing olivine	small veinlet		
STRUCTURES:								
COMMENTS: Ol + pl + cpx glomerocrysts. Apparent coarsening of groundmass minerals downward. 50-µm vein of saponite + pyrite.								

THIN SECTION:	206-1256C-5R-2, 2-6 cm					Piece No.: 1	Unit: 1	ODP TS#: 4
ROCK NAME:	Moderately cpx-ol-pl-phyric cryptocrystalline basalt							
WHERE SAMPLED:								
GRAIN SIZE:	0.03 mm							
TEXTURE:	Intergranular							
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS	
			min.	max.	av.			
PHENOCRYSTS								
pl	4.90	4.90	0.10	0.30	0.20	Platy, euhedral		
ol	0.00	1.05	0.10	0.40	0.25	Equant, euhedral	Replaced by clay minerals.	
cpx	0.65	0.65	0.10	0.40	0.25	Short prismatic, subhedral	Clots with pl + ol.	
GROUNDMASS								
pl						Highly skeletal laths		
cpx						Prismatic, euhedral		
Fe-Ti ox						Skeletal chains-equant polyhedral		
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS	
			min.	max.	av.			
saponite	1.50					olivine/pores		
pyrite/marcasite	<1					small veinlet		
STRUCTURES:								
COMMENTS :								
	Ol + pl + cpx forming glomerocrysts. Apparent coarsening of groundmass minerals downward.							

THIN SECTION:	206-1256C-5R-2, 39-42 cm					Piece No.: 1	Unit: 1	ODP TS#: 5
ROCK NAME:	Moderately cpx-ol-pl-phyric cryptocrystalline basalt							
WHERE SAMPLED:								
GRAIN SIZE:	0.08 mm							
TEXTURE:	Intergranular							
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS	
			min.	max.	av.			
PHENOCRYSTS								
pl	4.65	4.65	0.05	0.20	0.13	Platy, euhedral	Replaced by clay minerals.	
ol	0.00	1.80	0.08	0.50	0.29	Equant, euhedral		
cpx	0.60	0.60	0.10	0.20	0.15	Short prismatic, subhedral		
GROUNDMASS								
pl						Euhedral laths		
cpx						Thin prismatic, euhedral		
Fe-Ti ox						Skeletal-equant polyhedral		
Mesostasis								
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS	
			min.	max.	av.			
saponite	2.00					olivine/pores	slightly replacing pyroxene?	
STRUCTURES:								
COMMENTS : Ol + pl + cpx forming glomerocrysts.								

THIN SECTION:	206-1256C-6R-1W, 21-24 cm					Piece No.: 4b	Unit: 3	ODP TS#: 6
ROCK NAME:	Sparsely cpx-pl-ol-phyric cryptocrystalline basalt							
WHERE SAMPLED:								
GRAIN SIZE:	0.005-0.01 mm							
TEXTURE:	Variolitic							
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	min.	SIZE (mm) max.	av.	MORPHOLOGY	COMMENTS	
PHENOCRYSTS								
ol	0.00	0.85	0.04	0.30	0.17	Equant, euhedral	Replaced by clay minerals.	
pl	0.70	0.70	0.05	0.80	0.43	Platy, euhedral-subhedral, swallow tails		
cpx	0.05	0.05	0.06	0.30	0.18	Short prismatic, subhedral		
GROUNDMASS								
cpx						Skeletal-sheaflike		
pl						Very thin laths		
Fe-Ti ox						Skeletal-equant polyhedral		
gl	0.00	0.05					Trace amounts	
vesicles								
SECONDARY MINERALOGY	PERCENT		min.	SIZE (mm) max.	av.	REPLACING / FILLING	COMMENTS	
saponite	1.50					olivine/pores		
pyrite	<1					filling vesicles		
STRUCTURES:								
COMMENTS :	Varioles consisting of sheaflike cpx radiating from plagioclase in the center. Tiny Fe-Ti oxide and pl laths present between fibrous-sheaflike cpx. Pheoncrystic sheaflike cpx appears as subhedral short prisims clotted with pl. 20 mm saponite + pyrite vein present.							

THIN SECTION:	206-1256C-6R-1W, 88-91 cm	Piece No.: 13	Unit: S1	ODP TS#: 7
ROCK NAME:	Chert			
WHERE SAMPLED:				
GRAIN SIZE:				
TEXTURE:				

THIN SECTION:	206-1256C-6R-1W, 127-130 cm		Piece No.: 18	Unit: 5	ODP TS#: 8		
ROCK NAME:	Moderately ol-phyric cryptocrystalline basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.005-0.01 mm						
TEXTURE:	Variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00	1.30	0.05	0.15	0.1	Equant, euhedral-subhedral	Replaced by clay minerals.
pl	0.60	0.60	0.20	0.40	0.30	Stubby, euhedral-subhedral	
cpx	0.20	0.40	0.20	0.40	0.3	Stubby, subhedral	Replaced by clay minerals.
GROUNDMASS							
pl						Skeletal, platy laths	
cpx						Prismatic	
Fe-Ti ox						Skeletal-dendritic chains	
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	1.50					olivine/pores	slightly replacing pyroxene
pyrite	<1					filling 60 mm vein and along grain boundaries	
STRUCTURES:							
COMMENTS :	Rare large vesicles up to 0.8 mm in diameter rimmed by brownish clay minerals. Phenocrysts other than olivine are very small in amount. A vein rich in mt filling interstices between pl laths and short prismatic cpx.						

THIN SECTION:	206-1256C-6R-2W, 61-65 cm		Piece No.: 7b		Unit: 5	ODP TS#: 9	
ROCK NAME:	Sparsely ol-phyric cryptocrystalline basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.03-0.05 mm						
TEXTURE:	Variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00	1.06	0.05	0.40	0.23	Equant, euhedral-subhedral	Replaced by clay minerals.
pl	0.61	0.61	0.10	1.00	0.55	Platy, euhedral-subhedral	
cpx	tr	tr	0.03	0.10	0.07	Short prismatic, subhedral	
GROUNDMASS							
pl						Skeletal, platy laths	
cpx						Prismatic-sheaflike	
Fe-Ti ox						Skeletal, polyhedral	
gl	0.00						
vesicles							
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	2.00					olivine/pores	
pyrite/marcasite	<1					filling vesicles	
STRUCTURES:							
COMMENTS:	Sporadic vesicles up to 1mm in diameter are rimmed by clay minerals, filled by pyrite.						

THIN SECTION: 206-1256C-6R-3W, 21-24 cm **Piece No.: 1** **Unit: 6** **ODP TS#: 10**
ROCK NAME: Moderately pl-ol-phyric cryptocrystalline basalt
WHERE SAMPLED:
GRAIN SIZE: 0.05-0.10 mm
TEXTURE: Variolitic

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00	2.05	0.08	0.40	0.24	Equant, euhedral-subhedral	Replaced by clay minerals.
pl	1.25	1.25	0.08	0.70	0.39	Stubby, euhedral-subhedral	
GROUNDMASS							
pl						Skeletal, thin laths	Replaced by clay minerals.
cpx						Prismatic-sheaflike	
Fe-Ti ox						Skeletal-equant, polyhedral	
gl	0.00						
SECONDARY MINERALOGY							
	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
saponite	3.00		min.	max.	av.	olivine/pores	fills 0.3 mm vein

STRUCTURE: 0.3 mm splayed vein filled with saponite. Vein texture: irregular vein margins; face controlled fibers growth. Composite vein with at least two steps of growth and median line: alteration of wallrock minerals, first growth of fibers (0.05 mm half vein), second growth (0.1 mm half vein). Late stage re-opening of the vein and filling with saponite fibers in two veinlets (0.005 mm); curved ghost fibers (?) oblique to the vein margins

COMMENTS :

THIN SECTION:	206-1256C-6R-4W, 56-60 cm		Piece No.: 2			Unit: 6	ODP TS#: 11	
ROCK NAME:	Moderately cpx-pl-ol-phyric microcrystalline basalt							
WHERE SAMPLED:								
GRAIN SIZE:	0.10 mm							
TEXTURE:	Medium variolitic							
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS	
			min.	max.	av.			
PHENOCRYSTS								
ol	0.00	1.80	0.06	0.5	0.15	Equant, euhedral	Discrete crystals>clots. Replaced by clay minerals.	
pl	0.45	0.45	0.15	1.3	0.3	Platy, euhedral>subhedral	Discrete-clotted with cpx, ol.	
cpx	0.10	0.10	0.15	0.5	0.2	Equant, subhedral-anhedral	Clotted with pl. Small in amount.	
GROUNDMASS								
cpx						Skeletal prismatic, acicular, fibrous, sheaflike		
pl						Platy skeletal-thin laths		
Fe-Ti ox						Skeletal chains-equant polyhedons		
mesostasis							Fine aggregates of fibrous cpx+mt>pl embedded in altered glass.	
gl	0.00							
vesicle		0.25						
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS	
			min.	max.	av.			
saponite	7.00					olivine/pores and fills vein		
celadonite	5.00					fills vein		
chalcedony	1.00					fills vein		
aragonite	<1					fills vein		
pyrite	<1					fills vein		
STRUCTURE:	3-4 mm splayed vein with composite ataxial texture. The main vein has at least four steps of mineral growth; from the first step to the last one: celadonite partially face-controlled curved microfibers, saponite fibers + pyrite, chalcedony and aragonite. Saponite mostly occurs in vein network cutting the celadonite-bearing step. Splayed open fracture cuts the vein. One 3 mm thick vein filled with celadonite, fibrous saponite and late chalcedony with colloform-concretionary texture. One irregular veinlet (0.05 mm) partially filled (saponite?) with alteration halo (0.5 mm half vein) consisting of dominant celadonite and saponite. No crosscutting relationships with the other vein.							
COMMENTS :	Abundantly medium variolitic-branching cpx. 3-4 mm vein filled with celadonite, saponite, minor chalcedony and pyrite. One other vein filled with the same minerals and another with saponite and aragonite cutting across large vein. Celadonite- and saponite-rich alteration halo adjacent to the 3-4 mm vein.							

THIN SECTION:	206-1256C-6R-5W, 18-22 cm					Piece No.: 1D Unit: 6	ODP TS#: 12
ROCK NAME:	Moderately pl-ol-phyric cryptocrystalline basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.02-0.10 mm						
TEXTURE:	Intersertal-variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00	1.50	0.10	0.40	0.25	Equant, euhedral	Replaced by clay minerals.
pl	0.90	0.90	0.10	0.80	0.45	Platy, euhedral-subhedral	
GROUNDMASS							
cpx						Prismatic-sheaflike	
pl						Skeletal, thin laths	
Fe-Ti ox						Skeletal-dendritic chains	
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	2.00					olivine/pores	
STRUCTURES:							
COMMENTS :	Groundmass pl laths aligns normal to core						

THIN SECTION:	206-1256C-6R-5W, 76-80 cm		Piece No.: 5C Unit: 7			ODP TS#: 13	
ROCK NAME:	Moderately ol-phyric cryptocrystalline basalt						
WHERE SAMPLED:							
GRAIN SIZE:	< 0.1 mm						
TEXTURE:	Subophitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00	2.05	0.06	0.30	0.18	Equant, euhedral>subhedral	Forms discrete and clots. Replaced by clay minerals.
pl	0.35	0.35	0.15	0.80	0.48	Platy, euhedral-subhedral	
sp	tr	tr	0.01	0.01	0.01	Equant, euhedral polyhedrons	Rare inclusions in ol.
GROUNDMASS							
cpx						Platy-prismatic	
pl						Skeletal, platy	
gl	0.00						Replaced by clay minerals.
Fe-Ti ox						Highly skeletal-dendritic chains	
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	2.00					olivine	
STRUCTURES:							
COMMENTS :	Groundmass consists of coarser subophitic pl and cpx including tiny equant mt, and fibrous cpx + very thin pl laths + highly skeletal mt chains embedded in gl (now replaced by clay).						

THIN SECTION: 206-1256C-7R-1W, 62-66 cm **Piece No.:** 11 **Unit:** 9 **ODP TS#:** 14
ROCK NAME: Sapsely cpx-ol-pl-phyrlic cryptocrystalline basalt
WHERE SAMPLED: Folded glassy crust of lava surface
GRAIN SIZE: <0.01 mm
TEXTURE: Variolitic-aphanitic

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
pl	0.60	0.60	0.05	0.90	0.25	Thin platy, euhedral-subhedral	Clots>discrete crystals.
ol	0.00	0.35	0.06	0.30	0.10	Equant, euhedral	Discrete crystals>clotted with pl. Replaced by clay minerals.
cpx	0.10	0.10	0.07	0.50	0.10	Short prismatic, subhedral	Clotted with pl.
GROUNDMASS							
gl	0.00						Brown glass includes aphanitic varioles.
cpx						Fibrous aggregates	Brown glass with thin crystallites (pl?) inclusions.
pl				0.8		Thin tiny laths	Very thin, elongate lath presents. Brown glass with thin crystallites (pl?) inclusions.
Fe-Ti ox vesicles		tr	0.25	0.8		Skeletal chains Spherical	Rare in amount.

SECONDARY MINERALOGY	PERCENT	SIZE (mm)			REPLACING / FILLING	COMMENTS
		min.	max.	av.		
saponite	1.00				olivine/pores	

STRUCTURE:

COMMENTS : Most glass is devitrified to varioles consisting of very fine aggregates of cpx >> pl, most of which are unidentifiable under the microscope. Transition from aphanitic to microlitic varioles can be seen. Outer one centimeter has aphanitic groundmass layers in the glass matrix.

THIN SECTION:	206-1256C-7R-1W, 93-97 cm		Piece No.: 12 Unit: 9			ODP TS#: 15	
ROCK NAME:	Sparsely ol-phyric cryptocrystalline basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.02-0.05 mm						
TEXTURE:	Intersertal-variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00	0.65	0.06	1.00	0.53	Equant, euhedral	Replaced by clay minerals.
pl	0.35	0.35	0.20	0.20	0.20	Stubby, euhedral-subhedral	
cpx	0.05	0.05	0.10	0.40	0.25	Stubby, subhedral	Clotted with pl. Small in amount.
GROUNDMASS							
cpx						Prismatic-sheaflike	
pl						Thin laths	
Fe-Ti ox						Equant-skeletal-dendritic chains	
gl	0.00						Replaced by clay minerals.
vesicles							
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	1.00					olivine/pores	
STRUCTURE:							
COMMENTS : Groundmass pl aligned vertical subparallel to core.							

THIN SECTION:	206-1256C-7R-3W, 40-43 cm		Piece No.: 3B Unit: 11			ODP TS#: 16	
ROCK NAME:	Moderately ol-phyric cryptocrystalline basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.01-0.05 mm						
TEXTURE:	Variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
pl	1.55	1.55	0.06	1.00	0.53	Platy, euhedral-subhedral	Discrete and clotted.
ol	0.00	0.70	0.20	0.20	0.20	Equant, euhedral	Discrete and clotted. Replaced by clay minerals.
cpx	0.40	0.40	0.10	0.40	0.25	Stubby, subhedral	Clotted with pl.
sp	0.10	0.10	0.001	0.005	0.002	Equant, euhedral	Tiny inclusions in ol (picotite).
GROUNDMASS							
cpx						Prismatic-sheaflike	
pl						Thin laths	
Fe-Ti ox						Equant-skeletal-dendritic chains	
gl	0.00						Replaced by clay minerals.
vesicles		0.25					
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	1.00					olivine/pores	
pyrite	<1					replacing silicates	
STRUCTURE:							
COMMENTS :							

THIN SECTION:	206-1256C-7R-3W, 90-92 cm					Piece No.: 1A Unit: 11c	ODP TS#: 17
ROCK NAME:	Moderately cpx-pl-ol-phyric cryptocrystalline basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.005-0.01 mm						
TEXTURE:	Variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00	7.45	0.020	0.900	0.100	Equant, euhedral-subhedral	Replaced by clay minerals.
pl	0.20	0.20	0.050	0.500	0.100	Stubby, euhedral-subhedral	
cpx	0.25	0.25	-	0.350	-	Stubby, euhedral	One large cpx + pl forming a subophitic clot
GROUNDMASS							
cpx						Prismatic-sheaflike	
pl						Platy-thin skeletal laths	
Fe-Ti ox						Equant-skeletal-dendritic chains	
gl	0.00						Replaced by clay minerals.
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
STRUCTURE:	One 0.05 mm extensional stair-stepped vein, filled with saponite stretched fibers perpendicular to vein margins (face controlled)						
COMMENTS :	Large platy pl laths tend to align normal to core in the matrix of variolitic cpx.						

THIN SECTION:	206-1256C-7R-4W, 14-18 cm					Piece No.: 1B	Unit: 12	ODP TS#: 18
ROCK NAME:	Aphyric microcrystalline basalt							
WHERE SAMPLED:	Basal chilled margin of a lava flow							
GRAIN SIZE:	< 0.02 mm							
TEXTURE:	Variolitic-interstitial							
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS	
			min.	max.	av.			
PHENOCRYSTS								
ol	0.00	0.30	0.04	0.30	0.17	Equant, euhedral-subhedral	Discrete and clotted. Replaced by clay minerals.	
pl	0.15	0.15	0.06	0.90	0.48	Platy, euhedral-subhedral	Discrete and clotted.	
cpx	0.10	0.10	0.02	0.05	0.04	Short prismatic	Rare in amount.	
sp	tr	tr	0.005	0.01	0.01	Equant, euhedral	Rare tiny inclusions in ol.	
GROUNDMASS								
cpx						Prismatic-sheaflike		
pl						Thin skeletal laths		
Fe-Ti ox						Equant-skeletal-dendritic chains		
gl	0.00						Replaced by clay minerals.	
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS	
			min.	max.	av.			
saponite	1.50					olivine/pores		
STRUCTURE:								
COMMENTS :	Fluidal structure is shown by aligned interstitial pl. Coarse-grained patches are engulfed in finer-grained variolitic groundmass, showing shearing near the base of the flow.							

THIN SECTION:	206-1256C-7R-5W, 57-60 cm		Piece No.: 1D Unit: 14			ODP TS#: 19	
ROCK NAME:	Aphyric cryptocrystalline basalt						
WHERE SAMPLED:	Center of a one-meter thick lava flow						
GRAIN SIZE:	0.01- 0.1 mm						
TEXTURE:	Variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00	0.31	0.05	0.50	0.28	Equant, euhedral-subhedral	Discrete and clotted. Replaced by clay minerals.
pl	0.15	0.15	0.20	1.40	0.80	Platy, euhedral-subhedral	Discrete and clotted.
GROUNDMASS							
cpx						Prismatic<sheaflike	
pl						Thin skeletal laths	
Fe-Ti ox						Equant-skeletal-dendritic chains	
gl	0.00						Replaced by clay minerals.
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	1.00					olivine/pores	
pyrite	<1					replacing olivine	
STRUCTURE:							
COMMENTS :							

THIN SECTION:	206-1256C-8R-1W, 42-47 cm		Piece No.: 5A Unit: 15			ODP TS#: 20	
ROCK NAME:	Aphyric cryptocrystalline basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.01-0.08 mm						
TEXTURE:	Medium variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
pl	0.40	0.40	0.06	0.9	0.2	Platy-stubby, subhedral	Clotted with pl, cpx and ol.
ol	0.00	0.35	0.05	0.4	0.1	Equant, euhedral	Discrete crystals > clots.
cpx		tr	0.07	0.5	0.15	Short prismatic, subhedral-anhedral	
GROUNDMASS							
Mesostasis							Fibrous cpx + thin laths of pl + skeletal chains of Fe-Ti ox in altered glass.
pl						Skeletal platy	
cpx						Short prismatic, subhedral-anhedral	
Fe-Ti ox						Skeletal polyhedral	
vesicles			0.1	0.6	0.5	Spherical	Filled by clay minerals.
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	3.00					olivine/pores	lines vein walls
chalcedony	7.00					filling vein	
aragonite	1.00					in vein	
celadonite	<1					in vein	
pyrite	<1					in vein	
STRUCTURE:	1.6-5 mm composite vein. Vein texture: irregular vein margins; face controlled fibers growth along the vein margins. Composite ataxial, with several steps of growth: 1) alteration of wallrock minerals; 2) syntaxial growth of saponite fibers (0.06 mm); 3) further growth of saponite + pyrite; 4) two stages with carbonate fibers (fine- and coarse-grained); 5) three steps of parallel-controlled chalcedony growth. Folds and shear bands affect saponite fibers with a sinistral sense of shear almost parallel to the vein margins. One step of chalcedony growth probably contemporaneous to one carbonate step; shear bands cut at high angle the vein margin during this step giving an irregular shape to the vein. Late open thin cracks throughout the vein. 0.05 mm vein splay from the main composite vein with the same filling minerals.						
COMMENTS :	4-5 mm wide vein filled with saponite, aragonite, chalcedony, pyrite and trace celadonite. 1 mm wide alteration halo along vein, where rock is highly altered to saponite.						

THIN SECTION:	206-1256C-8R-2W, 34-39 cm		Piece No.: 1B Unit: 15			ODP TS#: 21	
ROCK NAME:	Sparsely ol-phyric cryptocrystalline basalt						
WHERE SAMPLED:	Center of a sheet flow						
GRAIN SIZE:	< 0.1 mm						
TEXTURE:	Subophitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00	1.40	0.10	0.30	0.20	Equant, euhedral>subhedral	Discrete and clotted. Replaced by clay minerals.
pl	0.30	0.30	0.20	1.20	0.70	Stubby, euhedral-subhedral	Clotted with pl + cpx.
cpx (aug+pig?)	tr	tr	0.10	0.40	0.25	Short prismatic, subhedral	
GROUNDMASS							
cpx						Prismatic-fibrous	
pl						Platy skeletal-thin laths	
Fe-Ti ox						Equant-skeletal-dendritic chains	
gl	0.00	tr					Replaced by clay minerals.
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	2.00					olivine/pores	
STRUCTURE:							
COMMENTS :	Similar groundmass texture as in #13, consisting of subophitic cpx + pl and fine fibrous cpx + pl laths + skeletal mt embedded in altered glass. Phenocrysts of pl + pig forming clots. Tingly ol with sp inclusions presents between pig and pl.						

THIN SECTION:	206-1256C-8R-2W, 117-121 cm		Piece No.: 4	Unit: 16	ODP TS#: 22		
ROCK NAME:	Aphyric cryptocrystalline basalt						
WHERE SAMPLED:							
GRAIN SIZE:	Aphanitic						
TEXTURE:	Fine variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00	0.70	0.06	0.60	0.10	Equant, euhedral	Replaced by clay minerals.
pl	0.15	0.15	0.06	0.40	0.20	Platy, euhedral	
cpx	tr	tr	0.05	0.40	0.24	Stubby, subhedral	Rare in amount.
GROUNDMASS							
pl						Thin laths	
cpx						Fibrous-granular	
Fe-Ti ox						Equant-dendritic chains	
gl	0.00	1.00					Replaced by clay minerals.
vesicles		tr				Spherical	
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	1.00					olivine/pores	small veinlet
STRUCTURE:							
COMMENTS : Interstices between varioles consist of granular cpx, thin pl laths and dendritic mt.							

THIN SECTION:	206-1256C-8R-3W, 136-140 cm		Piece No.: 13 Unit: 17			ODP TS#: 23	
ROCK NAME:	Moderately pl-ol-phyric cryptocrystalline						
WHERE SAMPLED:							
GRAIN SIZE:	0.005-0.01 mm						
TEXTURE:	Fine variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00	1.90	0.06	0.4	0.1	Equant, euhedral	Replaced by green-brown clay minerals. Discrete crystals > clots.
pl	0.90	0.90	0.08	1.6	0.3	Platy-stubby, subhedral-euhedral	Clotted with ol > discrete crystals.
GROUNDMASS							
cpx						Short prismatic-granular	
pl						Thin platy laths	
Fe-Ti ox						Equant-skeletal chains	
gl	0.00	tr					Replaced by brown clay minerals.
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	1.50					olivine/pore space and vein	
celadonite	1.00					olivine/pore space and vein	only adjacent to vein
aragonite	<1					filling vein	
iron oxyhydroxidxe	2.00					filling vein	
chalcedony	8.00					filling veins	
STRUCTURE:	Vein net of stepped-like veins. Main vein up to 6.2 mm width with composite growth of the infilling minerals. First syntaxial growth (pale green clay +/- titanite) followed by ataxial growth steps. Tension gashes and shear deformation affect the oxyhydroxide with an apparent dx sense of shear						
COMMENTS :	Fine varioles comprising sheaf-like cpx with sporadic tiny pl laths and Fe-Ti ox. 5 mm composite vein filled with celadonite, iron oxyhydroxide, saponite, chalcedony and aragonite. Vein is bordered by 0.1-0.3 mm alteration halo highly to totally altered to pale green clay +/- titanite, within 1-2 mm wide alteration halo where celadonite + minor saponite replace olivine phenocrysts.						

THIN SECTION:	206-1256C-8R-4W, 42-45 cm		Piece No.: 2	Unit: 17	ODP TS#: 24		
ROCK NAME:	Sparsely cpx-ol-pl-phyric fine-grained basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.4 mm						
TEXTURE:	Variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
pl	0.00	0.85	0.10	1.40	0.75	Platy, subhedral	Clotted with cpx.
ol	0.40	0.40	0.10	0.60	0.35	Equant, euhedral>subhedral	Discrete and clotted. Replaced by clay minerals.
cpx	tr	tr	0.40	0.40	0.40	Prismatic, subhedral	Rare clots with pl.
GROUNDMASS							
pl						Platy skeletal-thin laths	
cpx						Thin plates-prismatic-fibrous	
Fe-Ti ox						Skeletal-dendritic chains	
gl	0.00						Replaced by clay minerals.
vesicles							
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	1.00					olivine/pores	
STRUCTURE:							
COMMENTS :							

THIN SECTION:	206-1256C-8R-4W, 114-117 cm					Piece No.: 5	Unit: 18a	ODP TS#: 25
ROCK NAME:	Moderately cpx-pl-ol-phyric cryptocrystalline basalt							
WHERE SAMPLED:	Folded chilled margin of a sheet flow							
GRAIN SIZE:	< 0.1 mm							
TEXTURE:	Variolitic							
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS	
			min.	max.	av.			
PHENOCRYSTS								
ol	0.00	1.45	0.05	0.60	0.12	Equant, euhedral	Discrete. Rarely clotted with pl. Replaced by saponite.	
pl	0.90	0.90	0.05	1.50	0.25	Platy-stubby, euhedral-subhedral	Clotted with/without ol, cpx.	
cpx	0.25	0.25	0.06	0.40	0.10	Stubby, subhedral	Clotted with pl.	
GROUNDMASS								
cpx						Granular		
pl						Thin laths < 0.1 mm long		
mt						Equant skeletal-dendritic		
gl	0.00							
mesostasis							Consisting of varioles of fibrous cpx>mt>pl.	
vesicles		1.85	0.1	0.3	0.2	Spherical	Filled by carbonate.	
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS	
			min.	max.	av.			
saponite	4.00					olivine/vesicles and vein		
quartz	0.50					filling vein		
carbonate	1.00					filling vesicles		
amphibole	1.00					in vein		
pyrite	0.50					in vein		
STRUCTURE:	Chilled basalt with flow structure and 0.7 mm vein filled with saponite, quartz, carbonate, acicular amphibole (?) and pyrite parallel to flow structure.							
COMMENTS :								

THIN SECTION:	206-1256C-8R-5W, 18-21 cm					Piece No.: 3A	Unit: 18a	ODP TS#: 26
ROCK NAME:	Moderately cpx-pl-ol-phyric cryptocrystalline basalt							
WHERE SAMPLED:								
GRAIN SIZE:	< 0.05 mm							
TEXTURE:	Variolitic							
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS	
			min.	max.	av.			
PHENOCRYSTS								
ol	0.00	2.05	0.05	0.20	0.06	Equant, euhedral	Discrete crystals. Replaced by clay minerals.	
pl	0.40	0.40	0.07	0.60	0.10	Platy, euhedral	Discrete > clots.	
cpx	0.05	0.05	0.03	0.10	0.05	Granular, subhedral-euhedral	Clotted with pl.	
GROUNDMASS								
cpx						Fibrous		
pl						Skeletal laths		
mt						Equant skeletal-dendritic		
mesostasis	0.00							
vesicles		0.10		0.6		Spherical		
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS	
			min.	max.	av.			
saponite	4.00					olivine/pores and vein		
quartz	0.50					in vein		
pyrite	<0.5							
STRUCTURE:	Irregular >1 mm wide vein filled with saponite and quartz.							
COMMENTS :								

THIN SECTION:	206-1256C-8R-6W, 1-4 cm		Piece No.: 1B Unit: 18b			ODP TS#: 27	
ROCK NAME:	Aphyric cryptocrystalline basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.05 mm						
TEXTURE:	Variolitic-interstitial						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00	0.90	0.10	0.40	0.20	Equant, euhedral-subhedral	Discrete and clotted. Replaced by clay minerals.
pl	tr	tr	0.20	1.00	0.50	Stubby, euhedral>subhedral	Discrete and clotted with ol.
GROUNDMASS							
cpx	48.20	48.20				Prismatic	
pl	41.30	41.30				Platy, skeletal	
Fe-Ti ox	7.60	7.60				Equant-dendritic chains	
gl	tr	tr					Replaced by clay minerals. Rare interstices.
mesostasis	1.90	2.00					
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	1.00					olivine/pores	
carbonate	<1					replacing olivine	
STRUCTURE:							
COMMENTS : Variolitic plagioclase + fibrous cpx are intervened by layers of interstitial pl laths oblique to core wall.							

THIN SECTION:	206-1256C-8R-6W, 63-66 cm		Piece No.: 1G Unit: 18b			ODP TS#: 28	
ROCK NAME:	Moderately ol-phyric cryptocrystalline basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.04-2.0 mm						
TEXTURE:	M. variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00	3.90	0.10	0.80	0.20	Equant, euhedral-subhedral	Discrete and clotted. Replaced by clay minerals.
GROUNDMASS							
pl	47.80	47.80				Platy subhedral	
cpx (aug)	37.44	38.20				Short prismatic-anhedral	
pig	0.20	0.20				Thin platy, anhedral-subhedral	Very thin, elongated plates sandwiched by aug.
Fe-Ti ox	6.30	6.30				Equant, skeletal	
mesostasis	3.69	4.10					Intergrowth of qtz and sodic pl.
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	5.00					olivine/pores	
pyrite	<1					interstitial, along grain boundaries	
STRUCTURE:							
COMMENTS :							

THIN SECTION:	206-1256C-8R-6W, 115-120 cm		Piece No.: 1	Unit: 18b	ODP TS#: 29		
ROCK NAME:	Moderately pl-ol-phyric cryptocrystalline basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.01-0.1 mm						
TEXTURE:	Coarse variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00	3.90	0.10	1.80	0.30	Equant, euhedral-subhedral	Replaced by clay minerals.
pl	tr	tr	0.20	0.60	0.40	Platy-stubby core in anhedral rim	
GROUNDMASS							
pl	54.60	54.60				Skeletal laths	
cpx	36.20	36.20				Granular-prismatic, subhedral	
Fe-Ti ox	4.30	4.30				Equant-dendritic chains	
mesostasis	0.95	1.00					Vermicular intergrowths of ab + qtz.
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	5.00					olivine/pores	
pyrite	<1					interstitial, along grain boundaries	
STRUCTURE:							
COMMENTS : Coarse varioles consisting of radial pl + interstitial cpx. No pigeonite identified.							

THIN SECTION:	206-1256C-9R-1W, 6-9 cm		Piece No.: 1		Unit: 18b	ODP TS#: 30	
ROCK NAME:	Moderately ol-phyric fine-grained basalt						
WHERE SAMPLED:	Upper portion of thick massive lava						
GRAIN SIZE:	< 1.4 mm						
TEXTURE:	Variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00	6.40	0.10	0.30	0.10	Equant, euhedral	Replaced by clay minerals. Small in amount.
GROUNDMASS							
pl	45.50	45.50				Stubby-platy, euhedral-subhedral	
aug	26.41	27.80				Short prismatic-anhedral	
Fe-Ti ox	7.50	7.60				Equant-skeletal-dendritic chains	
mesostasis	7.25	7.40				Interstices	Intergrowth of ab + qtz
pig	4.80	4.90				Elongate prismatic	
qtz	0.40	0.40					
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	5.00					olivine/pores	
chlorite?	<1						
mica?	<1					late magmatic	
green clinopyroxene	<1					replacement rims on augite	late magmatic
STRUCTURE:							
COMMENTS :	Very coarse variolites form groundmass. Ol phenocrysts are few, and pl phenocrysts that were identified in finer-grained samples cannot be distinguished from the groundmass pl.						

THIN SECTION:	206-1256C-9R-1W, 61-65 cm		Piece No.: 5A Unit: 18b			ODP TS#: 31	
ROCK NAME:	Moderately ol-phyric fine-grained basalt						
WHERE SAMPLED:	Upper portion of thick massive lava						
GRAIN SIZE:	0.2-1 mm						
TEXTURE:	C. variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00	4.90	0.10	0.40	0.20	Equant, euhedral	Replaced by clay minerals. Small in amount.
GROUNDMASS							
pl	49.90	49.90				Stubby-platy, euhedral-subhedral	
cpx (aug+pig)	34.70	34.70				Short prismatic-anhedral	Pig is colorless, elongate prismatic.
Fe-Ti ox	7.50	7.50				Equant-skeletal-dendritic chains	
mesostasis	3.00	3.00				Interstices	Intergrowth of ab + qtz
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	5.00					olivine/pores	
chlorite	<1					olivine/pores	late magmatic
mica?	<1					interstitial	late magmatic
STRUCTURE:							
COMMENTS :	Cpx anhedral grains form varioles with pl. Minor disseminated pyrite and chalcopyrite.						

THIN SECTION:	206-1256C-9R-2, 23-26 cm					Piece No.: 1A	Unit: 18b	ODP TS#: 32
ROCK NAME:	Moderately ol-phyric fine-grained basalt							
WHERE SAMPLED:	Upper portion of thick massive lava							
GRAIN SIZE:	0.2-1 mm							
TEXTURE:	C. variolitic							
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS	
			min.	max.	av.			
PHENOCRYSTS								
ol	0.00					Equant, euhedral	Replaced by dark brown clay minerals.	
GROUNDMASS								
pl						Stubby, euhedral-subhedral		
aug						Granular-short prismatic, anhedral>euhedral		
pig						Elongate prismatic, euhedral	Intergrowths with aug.	
Fe-Ti ox						Equant-skeletal		
mesostasis						Interstices	Intergrowth of ab + qtz.	
qtz						Anhedral	Occurs near altered olivine and intergrowths.	
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS	
			min.	max.	av.			
saponite	5.00					olivine/pores		
chlorite	<1					olivine/pores	late magmatic	
STRUCTURE:								
COMMENTS :								

THIN SECTION:	206-1256C-9R-2W, 73-77 cm					Piece No.: 1B	Unit: 18b	ODP TS#: 33
ROCK NAME:	Moderately ol-phyric fine-grained basalt							
WHERE SAMPLED:	Upper portion of thick massive lava							
GRAIN SIZE:	0.2-1 mm							
TEXTURE:	C. variolitic							
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS	
			min.	max.	av.			
PHENOCRYSTS								
ol	0.00					Equant, euhedral	Replaced by dark brown clay minerals.	
GROUNDMASS								
pl						Stubby, euhedral-subhedral		
aug						Granular-short prismatic, anhedral>euhedral		
pig						Elongate prismatic, euhedral	Intergrowths with aug.	
Fe-Ti ox						Equant-skeletal		
mesostasis						Interstices	Intergrowth of ab + qtz.	
qtz						Anhedral	Occurs near altered olivine and intergrowths.	
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS	
			min.	max.	av.			
saponite	5.00					olivine/pores		
chlorite	<1					olivine/pores	late magmatic	
pyrite	<1					disseminated		
chalcopyrite	<1					disseminated		
STRUCTURE:								
COMMENTS :								

THIN SECTION:	206-1256C-9R-3W, 33-36cm		Piece No.: 1	Unit: 18c	ODP TS#: 34		
ROCK NAME:	Moderately ol-phyric fine-grained basalt						
WHERE SAMPLED:	Upper portion of thick massive lava						
GRAIN SIZE:	0.2-1 mm						
TEXTURE:	C. variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00					Equant, euhedral	Replaced by dark brown clay minerals.
GROUNDMASS							
pl						Stubby, euhedral-subhedral	
aug						Granular-short prismatic, anhedral>euhedral	
pig						Elongate prismatic, euhedral	Intergrowths with aug.
Fe-Ti ox						Equant-skeletal	
mesostasis						Interstices	Intergrowth of ab + qtz.
qtz						Anhedral	Occurs near altered olivine and intergrowths.
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	6.00					olivine/pores	
chlorite	<1					olivine/pores	late magmatic
clinopyroxene	<1					reaction rims on igneous pyroxene	
STRUCTURE:							
COMMENTS :	Saponite veinlet (50m thick).						

THIN SECTION:	206-1256C-9R-3W, 33-36 cm		Piece No.: 1	Unit: 18c	ODP TS#: 35		
ROCK NAME:	Moderately ol-phyric fine-grained basalt						
WHERE SAMPLED:							
GRAIN SIZE:	< 2 mm						
TEXTURE:	Subophitic-c. variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00					Equant, euhedral	Replaced by dark brown clay minerals.
GROUNDMASS							
pl						Stubby, euhedral-subhedral	
aug						Granular-short prismatic, anhedral>euhedral	
pig						Elongate prismatic, euhedral	Intergrowths with aug.
Fe-Ti ox						Equant-skeletal	
mesostasis						Interstices	Intergrowth of ab + qtz.
qtz						Anhedral	Occurs near altered olivine and intergrowths.
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	7.00					olivine/pores	
pyrite	1.00					disseminated	
green cpx	<1					reaction rims on igneous pyroxene	
STRUCTURE:							
COMMENTS :							

THIN SECTION:	206-1256C-9R-3W, 93-96 cm					Piece No.: 2	Unit: 18c	ODP TS#: 36
ROCK NAME:	Moderately ol-phyric fine-grained basalt							
WHERE SAMPLED:	Upper portion of thick massive lava							
GRAIN SIZE:	0.1-2 mm							
TEXTURE:	Subophitic-c. variolitic							
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS	
			min.	max.	av.			
PHENOCRYSTS								
ol	0.00					Equant, euhedral-subhedral	Replaced by dark brown clay minerals.	
GROUNDMASS								
pl						Platy, euhedral-subhedral, wedge-shaped skeletal		
aug						Stubby prismatic-thin platy intergrowths with pig		
pig						Elongate prismatic, euhedral	Partings normal to prisms.	
Fe-Ti ox						Equant-skeletal		
mesostasis						Interstices	Intergrowth of ab + qtz	
qtz						Anhedral	Occurs near altered olivine and intergrowths.	
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS	
			min.	max.	av.			
saponite	7.00					olivine/pores		
blue-green phyllosilicate	<1					interstitial, associated with saponite		
pyrite	<1					disseminated		
STRUCTURE:								
COMMENTS :								

THIN SECTION:	206-1256C-9R-4W, 3-6 cm		Piece No.: 1A Unit: 18c			ODP TS#: 37	
ROCK NAME:	Moderately ol-phyric fine-grained basalt						
WHERE SAMPLED:	Upper portion of thick massive lava						
GRAIN SIZE:	< 3 mm						
TEXTURE:	Coarse variolitic (> subophitic)						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00	3.06	0.05	0.40	0.20	Equant, euhedral-subhedral	Replaced by dark brown clay minerals.
GROUNDMASS							
pl	47.60	47.60				Platy, euhedral-subhedral, wedge-shaped skeletal	
aug	27.93	27.93				Stubby prismatic-thin platy intergrowths with pig	
pig	0.82	0.82				Elongate prismatic, euhedral	Partings normal to prisms.
Fe-Ti ox	6.42	6.42				Equant-skeletal	
mesostasis	10.81	10.81				Interstices	Intergrowth of ab + qtz
qtz	3.36	3.36				Anhedral	Occurs near altered olivine and intergrowths.
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	7.00					olivine/pores	
blue-green phyllosilicate	<1					olivine/pores	
pyrite	<1					disseminated	
clinopyroxene	<1					replacing igneous pyroxene	
STRUCTURE:							
COMMENTS :	Colorless pig is prismatic crystals with partings normal to prisms and forms either a discrete crystal or an intergrowth with aug. Some groundmass pl includes anhedral fan-shaped aug and pig that are radially arranged, forming a variole. More stubby pl and aug also penetrate each other to form radial aggregates of large varioles.						

THIN SECTION:	206-1256C-9R-4W, 62-68 cm		Piece No.: 1B Unit: 18c			ODP TS#: 38	
ROCK NAME:	Moderately ol-phyric fine-grained basalt						
WHERE SAMPLED:	Upper portion of thick massive lava						
GRAIN SIZE:	0.1-2 mm						
TEXTURE:	Subophitic-c. variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00	6.00	0.10	0.40	0.20	Equant, euhedral	Replaced by dark brown clay minerals.
GROUNDMASS							
pl	48.90	48.90				Stubby-platy, euhedral-subhedral	
aug	32.20	32.20				Stubby subhedral-elongated euhedral, thin anhedral	
pig	2.70	2.70				Elongate prismatic, euhedral	
Fe-Ti ox	5.90	5.90				Equant-skeletal	
mesostasis	3.60	3.60				Interstices	Intergrowth of ab + qtz
qtz	0.70	0.70				Anhedral	Occurs near altered olivine and intergrowths.
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	7.00					olivine/pores	
blue-green phyllosilicate	<1					olivine/pores	
pyrite	<1					disseminated	
clinopyroxene	<1					replacing igneous pyroxene	
STRUCTURE:							
COMMENTS :	Colorless pig in prismatic crystals with partings normal to prisms and forms either a discrete crystal or an intergrowth with aug. Some groundmass pl includes anhedral fan-shaped aug and pig that are radially arranged, forming a variole. More stubby pl and aug also penetrate each other to form radial aggregates (varioles).						

THIN SECTION:	206-1256C-9R-4W, 121-124 cm		Piece No.: 1	Unit: 18c	ODP TS#: 39		
ROCK NAME:	Moderately ol-phyric fine-grained basalt						
WHERE SAMPLED:	Upper portion of thick massive lava						
GRAIN SIZE:	0.1-2 mm						
TEXTURE:	Subophitic-c. variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00					Equant, euhedral-subhedral	Replaced by dark brown clay minerals.
GROUNDMASS							
pl						Platy, euhedral-subhedral, wedge-shaped skeletal	
aug						Stubby prismatic-thin platy intergrowths with pig	
pig						Elongate prismatic, euhedral	Partings normal to prisms.
Fe-Ti ox						Equant-skeletal	
mesostasis						Interstices	Intergrowth of ab + qtz
qtz						Anhedral	Occurs near altered olivine and intergrowths.
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	8.00					olivine/pores	
blue-green phyllosilicate	<1					interstitial, associated with saponite	
pyrite	1					disseminated	
STRUCTURE:							
COMMENTS :							

THIN SECTION:	206-1256C-9R-5W, 33-36 cm					Piece No.: 2A	Unit: 18c	ODP TS#: 40
ROCK NAME:	Moderately ol-phyric fine-grained basalt							
WHERE SAMPLED:	Upper portion of thick massive lava							
GRAIN SIZE:	0.1-2 mm							
TEXTURE:	Subophitic-c. variolitic							
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS	
			min.	max.	av.			
PHENOCRYSTS								
ol	0.00					Equant, euhedral-subhedral	Replaced by dark brown clay minerals.	
GROUNDMASS								
pl						Platy, euhedral-subhedral, wedge-shaped skeletal		
aug						Stubby prismatic-thin platy intergrowths with pig		
pig						Elongate prismatic, euhedral	Partings normal to prisms.	
Fe-Ti ox						Equant-skeletal		
mesostasis						Interstices	Intergrowth of ab + qtz	
qtz						Anhedral	Occurs near altered olivine and intergrowths.	
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS	
			min.	max.	av.			
saponite	6.00					olivine/pores		
blue-green phyllosilicate	<1					interstitial, associated with saponite		
pyrite	<1					disseminated		
STRUCTURE:								
COMMENTS :								

THIN SECTION:	206-1256C-9R-5W, 94-97 cm					Piece No.: 2b	Unit: 18c	ODP TS#: 41
ROCK NAME:	Moderately ol-phyric fine-grained basalt							
WHERE SAMPLED:	Upper portion of thick massive lava							
GRAIN SIZE:	0.1-2 mm							
TEXTURE:	Subophitic-c. variolitic							
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS	
			min.	max.	av.			
PHENOCRYSTS								
ol	0.00					Equant, euhedral-subhedral	Replaced by dark brown clay minerals.	
GROUNDMASS								
pl						Platy, euhedral-subhedral, wedge-shaped skeletal		
aug						Stubby prismatic-thin platy intergrowths with pig		
pig						Elongate prismatic, euhedral	Partings normal to prisms.	
Fe-Ti ox						Equant-skeletal		
mesostasis						Interstices	Intergrowth of ab + qtz	
qtz						Anhedral	Occurs near altered olivine and intergrowths.	
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS	
			min.	max.	av.			
saponite	9.00					olivine/pores		
blue-green phyllosilicate	<1					interstitial, associated with saponite		
pyrite	<1					disseminated		
green cpx	<1					alteration rims replacing primary cpx, when adjacent to the vein		
STRUCTURE:								
COMMENTS :	Late magmatic 4mm wide vein, composed of green cpx, quartz + albite intergrowths, euhedral quartz, pyrite and saponite.							

THIN SECTION:	206-1256C-9R-6W, 6-9 cm		Piece No.: 1A Unit: 18c			ODP TS#: 42	
ROCK NAME:	Moderately ol-phyric fine-grained basalt						
WHERE SAMPLED:	Upper portion of thick massive lava						
GRAIN SIZE:	< 3.0 mm						
TEXTURE:	Intergranular-coarse variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00	8.15	0.15	1.00	0.50	Equant, euhedral	Replaced by dark brown clay minerals.
GROUNDMASS							
pl	45.36	45.36				Stubby, euhedral-subhedral	
aug	27.73	27.73				Granular-short prismatic, anhedral>euhedral	
pig	0.20	0.20				Elongate prismatic, euhedral	Intergrowths with aug.
Fe-Ti ox	5.81	5.81				Equant-skeletal	
mesostasis	12.03	12.03				Interstices	Intergrowth of ab + qtz.
qtz	0.71	0.71				Anhedral	Occurs near altered olivine and intergrowths.
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	5.00					olivine/pores	
pyrite	<1					disseminated	
STRUCTURE:							
COMMENTS :							

THIN SECTION:	206-1256C-9R-6W, 71-75 cm		Piece No.: 1C Unit: 18c			ODP TS#: 43	
ROCK NAME:	Moderately ol-phyric fine-grained basalt						
WHERE SAMPLED:	Upper portion of thick massive lava						
GRAIN SIZE:	0.1-2 mm						
TEXTURE:	Subophitic-c. variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00					Equant, euhedral	Replaced by dark brown clay minerals.
GROUNDMASS							
pl						Stubby, euhedral-subhedral	
aug						Granular-short prismatic, anhedral>euhedral	
pig						Elongate prismatic, euhedral	Intergrowths with aug.
Fe-Ti ox						Equant-skeletal	
mesostasis						Interstices	Intergrowth of ab + qtz.
qtz						Anhedral	Occurs near altered olivine and intergrowths.
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	9.00					olivine/pores	
blue-green phyllosilicate	<1					interstitial, associated with saponite	
pyrite	1.00					disseminated	
green cpx	<1					alteration rims replacing primary cpx, when adjacent to the vein	
STRUCTURE:	3.2 mm stair-stepped vein with irregular margins. At least three growth stages of the infilling minerals: granophyric pl + qtz + (?) green cpx +/- opaque, euhedral qtz, irregular fibrous aggregates of saponite + pyrite						
COMMENTS :	Late magmatic 2 mm wide vein, composed of green cpx, quartz + albite intergrowths, euhedral quartz, pyrite and saponite.						

THIN SECTION:	206-1256C-9R-6W, 123-126 cm		Piece No.: 1	Unit: 18c	ODP TS#: 44		
ROCK NAME:	Moderately ol-phyric fine-grained basalt						
WHERE SAMPLED:	Upper portion of thick massive lava						
GRAIN SIZE:	0.1-2 mm						
TEXTURE:	Subophitic-c. variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00					Equant, euhedral	Replaced by dark brown clay minerals.
GROUNDMASS							
pl						Stubby, euhedral-subhedral	
aug						Granular-short prismatic, anhedral>euhedral	
pig						Elongate prismatic, euhedral	Intergrowths with aug.
Fe-Ti ox						Equant-skeletal	
mesostasis						Interstices	Intergrowth of ab + qtz.
qtz						Anhedral	Occurs near altered olivine and intergrowths.
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	4.00					olivine/pores	
blue-green phyllosilicate	<1					interstitial, associated with saponite	
pyrite	1.00					disseminated	
green cpx	<1					alteration rims replacing primary cpx, when adjacent to the vein	
STRUCTURE:							
COMMENTS :	Late magmatic 1.2 mm wide vein, composed of green cpx, quartz + albite intergrowths, euhedral quartz, pyrite and saponite.						

THIN SECTION:	206-1256C-9R-7W, 33-36 cm		Piece No.: 1A Unit:18d			ODP TS#: 45	
ROCK NAME:	Moderately ol-phyric fine-grained basalt						
WHERE SAMPLED:							
GRAIN SIZE:	< 2 mm						
TEXTURE:	Subophitic-c. variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00					Equant, euhedral	Replaced by dark brown clay minerals.
GROUNDMASS							
pl						Stubby, euhedral-subhedral	
aug						Granular-short prismatic, anhedral>euhedral	
pig						Elongate prismatic, euhedral	Intergrowths with aug.
Fe-Ti ox						Equant-skeletal	
mesostasis						Interstices	Intergrowth of ab + qtz.
qtz						Anhedral	Occurs near altered olivine and intergrowths.
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	4.00					olivine/pores	
blue-green phyllosilicate	<1					interstitial, associated with saponite	
pyrite	1.00					disseminated	
green cpx	<1					alteration rims replacing primary cpx, when adjacent to the vein	
STRUCTURE:							
COMMENTS :	Late magmatic 0.4 mm wide vein, composed of quartz + albite intergrowths and minor saponite.						

THIN SECTION:	206-1256C-9R-7W, 73-76 cm		Piece No.: 1A Unit: 18d			ODP TS#: 46	
ROCK NAME:	Moderately ol-phyric fine-grained basalt						
WHERE SAMPLED:							
GRAIN SIZE:	< 2 mm						
TEXTURE:	Subophitic-c. variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00					Equant, euhedral	Replaced by dark brown clay minerals.
GROUNDMASS							
pl						Stubby, euhedral-subhedral	
aug						Granular-short prismatic, anhedral>euhedral	
pig						Elongate prismatic, euhedral	Intergrowths with aug.
Fe-Ti ox						Equant-skeletal	
mesostasis						Interstices	Intergrowth of ab + qtz.
qtz						Anhedral	Occurs near altered olivine and intergrowths.
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	4.00					olivine/pores	
blue-green phyllosilicate	<1					interstitial, associated with saponite	
pyrite	1.00					disseminated	
STRUCTURE:							
COMMENTS :							

THIN SECTION:	206-1256C-9R-7W, 89-93 cm		Piece No.: 1A Unit: 18d			ODP TS#: 47	
ROCK NAME:	Moderately ol-phyric fine-grained basalt						
WHERE SAMPLED:							
GRAIN SIZE:	< 2 mm						
TEXTURE:	Subophitic-c. variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00					Equant, euhedral	Replaced by dark brown clay minerals.
GROUNDMASS							
pl						Stubby, euhedral-subhedral	
aug						Granular-short prismatic, anhedral>euhedral	
pig						Elongate prismatic, euhedral	Intergrowths with aug.
Fe-Ti ox						Equant-skeletal	
mesostasis						Interstices	Intergrowth of ab + qtz.
qtz						Anhedral	Occurs near altered olivine and intergrowths.
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	4.00					olivine/pores	
blue-green phyllosilicate	<1					interstitial, associated with saponite	
green cpx	1.00					alteration rims replacing primary cpx, when adjacent to the vein and quartz albite intergrowths in interstitial areas	
STRUCTURE:	0.2 mm vein with irregular margins.						
COMMENTS :	A 0.2 mm wide saponite vein with spectacular apple green secondary cpx, which lines the vein selvages. Plagioclase is extensively replaced by quartz + albite intergrowths when adjacent to the vein.						

THIN SECTION:	206-1256C-9R-7W, 122-127 cm		Piece No.: 1	Unit: 18d	ODP TS#: 48		
ROCK NAME:	Moderately ol-phyric fine-grained basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.1-2 mm						
TEXTURE:	Subophitic-c. variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00	2.40	0.10	0.40	0.20	Equant, euhedral	Replaced by clay minerals. Small in amount.
(pl)	tr	tr				Euhedral core in subhedral rims	Rare in amount
GROUNDMASS							
pl	45.20	45.20				Stubby-platy, euhedral-subhedral	
cpx (aug+pig)	37.20	37.20				Short prismatic-anhedral	
pig	-	-				Prismatic euhedral	
Fe-Ti ox	8.00	8.30				Equant-skeletal-dendritic chains	
mesostasis						Interstices	Intergrowth of ab + qtz
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	5.00					replacing olivine and plagioclase, filling pores	
chlorite	<1					interstitial	
pyrite	<1					replacing silicates	
chalcopyrite	<1					interstitial, replacing silicates	
STRUCTURE:							
COMMENTS :							
Colorless pig in prismatic crystals with partings normal to prisms. More euhedral and maller than aug. Occasionally included in or intergrown with aug. Tiny inclusions of glass (altered to clay minerals) are common in pl and cpx. Some inclusions have a spherical vapour.							

THIN SECTION:	206-1256C-9R-8W, 21-23 cm		Piece No.: 1	Unit: 18d	ODP TS#: 49		
ROCK NAME:	Moderately ol-phyric fine-grained basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.5-2 mm						
TEXTURE:	Partly poikilitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00		0.10	0.80	0.40	Equant, euhedral	Replaced by clay minerals. Small in amount.
GROUNDMASS							
pl						Stubby, euhedral-subhedral	
aug						Stubby, short prismatic	
pig						Anhedral round-subhedral prismatic	
Fe-Ti ox						Equant-skeletal-dendritic chains	
mesostasis						Interstices	Intergrowth of ab + qtz
hb	tr	tr				Anhedral	Rare in amount. Inclusions in mt, cpx.
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	5.00					replacing olivine, slightly replacing pyroxene and plagioclase, filling pores	
pyrite	<1					disseminated	
STRUCTURE:							
COMMENTS :	Cpx (aug) is sometimes poikilitically included in pl. Round grains-subhedral prismatic pig occurs as inclusions in brownish aug or as discrete crystals.						

THIN SECTION:	206-1256C-10R-1W, 43-46 cm		Piece No.: 1b		Unit: 18e	ODP TS#: 50	
ROCK NAME:	Moderately ol-phyric fine-grained basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.1-2 mm						
TEXTURE:	Very coarse variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00					Equant, euhedral	Replaced by dark brown clay minerals.
GROUNDMASS							
pl						Stubby-platy, euhedral-subhedral	
aug						Stubby elongated-anhedral grains	
pig						Elongate prismatic, euhedral	Very long prismatic pig presents
Fe-Ti ox						Equant-skeletal	
mesostasis						Interstices	Intergrowth of ab + qtz
qtz						Anhedral	Occurs near altered olivine and intergrowths.
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	5.00					replacing olivine, filling pores	
STRUCTURE:							
COMMENTS :							

THIN SECTION:	206-1256C-10R-1W, 104-107 cm			Piece No.: 1	Unit: 18e	ODP TS#: 51	
ROCK NAME:	Moderately ol-phyric fine-grained basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.1-2 mm						
TEXTURE:	Very coarse variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00					Equant, euhedral	Replaced by dark brown clay minerals.
GROUNDMASS							
pl						Stubby-platy, euhedral-subhedral	
aug						Stubby elongated-anhedral grains	
pig						Elongate prismatic, euhedral	Very long prismatic pig presents
Fe-Ti ox						Equant-skeletal	
mesostasis						Interstices	Intergrowth of ab + qtz
qtz						Anhedral	Occurs near altered olivine and intergrowths.
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	4.00					olivine/pores	
green cpx	<1					alteration rims replacing primary cpx, when adjacent to the quartz albite intergrowths in interstitial areas	
brown mica	<1					interstitial	
pyrite	1.00					disseminated	
STRUCTURE:							
COMMENTS :							

THIN SECTION:	206-1256C-10R-2W, 13-16 cm		Piece No.: 1a		Unit: 18e	ODP TS#: 52	
ROCK NAME:	Moderately ol-phyric fine-grained basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.1-2 mm						
TEXTURE:	Very coarse variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00					Equant, euhedral	Replaced by dark brown clay minerals.
GROUNDMASS							
pl						Stubby-platy, euhedral-subhedral	
aug						Stubby elongated-anhedral grains	
pig						Elongate prismatic, euhedral	Very long prismatic pig presents
Fe-Ti ox						Equant-skeletal	
mesostasis						Interstices	Intergrowth of ab + qtz
qtz						Anhedral	Occurs near altered olivine and intergrowths.
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	4.00					olivine/pores	
green cpx	<1					alteration rims replacing primary cpx, when adjacent to the quartz albite intergrowths in interstitial areas	
green cpx	<1					interstitial, associated with saponite	
blue-green phyllosilicate	<1					interstitial	
pyrite	<1					disseminated	
STRUCTURE:							
COMMENTS :							

THIN SECTION:	206-1256C-10R-2W, 65-68 cm					Piece No.: 1c	Unit: 18e	ODP TS#: 53
ROCK NAME:	Moderately ol-phyric fine-grained basalt							
WHERE SAMPLED:								
GRAIN SIZE:	0.1-2 mm							
TEXTURE:	Very coarse variolitic							
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS	
			min.	max.	av.			
PHENOCRYSTS								
ol	0.00					Equant, euhedral	Replaced by dark brown clay minerals.	
GROUNDMASS								
pl						Stubby-platy, euhedral-subhedral		
aug						Stubby elongated-anhedral grains		
pig						Elongate prismatic, euhedral	Very long prismatic pig presents	
Fe-Ti ox						Equant-skeletal		
mesostasis						Interstices	Intergrowth of ab + qtz	
qtz						Anhedral	Occurs near altered olivine and intergrowths.	
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS	
			min.	max.	av.			
saponite	4.00					olivine/pores - slightly replacing pyroxene		
blue-green phyllosilicate	<1					interstitial, associated with saponite		
pyrite	1.50					disseminated		
STRUCTURE:								
COMMENTS :								

THIN SECTION:	206-1256C-10R-2W, 105-108 cm		Piece No.: 1	Unit: 18e	ODP TS#: 54		
ROCK NAME:	Moderately ol-phyric fine-grained basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.1-2 mm						
TEXTURE:	Very coarse variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00	4.90	0.20	0.80	0.20	Equant, euhedral	Replaced by dark brown clay minerals.
GROUNDMASS							
pl	41.90	41.90				Stubby-platy, euhedral-subhedral	
cpx (aug+pig)	32.50	32.50				Stubby elongated-anhedral grains	
pig	1.00	1.00				Elongate prismatic, euhedral	Very long prismatic pig presents
Fe-Ti ox	6.60	6.60				Equant-skeletal	
mesostasis	12.90	12.90				Interstices	Intergrowth of ab + qtz
qtz	0.20	0.20				Anhedral	Occurs near altered olivine and intergrowths.
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	6.00					olivine/pores	
blue-green phyllosilicate	<1					olivine/pores	
green cpx	<1					reaction rims on igneous pyroxene	
albite	1.00					replacing plagioclase	
pyrite	<1					disseminated	
STRUCTURE:							
COMMENTS :	Colorless pig in prismatic crystals with partings normal to prisms and forms either a discrete crystal or an intergrowth with aug. Some groundmass pl includes anhedral fan-shaped aug and pig that are radially arranged, forming a variole. More stubby pl and aug also penetrate each other to form radial aggregates (varioles). Coarser than TS#38. Mesostatic intergrowths are heavily mottled by dusty aggregates of mainly clay minerals. Trace late magmatic brown mica is present in interstitial areas.						

THIN SECTION:	206-1256C-10R-2W, 13-16 cm		Piece No.: 1	Unit: 18e	ODP TS#: 55		
ROCK NAME:	Moderately ol-phyric fine-grained basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.1-2 mm						
TEXTURE:	Very coarse variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00					Equant, euhedral	Replaced by dark brown clay minerals.
GROUNDMASS							
pl						Stubby-platy, euhedral-subhedral	
aug						Stubby elongated-anhedral grains	
pig						Elongate prismatic, euhedral	Very long prismatic pig presents
Fe-Ti ox						Equant-skeletal	
mesostasis						Interstices	Intergrowth of ab + qtz
qtz						Anhedral	Occurs near altered olivine and intergrowths.
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	6.00					olivine/pores - replacing plagioclase	
albite	1.00					replacing plagioclase	
pyrite	1.00					disseminated	
STRUCTURE:							
COMMENTS :							

THIN SECTION:	206-1256C-10R-3W, 47-50 cm			Piece No.: 2	Unit: 18f	ODP TS#: 56	
ROCK NAME:	Moderately ol-phyric fine-grained basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.1-2 mm						
TEXTURE:	Very coarse variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00					Equant, euhedral	Replaced by dark brown clay minerals.
GROUNDMASS							
pl						Stubby-platy, euhedral-subhedral	
aug						Stubby elongated-anhedral grains	
pig						Elongate prismatic, euhedral	Very long prismatic pig presents
Fe-Ti ox						Equant-skeletal	
mesostasis						Interstices	Intergrowth of ab + qtz
qtz						Anhedral	Occurs near altered olivine and intergrowths.
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	5.00					olivine/pores - replacing plagioclase	
green cpx	<1					reaction rims on igneous pyroxene	
albite	<1					replacing plagioclase	
pyrite	<1					disseminated	
STRUCTURE:							
COMMENTS :							

THIN SECTION:	206-1256C-10R-3W, 102-105 cm			Piece No.: 4	Unit: 18g	ODP TS#: 57	
ROCK NAME:	Moderately ol-phyric fine-grained basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.1-2 mm						
TEXTURE:	Very coarse variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00					Equant, euhedral	Replaced by dark brown clay minerals.
GROUNDMASS							
pl						Stubby-platy, euhedral-subhedral	
aug						Stubby elongated-anhedral grains	
pig						Elongate prismatic, euhedral	Very long prismatic pig presents
Fe-Ti ox						Equant-skeletal	
mesostasis						Interstices	Intergrowth of ab + qtz
qtz						Anhedral	Occurs near altered olivine and intergrowths.
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	5.00					olivine/pores - slightly replacing plagioclase	
albite	< 1					replacing plagioclase	
STRUCTURE:							
COMMENTS :							

THIN SECTION:	206-1256C-10R-4W, 43-45 cm		Piece No.: 1	Unit: 18g	ODP TS#: 58		
ROCK NAME:	Moderately ol-phyric fine-grained basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.02-2 mm						
TEXTURE:	Very coarse variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00	6.40	0.10	0.50	0.10	Equant, euhedral	Replaced by dark brown clay minerals.
sp	tr	tr				Equant, euhedral	Tiny inclusions in ol.
GROUNDMASS							
pl	47.50	47.50				Stubby-platy, euhedral-subhedral	
cpx (aug+pig)	36.80	36.80				Stubby, subhedral>euhedral	
pig	0.30	0.30				Elongate prismatic, euhedral	Very long prismatic pig presents
Fe-Ti ox	3.50	3.50				Equant-skeletal	
mesostasis	5.30	5.30				Interstices	Intergrowth of ab + qtz
qtz	0.20	0.20				Anhedral	Occurs near altered olivine and intergrowths.
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	8.50					olivine/pores	in vein
pyrite	<1					disseminated	
green cpx	<1					reaction rims on igneous pyroxene	
albite	<1					replacing plagioclase	
blue-green phyllosilicate	<1					interstitial	
STRUCTURE:							
COMMENTS :	Colorless pig in prismatic crystals with partings normal to prisms and forms either a discrete crystal or an intergrowth with aug. Some groundmass pl includes anhedral fan-shaped aug and pig that are radially arranged, forming a variole. More stubby pl and aug also penetrate each other to form radial aggregates (varioles). 100 mm saponite vein.						

THIN SECTION:	206-1256C-10R-4W, 108-111 cm			Piece No.: 1	Unit: 18g	ODP TS#: 59	
ROCK NAME:	Moderately ol-phyric fine-grained basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.02-2 mm						
TEXTURE:	Very coarse variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00					Equant, euhedral	Replaced by dark brown clay minerals.
GROUNDMASS							
pl						Stubby-platy, euhedral-subhedral	
aug						Stubby elongated-anhedral grains	
pig						Elongate prismatic, euhedral	Very long prismatic pig presents
Fe-Ti ox						Equant-skeletal	
mesostasis						Interstices	Intergrowth of ab + qtz
qtz						Anhedral	Occurs near altered olivine and intergrowths.
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	5.00					olivine/pores - slightly replacing pyroxene	
albite	5.00					replacing plagioclase	
brown mica	<1					interstitial	
pyrite	2.00					disseminated	
STRUCTURE:							
COMMENTS :							

THIN SECTION:	206-1256C-10R-5W, 40-43 cm		Piece No.: 1a		Unit: 18g	ODP TS#: 60	
ROCK NAME:	Moderately ol-phyric fine-grained basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.02-2 mm						
TEXTURE:	Very coarse variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00					Equant, euhedral	Replaced by dark brown clay minerals.
GROUNDMASS							
pl						Stubby-platy, euhedral-subhedral	
aug						Stubby elongated-anhedral grains	
pig						Elongate prismatic, euhedral	Very long prismatic pig presents
Fe-Ti ox						Equant-skeletal	
mesostasis						Interstices	Intergrowth of ab + qtz
qtz						Anhedral	Occurs near altered olivine and intergrowths.
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	5.00					olivine/pores - - slightly replacing plagioclase	
albite	2.00					replacing plagioclase	
pyrite	< 0.5					disseminated	
STRUCTURE:							
COMMENTS :							

THIN SECTION:	206-1256C-10R-5W, 83-86 cm		Piece No.: 1b Unit: 18g			ODP TS#: 61	
ROCK NAME:	Moderately ol-phyric fine-grained basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.02-2 mm						
TEXTURE:	Very coarse variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00					Equant, euhedral	Replaced by dark brown clay minerals.
GROUNDMASS							
pl						Stubby-platy, euhedral-subhedral	
aug						Stubby elongated-anhedral grains	
pig						Elongate prismatic, euhedral	Very long prismatic pig presents
Fe-Ti ox						Equant-skeletal	
mesostasis						Interstices	Intergrowth of ab + qtz
qtz						Anhedral	Occurs near altered olivine and intergrowths.
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	7.00					olivine/pores	
albite	7.00					replacing plagioclase	
brown mica	<1					interstitial	
pyrite	1.00					disseminated	
STRUCTURE:							
COMMENTS :							

THIN SECTION:	206-1256C-10R-6W, 53-56 cm		Piece No.: 1	Unit: 18g	ODP TS#: 62		
ROCK NAME:	Moderately ol-phyric fine-grained basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.02-2 mm						
TEXTURE:	Very coarse variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00					Equant, euhedral	Replaced by dark brown clay minerals.
GROUNDMASS							
pl						Stubby-platy, euhedral-subhedral	
aug						Stubby elongated-anhedral grains	
pig						Elongate prismatic, euhedral	Very long prismatic pig presents
Fe-Ti ox						Equant-skeletal	
mesostasis						Interstices	Intergrowth of ab + qtz
qtz						Anhedral	Occurs near altered olivine and intergrowths.
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	7.00					olivine/pores	in vein
green cpx	<1					alteration rims replacing primary cpx, when adjacent to saponite+ pyrite vein	
albite	8.00					replacing plagioclase	
pyrite	3.00					disseminated	in vein
STRUCTURE:							
COMMENTS:	0.15 mm vein composed alternatively by pyrite and saponite, with adjacent host rock plagioclase partly replaced by saponite.						

THIN SECTION:	206-1256C-10R-6W, 78-81 cm		Piece No.: 3			Unit: 18g	ODP TS#: 63	
ROCK NAME:	Moderately ol-phyric fine-grained basalt							
WHERE SAMPLED:								
GRAIN SIZE:	0.02-2 mm							
TEXTURE:	Very coarse variolitic							
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS	
			min.	max.	av.			
PHENOCRYSTS								
ol	0.00	5.20				Equant, euhedral	Replaced by dark brown clay minerals.	
GROUNDMASS								
pl	44.30	44.30				Stubby-platy, euhedral-subhedral		
aug	34.80	34.80				Stubby elongated-anhedral grains		
Fe-Ti ox	5.70	5.70				Equant-skeletal		
pig	2.80	2.80				Elongate prismatic, euhedral	Very long prismatic pig presents	
mesostasis	6.70	6.70				Interstices	Intergrowth of ab + qtz	
qtz	0.50	0.50				Anhedral	Occurs near altered olivine and intergrowths.	
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS	
			min.	max.	av.			
saponite	6.00					olivine/pores		
blue-green phyllosilicate	<1					olivine/pores		
albite	2.00					replacing plagioclase		
pyrite	< 0.5					disseminated		
STRUCTURE:								
COMMENTS :								

THIN SECTION:	206-1256C-11R-1W, 55-58 cm		Piece No.: 1b Unit: 18h			ODP TS#: 64	
ROCK NAME:	Moderately ol-phyric fine-grained basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.8 mm						
TEXTURE:	Very coarse variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00	5.50				Equant, euhedral	Replaced by dark brown clay minerals.
GROUNDMASS							
pl	43.80	43.80				Stubby-platy, euhedral-subhedral	
aug	36.00	36.00				Stubby elongated-anhedral grains	
Fe-Ti ox	5.10	5.10				Equant-skeletal	
pig	1.10	1.10				Elongate prismatic, euhedral	Very long prismatic pig presents
mesostasis	7.60	7.60				Interstices	Intergrowth of ab + qtz
qtz	0.10	0.10				Anhedral	Occurs near altered olivine and intergrowths.
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	7.00					olivine/pores - slightly replace plagioclase	
albite	2.00					replacing plagioclase	
pyrite	< 0.5					disseminated	
STRUCTURE:							
COMMENTS :							

THIN SECTION:	206-1256C-11R-1W, 113-116 cm					Piece No.: 1	Unit: 18h	ODP TS#: 65
ROCK NAME:	Ol-phyric fine-grained basalt							
WHERE SAMPLED:								
GRAIN SIZE:	0.7 mm							
TEXTURE:	Very coarse variolitic							
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS	
			min.	max.	av.			
PHENOCRYSTS								
ol	0.00					Equant, euhedral	Replaced by dark brown clay minerals.	
GROUNDMASS								
pl						Stubby-platy, euhedral-subhedral		
aug						Stubby elongated-anhedral grains		
Fe-Ti ox						Equant-skeletal		
pig						Elongate prismatic, euhedral	Very long prismatic pig presents	
mesostasis						Interstices	Intergrowth of ab + qtz	
qtz						Anhedral	Occurs near altered olivine and intergrowths.	
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS	
			min.	max.	av.			
saponite	7.00					olivine/pores - slightly replace plagioclase		
albite	5.00					replacing plagioclase		
STRUCTURE:								
COMMENTS :								

THIN SECTION:	206-1256C-11R-2W, 23-26 cm					Piece No.: 1C	Unit: 18h	ODP TS#: 66
ROCK NAME:	Ol-phyric fine-grained basalt							
WHERE SAMPLED:								
GRAIN SIZE:	0.9 mm							
TEXTURE:	Very coarse variolitic							
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS	
			min.	max.	av.			
PHENOCRYSTS								
ol	0.00					Equant, euhedral	Replaced by dark brown clay minerals.	
GROUNDMASS								
pl						Stubby-platy, euhedral-subhedral		
aug						Stubby elongated-anhedral grains		
Fe-Ti ox						Equant-skeletal		
pig						Elongate prismatic, euhedral	Very long prismatic pig presents	
mesostasis						Interstices	Intergrowth of ab + qtz	
qtz						Anhedral	Occurs near altered olivine and intergrowths.	
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS	
			min.	max.	av.			
saponite	8.00					olivine/pores - slightly replace plagioclase		
albite	2.00					replacing plagioclase		
blue-green phyllosilicate	<1					olivine/pores		
pyrite	0.50					disseminated		
STRUCTURE:								
COMMENTS :								

THIN SECTION:	206-1256C-11R-2W, 79-82 cm	Piece No.: 1D	Unit: 18h	ODP TS#: 67
ROCK NAME:	Moderately pl-ol-phyric fine-grained basalt			
WHERE SAMPLED:				
GRAIN SIZE:	0.08-2 mm			
TEXTURE:	Very coarse variolitic			

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00	7.70	0.10	0.50	0.10	Equant, euhedral	Replaced by dark brown clay minerals.
pl	tr	tr				Stubby anhedral cores in subhedral rims	
GROUNDMASS							
pl	32.10	32.10				Stubby-platy, euhedral-subhedral	
cpx (aug+pig)	18.40	18.40				Stubby, subhedral>euhedral	
pig	1.10	1.10				Elongate prismatic, euhedral	
Fe-Ti ox	6.50	6.50				Equant-skeletal	
mesostasis	33.10	33.10				Interstices	Intergrowth of ab + qtz
qtz	1.10	1.10				Anhedral	Occurs near altered olivine and intergrowths.

SECONDARY MINERALOGY	PERCENT	SIZE (mm)			REPLACING / FILLING	COMMENTS
		min.	max.	av.		
saponite	9.00				olivine/pores	
pyrite	1.50				disseminated, replacing silicates	
albite	1.00				replacing plagioclase, especially along vein	
green cpx	<1				reaction rims on igneous pyroxene	
blue-green phyllosilicate	<1				interstitial	

STRUCTURE:

COMMENTS : Finer than TS#58. Colorless pig in prismatic crystals with partings normal to prisms and forms either a discrete crystal or an intergrowth with aug. Some groundmass pl includes anhedral fan-shaped aug and pig that are radially arranged, forming a variole. More stubby pl and aug also penetrate each other to form radial aggregates (varioles). A vein is mainly composed of mesostatic fine intergrowths of qtz and sodic pl. Pl in the vein becomes turbid along the rims and mottles by clay minerals. Titanomagnetite exhibits ilmenite exsolution lamellae. Rare interstitial late magmatic brown mica.

THIN SECTION:	206-1256C-11R-2W, 140-140 cm			Piece No.: 1	Unit: 18h	ODP TS#: 68	
ROCK NAME:	Moderately ol-phyric fine-grained basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.8 mm						
TEXTURE:	Very coarse variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00					Equant, euhedral	Replaced by dark brown clay minerals.
GROUNDMASS							
pl						Stubby-platy, euhedral-subhedral	
aug						Stubby elongated-anhedral grains	
Fe-Ti ox						Equant-skeletal	
pig						Elongate prismatic, euhedral	Very long prismatic pig presents
mesostasis						Interstices	Intergrowth of ab + qtz
qtz						Anhedral	Occurs near altered olivine and intergrowths.
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	8.00					olivine/pores	
pyrite	0.50					disseminated	
albite	2.00					replacing plagioclase, especially along vein	
blue-green phyllosilicate	<1					interstitial	
STRUCTURE:							
COMMENTS :							

THIN SECTION:	206-1256C-11R-3, 67-70 cm					Piece No.: 1D	Unit: 18h	ODP TS#: 69
ROCK NAME:	Moderately ol-phyric fine-grained basalt							
WHERE SAMPLED:								
GRAIN SIZE:	0.9 mm							
TEXTURE:	Very coarse variolitic							
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS	
			min.	max.	av.			
PHENOCRYSTS								
ol	0.00	<1				Equant, euhedral	Replaced by dark brown clay minerals.	
pl								
GROUNDMASS								
pl						Stubby-platy, euhedral-subhedral		
cpx (aug+pig)						Stubby elongated-anhedral grains		
pig						Elongate prismatic, euhedral	Very long prismatic pig presents	
Fe-Ti ox						Equant-skeletal		
mesostasis						Interstices	Intergrowth of ab + qtz	
qtz						Anhedral	Occurs near altered olivine and intergrowths.	
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS	
			min.	max.	av.			
saponite	5.00					olivine/pores	fills veins	
pyrite	<0.5					disseminated		
STRUCTURE:	5 mm wide cataclastic zone with angular clasts of plagioclase, clinopyroxene, and opaque of the host basalt coated by extensional fibers of saponite. Saponite fibers locally preserve perpendicular orientation close to the vein margins; shear bands affect the fibers with dx apparent sense of shear.							
COMMENTS :	Thin section is cut by 5 mm wide zone, consisting of saponite veins and basalt wallrock highly altered (90%) to saponite (with relics of plagioclase and titanomagnetite).							

THIN SECTION:	206-1256C-11R-3W, 116-119 cm			Piece No.: 1	Unit: 18h	ODP TS#: 70	
ROCK NAME:	Moderately ol-phyric fine-grained basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.8 mm						
TEXTURE:	Very coarse variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00					Equant, euhedral	Replaced by dark brown clay minerals.
GROUNDMASS							
pl						Stubby-platy, euhedral-subhedral	
aug						Stubby elongated-anhedral grains	
Fe-Ti ox						Equant-skeletal	
pig						Elongate prismatic, euhedral	Very long prismatic pig presents
mesostasis						Interstices	Intergrowth of ab + qtz
qtz						Anhedral	Occurs near altered olivine and intergrowths.
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	8.00					olivine/pores	
pyrite	<0.5					disseminated	
albite	2.00					replacing plagioclase	
STRUCTURE:							
COMMENTS :							

THIN SECTION:	206-1256C-11R-4W, 25-28 cm		Piece No.: 1B Unit: 18h			ODP TS#: 71	
ROCK NAME:	Moderately ol-phyric fine-grained basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.7 mm						
TEXTURE:	Very coarse variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00					Equant, euhedral	Replaced by dark brown clay minerals.
GROUNDMASS							
pl						Stubby-platy, euhedral-subhedral	
aug						Stubby elongated-anhedral grains	
Fe-Ti ox						Equant-skeletal	
pig						Elongate prismatic, euhedral	Very long prismatic pig presents
mesostasis						Interstices	Intergrowth of ab + qtz
qtz						Anhedral	Occurs near altered olivine and intergrowths.
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	8.00					olivine/pores	
pyrite	<0.5					disseminated	
albite	1.00					replacing plagioclase	
blue-green phyllosilicate	<1					interstitial	
STRUCTURE:							
COMMENTS :							

THIN SECTION:	206-1256C-11R-4W, 84-87 cm					Piece No.: 1e	Unit: 18h	ODP TS#: 72
ROCK NAME:	Moderately ol-phyric fine-grained basalt							
WHERE SAMPLED:								
GRAIN SIZE:	0.9 mm							
TEXTURE:	Very coarse variolitic							
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS	
			min.	max.	av.			
PHENOCRYSTS								
ol	0.00					Equant, euhedral	Replaced by dark brown clay minerals.	
GROUNDMASS								
pl						Stubby-platy, euhedral-subhedral		
aug						Stubby elongated-anhedral grains		
Fe-Ti ox						Equant-skeletal		
pig						Elongate prismatic, euhedral	Very long prismatic pig presents	
mesostasis						Interstices	Intergrowth of ab + qtz	
qtz						Anhedral	Occurs near altered olivine and intergrowths.	
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS	
			min.	max.	av.			
saponite	8.00					olivine/pores, replacing plagioclase		
pyrite	0.50					disseminated		
albite	1.00					replacing plagioclase		
blue-green phyllosilicate	<1					interstitial		
STRUCTURE:								
COMMENTS :								

THIN SECTION:	206-1256C-11R-5W, 4-7 cm		Piece No.: 1a		Unit: 18h	ODP TS#: 73	
ROCK NAME:	Moderately ol-phyric fine-grained basalt						
WHERE SAMPLED:							
GRAIN SIZE:	1.1 mm						
TEXTURE:	Very coarse variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00					Equant, euhedral	Replaced by dark brown clay minerals.
GROUNDMASS							
pl						Stubby-platy, euhedral-subhedral	
aug						Stubby elongated-anhedral grains	
Fe-Ti ox						Equant-skeletal	
pig						Elongate prismatic, euhedral	Very long prismatic pig presents
mesostasis						Interstices	Intergrowth of ab + qtz
qtz						Anhedral	Occurs near altered olivine and intergrowths.
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	7.00					olivine/pores, replacing plagioclase and cpx	
pyrite	2.00					disseminated, and replacing silicates	
blue-green phyllosilicate	1.00					interstitial	present in vein
green cpx	<1					replacing primary cpx rims	
STRUCTURE:							
COMMENTS :	One discontinuous 50m late magmatic vein, composed of blue-green phyllosilicate, euhedral quartz and magnetite.						

THIN SECTION:	206-1256C-11R-5W, 63-66 cm		Piece No.: 1a		Unit: 18h	ODP TS#: 74	
ROCK NAME:	Moderately ol-phyric fine-grained basalt						
WHERE SAMPLED:							
GRAIN SIZE:	1.1 mm						
TEXTURE:	Very coarse variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00					Equant, euhedral	Replaced by dark brown clay minerals.
GROUNDMASS							
pl						Stubby-platy, euhedral-subhedral	
aug						Stubby elongated-anhedral grains	
Fe-Ti ox						Equant-skeletal	
pig						Elongate prismatic, euhedral	Very long prismatic pig presents
mesostasis						Interstices	Intergrowth of ab + qtz
qtz						Anhedral	Occurs near altered olivine and intergrowths.
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	9.00					olivine/pores, replacing plagioclase	
pyrite	1.50					disseminated, replacing silicates	
albite	2.00					replacing plagioclase	
blue-green phyllosilicate	1.00					interstitial	
green cpx	<0.5					replacing primary cpx rims	
STRUCTURE:							
COMMENTS :							

THIN SECTION:	206-1256C-11R-5, 120-123 cm		Piece No.: 1	Unit: 18h	ODP TS#: 75		
ROCK NAME:	Moderately ol-phyric fine-grained basalt						
WHERE SAMPLED:							
GRAIN SIZE:	1.0 mm						
TEXTURE:	Very coarse variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00					Equant, euhedral	Replaced by dark brown clay minerals.
GROUNDMASS							
pl						Stubby-platy, euhedral-subhedral	
aug						Stubby elongated-anhedral grains	
Fe-Ti ox						Equant-skeletal	
pig						Elongate prismatic, euhedral	Very long prismatic pig presents
mesostasis						Interstices	Intergrowth of ab + qtz
qtz						Anhedral	Occurs near altered olivine and intergrowths.
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	9.00					olivine/pores, replacing plagioclase	
pyrite	1.50					disseminated, replacing silicates	
albite	2.00					replacing plagioclase	
blue-green phyllosilicate	1.00					interstitial	
green cpx	<0.5					replacing primary cpx rims	
STRUCTURE:							
COMMENTS :							

THIN SECTION:	206-1256C-11R-6, 47-50 cm		Piece No.: 1c	Unit: 18i	ODP TS#: 76		
ROCK NAME:	Moderately ol-phyric fine-grained basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.7 mm						
TEXTURE:	Very coarse variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00					Equant, euhedral	Replaced by dark brown clay minerals.
GROUNDMASS							
pl						Stubby-platy, euhedral-subhedral	
aug						Stubby elongated-anhedral grains	
Fe-Ti ox						Equant-skeletal	
pig						Elongate prismatic, euhedral	Very long prismatic pig presents
mesostasis						Interstices	Intergrowth of ab + qtz
qtz						Anhedral	Occurs near altered olivine and intergrowths.
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	10.00					olivine/pores, replacing plagioclase	in vein
blue-green phyllosilicate	1.00					interstitial	in vein
chalcopyrite	<0.5					disseminated	
green cpx	<0.5					replacing primary cpx rims, when adjacent to vein	
STRUCTURE:							
COMMENTS :	There is a 0.3 mm saponite and blue-green phyllosilicate veinlet.						

THIN SECTION:	206-1256C-11R-6W, 99-102 cm		Piece No.: 10	Unit: 18i	ODP TS#: 77		
ROCK NAME:	Moderately ol-phyric fine-grained basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.8 mm						
TEXTURE:	Very coarse variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00					Equant, euhedral	Replaced by dark brown clay minerals.
GROUNDMASS							
pl						Stubby-platy, euhedral-subhedral	
aug						Stubby elongated-anhedral grains	
Fe-Ti ox						Equant-skeletal	
pig						Elongate prismatic, euhedral	Very long prismatic pig presents
mesostasis						Interstices	Intergrowth of ab + qtz
qtz						Anhedral	Occurs near altered olivine and intergrowths.
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	10.00					olivine/pores, replacing plagioclase	
pyrite	0.50					disseminated, replacing silicates	
chalcopyrite	<0.5					disseminated	
green cpx	<0.5					replacing primary cpx rims	
blue-green phyllosilicate	1.00					interstitial	
STRUCTURE:							
COMMENTS :							

THIN SECTION:	206-1256C-11R-6, 124-127 cm					Piece No.: 1	Unit: 18i	ODP TS#: 78
ROCK NAME:	Moderately ol-phyric fine-grained basalt							
WHERE SAMPLED:								
GRAIN SIZE:	0.4 mm							
TEXTURE:	Very coarse variolitic							
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS	
			min.	max.	av.			
PHENOCRYSTS								
ol	0.00					Equant, euhedral	Replaced by dark brown clay minerals.	
GROUNDMASS								
pl						Stubby-platy, euhedral-subhedral		
aug						Stubby elongated-anhedral grains		
Fe-Ti ox						Equant-skeletal		
plg						Elongate prismatic, euhedral	Very long prismatic plg presents	
mesostasis						Interstices	Intergrowth of ab + qtz	
qtz						Anhedral	Occurs near altered olivine and intergrowths.	
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS	
			min.	max.	av.			
saponite	6.00					olivine/pores		
pyrite	<0.5					disseminated, replacing silicates		
chalcopyrite	<0.5					disseminated		
STRUCTURE:								
COMMENTS :								

THIN SECTION:	206-1256C-11R-7W, 9-12 cm					Piece No.: 1A	Unit: 18i	ODP TS#: 79
ROCK NAME:	Sparsely ol-phyric cryptocrystalline basalt (now hornfels)							
WHERE SAMPLED:	Recrystallized basal part of thick lava pond							
GRAIN SIZE:	< 0.02 mm							
TEXTURE:	Granoblastic							
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS	
			min.	max.	av.			
PHENOCRYSTS								
ol	0.00		0.10	0.70	0.30	Equant, euhedral	Replaced by dark brown clay minerals.	
GROUNDMASS								
cpx						Equigranular	Mostly recrystallized to neoblasts.	
Fe-Ti ox						Equant-skeletal	Mostly recrystallized to equigranular polyhedral neoblasts.	
pl						Laths	Some are replaced into equigranular neoblasts.	
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS	
			min.	max.	av.			
saponite	9.00					olivine/pores, replacing plagioclase		
STRUCTURE:								
COMMENTS :	Groundmass cpx and mt are almost completely recrystallized into equigranular neoblasts, while the original variolitic texture is still preserved. Larger plagioclase laths are incompletely replaced by neoblasts from the margins. Coarse-grained granophyric vein has finer-grained chilled margins against the host recrystallized basalt, and consists of mainly plagioclase, magnetite and quartz with interstices filled by intergrowths of quartz and sodic plagioclase.							

THIN SECTION:	206-1256C-11R-7W, 32-35 cm	Piece No.: 1b	Unit: 18i	ODP TS#: 80
ROCK NAME:	Sparsely cpx-ol-pl-phyric cryptocrystalline basalt (now hornfels)			
WHERE SAMPLED:	Recrystallized basal part of thick lava pond			
GRAIN SIZE:	< 0.02 mm			
TEXTURE:	Granoblastic			

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
pl			0.05	1.00	0.20	Stubby-platy, euhedral-subhedral	
ol	0.00		0.10	0.40	0.20	Equant, euhedral	Replaced by clay minerals.
cpx			0.15	0.60	0.60	Stubby-short prismatic, subhedral-anhedral	
GROUNDMASS							
cpx			0.005	0.015		Granular	Recrystallized into neoblasts.
pl			0.005	0.05		platy laths	Partially recrystallized into granoblastic grains. Mostly not recrystallized.
Fe-Ti ox						Equant polyhedral-subhedral	Recrystallized into neoblasts.
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
pyrite	<0.5					disseminated	
saponite	6.00					interstitial	

STRUCTURE:

COMMENTS : Less completely recrystallized aphanitic basalt than TS#79. Variolitic texture is still preserved. Deformed coarse- and fine-grained veins are progressively recrystallized into granoblastic cpx + mt with more magnetite along the margins. Coarser veins have finer-grained chilled margins against the host basalt (now recrystallized), with plagioclase laths grown perpendicular to the margins.

THIN SECTION:	206-1256C-11R7W, 76-79 cm					Piece No.: 1C	Unit: 18i	ODP TS#: 81
ROCK NAME:	Sparsely pl-ol-phyric cyptocrystalline basalt							
WHERE SAMPLED:	Recrystallized basal part of thick lava pond							
GRAIN SIZE:	< 0.02 mm							
TEXTURE:	Granoblastic							
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS	
			min.	max.	av.			
PHENOCRYSTS								
ol	0.00		0.06	0.30	0.15	Equant, euhedral	Discrete > clotted with/without pl.	
pl			0.10	0.60	0.20	Platy, euhedral-subhedral	Discrete > clots.	
GROUNDMASS								
cpx						Granular	Recrystallized into neoblasts.	
pl						Thin-short laths	Partially recrystallized.	
Fe-Ti ox						Granular > dendritic chains	Mostly recrystallized.	
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS	
			min.	max.	av.			
saponite	4.00					interstitial		
pyrite	<0.5					disseminated		
chalcopyrite	<0.5					disseminated		
STRUCTURE:	0.4 mm wide irregular veinlets and tension gashes filled with pl, qtz, minor cpx and opaque minerals, uncoloured acicular crystals (amphibole?). The margins are irregular and partially masked by the fine-grained recrystallized groundmass. Weak preferred orientation of plagioclase laths in the groundmass along a top to bottom direction.							
COMMENTS :	Plagioclase preserves igneous textures where large plagioclase surrounds domains with few plagioclase groundmass.							

THIN SECTION:	206-1256C-11R-7W, 96-99 cm					Piece No.: 1d	Unit: 18i	ODP TS#: 82
ROCK NAME:	Sparsely pl-ol-phyric cryptocrystalline basalt							
WHERE SAMPLED:	Recrystallized basal part of thick lava pond							
GRAIN SIZE:	< 0.02 mm							
TEXTURE:	Intergranular-variolitic-granoblastic							
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS	
			min.	max.	av.			
PHENOCRYSTS								
ol	0.00		0.05	0.25	0.10	Equant, euhedral	Discrete > clots. Replaced by clay minerals.	
pl			0.04	0.60	0.35	Platy, euhedral-subhedral	Discrete-clotted with/without ol.	
GROUNDMASS								
cpx						Granular, anhedral		
pl						Platy skeletal		
Fe-Ti ox						Equant skeletal		
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS	
			min.	max.	av.			
saponite/talc	2.00					replacing olivine		
STRUCTURE:	Cm-scale sigmoidal pull-apart filled with granophyric pl+qtz, +euhedral qtz, magnetite, cpx. The grain-size decreases towards the margins of the sigmoid. Sinistral sense of shear.							
COMMENTS :								

THIN SECTION:	206-1256C-11R-7W, 122-125 cm					Piece No.: 2	Unit: 18i	ODP TS#: 83
ROCK NAME:	Sparsely cpx-pl-ol-phyric cryptocrystalline basalt							
WHERE SAMPLED:	Recrystallized basal part of thick lava pond							
GRAIN SIZE:	0.005 mm							
TEXTURE:	Variolitic-granoblastic							
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS	
			min.	max.	av.			
PHENOCRYSTS								
ol	0.00		0.06	0.30	0.10	Equant, euhedral	Discrete-clots.	
pl			0.06	3.50	0.30	Platy, euhedral-subhedral	Discrete-clotted with/without ol, cpx.	
cpx			0.10	1.20	0.30	Prismatic, subhedral	Clotted with pl.	
GROUNDMASS								
cpx						Granular, subhedral-anhedral		
pl						Thin laths		
Fe-Ti ox						Equant skeletal, euhedral-anhedral		
vesicles			0.1	1	0.1	Spherical	Rind of clay minerals.	
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS	
			min.	max.	av.			
saponite	6.00					olivine/pores		
STRUCTURE:	Cm-scale sigmoidal pull-apart filled with granophyric pl+qtz, +euhedral qtz, magnetite, cpx. The grain-size decreases towards the margins of the sigmoid. Sinistral sense of shear.							
COMMENTS :	There is a 30µm wide veinlet, composed of saponite.							

THIN SECTION:	206-1256C-11R-7W, 130-133 cm					Piece No.: 2	Unit: 18i	ODP TS#: 84
ROCK NAME:	Sparse cpx-pl-ol-phyric cryptocrystalline basalt							
WHERE SAMPLED:	Recrystallized basal part of thick lava pond							
GRAIN SIZE:	0.01-0.015 mm							
TEXTURE:	Fine granoblastic							
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS	
			min.	max.	av.			
PHENOCRYSTS								
ol	0.00	0.45	0.06	0.20	0.10	Equant, euhedral	Replaced by dark brown clay minerals.	
pl	0.39	0.40	0.10	2.10	0.25	Stubby-platy, subhedral-euhedral		
cpx	0.05	0.05	0.10	1.00	0.15	Short prismatic, anhedral-subhedral		
GROUNDMASS								
cpx neoblast						Equant, granular		
pl primocryst						Platy, thin laths		
mt neoblast						Eauant, rounded	No skeletal crystals present.	
pl neoblast						Short-equant, rounded plates		
vesicles		tr				Spherical		
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS	
			min.	max.	av.			
saponite / talc	2.00					olivine		
saponite	5.00					interstitial, replacing plagioclase		
STRUCTURE:								
COMMENTS :	Groundmass cpx are recrystallized into granular neoblasts with round outlines. Although cpx are completely recrystallized, small radial aggregates of thin pl laths preserves primary variolitic textures. Fine vermicular mt < 0.05 mm in diameter sporadically appears enclosed by brown clayey minerals with high birefringence. Some have rectangular outlines, suggestive of replacement after ol pseudomorphs. There are 0.5mm vesicles filled with late magmatic quartz and apatite.							

THIN SECTION:	206-1256C-12R-1W, 12-15 cm					Piece No.: 2	Unit: 19	ODP TS#: 85
ROCK NAME:	Moderately pl-phyric cryptocrystalline basalt							
WHERE SAMPLED:								
GRAIN SIZE:	< 0.05 mm							
TEXTURE:	Variolitic							
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS	
			min.	max.	av.			
PHENOCRYSTS								
pl	1.85	1.85	0.06	0.50	0.18	Stubby, euhedral		
ol	0.00	0.45	0.10	1.40	0.20	Equant, euhedral		
cpx	0.05	0.05	0.10	0.40	0.15	Short prismatic, subhedral	Subophitically enclosing pl.	
GROUNDMASS								
pl						Platy skeletal-thin laths		
cpx						Prismatic-fibrous		
Fe-Ti ox						Equant-skeletal-dendritic chains		
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS	
			min.	max.	av.			
saponite	1.00					replacing olivine and rarely plagioclase, filling pores		
pyrite	<<1					interstitial		
STRUCTURE:								
COMMENTS : Medium-grained variolitic								

THIN SECTION:	206-1256C-12R-2W, 109-112 cm					Piece No.: 4	Unit: 21b	ODP TS#: 86
ROCK NAME:	Moderately cpx-ol-pl-phyric cryptocrystalline basalt							
WHERE SAMPLED:								
GRAIN SIZE:	0.02-0.06 mm							
TEXTURE:	Variolitic							
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS	
			min.	max.	av.			
PHENOCRYSTS								
pl	3.90	3.90	0.10	1.00	0.20	Stubby, euhedral>subhedral		
ol	0.00	3.70	0.06	0.30	0.15	Equant, euhedral		
cpx	1.50	1.50	0.10	0.60	0.18	Stubby, euhedral-subhedral	Clotted with pl.	
GROUNDMASS								
pl						Platy skeletal-thin laths		
cpx						Equigranular-short prismatic		
Fe-Ti ox						Equant polyhedral		
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS	
			min.	max.	av.			
saponite	5.00					replacing olivine and slightly replacing plagioclase and clinopyroxene, filling pores		
mica?	<1					interstitial	late magmatic	
blue-green phyllosilicate	<0.5					interstitial		
saponite/talc?	0.50					interstitial		
STRUCTURE:								
COMMENTS :								

THIN SECTION:	206-1256C-12R-3, 60-63 cm					Piece No.: 6	Unit: 22	ODP TS#: 87
ROCK NAME:	Aphyric cryptocrystalline basalt							
WHERE SAMPLED:								
GRAIN SIZE:								
TEXTURE:	holohyaline							
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS	
			min.	max.	av.			
PHENOCRYSTS								
pl	0.50	0.50				Platy, euhedral	Discrete crystals-clotted with ol.	
ol	0.00	0.15	0.05	0.30	0.10	Equant, euhedral-subhedral	Discrete crystals-clotted with pl. Replaced by clay minerals.	
GROUNDMASS								
gl	0.00						Mostly dark brown opaque material including very fine-grained varioles.	
vesicle		0.2						
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS	
			min.	max.	av.			
palagonite	95.00					replacing glass	yellow to opaque reddish material	
talc	<1					replacing olivine		
saponite	1.00					replacing olivine and plagioclase		
hematite	<1					in small veinlets with saponite		
green phyllosilicate	<1					in vein with saponite		
STRUCTURE:								
COMMENTS :	Chilled finger of basalt protruding into interflow sediment. Sediment recrystallized to quartz, amphibole (?), magnetite, hematite, chalcopyrite, and pyrite.							

THIN SECTION:	206-1256C-12R-3W, 92-95 cm		Piece No.: 10 Unit: 22			ODP TS#: 88	
ROCK NAME:	Aphyric cryptocrystalline basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.02-0.06 mm						
TEXTURE:	Variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
pl	0.65	0.65	0.10	0.50	0.15	Platy, euhedral-subhedral	
ol	0.00	0.20	0.05	0.40	0.10	Equant, euhedral	
cpx	0.10	0.10	0.08	0.40	0.24	Subhedral-anhedral	Clotted with pl.
GROUNDMASS							
cpx						Fibrous-granular	
pl						Thin skeletal laths	
Fe-Ti ox						Skeletal-dendritic chains	
vesicles		0.40	1.0	1.2	1.1	Spherical	
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	1.50					replacing olivine and rarely plagioclase, filling pores	50 µm saponite vein with small amounts of albite or quartz
talc	<<1					rarely replacing olivine	
magnetite	<<1					rarely replacing olivine	
pyrite	<1					replacing silicates	
albite/quartz?	<<1					in small vein with saponite	
STRUCTURE:							
COMMENTS : Bifurcating 50 µm vein with saponite and quartz or albite							

THIN SECTION:	206-1256C-13R-1W, 12-15 cm		Piece No.: 1	Unit: 22	ODP TS#: 89		
ROCK NAME:	Sparsely pl-phyric cryptocrystalline basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.005-0.015 mm						
TEXTURE:	Fine variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
pl	1.00	1.00	0.05	0.40	0.20	Stubby-platy, euhedral	
ol	0.00	0.50	0.08	0.35	0.10	Equant, euhedral	
GROUNDMASS							
cpx						Sheaflike-prismatic	
pl						Thin skeletal laths	
Fe-Ti ox						Skeletal-dendritic chains	
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	1.00					olivine/pores	in vein with carbonate
pyrite	<1					replacing olivine	
carbonate	5.00						in vein with saponite
STRUCTURES:	Composite vein with one syntaxial growth of fibrous saponite, and one growth of blocky carbonate with ghost fibers and solid inclusions.						
COMMENTS :	100 µm vein of saponite plus carbonate						

THIN SECTION:	206-1256D-2R-1W, 53-56 cm		Piece No.: 1C Unit: 1a			ODP TS#: 90	
ROCK NAME:	Moderately ol-phyric fine-grained basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.2-1.2 mm						
TEXTURE:	Medium variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00	3.60	0.08	0.35	0.10	Equant, euhedral	
GROUNDMASS							
pl	40.10	40.50				Platy-bow-tie shape, skeletal	
aug	32.06	33.40				Granular anhedral-stubby subhedral	
Fe-Ti ox	8.13	8.30				Equant skeletal	
pig	2.09	2.20				Elongate prismatic	
meso	11.8	11.80					Dendritic intergrowths of ab in qtz.
qtz	0.2	0.20				Anhedral	
apatite	tr	tr				Acicular	
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	5.00					olivine/pores	lining walls of vein
chalcedony	1.00					at center of vein	
Ca-carbonate	1.00					at center of vein	
pyrite							
STRUCTURES:	3mm composite vein. Vein texture: irregular vein margins; face controlled fibers growth along the vein margins. Composite ataxial, with several steps of growth: 1) alteration of wallrock minerals; 2) syntaxial growth of saponite fibers (0.06 mm) + pyrite; 3) growth of chalcedony, Ca-carbonate, pyrite, apatite. Shear bands affect saponite fibers. Late extensional cracking opens the vein along wallrock-vein boundary						
COMMENTS:	3 mm vein lined with saponite and minor quartz, and filled with chalcedony, Ca-carbonates, pyrite and minor chalcopyrite.						

THIN SECTION:	206-1256D-2R-1W, 85-87 cm					Piece No.: 1F	Unit: 1a	ODP TS#: 91
ROCK NAME:	Moderately ol-phyric fine-grained basalt							
WHERE SAMPLED:								
GRAIN SIZE:	0.4 mm							
TEXTURE:	Medium variolitic							
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS	
			min.	max.	av.			
PHENOCRYSTS								
ol	0.00	3.80	0.08	0.35	0.10	Equant, euhedral	Replaced by clay minerals.	
aug	tr	tr	0.80	2.20	1.50	Stubby, subhedral	Subophitically enclosing pl laths.	
pl	tr	tr	-	1.60	1.60	Platy, euhedral		
GROUNDMASS								
pl	42.37	42.80				Platy-bow-tie shape, skeletal-subhedral		
aug	29.38	30.60				Platy, subhedral-skeletal		
Fe-Ti ox	7.74	7.90				Equant skeletal		
pig	3.99	4.20				Elongate prismatic		
meso	10.50	10.50					Intergrowths of ab and qtz.	
qtz	4.20	4.20				Anhedral		
SECONDARY MINERALOGY	PERCENT	SIZE (mm)			REPLACING / FILLING	COMMENTS		
		min.	max.	av.				
saponite	5.00				replacing olivine, partly replacing plagioclase and pyroxene, filling pores			
chlorite?	<1				interstitial			
STRUCTURES:								
COMMENTS : Ubiquitous varioles 1-2 mm in diameter comprising platy pl and granular-platy aug.								

THIN SECTION:	206-1256D-3R-3W, 85-89 cm		Piece No.: 4	Unit: 1b	ODP TS#: 92		
ROCK NAME:	Highly ol-phyric fine-grained basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.2-1.5 mm						
TEXTURE:	Coarse variolitic-poikilitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00	11.20	.15].8	0.30	0.40	Equant, anhedral	Discretecrystals. Replaced by brown clay minerals.
GROUNDMASS							
pl	40.49	40.90				Platy-skeletal	Poikilitically enclose aug and pig.
aug	34.82	35.90				Platy-granular, subhedral-anhedral	
Fe-Ti ox	2.48	2.50				Equant skeletal	
pig	2.88	3.00				Prismatic-platy?, euhedral-subhedral	Intergrowths with aug.
mesostasis	6.90	6.90					Intergrowths of ab and qtz.
qtz	tr	tr				Anhedral	
apatite	tr	tr				Acicular	
SECONDARY MINERALOGY	PERCENT	SIZE (mm)			REPLACING / FILLING	COMMENTS	
		min.	max.	av.			
saponite	12.00				interstitial, vein fill, replacing cpx		
chalcedony	0.50				vein fill		
Ca-carb	<0.5				vein fill		
green cpx	0.50				reaction rims on igneous pyroxene		
STRUCTURES:	Microcataclastic zone with angular clasts of plagioclase, clinopyroxene, and opaque of the host basalt coated by extensional and radiating fibers of saponite. Shear bands affect the fibers.						
COMMENTS :	Granular to lenticular augite and pigeonite are poikilitically enclosed by large platy plagioclase. Cpx are radially arranged in several plagioclase crystals that may also radially arranged or penetrating each other. In some skeletal plagioclase, cpx blebs are oriented subparallel to the twinning and crystal planes of plagioclase. Large olivine phenocrysts are common. There is a vein, at least 2 mm wide, composed of quartz albite intergrowths, saponite and chalcedony.						

THIN SECTION:	206-1256D-4R-1W, 93-96 cm		Piece No.: 2	Unit: 1b	ODP TS#: 93		
ROCK NAME:	Highly ol-phyric fine-grained basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.2-2.0 mm						
TEXTURE:	Coarse variolitic(-intergranular)						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00	11.10	0.20	1.00	0.40	Equant, anhedral	Discrete crystals. Replaced by brown clay minerals.
GROUNDMASS							
pl	38.21	38.60				Stubby-platy-bow tie	
aug	31.20	32.50				Stubby-platy-prismatic, subhedral	
Fe-Ti ox	6.76	6.90				Equant skeletal	
pig	0.57	0.60				Prismatic, euhedral-subhedral	Intergrowths with aug.
meso	10.10	10.10					Intergrowths of ab and qtz.
qtz	0.20	0.20				Anhedral	
apatite	tr	tr				Acicular	
SECONDARY MINERALOGY	PERCENT		min.	max.	av.	REPLACING / FILLING	COMMENTS
pyrite	1.00					disseminated	
green cpx	0.50					alteration rims on primary cpx along late magmatic vein	
saponite	12.00					replacing olivine, interstitial	
STRUCTURES:							
COMMENTS :	Vein 1.5 mm wide runs through the section, consisting of intergrowths of qtz + ab including dusty clay minerals, anhedral qtz, acicular apatite. More stubby pl than in TS#92, but less in poikilitic pl. Similar variolitic texture as in TS#92.						

THIN SECTION:	206-1256D-4R-3W, 76-78 cm		Piece No.: 1A Unit: 1b			ODP TS#: 94	
ROCK NAME:	Moderately ol-phyric fine-grained basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.5-2.0 mm						
TEXTURE:	Coarse variolitic(-intergranular)						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00	3.80	0.20	0.70	0.30	Equant, euhedral-subhedral	Replaced by brown clay minerals.
GROUNDMASS							
pl	48.61	49.10				Stubby-platy, subhedral-euhedral	
aug	30.43	31.70				Stubby-platy, subhedral	
Fe-Ti ox	2.74	2.80				Equant skeletal	
pig	4.09	4.30				Prismatic, euhedral-subhedral	Intergrowths with aug.
meso	8.20	8.20					Vermicular intergrowths of ab and qtz.
qtz	0.10	0.10				Anhedral	
apatite	tr	tr				Acicular	
SECONDARY MINERALOGY	PERCENT	SIZE (mm)			REPLACING / FILLING	COMMENTS	
		min.	max.	av.			
saponite	5.00				replacing olivine, interstitial		
pyrite	<1				disseminated		
STRUCTURES:							
COMMENTS : Large mesostasis patch of large skeletal mt, intergrowths of qtz + ab including dusty clay minerals, anhedral qtz, acicular apatite.							

THIN SECTION:	206-1256D-5R-4W, 5-8 cm		Piece No.: 1	Unit: 1c	ODP TS#: 95		
ROCK NAME:	Moderately ol-phyric fine-grained basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.3-1.5 mm						
TEXTURE:	Coarse variolitic-intergranular						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00	6.80	0.10	0.50	0.20	Equant, euhedral	Replaced by clay minerals.
GROUNDMASS							
pl	45.05	45.50				Stubby, subhedral	
aug	30.91	32.20				Stubby-bow-tie shaped, subhedral	
Fe-Ti ox	5.98	6.10				Equant skeletal	
pig	1.81	1.90				Elongate prismatic	
meso	6.60	6.60					Intergrowths of ab and qtz.
qtz	0.90	0.90				Anhedral	
apt	tr	tr				Acicular	
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	8.00					replaces olivine, partly replaces plagioclase and pyroxene	
blue-green phyllosilicate	0.50					interstitial	
pyrite	1.00					disseminated	
STRUCTURES:							
COMMENTS:							

THIN SECTION:	206-1256D-4R-4W, 74-76 cm					Piece No.: 1B Unit: 1b	ODP TS#: 96
ROCK NAME:	Aphyric fine-grained basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.1-2.0 mm						
TEXTURE:	Coarse variolitic(-subophitic)						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00	0.50	0.20	1.00	0.40	Equant, euhedral	Discrete crystals. Replaced by brown clay minerals.
GROUNDMASS							
pl	39.80	40.20				Stubby-bow tie, euhedral-subhedral	
aug	28.42	29.60				Stubby-granular, subhedral-anhedral	
Fe-Ti ox	10.29	10.50				Equant skeletal	
pig	1.52	1.60				Elongate prismatic, euhedral-subhedral	Intergrowths with aug.
meso	10.90	10.90					Vermicular intergrowths of ab and qtz.
qtz	2.20	2.20				Anhedral	
apatite	tr	tr				Acicular	
SECONDARY MINERALOGY	PERCENT	SIZE (mm)			REPLACING / FILLING	COMMENTS	
		min.	max.	av.			
pyrite	1.00				disseminated		
saponite	6.00				interstitial, replacing olivine and interstitial quartz-albite overgrowths		
STRUCTURES:							
COMMENTS :	Large mesostasis patch of large skeletal mt, intergrowths of qtz + ab including dusty clay minerals, anhedral qtz, acicular apatite. Alteration of augite into clay minerals is more intense in the patches.						

THIN SECTION:	206-1256D-6R-5W, 107-109 cm		Piece No. 4	Unit: 1c	ODP TS#: 97		
ROCK NAME:	Highly ol-phyric fine-grained basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.1-1.0 mm						
TEXTURE:	Intergranular						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00	8.40	0.20	1.00	0.20	Equant, euhedral	Replaced by clay minerals.
GROUNDMASS							
pl	46.33	46.80				Stubby, euhedral-anhedral	
aug	25.73	26.80				Stubby-prismatic, euhedral-subhedral	
Fe-Ti ox	6.47	6.60				Equant skeletal	
pig	5.32	5.60				Prismatic, euhedral-anhedral	
meso	3.90	3.90					Intergrowths of ab and qtz.
qtz	1.90	1.90				Anhedral	
apt	tr	tr				Acicular	
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	10.00					replacing olivine, slightly replaces plagioclase and pyroxene along cracks, grain boundaries	
blue-green phyllosilicate	0.50					interstitial	
pyrite	<0.5					disseminated	
STRUCTURES:							
COMMENTS:	2-mm wide inclusion of olivine and augite with a small amount of plagioclase, where augite is poikilitically included in altered olivine. Finer than TS#96, but has more stubby pl and aug.						

THIN SECTION:	206-1256D-6R-7W, 83-86 cm		Piece No.: 1B Unit: 1c			ODP TS#: 98	
ROCK NAME:	Moderately ol-phyric fine-grained basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.5-2.0 mm						
TEXTURE:	Intergranular (> coarse variolitic)						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00	5.50	0.10	0.80	0.15	Equant, euhedral	Replaced by clay minerals.
GROUNDMASS							
pl	41.80	44.00				Stubby, euhedral-subhedral	
aug	29.88	33.20				Short prismatic-granular, subhedral-anhedral	
Fe-Ti ox	4.02	4.10				Equant skeletal	
pig	2.43	2.70				Prismatic, subhedral-euhedral	
meso	7.98	8.40					Intergrowths of ab and qtz.
qtz	2.10	2.10				Anhedral	
apt	tr	tr				Acicular	
SECONDARY MINERALOGY	PERCENT	SIZE (mm)			REPLACING / FILLING	COMMENTS	
		min.	max.	av.			
saponite	8.00				replacing olivine and filling pores	also in vein	
blue-green phyllosilicate	0.50				interstitial		
pyrite	<0.5				disseminated		
STRUCTURES:							
COMMENTS :	1-2 mm saponite vein, with wallrock highly altered to saponite within 0.2 mm of vein.						

THIN SECTION:	206-1256D-7R-3W, 86-88 cm		Piece No.: 2D Unit: 1c			ODP TS#: 99	
ROCK NAME:	Moderately ol-phyric fine-grained basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.1-1.0 mm						
TEXTURE:	Intergranular (>coarse variolitic>poikilitic)						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00	5.60	0.10	0.70	0.20	Equant, euhedral	Replaced by yellow brown clay minerals.
GROUNDMASS							
pl	45.74	46.20				Stubby, euhedral-anhedral	
aug	28.61	29.80				Stubby-prismatic, euhedral-subhedral	
Fe-Ti ox	7.33	7.40				Equant skeletal	
pig	4.66	4.90				Prismatic, euhedral-anhedral	
meso	5.20	5.20					Intergrowths of ab and qtz.
qtz	0.90	0.90				Anhedral	
apt	tr	tr				Acicular	
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	7.00					olivine/pores	
blue-green phyllosilicate	0.50					interstitial	
pyrite	<0.5					disseminated	
STRUCTURES:							
COMMENTS :	Round and zoned plagioclase up to 1.3 mm wide with inclusions of granular to bleb-like cpx > mt.						

THIN SECTION:	206-1256D-8R-2W, 67-69 cm		Piece No.: 2	Unit: 1c	ODP TS#: 100		
ROCK NAME:	Moderately ol-phyric fine-grained basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.1-2.0 mm						
TEXTURE:	Intergranular (>coarse variolitic)						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00	4.70	0.10	0.60	0.30	Equant, euhedral	Replaced by dark brown clay minerals.
GROUNDMASS							
pl	47.92	48.40				Stubby-bow tie, euhedral-subhedral	
aug	31.30	32.60				Prismatic-granular, euhedral-subhedral	
Fe-Ti ox	43.56	44.00				Equant skeletal-dendritic	
pig	4.28	4.50				Long prismatic, euhedral-anhedral	
meso	3.30	3.30					Intergrowths of ab and qtz.
qtz	2.10	2.10				Anhedral	
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	7.00					olivine/pores	
pyrite	1.00					filling pores with saponite	
blue-green phyllosilicate	1.00					interstitial	
STRUCTURES:							
COMMENTS :							

THIN SECTION:	206-1256D-8R-6W, 46-49 cm		Piece No.: 1B Unit: 1c			ODP TS#: 101	
ROCK NAME:	Highly ol-phyric fine-grained basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.05-1.5 mm						
TEXTURE:	Intergranular-coarse variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00	10.90	0.20	0.70	0.30	Equant, euhedral	Discrete crystals. Replaced by brown clay minerals.
GROUNDMASS							
pl	45.57	46.50				Platy-stubby, subhedral	
aug	33.12	34.50				Stubby-prismatic, subhedral-anhedral	
Fe-Ti ox	2.77	2.80				Equant polyhedral	
pig	2.30	2.40				Elongate prismatic, euhedral-subhedral	
meso	1.50	1.50					Intergrowths of ab and qtz.
qtz	1.40	1.40				Anhedral	
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	12.00					olivine,pores	
pyrite	<1					filling pores with saponite	
blue-green phyllosilicate	0.50					interstitial	
STRUCTURES:							
COMMENTS :	Late-stage magmatic vein ca. 1 mm wide present. Along the vein, plagioclase decomposed into polygrains of sodic plagioclase + quartz. Quartz has oval-bleb-like inclusions of green chlorite and biotite? Augite is replaced by green cpx along the rim. The same disintegration of plagioclase can sporadically be seen in the host basalt.						

THIN SECTION:	206-1256D-9R-2W, 7-9 cm		Piece No.: 1	Unit: 1c	ODP TS#: 102		
ROCK NAME:	Moderately ol-phyric fine-grained basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.1-2.0 mm						
TEXTURE:	Intergranular (-subophitic)						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00	7.80	0.10	0.80	0.30	Equant, euhedral	Discrete crystals. Replaced by brown clay minerals.
GROUNDMASS							
pl	44.49	45.40				Platy-bow tie, euhedral-subhedral	
aug	26.03	27.40				Granular-short prismatic, subhedral	
Fe-Ti ox	6.40	6.40				Equant, skeletal	
pig	1.60	1.70				Prismatic, subhedral	
meso	5.10	5.10					Intergrowths of ab and qtz.
qtz	6.20	6.20				Anhedral	
glass	0.00	tr				Rare interstices	Replaced by saponite.
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	9.00					olivine/pores/glass	
pyrite	1.50					disseminated and replacing primary minerals	
blue-green phyllosilicate	<0.5					interstitial	
STRUCTURES:							
COMMENTS :	Plagioclase decomposed into polygrains of sodic plagioclase + quartz. Quartz has oval-bleb-like inclusions of green chlorite and biotite? Augite is replaced by green cpx along the rim.						

THIN SECTION:	206-1256D-9R-5W, 62-65 cm		Piece No.: 2A Unit: 1c			ODP TS#: 103	
ROCK NAME:	Moderately ol-phyric fine-grained basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.05-1.0 mm						
TEXTURE:	Coarse variolitic-intergranular-subophitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00	7.20	0.20	0.70	0.30	Equant, euhedral	Discrete crystals. Replaced by brown clay minerals.
GROUNDMASS							
pl	44.69	45.60				Platy-bow tie, euhedral-subhedral	
aug	30.14	31.40				Granular-prismatic, subhedral-anhedral	
Fe-Ti ox	7.43	7.50				Equant, skeletal	
plg	1.62	1.70				Prismatic, subhedral-anhedral	
meso	4.80	4.80					Intergrowths of ab and qtz.
qtz	1.80	1.80				Anhedral	
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	9.00					olivine/pores	
pyrite	<0.5					disseminated/in vein	
brown mica	<0.5					interstitial	
STRUCTURES:	Stepped, irregular vein filled with saponite in radiating fibers (and or green clay minerals)						
COMMENTS :	1 mm vein of saponite with minor pyrite.						

THIN SECTION:	206-1256D-10R-1W, 110-113 cm					Piece No.: 2	Unit: 1c	ODP TS#: 104
ROCK NAME:	Moderately ol-phyric fine-grained basalt							
WHERE SAMPLED:								
GRAIN SIZE:	0.2-1.2 mm							
TEXTURE:	Caorse-medium variolitic							
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS	
			min.	max.	av.			
PHENOCRYSTS								
ol	0.00	9.60	0.20	0.70	0.40	Equant, euhedral	Discrete crystals. Replaced by brown clay minerals.	
GROUNDMASS								
pl	40.87	41.70				Platy-bow tie, skeletal		
aug	38.98	40.60				Granular-short prismatic, subhedral-anhedral		
Fe-Ti ox	5.15	5.20				Equant polyhedral		
pig	0.57	0.60				Elongate prismatic, euhedral-subhedral		
meso	1.30	1.30					Intergrowths of ab and qtz.	
qtz	1.00	1.00				Anhedral		
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS	
			min.	max.	av.			
saponite	11.00					olivine, interstitial		
green cpx	0.50					reaction rims on primary cpx		
pyrite	<0.5					disseminated		
brown mica	0.50					interstitial		
STRUCTURES:								
COMMENTS :								

THIN SECTION:	206-1256D-10R-2W, 28-30 cm		Piece No.: 1A Unit: 1c			ODP TS#: 105	
ROCK NAME:	Moderately ol-phyric fine-grained basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.2-2.2 mm						
TEXTURE:	Medium variolitic (-subophitic)						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00	5.00	0.10	0.50	0.20	Equant, euhedral	Discrete crystals. Replaced by brown clay minerals.
GROUNDMASS							
pl	49.10	50.10				Platy-bow tie, euhedral-subhedral	
aug	28.03	29.20				Granular-short prismatic, subhedral-anhedral	
Fe-Ti ox	5.45	5.50				Equant, skeletal	
pig	4.47	4.70				Prismatic, euhedral-subhedral	
meso	4.30	4.30					Intergrowths of ab and qtz.
qtz	1.20	1.20				Anhedral	
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	8.00					olivine, interstitial	
blue-green phyllosilicate	0.50					interstitial	
green cpx	0.50					reaction rims on primary cpx	
pyrite	<0.5					disseminated	
STRUCTURES:							
COMMENTS :							

THIN SECTION:	206-1256D-11R-3W, 39-42 cm		Piece No.: 1A Unit: 1c			ODP TS#: 106	
ROCK NAME:	Moderately ol-phyric fine-grained basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.1-2.0 mm						
TEXTURE:	Medium variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00	8.70	0.15	0.80	0.40	Equant, euhedral	Discrete crystals. Replaced by brown clay minerals.
GROUNDMASS							
pl	48.22	49.20				Platy-bow tie, euhedral-subhedral	
aug	26.78	27.90				Granular-prismatic, subhedral-anhedral	
Fe-Ti ox	5.25	5.30				Equant, skeletal	
pig	2.19	2.30				Prismatic, euhedral-subhedral	
meso	4.60	4.60					Intergrowths of ab and qtz.
qtz	2.00	2.00				Anhedral	
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	10.00					olivine, pores, partly replacing plagioclase	
pyrite	1.00					disseminated	
chalcopyrite	<0.5					disseminated	
STRUCTURES:	0.5 mm vein with pseudoisotropic areas and intragranular alteration; face-controlled growth of clay-minerals. Late stage tiny cracks crosscut the vein						
COMMENTS :	0.2-0.4 mm vein, composed of minor quartz & albite granophyric intergrowths, later subhedral quartz and later saponite, with local pseudoisotropic areas.						

THIN SECTION:	206-1256D-12R-7W, 83-86 cm		Piece No.: 1C Unit: 1d			ODP TS#: 107	
ROCK NAME:	Moderately ol-phyric fine-grained basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.05-0.5 mm						
TEXTURE:	Fine-Medium variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00	2.20	0.15	1.50	0.20	Equant, euhedral	Discrete crystals. Replaced by brown clay minerals.
GROUNDMASS							
pl	39.20	39.60				Platy-bow tie, euhedral-subhedral	
aug	36.19	37.70				Granular-prismatic, subhedral-anhedral	
Fe-Ti ox	9.41	9.50				Equant, skeletal chains	
pig	1.05	1.10				Elongate prisms-blebs, euhedral-subhedral	
meso	8.60	8.60					Intergrowths of ab and qtz.
qtz	1.30	1.30				Anhedral	
apatite						Prismatic	
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	4.00					olivine/pores	
blue-green phyllosilicate	<1					interstitial	
pyrite	1.00					disseminated	
STRUCTURES:							
COMMENTS :							

THIN SECTION:	206-1256D-13R-1W, 20-22 cm		Piece No.: 4	Unit: 2	ODP TS#: 108		
ROCK NAME:	Highly cpx-ol-pl-phyric cryptocrystalline basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.02-0.5 mm						
TEXTURE:	Fine-Medium variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
pl	5.71	5.71	0.20	1.00	0.80	Stubby, euhedral-subhedral	Zoned rims. Clotted with/without ol + cpx.
ol	0.00	4.41	0.20	1.80	0.40	Equant, euhedral	Discrete crystals > clots. Replaced by brown clay minerals.
cpx	0.20	0.20	0.10	0.20	0.10	Stubby, subhedral-euhedral	Clotted with pl.
GROUNDMASS							
pl						Platy-bow tie, skeletal-euhedral	
cpx (aug + pig)						Granular-short prismatic, subhedral-anhedral	
gl							Replaced by brown clay minerals.
Fe-Ti ox						Equant, skeletal chains	
vesicles		0.20				Spherical	Filled by brown clay minerals.
SECONDARY MINERALOGY	PERCENT		Percent			REPLACING / FILLING	COMMENTS
			BLK	BRN	HR		
saponite			20	15	21	vesicles, olivine, interstitial and vein fill	
Iron hydroxide			5	20	0	vesicles, olivine, interstitial and vein fill	
pyrite	<0.5					disseminated pyrite front along black halo selvage	
STRUCTURES:							
COMMENTS : A veinlet, >0.8 mm wide, is composed of opaque and red iron hydroxide and later saponite, and a 0.1 mm wide veinlet is composed of iron hydroxide.							

THIN SECTION:	206-1256D-13R-1W, 109-111 cm		Piece No. 4	Unit: 2	ODP TS#: 109		
ROCK NAME:	Moderately cpx-ol-pl-phyric cryptocrystalline basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.05-0.5 mm						
TEXTURE:	Variolitic-intergranular						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
pl	4.25	4.25	0.10	0.60	0.40	Stubby-platy, euhedral-subhedral	Clotted with/without ol + cpx.
ol	0.00	3.05	0.10	0.40	0.20	Equant, euhedral	Discrete crystals or forms clots with/withoug pl. Replaced by brown clay minerals.
cpx	0.15	0.15	0.15	0.20	0.20	Granular, subhedral-anhedral	Clotted with pl.
GROUNDMASS							
pl						Skeletal laths	
gl							
cpx						Granular-prismatic, subhedral-anhedral	Replaced by brown clay minerals.
Fe-Ti ox						Equant, skeletal chains	
vesicles		tr				Sperical	Filled by brown clay minerals.
SECONDARY MINERALOGY	PERCENT	Percent			REPLACING / FILLING	COMMENTS	
		BLK	BRN	HR			
saponite		12		20	vesicles, olivine, interstitial, vein fill		
celadonite		8		0	vesicles, olivine, interstitial		
iron hydroxide		1		0	vesicles, olivine, interstitial		
pyrite	1.50				along pyrite front		
STRUCTURES:							
COMMENTS : There is a 0.4 mm wide vein composed of finely crystalline saponite, bounded by a black halo							

THIN SECTION:	206-1256D-14R-2W, 84-96 cm					Piece No.: 14	Unit: 2	ODP TS#: 110
ROCK NAME:	Moderately cpx-ol-pl-phyric cryptocrystalline basalt							
WHERE SAMPLED:	Basalt with glassy chilled margin							
GRAIN SIZE:	Aphanitic-holohyaline							
TEXTURE:	Holohyaline- variolitic							
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS	
			min.	max.	av.			
PHENOCRYSTS								
pl	3.78	3.78	0.10	1.20	0.50	Stubby-platy, euhedral-subhedral	Clots > discrete crystals.	
ol	0.20	0.40	0.04	0.10	0.05	Equant, euhedral	Tiny microphenocrysts with glass inclusions. Some form clots with/without pl and cpx. Olivine in aphanitic part is altered to brown clay minerals.	
cpx	0.35	0.35	0.05	0.10	0.05	Granular-short prismatic, subhedral-euhedral		
GROUNDMASS								
cpx						Fibrous-sheaflike		
pl						Thin platy, skeletal		
gl		50.15					Replaced by brown clay minerals.	
Fe-Ti ox						Equant skeletal-dendritic chains		
vesicles		0.75				Spherical-hemispherical	Filled by brown clay minerals.	
SECONDARY MINERALOGY	PERCENT	Percent		REPLACING / FILLING	COMMENTS			
		BLK	HR					
saponite		1	6	vesicles, interstitial, olivine, veinlets				
celadonite		1	0	vesicles, interstitial, olivine, veinlets				
iron hydroxide		0.5	0	vesicles, interstitial, olivine, veinlets				
pyrite	1.00			along pyrite front				
STRUCTURES:								
COMMENTS :	Fresh olivine present only in fresh glass. Tiny aggregates of granular-short prismatic cpx + plagioclase laths up to 1 mm in diameter are present. Light brown marginal glass is > 5 mm thick. A 0.2 mm wide vein is composed of saponite and silica minerals, there are also several 100 mm wide celadonite or saponite veinlets cross cutting the glass. Along the veinlet margins the glass is altered to palagonite. Black halo along vein in crystalline rock.							

THIN SECTION:	206-1256D-14R-2W, 127-130 cm		Piece No. 18	Unit: 2	ODP TS#: 111		
ROCK NAME:	Moderately cpx-ol-pl-phyric cryptocrystalline basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.05-0.2 mm						
TEXTURE:	Variolitic-intergranular						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
pl	3.16	3.16	0.08	1.70	0.40	Platy, euhedral-subhedral	Zoned rims. Discrete crystals and clots.
ol	0.00	2.36	0.10	1.40	0.20	Equant, euhedral	Discrete crystals > clots.
cpx	0.10	0.10	0.05	0.20	0.20	Short prismatic-granular, subhedral	Clots.
GROUNDMASS							
cpx						Granular-prismatic, subhedral-anhedral	
pl						Skeletal laths	
gl							
Fe-Ti ox						Equant skeletal-dendritic chains	
vesicles		0.35				Spherical	
SECONDARY MINERALOGY	PERCENT		Percent			REPLACING / FILLING	COMMENTS
			BLK	HR			
saponite			7	23		vesicles, olivine, interstitial, vein fill	
celadonite			12	0		vesicles, olivine, interstitial, vein fill	
pyrite	0.50					disseminated pyrite front	
STRUCTURES:							
COMMENTS:	A 0.5 mm wide vein composed of celadonite and later iron hydroxide cuts the thin section and a >0.3 mm wide vein is composed of saponite and minor iron hydroxide, there are black halos adjacent to both these veins.						

THIN SECTION:	206-1256D-15R-1W, 69-71 cm					Piece No.: 12	Unit: 3	ODP TS#: 112
ROCK NAME:	Moderately pl-ol-phyric cryptocrystalline basalt							
WHERE SAMPLED:								
GRAIN SIZE:	0.05-0.3 mm							
TEXTURE:	Variolitic-intergranular							
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS	
			min.	max.	av.			
PHENOCRYSTS								
ol	0.00	3.40	0.10	0.70	0.20	Equant, euhedral	Discrete crystals.	
pl	0.50	0.50	0.10	1.20	0.60	Platy, euhedral-subhedral	Clotted with/without ol.	
GROUNDMASS								
pl						Platy skeletal-bow tie shaped		
cpx						Granular, anhedral		
gl	0.00							
Fe-Ti ox						Equant skeletal-dendritic chains		
vesicles		0.35				Spherical	Filled by brown clay minerals.	
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS	
			min.	max.	av.			
saponite	20.00					vesicles, olivine, interstitial		
chalcedony	0.50					vesicles		
STRUCTURES:								
COMMENTS:								

THIN SECTION:	206-1256D-16R-1W, 81-83 cm					Piece No.: 18	Unit: 3	ODP TS#: 113
ROCK NAME:	Moderately cpx-ol-pl-phyrlic cryptocrystalline basalt							
WHERE SAMPLED:								
GRAIN SIZE:	0.02-0.3 mm							
TEXTURE:	Variolitic							
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS	
			min.	max.	av.			
PHENOCRYSTS								
pl	1.80	1.80	0.10	0.40	0.15	Platy, euhedral-subhedral	Clots.	
ol	0.00	1.45	0.05	0.20	0.07	Equant, euhedral	Discrete crystals. Replaced by green-brown clay minerals.	
cpx	0.15	0.15	0.05	0.35	0.20	Granular, anhedral	Clotted with pl.	
GROUNDMASS								
pl						Platy skeletal laths, fan-shaped		
cpx						Granular-sheaflike		
Fe-Ti ox						Equant skeletal-dendritic chains		
gl	0.00						Replaced by green-yellow clay minerals.	
vesicles		tr				Spherical-hemispherical	Filled by green clay minerals.	
SECONDARY MINERALOGY	PERCENT		Percent			REPLACING / FILLING	COMMENTS	
			BLK	HR				
saponite			0.00	12.00		olivine, vesicles, interstitial		
celadonite			15.00	0.00		olivine, vesicles, interstitial, vein fill		
iron hydroxide			2.00	0.00		olivine, vesicles, interstitial, vein fill		
pyrite	0.50					pyrite front		
STRUCTURES:								
COMMENTS :	There is a 0.03 mm wide veinlet, composed of iron hydroxide progressing along its length to a celadonite en echelon vein. A 10 µm veinlet is filled with saponite. Black halo along vein.							

THIN SECTION:	206-1256D-19R-1W, 36-38 cm		Piece No.: 6	Unit: 3	ODP TS#: 114		
ROCK NAME:	Sparsely pl-ol-phyric cryptocrystalline basalt						
WHERE SAMPLED:							
GRAIN SIZE:	<0.01 mm						
TEXTURE:	Variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00	1.45	0.05	0.20	0.10	Equant, euhedral	Discrete crystals. Replaced by green-brown clay minerals. Clots.
pl	0.10	0.10	0.05	0.50	0.10	Platy, euhedral-subhedral	
GROUNDMASS							
cpx						Granular-sheaflike	Replaced by brown clay minerals.
pl						Platy skeletal laths	
gl	0.00						
Fe-Ti ox						Dendritic chains	Filled by green clay minerals.
vesicles		tr		0.30		Spherical-hemispherical	
SECONDARY MINERALOGY	PERCENT		Percent			REPLACING / FILLING	COMMENTS
			BRN	BLK	HR		
saponite				0.00	12.00	olivine, interstitial, vesicles	
celadonite			10.00	10.00	0.00	olivine, interstitial, vesicles	
iron hydroxide			15.00	0.00	0.00	olivine, interstitial, vesicles	
STRUCTURES:							
COMMENTS:	1.2 mm wide iron hydroxide vein with locally more celadonic selvages. There is a 2-4 mm greenish black halo associated with this vein.						

THIN SECTION:	206-1256D-20R-1W, 27-29 cm				Piece No.: 5	Unit: 4a	ODP TS#: 115
ROCK NAME:	Aphyric cryptocrystalline basalt						
WHERE SAMPLED:							
GRAIN SIZE:	Holohyaline-aphanitic						
TEXTURE:	Holohyaline-aphanitic (very fine varioles)						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	min.	SIZE (mm) max.	av.	MORPHOLOGY	COMMENTS
PHENOCRYSTS							
pl	0.20	0.20	0.10	0.50	0.15	Platy, euhedral-subhedral	Clots.
ol	0.00	0.10	0.02	0.03	0.02	Equant, euhedral-short prismatic	Rare fresh olivine in fresh glass.
GROUNDMASS							
gl	74.67	78.60					Replaced by brown clay minerals.
vesicles		0.10	0.02	0.03	0.02	Spherical-hemispherical	Filled by green clay minerals.
SECONDARY MINERALOGY	PERCENT		min.	SIZE (mm) max.	av.	REPLACING / FILLING	COMMENTS
palagonite	35.00					glass	
STRUCTURES:							
COMMENTS: Hyaloclastite consisting of clasts of volcanic glass and aphanitic clasts with glassy rinds. Glass clasts has curved, both convex and concave outlines and sharp edges. Hydration and palagonitization proceed along cracks and from margins to the cores, obscuring the original outlines of the glass clasts.							

THIN SECTION:	206-1256D-21R-2W, 75-78 cm					Piece No.: 13	Unit: 4d	ODP TS#: 116
ROCK NAME:	Moderately cpx-pl-ol-phyric cryptocrystalline basalt							
WHERE SAMPLED:								
GRAIN SIZE:	0.01-0.15 mm							
TEXTURE:	Variolitic							
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS	
			min.	max.	av.			
PHENOCRYSTS								
ol	0.00	2.70	0.05	0.15	0.05	Equant, euhedral	Replaced by brown clay minerals.	
pl	0.50	0.50	0.05	0.50	0.15	Platy laths, euhedral-subhedral	Slightly zoned. Clotted with/without cpx.	
cpx (aug)	tr	tr	0.10	0.50	0.15	Stubby, euhedral-subhedral	Rare large cpx forms discrete crystals. Small crystals are clotted with pl.	
GROUNDMASS								
pl						Thin skeletal laths-bow tie shaped		
cpx						Prismatic-granular		
Fe-Ti ox						Dendritic chains		
gl	74.67	78.60					Replaced by brown clay minerals.	
SECONDARY MINERALOGY	PERCENT		Percent		REPLACING / FILLING	COMMENTS		
			BLK	HR				
saponite			0.00	15.00	olivine, vesicles, interstitial			
celadonite			12.00	0.00	olivine, vesicles, interstitial, vein fill			
Fe-hydroxides			3.00	0.00	olivine, vesicles, interstitial, vein fill			
pyrite	< 0.5				pyrite front			
STRUCTURES:								
COMMENTS: Saponite vein > 0.1mm. Black halo along vein.								

THIN SECTION: 206-1256D-22R-2W, 111-113 cm **Piece No.:** 5D **Unit:** 4d **ODP TS#:** 117
ROCK NAME: Moderately cpx-pl-ol-phyric cryptocrystalline basalt
WHERE SAMPLED:
GRAIN SIZE: 0.01-0.10 mm
TEXTURE: Variolitic

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00	2.50	0.03	0.25	0.06	Equant, euhedral	Discrete crystals. Replaced by brown clay minerals.
pl	0.50	0.50	0.05	0.55	0.15	Platy, euhedral-subhedral	Clotted with/without cpx.
cpx (aug)	0.10	0.10		0.65	0.65	Short prismatic-stubby, euhedral-subhedral	Rare large cpx subophitically include pl. Small are clotted with pl.
GROUNDMASS							
cpx						Granular-thin platy	
pl						Thin skeletal laths	
Fe-Ti ox						Dendritic chains-equant skeletal	
gl							Replaced by green clay minerals.
vesicles			0.06	0.1	0.08	Spherical	

SECONDARY MINERALOGY	PERCENT	Percent		REPLACING / FILLING	COMMENTS
		MIX	HR		
saponite		12.00	10.00	olivine, vesicles, interstitial, vein fill	
celadonite		8.00	0.00	olivine, vesicles, interstitial, vein fill	
Fe-hydroxides		2.00	0.00	olivine, vesicles, interstitial, vein fill	
pyrite	0.50			pyrite front	
Silica minerals	8.00				

STRUCTURES:

COMMENTS : 1.5-2 mm wide vein, composed of celadonite/saponite followed by saponite and later silica minerals, mixed halo (6-8 mm wide) associated with this vein. 0.3 mm vein composed of celadonite/saponite.

THIN SECTION:	206-1256D-22R-3W, 112-114 cm					Piece No.: 11	Unit: 4d	ODP TS#: 118
ROCK NAME:	Sparsely cpx-pl-ol-phyric cryptocrystalline basalt							
WHERE SAMPLED:								
GRAIN SIZE:	0.03-0.15 mm							
TEXTURE:	Variolitic							
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS	
			min.	max.	av.			
PHENOCRYSTS								
ol	0.00	1.30	0.04	0.30	0.06	Equant, euhedral	Discrete crystals. Replaced by brown clay minerals.	
pl	0.55	0.55	0.06	0.70	0.40	Platy, euhedral>subhedral	Clotted with/without cpx.	
cpx (aug)	tr	tr	0.30	1.10	0.50	Short prismatic-stubby,euhedral-subhedral	Large cpx subophitically include pl. Small are clotted with pl.	
GROUNDMASS								
cpx						Granular-stubby, subhedral-anhedral		
pl						Platy skeletal laths		
Fe-Ti ox						Dendritic chains-equant skeletal		
gl							Replaced by green clay minerals.	
SECONDARY MINERALOGY	PERCENT		Percent		REPLACING / FILLING	COMMENTS		
			BLK	HR				
saponite				9.00	olivine, vesicles, interstitial, vein fill			
celadonite			7.00	0.00	olivine, vesicles, interstitial, vein fill			
Fe-hydroxides			3.00	0.00	olivine, vesicles, interstitial, vein fill			
pyrite	0.50				pyrite front			
STRUCTURES:								
COMMENTS :	Sporadic alteration patches have more altered cpx. 0.3 mm vein filled by Fe-hydroxide vermicules and celadonite reopened by saponite. Black halo along vein.							

THIN SECTION:	206-1256D-22R-4W, 84-92 cm					Piece No.: 9	Unit: 4d	ODP TS#: 119
ROCK NAME:	Moderately cpx-ol-pl-phyric cryptocrystalline basalt							
WHERE SAMPLED:								
GRAIN SIZE:								
TEXTURE:	Variolitic (holohyaline-aphanitic)							
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS	
			min.	max.	av.			
PHENOCRYSTS								
pl	1.46	1.46	0.02	0.60	0.04	Platy-stubby, euhedral-subhedral		
ol	0.04	0.75	0.03	0.50	0.05	Equant, euhedral	Discrete crystals. Replaced by brown clay minerals. Fresh olivine in fresh chilled margin glass.	
cpx (aug)	0.50	0.50	0.25	0.60	0.40	Stubby, subhedral	Large cpx subophitically include pl. Small are clotted with pl.	
GROUNDMASS								
cpx						Fibrous		
pl						Thin skeletal laths		
gl								
Fe-Ti ox						Tiny dendrites	Concentrates in between bunches of fibrous cpx.	
vesicles		0.35		0.7	0.7	Hemispherical		
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS	
			min.	max.	av.			
celadonite/saponite	3.00					olivine, vesicles, interstitial, vein fill		
pyrite	0.50							
STRUCTURES:	Composite vein with four steps of mineral growth: 1) wallrock alteration by saponite with vermicular texture + opaque minerals; 2) stretched saponite fibers orthogonal to the vein selvage; 3) early silica; 4) late stage silica in vug.							
COMMENTS:	Aphanitic chip with fresh glass margin. 3 veinlets 20µm-wide composed of celadonite/saponite							

THIN SECTION:	206-1256D-23R-1W, 83-85 cm	Piece No.: 6	Unit: 4d	ODP TS#: 120
ROCK NAME:	Moderately cpx-pl-ol-phyric cryptocrystalline basalt			
WHERE SAMPLED:				
GRAIN SIZE:	0.05-0.15 mm			
TEXTURE:	Variolitic-intergranular			

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00	1.60	0.05	0.10	0.06	Equant, euhedral	Discrete crystals. Replaced by brown clay minerals.
pl	0.75	0.75	0.08	1.00	0.30	Platy, euhedral-subhedral	Clotted with cpx. Slightly zoned.
cpx (aug)	0.55	0.55	0.12	1.00	0.50	Stubby, euhedral-subhedral	Large cpx subophitically includes pl and shows sector or domain zoning.
GROUNDMASS							
cpx						Granular-short prismatic, euhedral-subhedral	
pl						Thin skeletal laths	
Fe-Ti ox						Equant skeletal-dendritic chains	
gl							Replaced by brown clay minerals.
vesicles		0.10				Hemispherical	

SECONDARY MINERALOGY	PERCENT	Percent		REPLACING / FILLING	COMMENTS
		BLK	HR		
celadonite		5.00	0.00	olivine, vesicles, interstitial, vein fill	
iron hydroxide		2.00	0.00	olivine, vesicles, interstitial, vein fill	
saponite		0.00	7.00	olivine, vesicles, interstitial	
pyrite	0.50			partly fills vesicles, interstitial, pyrite front	

STRUCTURES:

COMMENTS: 1.6 mm wide vein, composed of celadonite and iron hydroxides along the vein selvages, and with a vermicular texture within the vein, with a 5-10 mm 'greenish' black halo and a pyrite front.

THIN SECTION:	206-1256D-24R-2W, 52-55 cm		Piece No.: 6	Unit: 5	ODP TS#: 121		
ROCK NAME:	Moderately cpx-ol-pl-phyric cryptocrystalline basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.005-0.02 mm						
TEXTURE:	Variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
pl	4.55	4.55	0.10	0.80	0.30	Platy-stubby, euhedral-subhedral	Clotted with/without cpx. Slightly zoned.
ol	0.00	1.95	0.05	0.30	0.10	Equant, euhedral	Discrete crystals. Replaced by brown clay minerals.
cpx	1.35	1.35	0.10	7.00	0.30	Stubby-short prismatic, euhedral-subhedral	Clotted with pl.
GROUNDMASS							
cpx						Granular-prismatic, subhedral-anhedral	
pl						Platy skeletal	
Fe-Ti ox						Equant skeletal-dendritic chains	
gl							
vesicles		0.10				Spherical	
SECONDARY MINERALOGY	PERCENT		Percent			REPLACING / FILLING	COMMENTS
			BLK	HR			
celadonite			5.00	0.00		olivine, vesicles, interstitial	
iron hydroxides			3.00	0.00		olivine, vesicles, interstitial	
saponite			0.00	8.00		olivine, vesicles, interstitial	
pyrite	<0.5					py front	
STRUCTURES:							
COMMENTS:	A 50 µm vein grades from celadonite to iron hydroxides, then to celadonite and iron hydroxides, then to saponite, towards the interior of the thin section, the vein has a 2-4 mm wide black halo.						

THIN SECTION:	206-1256D-24R-2W, 120-122 cm					Piece No.: 17	Unit: 5	ODP TS#: 122
ROCK NAME:	Moderately cpx-ol-pl-phyric cryptocrystalline basalt							
WHERE SAMPLED:								
GRAIN SIZE:	0.005-0.02 mm							
TEXTURE:	Variolitic							
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS	
			min.	max.	av.			
PHENOCRYSTS								
pl	2.85	2.85	0.05	0.80	0.20	Platy-stubby, euhedral-subhedral	Zoned. Clotted with/without cpx.	
ol	0.00	2.00	0.04	0.80	0.08	Equant, euhedral	Large ol forms a clot with cpx subophitically includes pl present. Replaced by brown clay minerals.	
cpx	1.35	1.35	0.05	1.50	0.20	Stubby, euhedral-subhedral	Clotted with pl. Rarely with ol.	
GROUNDMASS								
cpx						Granular-fibrous		
pl						Skeletal, thin platy		
Fe-Ti ox						Dendritic		
gl								
SECONDARY MINERALOGY	PERCENT	percent		REPLACING / FILLING	COMMENTS			
		BLK	HR					
celadonite		4.00	0.00	olivine, vesicles, interstitial				
iron hydroxide		4.00	0.00	olivine, vesicles, interstitial				
saponite		0.00	8.00	olivine, vesicles, interstitial				
pyrite	0.50			py fronts				
STRUCTURES:								
COMMENTS :	A 0.6 mm wide vein grades from celadonite + iron hydroxides to saponite, it has 2 cusped black halos (1-4 mm wide) at either end of the vein.							

THIN SECTION:	206-1256D-26R-1W, 22-24 cm		Piece No.: 2	Unit: 6	ODP TS#: 123		
ROCK NAME:	Aphyric microcrystalline basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.025-0.08 mm						
TEXTURE:	Variolitic-intergranular						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00	0.85	0.05	0.30	0.06	Equant, euhedral	Discrete crystals. Replaced by brown clay minerals.
GROUNDMASS							
cpx						Granular-prismatic, subhedral-euhedral	
pl						Platy skeletal-bow tie, euhedral-subhedral	
Fe-Ti ox						Equant skeletal-dendritic chains	
SECONDARY MINERALOGY	PERCENT		percent			REPLACING / FILLING	COMMENTS
			BLK	HR			
celadonite			0.50	0.00		olivine, vesicles, interstitial	
saponite			4.00	5.00		olivine, vesicles, interstitial	
pyrite			0.50			interstitial in black halo, py front	
STRUCTURES:							
COMMENTS:	120 µm vein is composed of celadonite and iron hydroxide, with a 4 mm wide black halo.						

THIN SECTION:	206-1256D-26R-2W, 22-25 cm					Piece No.: 4	Unit: 7	ODP TS#: 124
ROCK NAME:	Sparsely cpx-pl-ol-phyric cryptocrystalline basalt							
WHERE SAMPLED:								
GRAIN SIZE:	0.01-0.5 mm							
TEXTURE:	Fine variolitic							
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS	
			min.	max.	av.			
PHENOCRYSTS								
ol	0.00	1.60	0.05	0.30	0.20	Equant, euhedral	Discrete crystals. Replaced by brown clay minerals.	
pl		0.75	0.02	0.40	0.20	Platy, euhedral-subhedral	Forms both discrete crystals and clots.	
cpx		0.55	0.10	0.40	0.10	Prismatic-granular, euhedral-subhedral	Clots > discrete. Large cpx subophitically includes pl.	
GROUNDMASS								
cpx						Granular-short prismatic-fibrous		
pl						Thin platy skeletal		
Fe-Ti ox						Skeletal-dendritic chains		
gl	0.00						Replaced by brown clay minerals.	
vesicles		0.10						
SECONDARY MINERALOGY	PERCENT	percent			REPLACING / FILLING	COMMENTS		
saponite	10.00				interstitial, olivine, vesicles			
STRUCTURES:	Clasts of the brecciated host basalt have angular to subangular shape, but their margins are smoothed due to alteration.							
COMMENTS :	Glassy basalt dike intruding into the brecciated host basalt (described above), cemented by sediment. The dike has phenocrysts of pl and rare cpx and ol. The sediment is composed of quartz, pale green amphibole prisms, blue-green phyllosilicate and later saponite. The glass is cross-cut by saponite + chalcedony + magnetite veinlets.							

THIN SECTION:	206-1256D-26R-4W, 17-19 cm					Piece No.: 3	Unit: 8a	ODP TS#: 125
ROCK NAME:	Sparsely pl-ol-phyric cryptoocrystalline basalt							
WHERE SAMPLED:								
GRAIN SIZE:	0.05-0.3 mm							
TEXTURE:	Medium variolitic							
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS	
			min.	max.	av.			
PHENOCRYSTS								
ol	0.00	1.75	0.15	1.00	0.20	Equant, euhedral	Discrete crystals. Replaced by brown clay minerals.	
pl		0.55	0.20	1.20	0.40	Platy, euhedral-subhedral	Forms both discrete crystals and clots.	
GROUNDMASS								
cpx						Prismatic, euhedral-anhedral		
pl						Platy-bow tie, euhedral-subhedral		
Fe-Ti ox						Equant polyhedral-skeletal		
gl	0.00						Replaced by brown clay minerals.	
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS	
			min.	max.	av.			
saponite	10.00					olivine, interstitial, vesicles		
pyrite	0.50					disseminated		
STRUCTURES:								
COMMENTS : 3 types of varioles form the groundmass: Cpx forms a core of radiating plagioclase laths, filling interstices between the laths; Some cpx grows as large as plagioclase, forming radiating fans with plagioclase; rarely, further largely grown cpx subophitically includes plagioclase laths that are radially arranged.								

THIN SECTION:	206-1256D-26R-6W, 13-15 cm		Piece No.: 4	Unit: 8a	ODP TS#: 126		
ROCK NAME:	Aphyric cryptoocrystalline basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.02-0.5 mm						
TEXTURE:	Medium variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00	0.90	0.05	0.20	0.15	Equant, euhedral	Discrete crystals. Replaced by brown clay minerals.
pl		tr	0.07	0.40	0.20	Platy, euhedral-subhedral	Forms both discrete crystals and clots.
cpx		tr	0.20	0.20	0.20	Stubby, euhedral	1 phenocryst.
GROUNDMASS							
cpx (aug + pig)						Prismatic, euhedral-anhedral	
pl						Platy-bow tie, euhedral-subhedral	
Fe-Ti ox						Equant skeletal	
gl	0.00						Replaced by brown clay minerals.
mesostasis							Tiny dendritic mt + fibrous cpx + rare pl laths in altered glass.
SECONDARY MINERALOGY	PERCENT	Dk Grn	percent			REPLACING / FILLING	COMMENTS
			Lt Grn	BRN	HR		
iron hydroxide		0.00	0.00	25.00	0.00	olivine, vesicles, interstitial	
saponite		90.00	3.00	0.00	6.00	olivine, vesicles, interstitial	
STRUCTURES:	Overlapping segments in saponite + pyrite 0.1 mm veins.						
COMMENTS :	Similar texture to TS#125, but slightly finer. Small pigeonite prisms are sandwiched by augite in the groundmass. 2 mm vein is composed of saponite/celadonite with a 7 mm wide composite halo, consisting of three zones (from the vein to the host rock): 0.1 mm dark green saponite rich zone, 0.8 mm light green zone and a 4.5 mm wide brown-orange zone (saponite & brown orange staining) and no pyrite front. Five 0.1 mm wide veins, composed of euhedral pyrite and olive brown saponite, cut the cross section.						

THIN SECTION:	206-1256D-27R-2W, 90-92 cm					Piece No.: 5B	Unit: 8a	ODP TS#: 127
ROCK NAME:	Sparsely cpx-pl-ol-phyric microcrystalline basalt							
WHERE SAMPLED:								
GRAIN SIZE:	0.04-0.3 mm							
TEXTURE:	Medium variolitic							
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS	
			min.	max.	av.			
PHENOCRYSTS								
ol	0.00	1.45	0.10	0.50	0.30	Equant, euhedral	Discrete crystals. Replaced by brown clay minerals.	
pl	0.30	0.30	0.30	0.90	0.60	Platy, euhedral-subhedral	Zoned outer rims. Forms both discrete crystals and clots with/without cpx.	
cpx	0.10	0.10	0.20	0.50	0.40	Stubby, euhedral	Clotted with/without pl or discrete.	
GROUNDMASS								
cpx						Granular>prismatic, euhedral-anhedral		
pl						Platy-bow tie, euhedral-subhedral		
Fe-Ti ox						Equant skeletal		
gl	0.00						Replaced by brown clay minerals.	
mesostasis							Tiny dendritic mt + fibrous cpx + rare curved pl laths in altered glass.	
SECONDARY MINERALOGY	PERCENT	SIZE (mm)			REPLACING / FILLING	COMMENTS		
		min.	max.	av.				
saponite	10.00				olivine, vesicles, interstitial			
pyrite	1.00				disseminated			
STRUCTURES:								
COMMENTS:	Tiny globules (< 0.2 mm) in glass. Similar texture to TS#125, and slightly coarser than TS#126. Dark saponite rich (40%) alteration patch.							

THIN SECTION:	206-1256D-28R-1W, 33-35 cm		Piece No.: 6	Unit: 8a	ODP TS#: 128		
ROCK NAME:	Aphyric cryptocrystalline basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.01-0.3 mm						
TEXTURE:	Medium variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00	0.65	0.08	0.30	0.15	Equant, euhedral	Discrete crystals. Replaced by brown clay minerals.
pl	0.10	0.10	0.25	0.40	0.30	Platy, euhedral-subhedral	
cpx	tr	tr	0.20	0.35	0.25	Prismatic	
GROUNDMASS							
cpx						Granular-prismatic, anhedral-subhedral	Replaced by brown clay minerals. Tiny dendritic mt + fibrous cpx + rare curved pl laths in altered glass.
pl						Platy skeletal-thin laths-bow tie	
Fe-Ti ox						Equant skeletal	
gl	0.00						
mesostasis							
vesicles		0.35	0.08	0.2	0.1		
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	8.00					olivine, vesicle rims, interstitial	
pyrite	0.50					py front	
Ca- carbonate	<0.5					interior of vesicle	
STRUCTURES:							
COMMENTS:	A pyrite front bounds a 2 mm black halo, which just cuts the corner of the thin section and is associated with a 10 μm saponite veinlet.						

THIN SECTION:	206-1256D-29R-1W, 107-110 cm		Piece No.: 21 Unit: 8b			ODP TS#: 129	
ROCK NAME:	Aphyric cryptocrystalline basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.005-0.05 mm						
TEXTURE:	Medium variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00	0.65	0.05	0.10	0.05	Equant, euhedral	Discrete crystals. Replaced by brown clay minerals.
pl	0.05	0.05	0.06	0.40	0.20	Platy, euhedral	Discrete-clots. Clear cores and zoned rims.
GROUNDMASS							
cpx						Fibrous-granular, subhedral-anhedral	
pl						Thin skeletal laths	
Fe-Ti ox						Dendritic chins-skeletal	
gl	0.00						Replaced by brown clay minerals.
mesostasis							Tiny dendritic mt + fibrous cpx + rare curved pl laths in altered glass.
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	3.00					olivines, vesicles, interstitial	
celadonite	1.00					olivines, vesicles, interstitial	
pyrite	1.00					disseminated / veinlet fill	
STRUCTURES:							
COMMENTS:	A plagioclase phenocryst has an hour-glass like core and reverse rim. Granular aggregates of cpx form cores of varioles from which plagioclase laths and prismatic cpx radiate. Two μm pyrite veinlets.						

THIN SECTION:	206-1256D-30R-1W, 41-58 cm		Piece No.: 7	Unit: 8b	ODP TS#: 130		
ROCK NAME:	Aphyric cryptocrystalline basalt						
WHERE SAMPLED:	Rubble of hyaloclastite						
GRAIN SIZE:							
TEXTURE:	Holohyaline						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
pl	0.40	0.40	0.05	0.17	0.10	Stubby, euhedral-subhedral	Clotted.
ol	0.00	tr	0.08	0.08	0.08	Equant, subhedral	Only one phenocryst present. Clotted with pl. Replaced by brown clay minerals.
GROUNDMASS							
gl							Replaced by brown clay minerals.
cpx						Fibrous aggregates	
vesicles		tr		0.40		Spherical	
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
palagonite	3.50					replacing glass along fractures	
STRUCTURES:							
COMMENTS:	Angular clasts of volcanic glass partially altered to palagonite along the margins. Few hemispherical vesicles up to 0.4 mm across and fibrous aggregates of cpx are present.						

THIN SECTION:	206-1256D-31R-1W, 125-127 cm		Piece No.: 19 Unit: 8d			ODP TS#: 131	
ROCK NAME:	Aphyric cryptocrystalline basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.03-0.05 mm						
TEXTURE:	Medium variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00	0.50	0.05	0.15	0.10	Equant, euhedral	Discrete. Replaced by brown clay minerals.
pl	0.05	0.05	0.09	0.20	0.10	Platy, euhedral	Discrete. Clear core and zoned rim.
GROUNDMASS							
cpx						Prismatic, subhedral-anhedral	
pl						Platy skeletal-bow tie	
Fe-Ti ox						Equant skeletal	
gl							Less in amount than TS#129 and 130. Replaced by brown clay minerals.
vesicles		0.05		0.4		Spherical	
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	6.00					vesicles, olivine, interstitial	
STRUCTURES:							
COMMENTS:	Coarser than TS#129.						

THIN SECTION:	206-1256D-32R-2W, 4-6 cm		Piece No.: 1A Unit: 8d			ODP TS#: 132	
ROCK NAME:	Aphyric cryptocrystalline basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.01-0.4 mm						
TEXTURE:	Medium variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00	0.70	0.05	0.30	0.10	Equant, euhedral	Discrete. Replaced by brown clay minerals.
GROUNDMASS							
cpx						Prismatic, subhedral-anhedral	
pl						Platy skeletal-bow tie	
Fe-Ti ox						Equant skeletal-dendritic	
gl							
vesicles		tr	0.08	0.3	0.15	Spherical	Replaced by brown clay minerals. Clay minerals on the vesicle walls. Fibrous crystals grown normal to wall.
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	7.00					olivine, vesicles, interstitial	
STRUCTURES:							
COMMENTS:							

THIN SECTION:	206-1256D-33R-1W, 36-38 cm		Piece No.: 4A Unit: 8d			ODP TS#: 133	
ROCK NAME:	Sparsely cpx-pl-ol-phyric cryptocrystalline basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.06-0.5 mm						
TEXTURE:	Medium variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00	1.25	0.10	0.30	0.10	Equant, euhedral	Discrete. Replaced by brown clay minerals.
pl	0.55	0.55	0.10	1.10	0.30	Platy, euhedral-subhedral	Clotted with cpx.
cpx	0.20	0.20	0.10	0.30	0.20	Stubby, subhedral-anhedral	Subophitic clots.
GROUNDMASS							
cpx						Prismatic, subhedral-euhedral	
pl						Platy skeletal-bow tie, euhedral-subhedral	
Fe-Ti ox						Equant > skeletal	
gl							Replaced by brown clay minerals.
vesicles		tr	0.06	0.3	0.1	Spherical	Concentric infilling by clay minerals.
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	8.00					olivine, vesicles, interstitial	
STRUCTURES:							
COMMENTS:							

THIN SECTION: 206-1256D-34R-2W, 33-35 cm **Piece No.: 1C Unit: 8d** **ODP TS#: 134**
ROCK NAME: Sparsely cpx-pl-bearing ol-phyric cryptocrystalline basalt
WHERE SAMPLED:
GRAIN SIZE: 0.05-0.2 mm
TEXTURE: Fine-medium variolitic

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00	1.30	0.05	0.30	0.15	Equant, euhedral	Discrete. Replaced by brown clay minerals.
pl	0.50	0.50	0.05	0.60	0.25	Platy, euhedral	Discrete or clotted with/without cpx.
cpx	0.20	0.20	0.05	0.60	0.20	Stubby, subhedral-euhedral	Subophitically includes pl.
GROUNDMASS							
cpx						Granular-prismatic, subhedral-anhedral	
pl						Platy skeletal-bow tie, euhedral-subhedral	
Fe-Ti ox						Equant skeletal	
gl							Replaced by brown clay minerals.
mesostasis							Altered gl + fibrous cpx + dendritic mt.

SECONDARY MINERALOGY	PERCENT	SIZE (mm)			REPLACING / FILLING	COMMENTS
		min.	max.	av.		
saponite	8.00				olvine, vesicles, interstitial	

STRUCTURES:

COMMENTS:

THIN SECTION:	206-1256D-35R-3W, 11-12 cm		Piece No.: 3	Unit: 9	ODP TS#: 135		
ROCK NAME:	Moderately ol-cpx-pl-phyric cryptocrystalline basalt						
WHERE SAMPLED:							
GRAIN SIZE:	<0.01 mm						
TEXTURE:	Fine variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
pl	2.25	2.25	0.10	0.50	0.30	Platy, euhedral-subhedral	Discrete or clotted with/without cpx.
cpx	1.10	1.10	0.07	1.00	0.07	Stubby, subhedral-euhedral	Large cpx subophitically includes pl. Small cpx form both discrete microphenocrysts and clots.
ol	0.00	0.50	0.04	0.20	0.15	Equant, euhedral	Discrete. Replaced by brown clay minerals.
GROUNDMASS							
cpx						Fibrous>prismatic, skeletal-euhedral	
pl						Platy-skeletal laths, euhedral-subhedral	Swallow tails on some phenocrysts.
Fe-Ti ox						Dendritic chians-equant skeletal	
gl							Replaced by brown clay minerals.
vesicles			0.12	0.14	0.13		
SECONDARY MINERALOGY	PERCENT		percent			REPLACING / FILLING	COMMENTS
			BLK	HR			
saponite			0.00	5.00		olivine, vesicles, interstitial	
iron hydroxides			2.00	0.00		olivine, vesicles, interstitial	
celadonite			3.00	0.00		olivine, vesicles, interstitial	
pyrite	0.50					py front	
STRUCTURES:							
COMMENTS:	Clot of ol + cpx + pl present. > 0.1 mm wide vein is composed of iron hydroxides and saponite/celadonite with a 3 mm wide black halo with a pyrite front.						

THIN SECTION:	206-1256D-36R-2W, 37-39 cm		Piece No.: 3B Unit: 10			ODP TS#: 136	
ROCK NAME:	Aphyric cryptocrystalline basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.05-0.4 mm						
TEXTURE:	Medium variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00	0.95	0.06	0.30	0.15	Equant, euhedral	Discrete. Replaced by brown clay minerals.
GROUNDMASS							
cpx						Prismatic-granular, euhedral-subhedral	
pl						Platy skeletal-bow tie, euhedral-subhedral	
Fe-Ti ox						Equant skeletal	
gl		tr					Replaced by brown clay minerals.
vesicles		0.05					
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	9.00					vesicles, olivine, interstitial	
STRUCTURES:							
COMMENTS:	Although olivine is small, cpx and plagioclase neither penetrate nor are included in olivine. This suggests all olivine crystallized prior to the groundmass crystals.						

THIN SECTION:	206-1256D-37R-1W, 88-90 cm		Piece No.: 4C Unit: 10			ODP TS#: 137	
ROCK NAME:	Sparsely cpx-pl-ol-phyric cryptocrystalline basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.02-0.6 mm						
TEXTURE:	Medium variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0	3.90	0.05	0.50	0.20	Equant, euhedral	Discrete. Replaced by brown clay minerals.
pl		0.25	0.30	0.90	0.50	Platy, euhedral-anhedral	Normally zoned rim. Discrete and clotted with/without cpx.
cpx		tr	0.15	0.40	0.20	Short prismatic, euhedral-subhedral	Rare.
GROUNDMASS							
cpx						Short prismatic-granular, subhedral-anhedral	
pl						Platy bow tie, euhedral-subhedral	
Fe-Ti ox						Equant skeletal-dendritic chains	
gl							Replaced by brown clay minerals.
mesostasis							dendritic mt + fibrous cpx + pl? + gl
SECONDARY MINERALOGY	PERCENT		percent			REPLACING / FILLING	COMMENTS
			patch	HR			
saponite			40	6		replacing olivine and cpx, vesicles, interstitial	
pyrite			8	0		vug fill / disseminated	
STRUCTURES:							
COMMENTS:	Dark saponite rich and pyrite rich alteration patch.						

THIN SECTION:	206-1256D-37R-2W, 12-15 cm	Piece No.: 2	Unit: 10	ODP TS#: 138
ROCK NAME:	Moderately cpx-ol-pl-phyric microcrystalline basalt			
WHERE SAMPLED:	Upper middle of a thick sheet flow			
GRAIN SIZE:	0.04-0.5 mm			
TEXTURE:	Medium variolitic			

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
pl	6.20	6.20	0.10	0.70	0.40	Platy, euhedral-subhedral	Zoned rim. Mostly clotted with/without cpx and/or ol.
ol	0.00	1.05	0.09	0.70	0.15	Equant, euhedral	Discrete. Rarely partially enclosed by pl. Replaced by brown clay minerals.
cpx	0.30	0.30	0.16	1.10	0.25	Stubby-prismatic, subhedral	Clotted with pl.
GROUNDMASS							
cpx						Granular-prismatic, anhedral-euhedral	
pl						Platy-bow tie, euhedral-subhedral	
Fe-Ti ox						Equant polyhedral	
gl							Replaced by brown clay minerals.
mesostasis							dendritic mt + thin pl laths + fibrous cpx + pl? + gl
vesicles					0.03	Spherical	
SECONDARY MINERALOGY							
	PERCENT		percent			REPLACING / FILLING	COMMENTS
saponite			patch	HR		olivine, cpx, vesicles, interstitial	in portion of section below vein
chalcedony			10.00	0.00		globules, vesicles	in portion of section below vein
pyrite	0.50		10.00	0.00		disseminated	in portion of section below vein

STRUCTURES:

COMMENTS: Fine-grained vein in the upper middle of the thin section consists of equigranular cpx and mt and granular-platy plagioclase laths. Very fine parts either show angular outlines or are folded and deformed. The cpx, mt and some part of plagioclase are apparently recrystallized into equigranular neoblasts. The host rock above the vein has finer plagioclase adjacent to the vein, which grew perpendicular to the vein. Away from the vein, plagioclase becomes coarser and show oblique alignment, concordant with some plagioclase laths in the vein, suggestive of flowage shearing. The host beneath the vein is coarser than the host above it, which shows neither specific orientation nor grain size variation near the contact with the vein. The host rock below the vein contains a dark alteration patch.

THIN SECTION:	206-1256D-38R-1W, 10-12 cm					Piece No.: 2	Unit: 11	ODP TS#: 139
ROCK NAME:	Moderately cpx-pl-ol-phyric cryptocrystalline basalt							
WHERE SAMPLED:								
GRAIN SIZE:	0.1-0.4 mm							
TEXTURE:	Medium variolitic							
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS	
			min.	max.	av.			
PHENOCRYSTS								
ol	0.00	1.40	0.07	0.30	0.20	Equant, euhedral	Discrete>clots. Replaced by brown clay minerals.	
pl	1.50	1.50	0.08	0.50	0.35	Platy, euhedral-subhedral	Zoned. Clotted with/without cpx.	
cpx	0.50	0.50	0.10	0.80	0.50	Stubby-short prismatic, subhedral	Subophitically includes pl with/without ol.	
GROUNDMASS								
cpx						Prismatic-granular, subhedral-anhedral		
pl						Thin skeletal laths		
Fe-Ti ox						Equant skeletal-dendritic chains		
gl							Replaced by brown clay minerals.	
mesostasis							dendritic mt + fibrous cpx + gl	
SECONDARY MINERALOGY	PERCENT		size			REPLACING / FILLING	COMMENTS	
			max	min	av.			
saponite	7.00					olivine, interstitial		
pyrite	3.00					vein fill, vesicles adjacent to vein, disseminated		
STRUCTURES:								
COMMENTS: 10 µm irregular pyrite + marcasite veinlet, > 20 µm saponite veinlet, with parallel brown bands (iron hydroxide staining on primary minerals and interstitial iron hydroxides) in the host rock.								

THIN SECTION:	206-1256D-39R-2W, 12-15 cm					Piece No.: 1	Unit: 13	ODP TS#: 140
ROCK NAME:	Sparsely cpx-ol-pl-phyric microcrystalline basalt							
WHERE SAMPLED:								
GRAIN SIZE:	0.1 mm							
TEXTURE:	Medium variolitic							
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS	
			min.	max.	av.			
PHENOCRYSTS								
pl	1.05	1.05	0.05	0.10	0.40	Platy, subhedral	Zoned. Clotted with/without cpx.	
ol	0.00	0.60	0.10	0.30	0.15	Equant, euhedral	Discrete>clots. Replaced by brown clay minerals.	
cpx	0.10	0.10	0.30	0.60	0.45	Stubby, subhedral	Subophitically includes pl.	
GROUNDMASS								
cpx						Short prismatic-granular, subhedral		
pl						Platy-bow tie, euhedral-subhedral		
Fe-Ti ox						Equant > dendritic		
mesostasis							dendritic mt + fibrous cpx + gl	
vesicles		0.15	0.3	0.3	0.3	Spherical		
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS	
			min.	max.	av.			
saponite	6.00					olivine, vesicles, interstitial		
STRUCTURES:								
COMMENTS:								

THIN SECTION:	206-1256D-40R-1W, 75-79 cm		Piece No.: 12 Unit: 14		ODP TS#: 141		
ROCK NAME:	Sparsely pl-cpx-ol-phyric cryptocrystalline basalt						
WHERE SAMPLED:							
GRAIN SIZE:	<0.05 mm						
TEXTURE:	Fine variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol		1.15	0.10	0.25	0.20	Equant, euhedral	Discrete. Rarely clotted with pl and cpx. Replaced by brown clay minerals.
cpx		1.10	0.10	1.10	0.20	Stubby-granular, euhedral-anhedral	Subophitically includes stubby pl.
pl	0.00	0.95	0.10	0.70	0.20	Platy-stubby, euhedral-subhedral	Clotted with/without cpx.
GROUNDMASS							
cpx						Feathery-sheaf-like	
pl						Skeletal laths	
Fe-Ti ox						Dendritic chains	
gl							Replaced by brown clay minerals.
SECONDARY MINERALOGY	PERCENT		percent			REPLACING / FILLING	COMMENTS
			BLK	HR			
celadonite			9.00	0.00		olivine, interstitial	
saponite			0.00	10.00		olivine, interstitial	
iron hydroxide			1.00	0.00		olivine, interstitial	
pyrite				<0.5		disseminated, pyrite front	
STRUCTURES:							
COMMENTS:	Medium-sized varioles consisting of fine granular cpx and platy plagioclase with rare olivine are sporadically present. Discrete plagioclase is thinner than large subophitic plagioclase, but is more elongated as long as 1.5 mm. A 2 mm wide black halo is present, but the associated vein is not preserved.						

THIN SECTION:	206-1256D-40R-1W, 86-106 cm		Piece No.: 14 Unit: 14			ODP TS#: 142	
ROCK NAME:	Moderately ol-pl-cpx-phyric cryptocrystalline basalt						
WHERE SAMPLED:	Chunk						
GRAIN SIZE:	<0.05 mm						
TEXTURE:	Fine variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
cpx	1.70	1.70	0.03	1.10	0.40	Stubby, euhedral-subhedral	Ophitically-subophitically includes pl laths.
pl	1.15	1.15	0.10	0.80	0.35	Platy-stubby, euhedral-subhedral	Clotted with/without cpx.
ol	0.00	0.55	0.05	0.30	0.08	Equant, euhedral	Discrete. Replaced by brown clay minerals.
GROUNDMASS							
cpx						Feathery	
pl						Skeletal laths	
Fe-Ti ox						Dendritic chains	
gl							Replaced by brown clay minerals.
vesicles			0.06	0.2	0.1	Spherical	
SECONDARY MINERALOGY	PERCENT		percent			REPLACING / FILLING	COMMENTS
			BLK	HR			
saponite			1.00	5.00		olivine, vesicles, interstitial	
celadonite			4.00	0.00		olivine, vesicles, interstitial	
pyrite	<0.5					disseminated	
STRUCTURES:							
COMMENTS:	Medium-sized varioles consisting of fine granular cpx and plagioclase laths are sporadically present among fibrous variolitic matrix. < 10 µm wide vein, is composed of celadonite + iron hydroxides, with a 2 mm black halo.						

THIN SECTION:	206-1256D-42R-2W, 31-33 cm		Piece No.: 2	Unit: 15	ODP TS#: 143		
ROCK NAME:	Aphyric cryptocrystalline basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.05-0.15 mm						
TEXTURE:	Medium variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.80	0.80	0.10	0.30	0.10	Equant, euhedral	Discrete. Replaced by brown clay minerals.
cpx	0.15	0.15	0.15	0.30	0.15	Stubby-prismatic, euhedral-subhedral	Ophitically-subophitically includes pl laths.
pl	0.00	0.10	0.10	0.60	0.15	Platy, euhedral-subhedral	Clotted with/without cpx.
GROUNDMASS							
cpx						Short prismatic, subhedral-anhedral	
pl						Platy-bow tie	
Fe-Ti ox						Equant skeletal-dendritic chains	
mesostasis							Dendritic mt + acicular pl? + fibrous cpx? + gl
vesicles			0.4	0.4	0.4	Spherical	
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	8.00					olivine, vesicles, interstitial	
STRUCTURES:							
COMMENTS:							

THIN SECTION:	206-1256D-43R-2W, 52-53 cm		Piece No.: 9	Unit: 16b	ODP TS#: 144		
ROCK NAME:	Sparsely ol-pl-phyric cryptocrystalline basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.03-0.10 mm						
TEXTURE:	Medium variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
pl	0.00	0.90	0.05	0.58	0.20	Platy, euhedral-subhedral	Clotted.
ol	0.85	0.85	0.05	0.17	0.07	Equant, euhedral	Discrete. Replaced by brown clay minerals.
GROUNDMASS							
cpx						Prismatic, subhedral-anhedral	
pl						Skeletal platy-bow tie	
Fe-Ti ox						Dendritic	
gl							Replaced by brown clay minerals.
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	5.00					olivine, interstitial	
STRUCTURES:							
COMMENTS:							

THIN SECTION:	206-1256D-45R-1W, 91-93 cm					Piece No.: 16	Unit: 17	ODP TS#: 145
ROCK NAME:	Moderately pl-ol-phyric cryptocrystalline basalt							
WHERE SAMPLED:								
GRAIN SIZE:	0.03-0.10 mm							
TEXTURE:	Fine variolitic							
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS	
			min.	max.	av.			
PHENOCRYSTS								
ol	0.00	2.05	0.03	0.40	0.10	Equant, euhedral	Discrete. Replaced by brown clay minerals.	
pl	1.55	1.55	0.15	0.95	0.30	Stubby-platy, euhedral-subhedral	Zoned rim. Clotted.	
GROUNDMASS								
cpx						Sheaflike-feathery-short prismatic-granular, anhedral-subhedral		
pl						Skeletal laths		
Fe-Ti ox						Dendritic chains-equant skeletal	Replaced by brown clay minerals.	
gl							Dendritic mt + fibrous cpx + gl	
mesostasis								
vesicles			0.4	0.4	0.4			
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS	
			min.	max.	av.			
saponite	15.00					olivine, vesicles, interstitial		
STRUCTURES:								
COMMENTS:								

THIN SECTION:	206-1256D-46R-1W, 24-28 cm					Piece No.: 4	Unit: 18	ODP TS#: 146
ROCK NAME:	Moderately ol-pl-phyric cryptocrystalline basalt							
WHERE SAMPLED:	Near chilled margin							
GRAIN SIZE:	<0.2 mm							
TEXTURE:	Very fine variolitic							
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS	
			min.	max.	av.			
PHENOCRYSTS								
pl	3.76	3.76	0.50	1.00	0.20	Stubby-platy, euhedral-subhedral	Zoned rim. Clotted.	
ol	0.00	3.61	0.14	1.20	0.30	Equant, euhedral	Discrete. Replaced by brown clay minerals.	
GROUNDMASS								
cpx						Fibrous-granular, anhedral		
pl						Skeletal laths		
Fe-Ti ox						Equant skeletal-dendritic chains		
mesostasis							Dendritic mt + fibrous cpx + gl	
Irregular vesicles				1.4		Irregular, subhorizontally elongate		
vesicles			0.05	0.5	0.3	Spherical		
SECONDARY MINERALOGY	PERCENT	percent		REPLACING / FILLING	COMMENTS			
		BLK	HR					
saponite		1.00	12.00	olivine, vesicles, interstitial				
celadonite		2.00	0.00	olivine, vesicles, interstitial				
iron hydroxide		0.50	0.00	olivine, vesicles, interstitial				
pyrite	<0.5			disseminated				
STRUCTURES:	Set of tiny veins with overlapping segments: inter and intragranular cracks with en echelon morphology filled with fibrous and vermicular saponite,							
COMMENTS:	Large skeletal olivine phenocrysts. 1 mm wide black halo, associated vein not present in thin section. 10 µm wide saponite veinlets.							

THIN SECTION:	206-1256D-46R-1W, 64-66 cm					Piece No.: 8	Unit: 18	ODP TS#: 147
ROCK NAME:	Moderately ol-pl-phyric cryptocrystalline basalt							
WHERE SAMPLED:								
GRAIN SIZE:	0.001-0.1 mm							
TEXTURE:	Fine variolitic							
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS	
			min.	max.	av.			
PHENOCRYSTS								
pl	5.20	5.20	0.20	2.10	0.60	Stubby-platy, euhedral-subhedral	Slightly zoned. Clotted.	
ol	0.00	1.85	0.10	0.70	0.20	Equant, euhedral	Discrete. Replaced by brown clay minerals.	
GROUNDMASS								
cpx						Granular-prismatic, anhedral>subhedral		
pl						Thin platy		
Fe-Ti ox						Equant skeletal-dendritic chains		
mesostasis							Dendritic mt + fibrous cpx + gl	
vesicles		tr	0.5	0.5	0.5	Spherical		
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS	
			min.	max.	av.			
saponite	28.00					olivine, vesicles, interstitial, partly replacing cpx, veinlet fill.		
STRUCTURES:								
COMMENTS:	Large skeletal olivine phenocrysts. Three parallel, 0.5 μm wide saponite veinlets.							

THIN SECTION:	206-1256D-46R-1W, 85-88 cm					Piece No.: 11	Unit: 18	ODP TS#: 148
ROCK NAME:	Moderately ol-pl-phyric cryptocrystalline basalt							
WHERE SAMPLED:								
GRAIN SIZE:	0.01-0.3 mm							
TEXTURE:	Fine variolitic							
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS	
			min.	max.	av.			
PHENOCRYSTS								
pl	2.50	2.50	0.20	2.00	0.40	Stubby-platy, euhedral-subhedral	Slightly zoned. Clotted.	
ol	0.00	1.95	0.07	1.20	0.25	Equant, euhedral	Discrete. Replaced by brown clay minerals.	
GROUNDMASS								
cpx						Fibrous-granular, anhedral>subhedral		
pl						Thin skeletal laths		
Fe-Ti ox						Dendritic chains		
gl							Replaced by brown clay minerals.	
vesicles		tr	0.05	0.3	0.15	Spherical		
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS	
			min.	max.	av.			
pyrite	0.50					disseminated		
saponite	25.00					olivine, vesicles, interstitial		
celadonite	1.00					olivine, vesicles, interstitial		
iron hydroxide	1.00					olivine, vesicles, interstitial		
STRUCTURES:								
COMMENTS: Large skeletal olivine phenocrysts up to 1.2 mm. > 0.4 mm wide saponite vein.								

THIN SECTION:	206-1256D-47R-1W, 24-25 cm					Piece No.: 2	Unit: 19	ODP TS#: 149
ROCK NAME:	Moderately ol-pl-phyric cryptocrystalline basalt							
WHERE SAMPLED:								
GRAIN SIZE:	0.001-0.1 mm							
TEXTURE:	Fine variolitic							
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS	
			min.	max.	av.			
PHENOCRYSTS								
pl	1.40	1.40	0.05	0.50	0.20	Platy, euhedral-subhedral	Zoned cores. Clotted.	
ol	0.00	0.85	0.03	0.10	0.60	Equant, euhedral	Discrete. Replaced by brown clay minerals.	
GROUNDMASS								
cpx						Fibrous-granular, anhedral>subhedral		
pl						Thin skeletal laths		
Fe-Ti ox						Dendritic chains		
mesostasis							Dendritic mt + fibrous cpx + gl	
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS	
			min.	max.	av.			
saponite	7.00					olivine, interstitial		
pyrite	1.00					vein fill, along grain boundaries, vesicle fill, replacing primary minerals		
STRUCTURES:								
COMMENTS: Two 0.3 mm wide discontinuous pyrite veinlets.								

THIN SECTION:	206-1256D-49R-2W, 38-39 cm					Piece No.: 1	Unit: 19	ODP TS#: 150
ROCK NAME:	Moderately cpx-pl-ol-phyric cryptocrystalline basalt							
WHERE SAMPLED:								
GRAIN SIZE:	< 0.3 mm							
TEXTURE:	Fine-medium variolitic							
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS	
			min.	max.	av.			
PHENOCRYSTS								
ol	0.00	3.10	0.05	0.40	0.15	Equant, euhedral	Discrete. Replaced by brown clay minerals.	
pl	0.90	0.90	0.04	0.50	0.20	Platy, euhedral-subhedral	Zoned cores. Clotted with/without cpx, rarely with ol.	
cpx	tr	tr	0.05	0.15	0.07	Stubby, euhedral-subhedral	Rare in clots with pl.	
GROUNDMASS								
cpx						Granular-fibrous, subhedral-anhedral		
pl						Platy-skeletal curved, subhedral-euhedral		
Fe-Ti ox						Skeletal-dendritic		
gl							Replaced by brown clay minerals.	
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS	
			min.	max.	av.			
saponite	8.00					olivine, interstitial		
pyrite	0.50					disseminated		
STRUCTURES:								
COMMENTS: Large and fine varioles consist of granular and fibrous cpx, respectively.								

THIN SECTION:	206-1256D-51R-2W, 14-16 cm					Piece No.: 4	Unit: 21	ODP TS#: 151
ROCK NAME:	Aphyric cryptocrystalline basalt							
WHERE SAMPLED:	Hyaloclastic breccia							
GRAIN SIZE:								
TEXTURE:	Holohyaline							
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS	
			min.	max.	av.			
PHENOCRYSTS								
pl	0.15	0.15	0.02	0.20	0.10	Platy, euhedral-subhedral	Zoned cores. Clotted.	
ol	0.00	0.60	0.05	0.20	0.10	Equant, euhedral	Discrete. Replaced by brown clay minerals.	
GROUNDMASS								
cpx		35.85				Granular-fibrous, subhedral-anhedral	Crystallites forming varioles.	
gl		63.30					Replaced by brown clay minerals.	
vesicles		0.10						
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS	
			min.	max.	av.			
palagonite	5.00					glass		
STRUCTURES:	Bands of coalesced varioles define flow-related isoclinal folds. Varioles are slightly flattened along the fold limbs. Late stage veins filled with pale brown clay minerals and cataclastic material crosscut the folds veins with apparent offset of banding.							
COMMENTS:	Brown bands 1-5 mm wide of very fine varioles are embedded in clear pale brown glass and show flow folding.							

THIN SECTION:	206-1256D-52R-1W, 4-5 cm		Piece No.: 1A Unit: 22			ODP TS#: 152	
ROCK NAME:	Sparsely pl-cpx-ol-phyric cryptocrystalline basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.005-0.01 mm						
TEXTURE:	Very fine variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00	0.75	0.02	0.20	0.05	Equant, euhedral	Discrete. Replaced by brown clay minerals.
cpx	0.40	0.40	0.04	0.15	0.08	Granular-short prismatic, subhedral	Clots with pl.
pl	0.35	0.35	0.10	0.80	0.10	Platy-laths, euhedral>subhedral	Clotted with/without cpx, rarely with ol.
GROUNDMASS							
cpx						Fibrous, subhedral-anhedral	Forms varioles.
Fe-Ti ox						Equant-skeletal	No dendrite present.
pl						Thin skeletal laths	
gl							Replaced by brown clay minerals.
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	6.00					mainly as spherulites, olivine, interstitial	
pyrite	0.50					vein	
STRUCTURES:							
COMMENTS:							
One large plagioclase phenocryst is zoned in the core. Others form macrophenocrysts clotted with ol + cpx and only zoned in the rim. Although cpx is predominantly fibrous, magnetite has an equant form and few crystals are skeletal. Dendritic mt absent. 10 µm pyrite veinlet, with disseminated pyrite in the adjacent 0.2 mm of host rock							

THIN SECTION:	206-1256D-52R-2W, 15-16 cm		Piece No.: 4	Unit: 23	ODP TS#: 153		
ROCK NAME:	Aphyric cryptocrystalline basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.005-0.2 mm						
TEXTURE:	Fine variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00	0.65	0.04	0.10	0.07	Equant, euhedral	Discrete. Replaced by brown clay minerals.
pl	0.20	0.20	0.10	0.70	0.20	Platy, euhedral-subhedral	Some are zoned in the core. Discrete > clots.
GROUNDMASS							
cpx						Granular-fibrous, subhedral-anhedral	Forms varioles.
pl						Thin skeletal laths	
Fe-Ti ox						Dendritic	
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
pyrite	0.50					disseminated	
saponite	6.00					mainly as spherulites, olivine, interstitial	
STRUCTURES:							
COMMENTS:	One plagioclase phenocryst is zoned in the core and one is oscillatory zone. Others have zoned rims.						

THIN SECTION:	206-1256D-53R-3W, 24-25 cm					Piece No.: 2	Unit: 23	ODP TS#: 154
ROCK NAME:	Sparsely pl-cpx-ol-phyric cryptocrystalline basalt							
WHERE SAMPLED:								
GRAIN SIZE:	0.01-0.3 mm							
TEXTURE:	Medium variolitic							
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS	
			min.	max.	av.			
PHENOCRYSTS								
ol	0.00	1.15	0.05	0.24	0.05	Equant, euhedral	Discrete. Replaced by brown clay minerals.	
pl	0.35	0.35	0.10	0.80	0.30	Stubby-platy, euhedral-subhedral	Zoned cores.	
GROUNDMASS								
cpx						Prismatic-granular, subhedral-anhedral		
pl						Platy-bow tie, euhedral-subhedral	Fan-shaped varioles with granular cpx.	
Fe-Ti ox						Equant-skeletal	No dendrite present.	
mesostasis							Dendritic Fe-Ti oxide + very thin pl laths + fibrous cpx.	
gl	0.00						Replaced by brown clay minerals.	
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS	
			min.	max.	av.			
pyrite	<0.5					disseminated		
saponite	4.00					olivine, interstitial		
STRUCTURES:								
COMMENTS:								

THIN SECTION:	206-1256D-54R-3W, 116-117 cm					Piece No.: 17	Unit: 23	ODP TS#: 155
ROCK NAME:	Sparsely pl-cpx-ol-phyric cryptocrystalline basalt							
WHERE SAMPLED:								
GRAIN SIZE:	< 0.1 mm							
TEXTURE:	Very fine variolitic							
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS	
			min.	max.	av.			
PHENOCRYSTS								
ol	0.00	0.60	0.02	0.24	0.06	Equant, euhedral	Discrete. Replaced by saponite.	
cpx	0.45	0.45	0.10	0.45	0.20	Prismatic, subhedral-euhedral	Discrete or clotted with pl.	
pl	0.10	0.10	0.10	0.15	0.10	Platy-stubby, euhedral-subhedral	Reverse zoning in large discrete phenocrysts. Small crystals are clotted with cpx.	
GROUNDMASS								
cpx						Prismatic-fibrous, euhedral-subhedral		
pl						Thin laths		
Fe-Ti ox						Equant > dendritic		
gl	0					Interstices between varioles	Replaced by saponite.	
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS	
			min.	max.	av.			
saponite	5.00					olivine, interstitial, vesicles		
iron hydroxides	0.50					olivine, interstitial, vesicles		
STRUCTURES:								
COMMENTS:	Smaller plagioclase form clots with cpx. Larger plagioclase is discrete or clotted with ol. Some reversely zoned plagioclase have subhedral calcic core in sodic mantle with inclusions of cpx, mt, brown glass (now saponite), which in turn enclosed by calcic rim.							

THIN SECTION:	206-1256D-55R-2W, 63-64 cm		Piece No.: 6	Unit: 23	ODP TS#: 156		
ROCK NAME:	Sparsely cpx-ol-pl-phyric cryptocrystalline basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.01-0.3 mm						
TEXTURE:	Fine-medium variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
pl	0.45	0.45	0.10	2.00	0.20	Platy-stubby, euhedral-subhedral	Reverse zoning. Clotted with/without cpx, ol.
ol	0.00	0.40	0.05	0.25	0.10	Equant, euhedral	Discrete>clots with pl.
cpx	0.25	0.25	0.06	0.26	0.10	Granular-stubby, subhedral-anhedral	Clotted with pl. Some poikilitic cpx.
GROUNDMASS							
cpx						Prismatic-fibrous-granular, euhedral-anhedral	
pl						Platy-thin laths, euhedral-subhedral	Some are long, curved, skeletal crystals.
Fe-Ti ox						Equant polyhedral>dendritic	
vesicles		tr				Spherical	Filled by saponite.
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
pyrite	1.00					vein, patch, disseminated	
saponite	6.00					olivine, vesicles, interstitial	
albite	0.50					partly replacing primary plagioclase	
STRUCTURES:							
COMMENTS:	Cpx phenocrysts are clotted with reversely zoned plagioclase. 0.3 mm wide pyrite veinlet with pyrite filling interstitial space and small vesicles in the adjacent host rock. 3 mm x 1mm pyrite rich patch.						

THIN SECTION:	206-1256D-56R-2W, 66-67 cm		Piece No.: 8	Unit: 23	ODP TS#: 157		
ROCK NAME:	Aphyric cryptocrystalline basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.005-0.3 mm						
TEXTURE:	Fine variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00	0.45	0.05	0.30	0.07	Equant, euhedral	Discrete>clots. Replaced by saponite.
pl	0.20	0.20	0.10	0.40	0.10	Platy, euhedral-subhedral	Reverse zoning.
GROUNDMASS							
cpx						Fibrous-prismatic, anhedral-euhedral	
pl						Thin laths-curved elongate plates	
Fe-Ti ox						Equant skeletal-dendritic	
gl	0.00						Replaced by clay minerals.
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	4.00					olivine, vesicles, interstitial	
iron hydroxides	1.00					olivine, vesicles, interstitial	
STRUCTURES:							
COMMENTS:							

THIN SECTION:	206-1256D-57R-2W, 29-30 cm		Piece No.: 1C Unit: 24a			ODP TS#: 158	
ROCK NAME:	Moderately cpx-pl-ol-phyric microcrystalline basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.1-1.1 mm						
TEXTURE:	Coarse variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00	7.40	0.06	1.40	0.15	Equant, euhedral	Discrete. Replaced by saponite.
pl		tr	0.10	0.10	0.10	Thin platy-skeletal, euhedral-subhedral	Reverse zoning.
cpx		tr	0.20	0.20	0.20	Granular-stubby, subhedral-anhedral	Clotted with ol.
GROUNDMASS							
pl						Platy-skeletal-curved-bow tie	
aug						Stubby-prismatic, subhedral-anhedral	
Fe-Ti ox						Equant, skeletal	
pig						Prismatic, subhedral-anhedral	Intergrowth with aug.
mesostasis							Intergrowth of qtz + ab, mt, apatite, altered gl.
vesicles		tr		1.6			
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	10.00					olivine, interstitial, external rims of large (1mm) vesicles	
Ca-carbonate	<0.5					cores of vesicles	
pyrite	0.50					external rims of large vesicles, associated with saponite	
STRUCTURES:							
COMMENTS:							

THIN SECTION:	206-1256D-57R-3W, 0-1 cm					Piece No.: 1	Unit: 24a	ODP TS#: 159
ROCK NAME:	Sparsely pl-ol-phyric cryptocrystalline basalt							
WHERE SAMPLED:	Red altered part from a thick massive lava							
GRAIN SIZE:	0.05-1.4 mm							
TEXTURE:	Coarse variolitic							
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS	
			min.	max.	av.			
PHENOCRYSTS								
ol	0.00		0.08	0.60	0.20	Equant, euhedral-skeletal	Discrete. Replaced by saponite.	
pl			0.30	2.10	0.30	Stubby, euhedral-subhedral	Discrete-clots. Some are mottled with dusty inclusions.	
GROUNDMASS								
pl						Platy, euhedral-subhedral		
cpx						Stubby-short prismatic, subhedral-anhedral		
Fe-Ti ox						Equant, skeletal		
mesostasis							Intergrowth of qtz + ab, altered gl.	
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS	
			min.	max.	av.			
saponite	25.00					cpx,		
iron hydroxide	10.00					large irregular vugs		
celadonite	20.00					large irregular vugs, partly replacing plagioclase		
chalcedony	10.00					large irregular vugs		
feldspar (K or Na?)	8.00					replacing primary plagioclase		
STRUCTURES:								
COMMENTS:	Some plagioclase have a sodic, euhedral-resorbed core in more calcic mantle with normal rim. Dusty inclusions present between the core and mantle. Normally zoned plagioclase has a calcic core surrounded by normal rim, and lacks the mantle.							

THIN SECTION:	206-1256D-57R-4W, 77-78 cm					Piece No.: 4	Unit: 24b	ODP TS#: 160
ROCK NAME:	Moderately ol-cpx-pl-phyric cryptocrystalline basalt							
WHERE SAMPLED:								
GRAIN SIZE:	Very fine variolitic							
TEXTURE:								
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS	
			min.	max.	av.			
PHENOCRYSTS								
pl	5.60	5.60	0.10	0.93	0.10	Thin platy-skeletal, euhedral-subhedral	Slight zoning. Clotted with ol, cpx.	
cpx	1.50	1.50				Granular-stubby, subhedral-anhedral	Clotted with pl, ol.	
ol	0.00	0.80	0.04	0.25	0.10	Equant, euhedral-skeletal	Replaced by saponite.	
GROUNDMASS								
cpx						Fibrous-granular, anhedral		
pl						Thin laths-curved elongate plates		
Fe-Ti ox						Equant skeletal-dendritic		
vesicles		tr						
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS	
			min.	max.	av.			
saponite	4.00					olivine, vesicle rims, interstitial, isolated spherulites, partly replacing primary cpx and plagioclase	when replacing olivine phenocrysts saponite is associated with chalcedony.	
chalcedony	0.50					cores of vesicles		
Ca-carbonate	0.50					cores of vesicles		
pyrite	<0.5					disseminated		
STRUCTURES:								
COMMENTS:	Glomerocrysts of olivine with cpx + pl. Plagioclase in clots has normal rim, but is not zoned in the core. Large plagioclase (0.2-0.5 mm) encloses poikilitically olivine. Discrete thinner, elongate plagioclase has a clear core.							

THIN SECTION:	206-1256D-59R-2W, 114-115 cm					Piece No.: 12	Unit: 24d	ODP TS#: 161
ROCK NAME:	Moderately ol-cpx-pl-phyric cryptocrystalline basalt							
WHERE SAMPLED:								
GRAIN SIZE:	mm							
TEXTURE:	Very fine variolitic							
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS	
			min.	max.	av.			
PHENOCRYSTS								
pl			0.11	1.30	0.20	Platy, euhedral-subhedral	Clotted with ol, cpx. Normal zoning with clear core.	
cpx			0.04	0.30	0.10	Granular, anhedral-subhedral		
ol	0.00		0.10	1.20	0.20	Equant, euhedral-skeletal	Clotted with pl, cpx. Replaced by saponite.	
GROUNDMASS								
cpx						Fibrous-granular, anhedral-subhedral		
pl						Thin laths-curved elongate plates		
Fe-Ti ox						Equant, skeletal-dendritic		
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS	
			min.	max.	av.			
saponite	7.00					olivine phenocryst rims, interstitial, isolated sherulites, partly replacing primary plagioclase and cpx		
chalcedony	0.50					olivine phenocryst cores		
STRUCTURES:								
COMMENTS: Cpx phenocrysts form core of variolitic aggregates. Larger cpx subophitically encloses pl.								

THIN SECTION:	206-1256D-59R-4W, 0-1 cm		Piece No.: 1	Unit: 24d	ODP TS#: 162		
ROCK NAME:	Sparsely pl-ol-phyric cryptocrystalline basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.01-0.1 mm						
TEXTURE:	Medium-coarse variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00	0.95	0.06	0.70	0.15	Equant, euhedral	Discrete. Replaced by saponite.
pl	0.30	0.30	0.30	0.50	0.50	Platy, euhedral-subhedral	Clots.
GROUNDMASS							
pl						Platy-thin skeletal-bow tie	
aug						Thin prismatic-granular, subhedral-anhedral	Some are very elongate.
Fe-Ti ox						Equant, skeletal-dendritic	
plg						Prismatic, subhedral-anhedral	
mesostasis							Granophyric intergrowths of qtz and sodic pl + dendritic mt + apatite
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	10.00					interstitial, olivine, partly replacing primary cpx	
STRUCTURES:							
COMMENTS:	Platy pl + small stubby cpx + ol clots.						

THIN SECTION:	206-1256D-60R-2W, 35-48 cm					Piece No.: 4	Unit: 24e	ODP TS#: 163
ROCK NAME:	Moderately ol-phyric fine-grained basalt							
WHERE SAMPLED:	A piece of chunk							
GRAIN SIZE:	0.02-0.5 mm							
TEXTURE:	Coarse variolitic							
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS	
			min.	max.	av.			
PHENOCRYSTS								
ol	0	5.5	0.05	0.8	0.2	Equant, euhedral-skeletal	Clots-discrete. Replaced by saponite.	
GROUNDMASS								
pl						Platy-fan shaped-curved, subhedral		
aug						Stubby-prismatic, subhedral-anhedral		
Fe-Ti ox						Equant, skeletal		
plg						Prismatic-subhedral-anhedral		
mesostasis							Granophyric intergrowths of qtz and sodic pl + fine cpx? + apatite	
qtz						Anhedral		
apatite								
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS	
			min.	max.	av.			
saponite	13					olivine, partly replacing cpx, interstitial, large (1.5 mm) vugs		
pyrite	0.5					disseminated		
STRUCTURES:								
COMMENTS:	Olivine forms clots. Especially larger olivine has skeletal forms, clotted together.							

THIN SECTION:	206-1256D-61R-1W, 90-96 cm		Piece No.: 13 Unit: 25			ODP TS#: 164	
ROCK NAME:	Aphyric cryptocrystalline basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.01-0.05 mm						
TEXTURE:	Intergranular-coarse variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00	0.35	0.04	0.30	0.07	Equant, euhedral	Discrete. Replaced by saponite.
GROUNDMASS							
cpx			0.03	0.05		Granular-prismatic, subhedral-anhedral	
pl						Skeletal thin laths	
Fe-Ti ox						Equant skeletal-dendritic chians	
gl							
vesicles		0.55		0.23		Spherical	Filled by celadonite.
SECONDARY MINERALOGY	PERCENT		percent			REPLACING / FILLING	COMMENTS
			MIX	HR			
saponite				10.00		olivine, vesicles, interstitial	
celadonite			6.00			olivine, vesicles, interstitial	
iron hydroxides			4.00			olivine, vesicles, interstitial	
pyrite	<0.5					pyrite front	
STRUCTURES:							
COMMENTS:	6 mm wide mixed halo, with disseminated pyrite front, the associated vein is no longer present.						

THIN SECTION:	206-1256D-62R-1W, 23-26 cm					Piece No.: 6	Unit: 25	ODP TS#: 165
ROCK NAME:	Aphyric cryptocrystalline basalt							
WHERE SAMPLED:								
GRAIN SIZE:	0.01-0.2 mm							
TEXTURE:	Medium variolitic							
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS	
			min.	max.	av.			
PHENOCRYSTS								
ol	0.00	0.35	0.05	0.20	0.08	Equant euhedral	Discrete. Replaced by saponite.	
GROUNDMASS								
pl						Platy-thin laths		
cpx						Granular-prismatic-acicular		
Fe-Ti ox						Equant skeletal-dendritic		
gl								
SECONDARY MINERALOGY	PERCENT		percent			REPLACING / FILLING	COMMENTS	
			BRN	Grn-blk	HR			
saponite				3 to 7	8.00	vesicles, olivine, interstitial	saponite / celadonite mixtures?	
celadonite			0.50	3 to 7		vesicles, olivine, interstitial	saponite / celadonite mixtures?	
iron oxyhydroxides			7.50			vesicles, olivine, interstitial		
pyrite	<0.5					pyrite front		
opal	<0.5					vein		
STRUCTURES:								
COMMENTS:	< 0.2 mm wide vein, composed of iron oxyhydroxide + opal spherules and later celadonite with a mixed halo. The halo is composed of (from vein to host rock) a 0.2 mm wide light gray halo (celadonite + minor iron oxyhydroxide), an orange brown, 5 mm halo (predominantly iron oxyhydroxide) and a light greenish gray 5-8 mm halo (celadonite/nontronite or celadonite/saponite). This mixed halo is separated from the host rock by a pyrite front.							

THIN SECTION: 206-1256D-63R-1W, 81-83 cm **Piece No.:** 6 **Unit:** 25 **ODP TS#:** 166
ROCK NAME: Sparsely ol-cpx-pl-phyric cryptocrystalline basalt
WHERE SAMPLED:
GRAIN SIZE: <0.005 mm
TEXTURE: Very fine variolitic

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
pl	0.85	0.85	0.90	0.90	0.90	Platy, euhedral-subhedral	Discrete-clotted. Slight normal zoning.
cpx	0.20	0.20	0.50	0.50	0.50	Stubby, euhedral-subhedral	Clotted.
ol	0.00	0.20	0.10	0.10	0.10	Equant, euhedral	Clotted with/without pl, cpx. Replaced by saponite.
GROUNDMASS							
cpx						Fibrous-prismatic	
pl						Skeletal thin laths	
Fe-Ti ox						Dendritic	
mesostasis							
vesicles		0.10		0.23		Spherical	Filled by clay minerals + qtz.

SECONDARY MINERALOGY	PERCENT	percent		REPLACING / FILLING	COMMENTS
		halo	HR		
saponite			1.50	olivine, vesicles, interstitial	
celadonite		2.00		olivine, vesicles, interstitial	
pyrite	<0.5			disseminated	
albite	0.50			replacing plagioclase	
iron oxyhydroxide	<0.5			vein	
chalcedony			1.50	vein, interstitial spherulites, associated with saponite	

STRUCTURES:

COMMENTS: Reversely zoned plagioclase has resorbed, sodic core, calcic mantle and sodic rim. Normally zoned plagioclase does not have mantle. > 0.07 mm wide vein, composed of chalcedony + trace iron oxyhydroxide and celadonite. The vein has a 0.3 mm poorly defined alteration halo.

THIN SECTION:	206-1256D-65R-1W, 137-138 cm	Piece No.: 15	Unit: 26	ODP TS#: 167
ROCK NAME:	Moderately ol-cpx-pl-phyric cryptocrystalline basalt			
WHERE SAMPLED:				
GRAIN SIZE:	0.005-0.4 mm			
TEXTURE:	Fine variolitic			

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
pl	2.20	2.20	0.12	1.20	0.40	Platy, euhedral-subhedral	Discrete crystal-clotted with/without cpx, ol. Normally or oscillatory zoned.
cpx	0.65	0.65	0.09	1.10	0.15	Stubby-prismatic, euhedral-subhedral	Clotted with/without cpx, ol. Large phenocryst subophitically encloses pl.
ol	0.00	0.55	0.05	0.30	0.07	Equant, euhedral-skeletal	Discrete crystals. Replaced by saponite.
GROUNDMASS							
cpx						Fibrous-prismatic	
pl						Platy-thin laths	
Fe-Ti ox						Dendritic-equant skeletal	
vesicles		0.05					

SECONDARY MINERALOGY	PERCENT	SIZE (mm)			REPLACING / FILLING	COMMENTS
		min.	max.	av.		
saponite	7.00				interstitial, plagioclase, olivine	
albite	0.50				replacing plagioclase	
pyrite	<0.5				vein, disseminated adjacent to vein.	
chalcedony	0.50				small spherulites associated with saponite in interstitial areas.	

STRUCTURES:

COMMENTS: 20 µm wide pyrite vein, with minor pyrite in the adjacent host rock.

THIN SECTION:	206-1256D-65R-3W, 14-16 cm					Piece No.: 1	Unit: 26	ODP TS#: 168
ROCK NAME:	Moderately ol-pl-cpx-phyric cryptocrystalline basalt							
WHERE SAMPLED:								
GRAIN SIZE:	0.005-0.5 mm							
TEXTURE:	Fine variolitic							
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS	
			min.	max.	av.			
PHENOCRYSTS								
cpx	1.65	1.65	0.20	1.40	0.20	Prismatic, subhedral-euhedral	Clotted with pl. Some subophitically enlose pl.	
pl	1.25	1.25	0.20	1.00	0.20	Platy, euhedral-subhedral	Discrete-clotted with/without cpx.	
ol	0.00	0.40	0.05	0.25	0.08	Equant, euhedral	Discrete crystals. Rarely clotted with cpx. Replaced by saponite.	
GROUNDMASS								
cpx						Granular- prismatic, subhedral-anhedral		
pl						Skeletal platy		
Fe-Ti ox						Dendritic-equant skeletal		
gl	0.00						Replaced by brown clay minerals.	
mesostasis							Tiny cpx + pl laths + dendritic mt in altered glass.	
SECONDARY MINERALOGY	PERCENT	SIZE (mm)			REPLACING / FILLING	COMMENTS		
		min.	max.	av.				
saponite	7.00				olivine, plagioclase, vesicles, interstitial			
chalcedony	0.50				small spherulites associated with saponite in interstitial areas.			
albite	0.50				plagioclase			
STRUCTURES:								
COMMENTS:								

THIN SECTION: 206-1256D-67R-2W, 73-74 cm **Piece No.:** 7 **Unit:** 26 **ODP TS#:** 169
ROCK NAME: Sparsely ol-cpx-pl-phyric cryptocrystalline basalt
WHERE SAMPLED:
GRAIN SIZE: 0.005-0.1 mm
TEXTURE: Fine variolitic

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
pl	0.85	0.85	0.07	0.65	0.30	Platy, euhedral-subhedral	Clotted with/without cpx. Normal pl has clear cores and reverse one has dusty cores.
cpx	0.55	0.55	0.08	0.47	0.40	Stubby, subhedral-euhedral	Subophitically encloses pl.
ol	0.00	0.40	0.05	0.26	0.10	Equant, euhedral	Discrete crystals. Replaced by saponite.
GROUNDMASS							
cpx						Fibrous>granular	
pl						Thin skeletal-platy	
Fe-Ti ox						Dendritic-equant skeletal	
gl	0.00						Replaced by brown clay minerals.

SECONDARY MINERALOGY	PERCENT	percent		REPLACING / FILLING	COMMENTS
		BLK	HR		
celadonite		3.00		olivine, vesicles, interstitial, plagioclase	
saponite			6.00	olivine, vesicles, interstitial, plagioclase	
iron oxyhydroxide		3.00		olivine, vesicles, interstitial, plagioclase	
albite	1.00			plagioclase	

STRUCTURES:

COMMENTS: Normally zoned plagioclase has a clear core and is clotted with cpx phenocrysts. Reversely zoned plagioclase has a mottled core with clay minerals, cpx, glass and dendritic magnetite. Most cores are euhedral but some are resorbed. Forms clots with reverse plagioclase only. > 50 mm wide vein, composed of iron oxyhydroxide and celadonite, with a 2.5 mm wide black halo without a pyrite front.

THIN SECTION:	206-1256D-67R-3W, 57-66 cm		Piece No.: 7	Unit: 26	ODP TS#: 170		
ROCK NAME:	Sparsely cpx-pl-ol-phyric cryptocrystalline basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.01-0.1 mm						
TEXTURE:	Fine-medium variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00	3.00	0.06	0.30	0.09	Equant, euhedral-skeletal	Discrete crystals. Replaced by saponite.
pl	0.65	0.65	0.07	0.60	0.30	Platy, euhedral	Clotted.
cpx	0.10	0.10	0.20	0.40	0.20	Short prismatic, euhedral	Discrete crystal or subophitically include plagioclase.
GROUNDMASS							
cpx						Fibrous-prismatic	Bimodal in grain size.
pl						Skeletal thin laths-bow tie	
Fe-Ti ox						Dendritic > equant skeletal	
gl	0.00						Replaced by brown clay minerals.
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	5.00					olivine, vesicles, interstitial, and partially replacing plagioclase.	
pyrite	<0.5					disseminated	
albite	<0.5					plagioclase	
STRUCTURES:							
COMMENTS:	The groundmass contains two types of varioles consisting of fibrous cpx + very thin pl, and granular-prismatic cpx + platy, skeletal-bow tie like plagioclase.						

THIN SECTION: 206-1256D-69R-1W, 15-17 cm **Piece No.:** 4 **Unit:** 26 **ODP TS#:** 171
ROCK NAME: Sparsely pl-cpx-ol-phyric cryptocrystalline basalt
WHERE SAMPLED:
GRAIN SIZE: 0.005-0.1 mm
TEXTURE: Fine variolitic

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00	0.55	0.07	0.30	0.08	Equant, euhedral-skeletal	Discrete crystals. Replaced by saponite.
cpx (aug>pig)	0.45	0.45	0.06	0.80	0.20	Stubby, euhedral-subhedral	Discrete crystal.
pl	0.25	0.25	0.15	0.85	0.20	Platy, euhedral-subhedral	Discrete crystal-clots. Normal zoning in clots with cpx.
GROUNDMASS							
cpx						Fibrous-granular	
pl						Thin laths	
Fe-Ti ox						Dendritic	
gl	0.00						Replaced by brown clay minerals.
vesicles					0.05	Spherical	

SECONDARY MINERALOGY	PERCENT	percent		REPLACING / FILLING	COMMENTS
		Mixed	HR		
saponite			8.00	olivine, plagioclase, interstitial, vesicles	
celadonite		3.00		olivine, plagioclase, interstitial, vesicles	
iron-oxyhydroxide		5.00		olivine, plagioclase, interstitial, vesicles	
pyrite	<0.5			pyrite front, disseminated	
albite	0.50			plagioclase	

STRUCTURES:

COMMENTS: Plagioclase with dusty core has reverse rim. Normally zoned plagioclase forms clots with cpx, but reversely zoned plagioclase is clotted with reverse plagioclase only. Rare pigeonite? prism is included in the core of a euhedral augite phenocryst that includes plagioclase. 0.6 mm wide iron oxyhydroxide vein, with an associated 10mm wide mixed halo, which has a succession of different colored bands (orange, brown, green) corresponding to more or less iron oxyhydroxide and celadonite. The most external halo (green) contains celadonite and no iron oxyhydroxide. the mixed halo has a pyrite front.

THIN SECTION:	206-1256D-72R-1W, 116-124 cm		Piece No.: 10 Unit: 26			ODP TS#: 172	
ROCK NAME:	Aphyric cryptocrystalline basalt						
WHERE SAMPLED:	Fine lens in a sheet flow						
GRAIN SIZE:	0.001-0.1 mm						
TEXTURE:	Very fine variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
pl	0.50	0.50	0.06	0.70	0.30	Platy, euhedral-subhedral	Clotted with/without cpx, ol. Discrete crystals.
ol	0.00	0.15	0.07	0.10	0.08	Equant, euhedral	Rarely clotted with pl (enclose by pl).
cpx	tr	tr	0.22	0.65	0.40	Stubby, euhedral-subhedral	Clotted with pl.
GROUNDMASS							
cpx						Fibrous-granular	
pl						Thin laths	
Fe-Ti ox						Dendritic-equant skeletal	
gl	0.00						Replaced by brown clay minerals.
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	3.00					olivine, plagioclase, interstitial, vesicles	
celadonite	3.00					olivine, plagioclase, interstitial, vesicles	
iron oxyhydroxide	3.00					olivine, plagioclase, interstitial, vesicles	
pyrite	<0.5					disseminated	
magnetite	<0.5					vein, interstitial adjacent to vein	
albite	1.00					plagioclase	
STRUCTURES:							
COMMENTS:	Fine lens in a sheet flow, which shows gradual change in density of varioles and grain size as in the chilled margin on a flow top. 50 mm wide vein, composed of alternating celadonite, iron oxyhydroxide and magnetite. The alteration minerals in the adjacent rock are the same as those filling veins.						

THIN SECTION:	206-1256D-74R-1W, 110-112 cm		Piece No.: 9	Unit: 26	ODP TS#: 173		
ROCK NAME:	Sparsely cpx-pl-ol cryptocrystalline basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.005-0.3 mm						
TEXTURE:	Medium variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
ol	0.00	1.00	0.05	0.25	0.10	Equant, euhedral-skeletal	Discrete crystals. Replaced by saponite.
pl		0.20	0.30	1.00	0.30	Platy, euhedral	Discrete crystal.
cpx		0.10	0.45	0.45	0.45	Stubby, euhedral	Discrete crystal.
GROUNDMASS							
cpx						Granular- prismatic, subhedral-anhedral	
pl						Skeletal platy-bow tie	
Fe-Ti ox						Dendritic	
gl	0.00						Replaced by brown clay minerals.
vesicles			0.05	0.2	0.1	Spherical	
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	7.00					interstitial, olivine, plagioclase, vesicles	
albite	1.50					plagioclase	
STRUCTURES:							
COMMENTS:							

THIN SECTION:	206-1256D-74R-2W, 35-36 cm		Piece No.: 4	Unit: 26	ODP TS#: 174		
ROCK NAME:	Aphyric cryptocrystalline basalt						
WHERE SAMPLED:							
GRAIN SIZE:	0.005-0.1 mm						
TEXTURE:	Fine variolitic						
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm)			MORPHOLOGY	COMMENTS
			min.	max.	av.		
PHENOCRYSTS							
pl	0.70	0.70	0.15	0.08	0.40	Platy, euhedral-subhedral	Clotted.
cpx	0.20	0.20	0.06	0.56	0.20	Stubby, subhedral-anhedral	Subophitically encloses pl.
ol	0.00	tr	0.05	0.15	0.07	Equant, euhedral	Discrete crystals. Replaced by saponite + qtz.
GROUNDMASS							
cpx						Fibrous-short prismatic	
pl						Thin laths	
Fe-Ti ox						Dendritic > equant skeletal	
gl	0.00						Replaced by brown clay minerals.
SECONDARY MINERALOGY	PERCENT		SIZE (mm)			REPLACING / FILLING	COMMENTS
			min.	max.	av.		
saponite	5.00					olivine, plagioclase, interstitial	
albite	0.50					plagioclase	
pyrite	0.50					disseminated	
chalcedony	<0.5					small interstitial spherulites associated with saponite	
STRUCTURES:							
COMMENTS:	Reversely zoned plagioclase has dusty core and is clotted with reverse plagioclase only. Normally zoned plagioclase has both dusty and clear cores and is clotted with cpx. Sometimes subophitically enclosed by cpx phenocrysts.						