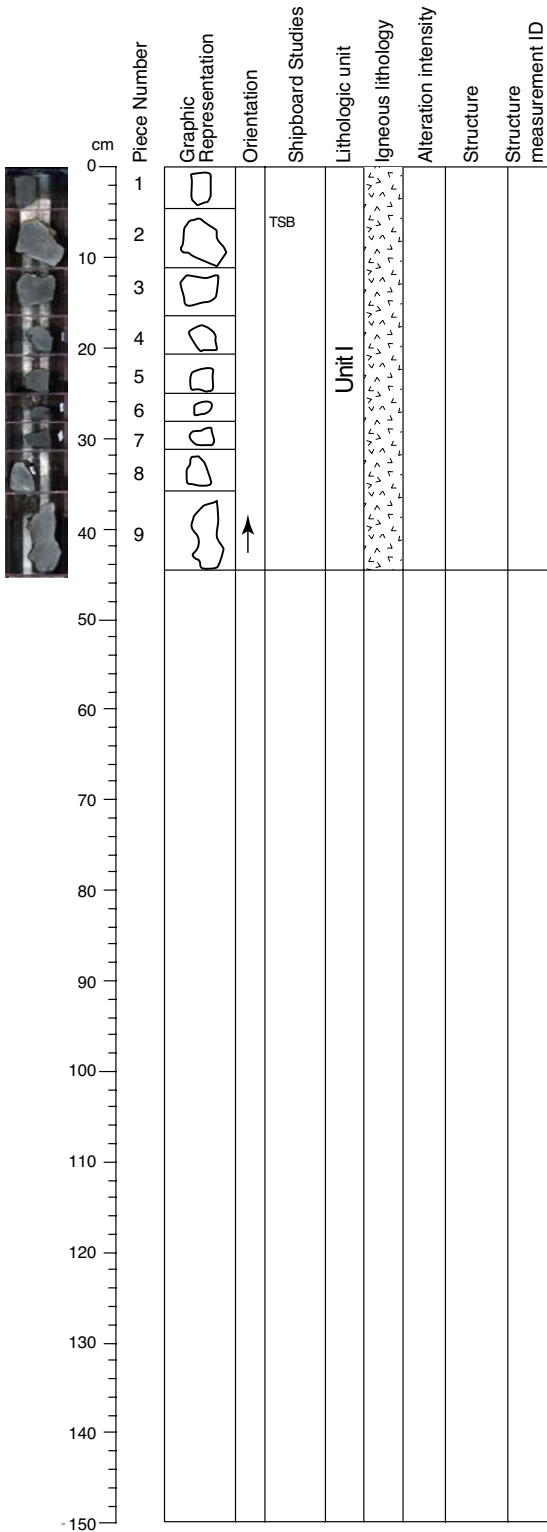


**Core Photo**



**209-1273A-1R-1 (Section top: 0.00 mbsf)**

ROCK NAME: BASALT

Pieces 1–10

COLOR: Light gray

PRIMARY MINERALOGY:

Aphyric

Vesicles            Mode <1%  
                           Size <1 mm


COMMENTS: This section consists of angular pebbles of aphyric basalt with a thin iron-manganese coating. All the samples have a variable but low abundance of vesicles that are more abundant toward the rim. Vesicle size is variable but less than a 1 mm in diameter. Pieces 1 and 5 have a fresh glassy crust.

SECONDARY MINERALOGY:

No visible alteration.

THIN SECTIONS: Sample 1273A-1R-1, 5-8 cm

**Core Photo**

cm	Piece Number	Graphic Representation	Orientation	Shipboard Studies	Lithologic unit	Igneous lithology	Alteration intensity	Structure	Structure measurement ID
0	1								
10									
20									
30									
40									
50									
60									
70									
80									
90									
100									
110									
120									
130									
140									
150									

**209-1273B-1R-1 (Section top: 0.00 mbsf)**

ROCK NAME: BASALT

Pieces 1

COLOR: Light gray

PRIMARY MINERALOGY:

Aphyric

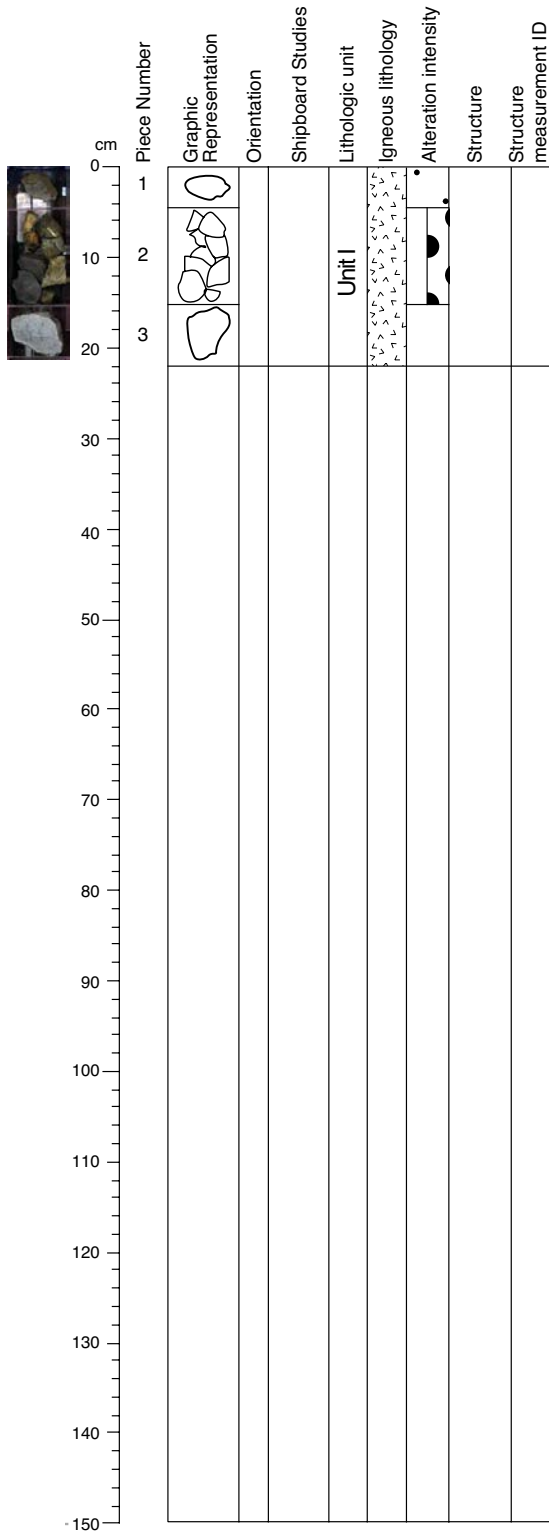
Vesicles            Mode <1%  
                           Size 0.5–1 mm

COMMENTS: This section consists of one angular pebble of aphyric basalt with a thin iron-manganese coating. Vesicles are more abundant toward the rim and vary in size from 0.5 mm to 1 mm in diameter.

SECONDARY MINERALOGY:

No visible alteration.

**Core Photo**



**209-1273B-2R-1 (Section top: 11.6 mbsf)**

ROCK NAME: BASALT

Pieces 1-3

COLOR: Light gray

PRIMARY MINERALOGY:

Aphyric

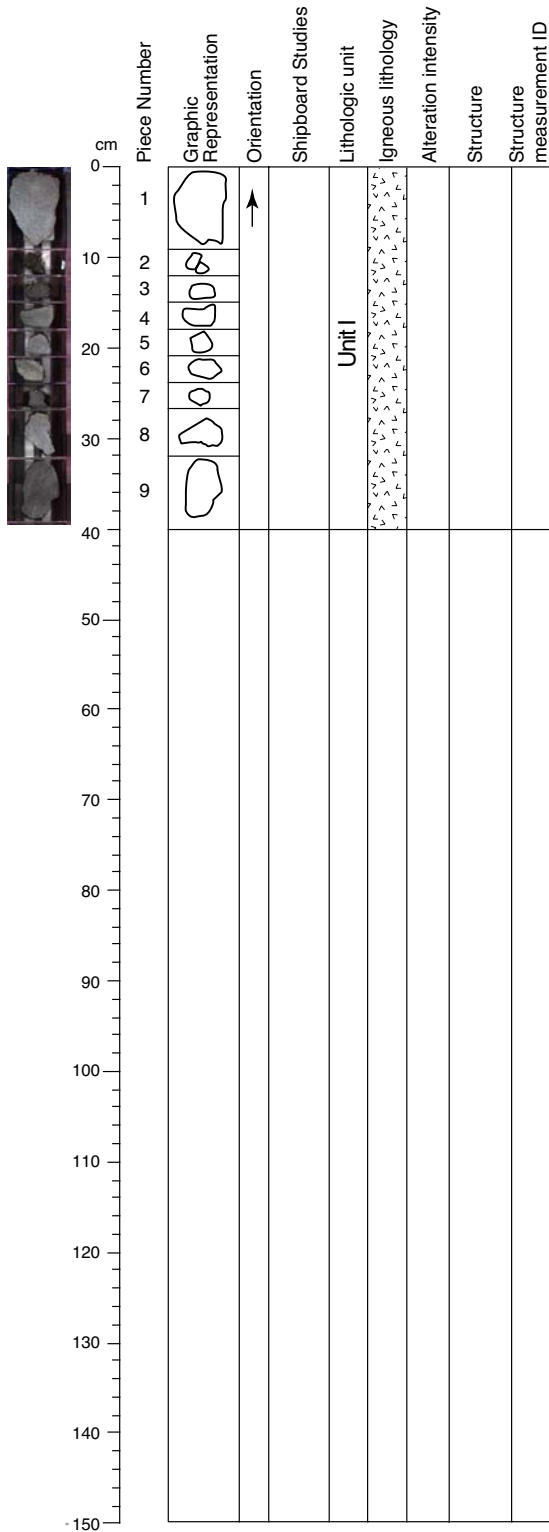
Vesicles Mode 1%-2%  
 Size <1.5 mm

COMMENTS: This section consists of angular pebbles of aphyric basalt with a thin iron-manganese coating and two pieces of hyaloclastic breccia with fresh glass. The aphyric basalts have a low abundance of vesicles, randomly distributed but overall more abundant toward the rim. Vesicle size is variable but less than a 1.5 mm in diameter.

SECONDARY MINERALOGY:

Piece 1 is a pillow-rind breccia with a cement of red clay and Fe-oxyhydroxide. Glass fragments within the breccia appear mostly fresh. The total percent of alteration is 10%. Piece 2 is a bin with rubby pieces of highly altered pillow-rind breccia and fresh basalt. Piece 3 shows no visible alteration.

**Core Photo**



**209-1273B-3R-1 (Section top: 16.6 mbsf)**

ROCK NAME: BASALT

Pieces 1-9

COLOR: Light gray

PRIMARY MINERALOGY:

Aphyric with rare plagioclase  
 Mode <0.5%  
 Size <1 mm

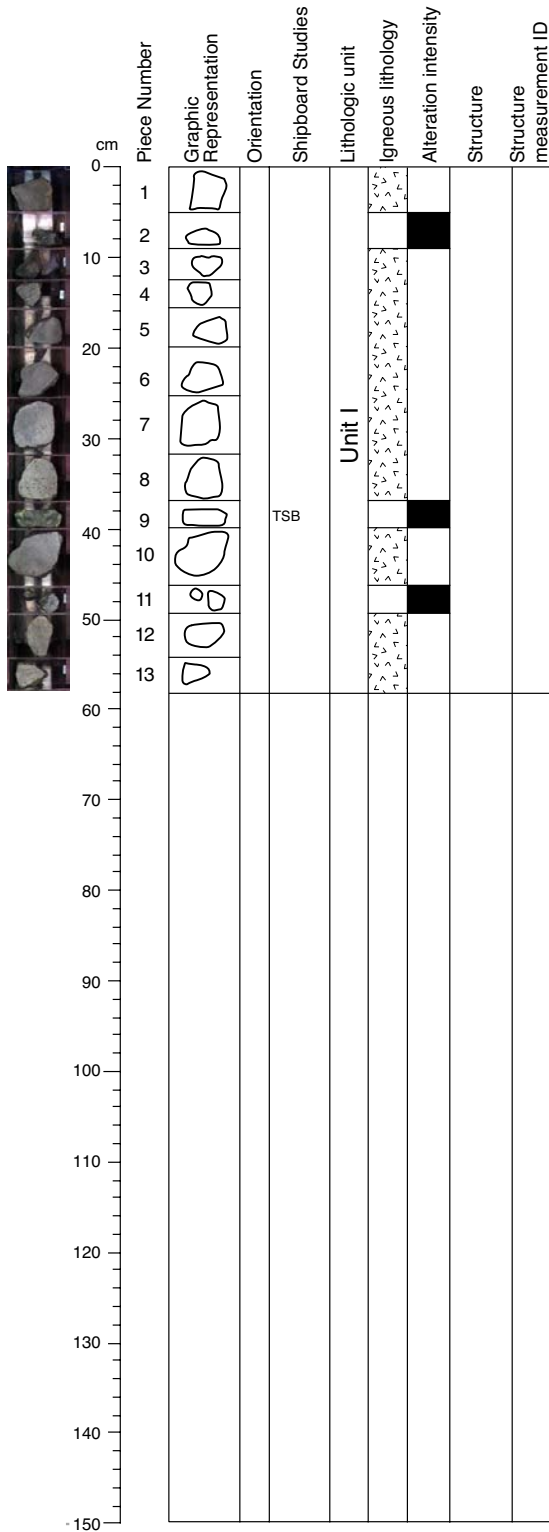
Vesicles Mode <8%  
 Size <1 mm

COMMENTS: This section consists of angular pebbles of aphyric basalt with a thin iron-manganese coating. The basalts have rare plagioclase phenocrysts (<0.5%) and up to 8% randomly distributed vesicles. Vesicle size is variable but less than a 1 mm in diameter. Piece 1 is a sector of pillow with fresh glassy crust. Piece 8 has a variolitic structure.

SECONDARY MINERALOGY:

No visible alteration.

Core Photo



209-1273C-1R-1 (Section top: 0.0 mbsf)

ROCK NAME: BASALT and PERIDOTITE

Pieces 1-13

COLOR: Light gray

PRIMARY MINERALOGY:

Aphyric with rare plagioclase  
 Mode <0.5%  
 Size 5 mm

Vesicles Mode 1%-5%  
 Size <1 mm

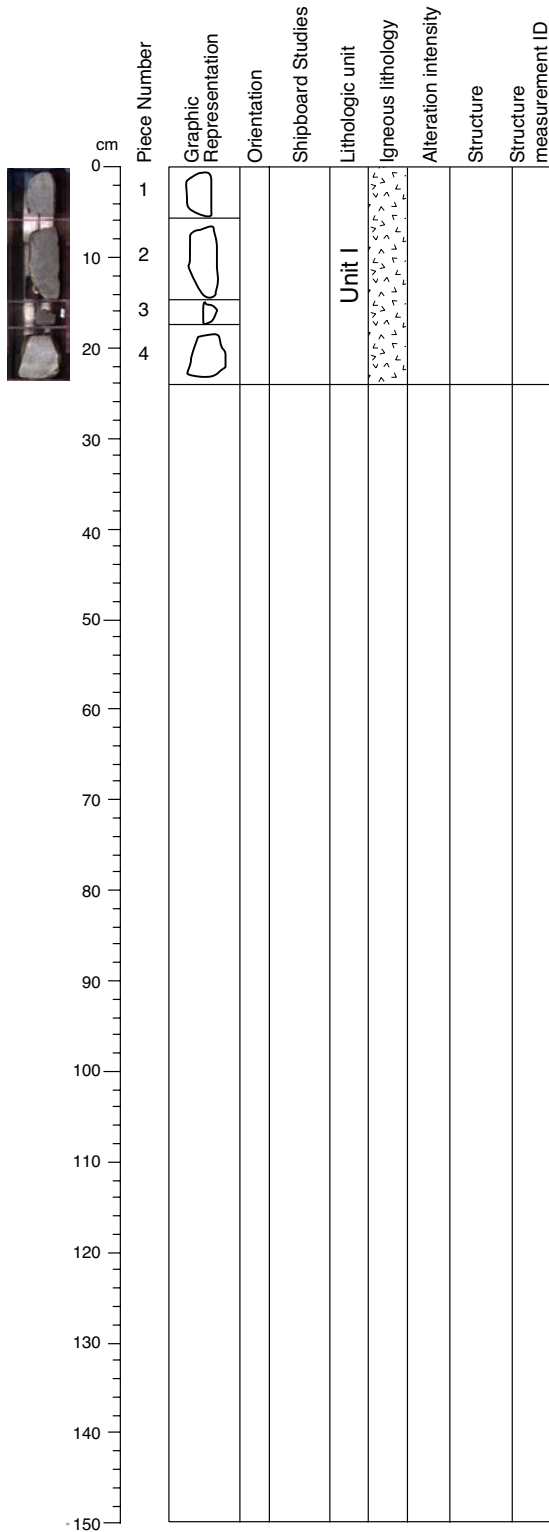
COMMENTS: This section consists of angular pebbles of aphyric basalt and three little pebbles of completely serpentinized peridotite. The basalts have rare plagioclase phenocrysts (<0.5%) and a variable abundance of vesicles (< 5%). Vesicles are randomly distributed in the groundmass. Vesicle size is variable but less than a 1 mm in diameter. Piece 1 and 10 are sectors of pillow with fresh glassy crust. Fresh spinel (up to 2 mm) has been observed in the peridotite thin section.

SECONDARY MINERALOGY:

All pieces of basalt show no visible alteration, except decorations of green clay and acicular zeolite on the walls of vugs and vesicles in Pieces 12 and 13. Pieces 2, 9, and 11 are completely altered harzburgite with about 50% serpentine and noticeable amounts of clay and Fe-oxyhydroxide replacing olivine.

THIN SECTIONS: Sample 1273C-1R-1, 38-40 cm

**Core Photo**



**209-1273C-2R-1 (Section top: 18.0 mbsf)**

ROCK NAME: BASALT

Pieces 1-4

COLOR: Light gray

PRIMARY MINERALOGY:

Aphyric with rare plagioclase  
 Mode <0.5%  
 Size 2 mm

Vesicles Mode 5%  
 Size <1 mm

COMMENTS: This section consists of angular pebbles of aphyric basalt. Piece 2 has a few plagioclase phenocrysts (<0.5%). All the basalts have a variable abundance of vesicles (<5%) dispersed throughout the matrix. Vesicle size is less than a 1 mm in diameter. Piece 3 and 4 have a fresh glassy crust.

SECONDARY MINERALOGY:  
 No visible alteration.

1273C-3R No recovery.

**THIN SECTION:** 209-1273A-1R-1, Piece 2, 5-8 cm      **TS#185**      **Observer:** AC, WM  
**ROCK NAME:** BASALT  
**GRAIN SIZE:** Aphanitic  
**TEXTURE:** Microcrystalline felty

PRIMARY MINERALOGY	MODE (Visual estimate)		SIZE (mm)	MORPHOLOGY	COMMENTS
	PERCENT PRESENT	PERCENT ORIGINAL			
PHENOCRYSTS					
Olivine	2	2	<1	Skeletal	Spinel inclusions in olivine.
GROUNDMASS					
Plagioclase	40	40	<0.5		
Clinopyroxene	10	10	<0.5		
Oxide/opaque	2	2	0.02		
Glass	0	46			

VESICLES	PERCENT PRESENT	REPLACING	MORPHOLOGY	COMMENTS
Vesicles	1	1		

**GENERAL COMMENTS**

SECONDARY MINERALOGY	PERCENT PRESENT	MORPHOLOGY	COMMENTS
Rock is unaltered			

VEIN / FRACTURE FILLING	PERCENT PRESENT	MORPHOLOGY	COMMENTS
No veins			

**STRUCTURE**  
No structural features are visible in this thin section.

**Crosscutting Relationships (as are apparent in thin section):**

**THIN SECTION:** 209-1273C-1R-1, Piece 9, 46-48 cm      **TS#186**      **Observer: WB**  
**ROCK NAME:** HARZBURGITE  
**GRAIN SIZE:** Coarse-grained  
**TEXTURE:** Protogranular

PRIMARY MINERALOGY	MODE (Visual estimate)		SIZE (mm)	MORPHOLOGY	COMMENTS
	PERCENT PRESENT	PERCENT ORIGINAL			
Olivine	0	73			
Orthopyroxene	0	25	3-8	Anhedral	
Clinopyroxene	0	?			
Spinel	1	2	2	Anhedral	

**GENERAL COMMENTS**      Strongly altered harzburgite.

SECONDARY MINERALS	PERCENT PRESENT	REPLACING	MORPHOLOGY	COMMENTS
Serpentine	50	Olivine, orthopyroxene		
Talc	10	Orthopyroxene		
Tremolite	1	Orthopyroxene		
Chlorite	3	Olivine		
Brown clay	35	Olivine		
Magnetite	1	Olivine, spinel		
Hematite	1	Olivine		

VEIN / FRACTURE FILLING	PERCENT PRESENT	MORPHOLOGY	COMMENTS
No veins			

**STRUCTURE**

Crystal Plastic:  
 Very minor ductile deformation; kink banding of pyroxene.

Brittle:  
 Several brittle shear fractures with offset <0.5 mm cut sample.  
 One small fault containing fibrous chlorite is 0.4 mm wide and at least 1-mm offset based on displaced serpentine veins.

Foliation:  
 Very weak foliation defined by ribbon texture serpentine.

**Crosscutting Relationships (as are apparent in thin section):**

- 1) Minor ductile deformation
- 2) Serpentinization
- 3) Serpentine veins
- 4) Brittle shear fractures and minor faults
- 5) Late serpentine veins