UNIT 1: APHYRIC BASALT

Pieces 1–3

CONTACTS: None.
PHENOCRYSTS: None.
GROUNDMASS: Uniformly fine grained.
VESICLES: 20%; <1 mm to 5 mm; variable, pipe; pipe vesicle zone 3 cm on Piece 3; segregation vesicles filled with finely vesiculated basalt.
COLOR: Dark gray.
STRUCTURE: Massive.
ALTERATION: Fresh, minor red clay mineralization on some surfaces.
VEINS/FRACTURES: None.
UNIT 1: APHYRIC BASALT

Pieces 1–6

CONTACTS: None.
PHENOCRYSTS: None.
GROUNDMASS: Uniformly fine grained.
VESICLES: 15–20%; <1 mm–1 cm; variable; uniform (fine); segregation vesicles, fine vesicle trails space 1–2 cm, glassy walls.
Miaroles: None.
COLOR: Dark grey.
STRUCTURE: Massive.
ALTERATION: Fresh, Piece 1B has light brown alteration, minor alteration on the surface of other pieces.
VEINS/FRACTURES: None.
ADDITIONAL COMMENTS: Piece 1A has gold saw-blade paint on the archived half. Paint has entered some vesicles. Piece 1A has an undulating diamond bit cut.
UNIT 1: APHYRIC BASALT

Piece 1

CONTACTS: None.
PHENOCRYSTS: None.
GROUNDMASS: Uniformly fine grained.
VESICLES: 10%; 1 mm and 1 cm; round to ovoid; uniform; vesiculated basalt fills segregation vesicles, vesicle trails space 1-2 cm.
COLOR: Dark gray.
STRUCTURE: Massive.
ALTERATION: Fresh, glassy vesicle rims.
VEINS/FRACTURES: None.
UNIT 1: APHYRIC BASALT

Piece 1 (cuttings)

CONTACTS: None.
PHENOCRYSTS: None.
GROUNDMASS: Uniformly fine grained.
VESICLES: 10%; <1 mm, 3-5 mm; round to oblate; uniform fine vesicles; segregation vesicles filled with vesiculated basalt.
Miaroles: None.
COLOR: Dark gray.
STRUCTURE: Massive.
ALTERATION: Fresh, glassy vesicle walls.
VEINS/FRACTURES: None.
ADDITIONAL COMMENTS: Also contains grains of pipe scale and diamond-bit matrix.
UNIT 1: APHYRIC BASALT

Pieces 1–3

CONTACTS: None.

PHENOCRYSTS: None.

GROUNDMASS: Fine grained.

VESICLES: 5%; <1 mm–5 mm; round to ovoid; uniform; vesiculated basalt segregation vesicles.

Miaroles: None.

COLOR: Dark gray.

STRUCTURE: Massive.

ALTERATION: Fresh, reddish brown mineral fills some vesicles, yellow green mineral on fracture surface.

VEINS/FRACTURES: None; reddish brown mineral precipitated in some vesicles.

ADDITIONAL COMMENTS: Basalts have been partially cored with DCS. Piece 3A has multiple lacerations from the drill bit.
UNIT 1: APHYRIC BASALT

Piece 1

CONTACTS: Pillow contact on upper and lower surfaces.
PHENOCRYSTS: None.
GROUNDMASS: Uniformly fine grained.
VESICLES: 5%; <1 mm, 8 mm; round to ovoid; uniform.
COLOR: Dark gray.
STRUCTURE: Pillow.
ALTERATION: Upper and lower surfaces are slightly altered with light brown/yellow clay mineral.
VEINS/FRACTURES: None.
ADDITIONAL COMMENTS: Coring cut uneven (1–2 mm amplitude).
UNIT 1: APHYRIC BASALT

Piece 1

CONTACTS: Pillow contact on upper and lower surfaces.

PHENOCRYSTS: None.

GROUNDMASS: Uniformly fine grained.

VESICLES: 5%; < 1 mm, 3 mm; round; uniform.

COLOR: Dark gray.

STRUCTURE: Pillow.

ALTERATION: Upper and lower surfaces are slightly altered with light brown/yellow clay mineral.

VEINS/FRACTURES: <1%; 1 mm; 60; 1 vesiculated basalt fracture visible on cored face.

ADDITIONAL COMMENTS: Coring cut uneven (2–3 mm amplitudes).
UNIT 1: APHYRIC BASALT

Piece 1

CONTACTS: Pillow contact on upper surface.

PHENOCRYSTS: None.

GROUNDMASS: Uniformly fine grained.

VESICLES: 5%; <1 mm, 3 mm; round; uniform; vesiculated basalt fills segregation vesicles.

COLOR: Dark gray.

STRUCTURE: Pillow.

ALTERATION: Yellow-brown clay mineral on upper surface.

VEINS/FRACTURES: <1%; 1 mm; 80; 1 vesiculated basalt fracture visible on cored face.

ADDITIONAL COMMENTS: Top of piece has concentric grooves from the center bit.
UNIT 1: APHYRIC BASALT

Pieces 1–2

CONTACTS: Altered surfaces top of 2A, 2B, 2C; bottom of 2A, 2B.
PHENOCRYSTS: None.
GROUNDMASS: Uniformly fine grained.
VESICLES: 5%; <1 mm, 3 mm (maximum for 1), 1 cm (maximum for 2); round to ovoid;
line are uniform; subparallel vesicle trails in Piece 2.
COLOR: Dark gray.
STRUCTURE: Massive.
ALTERATION: Yellow-brown clay mineral on upper surface.
VEINS/FRACTURES: <1%; <1 mm; 90; fracture divides Piece 2C.
UNIT 1: APHYRIC BASALT

Piece 1

CONTACTS: Top of 1A.

PHENOXYST: None.

GROUNDMASS: Uniformly fine grained.

VESICLES: 5%, <1 mm, 5 mm, round to ovoid; fine and uniform; subparallel vesicle trails spaced 2-4 cm dip 65°, red incipient amygdule mineralization in Piece 1B.

Miaroles: Microcrystals line walls of larger vesicles.

COLOR: Dark gray.

STRUCTURE: Massive.

ALTERATION: Yellow-brown clay mineral on upper surface and on fractured surface in Piece 1A.

VEINS/FRACTURES: <1%; <1 mm; 90°; fracture divides Piece 1A.
UNIT 1: APHYRIC BASALT

Piece 1

CONTACTS: None.
PHENOCRYSTS: None.
GROUNDMASS: Uniformly fine grained.
VESICLES: 7%; <1 mm, 1.5 cm; pipe and round; fine are uniform; vesiculation increases toward bottom; vesicle trails present.
Miaroles: Microcrystals line walls of larger vesicles.
COLOR: Dark gray.
STRUCTURE: Pillow zonation of vesicles.
ALTERATION: Fresh.
VEINS/FRACTURES: None.
ADDITIONAL COMMENTS: 10 cm rounded basalt xenolith or filled vesicle.

UNIT 1: APHYRIC BASALT

Piece 2

CONTACTS: None.
PHENOCRYSTS: None.
GROUNDMASS: Uniformly fine grained.
VESICLES: 15%; <1 mm, 1.5 cm; round; vesicle zones are banded; concentration of vesicles greater at bottom but size decreases.
COLOR: Dark gray.
STRUCTURE: Pillow (from vesicle banding and glassy basal surface).
ALTERATION: Fresh, red brown mineral fills some vesicles, yellow green clay.
VEINS/FRACTURES: None.
ADDITIONAL COMMENTS: 10 cm rounded basalt xenolith or filled vesicle.
UNIT 1: APHYRIC BASALT

Pieces 1–3

CONTACTS: None.
PHENOCRYSTS: None.
GROUNDMASS: Uniformly fine grained.
VESICLES: 5%; average 3 mm; round; ovoid; uniform.
COLOR: Dark gray.
STRUCTURE: Massive.
ALTERATION: Red brown clay mineral.
VEINS/FRACTURES: None.
ADDITIONAL COMMENTS: The plastic core liner has been melted onto some pieces during removal from the barrel (especially Piece 3).
UNIT 1: APHYRIC BASALT

Pieces 1–6

CONTACTS: None.

PHENOCRYSTS: None.

GROUNDMASS: Uniformly fine grained.

VESICLES: 5–10%; <1 mm to 5 mm; ovoid, pipe; fine are uniform, zoned; Piece 2 and Piece 3 have bands of vesicles with frothy layer. Some vesicles filled with vesiculated basalt.

COLOR: Dark gray.

STRUCTURE: Massive.

ALTERATION: Fresh, light yellow brown clay on some surfaces and vesicles.

VEINS/FRACTURES: None.

ADDITIONAL COMMENTS: The plastic core liner has been melted onto some pieces during removal from the barrel (especially Piece 3).
UNIT 1: APHYRIC BASALT

Pieces 1–4

CONTACTS: None.

PHENOCRYSTS: None.

GROUNDMASS: Uniformly fine grained.

VESICLES: 5–20%; <1 mm to 3 mm; ovoid, pipe; fine are uniform, zoned.

COLOR: Dark gray.

STRUCTURE: Massive.

ALTERATION: Fresh, red brown and yellow brown clay on ppt on some surfaces.

VEINS/FRACTURES: Alteration on internal surfaces to core suggest that rock was fractured before drilling.
UNIT 1: APHYRIC BASALT

Pieces 1–2

CONTACTS: None.

PHENOCRYSTS: None.

GROUNDMASS: Uniformly fine grained.

VESICLES: 10%; 1 mm to 3 mm; ovoid; fine are uniform, zoned.

COLOR: Dark gray.

STRUCTURE: Massive.

ALTERATION: Fresh, yellow clay on Piece 2, precipitated on lower surface of Piece 1.
UNIT 1: APHYRIC BASALT

Pieces 1–7

CONTACTS: Pillow margin on Piece 2.

PHENOCRYSTS: None.

GROUNDMASS: Uniformly fine grained.

VESICLES: 10%; 1 m to 3 mm; round/ovoid; zoned; vesicles in Piece 2 are zoned parallel to the pillow margin.

COLOR: Dark gray.

STRUCTURE: Pillow.

ALTERATION: Fresh, clay alteration on some surfaces (top and bottom of Piece 7).
UNIT 1: APHYRIC BASALT

Pieces 1-8

CONTACTS: Pillow contact at base of Piece 7.
PHENOCRYSTs: None.
GROUNDMASS: Uniformly fine grained.
VESICLES: 10-15%; 2 mm average; variable; uniform, fine near quenched margin; segregation vesicles.
COLOR: Dark gray.
STRUCTURE: Pillow.
ALTERATION: Fresh, yellow brown clay on some surfaces.
VEINS/FRACTURES: None.
ADDITIONAL COMMENTS: Glass on Piece 4 and Piece 7.
UNIT 1: APHYRIC BASALT

Pieces 1–5

CONTACTS: Pillow margin at base of Piece 4.

PHENOCRYSTS: None.

GROUNDMASS: Uniformly fine grained.

VESICLES: 10–15%; average 3 mm; variable; fine uniform 3 cm on Piece 3; larger vesicles are filled with finely vesiculated basalt.

COLOR: Dark gray.

STRUCTURE: Massive.

ALTERATION: Fresh, minor red clay mineralization on some surfaces.

VEINS/FRACTURES: Pieces 1A and 1B have fractures with minor clay mineralization.
UNIT 1: APHYRIC BASALT

Pieces 1–3

CONTACTS: None.
PHENOCRYSTS: None.
GROUNDMASS: Uniformly fine grained.
VESICLES: 10%, average 3 mm; variable; fine uniform.
COLOR: Dark gray.
STRUCTURE: Massive.
ALTERATION: Fresh, minor alteration on fracture surface.
VEINS/FRACTURES: Piece 2 has a vertical fracture.
UNIT 1: APHYRIC BASALT

Pieces 1–6

CONTACTS: None.

PHENOCRYSTS: None.

GROUNDMASS: Uniformly fine grained.

VESICLES: 10%; average 3 mm, largest 3 mm; variable; fine uniform.

COLOR: Dark gray.

STRUCTURE: Massive.

ALTERATION: Fresh, minor clay precipitated on surfaces and in some vesicles.

VEINS/FRACTURES: Piece 2 has a vertical fracture.
UNIT 1: APHYRIC BASALT

Pieces 1–3

CONTACTS: Pillow margin on Piece 1B.
PHENOCRYSTS: None.
GROUNDMASS: Uniformly fine grained.
VESICLES: 10%; <1 mm to 3 mm, maximum 3 mm; variable; fine uniform.
COLOR: Dark gray.
STRUCTURE: Pillow.
ALTERATION: Fresh, red brown clay on some surfaces, glassy margin on Piece 1B.
VEINS/FRACTURES: Piece 3B has fractures.
UNIT 1: APHYRIC BASALT

Pieces 1–7

CONTACTS: None.
PHENOCRYSTS: None.
GROUNDMASS: Uniformly fine grained.
VESICLES: 10%, <1 mm to 3 mm, maximum 3 mm; variable; fine uniform; Piece 2 has pipe vesicles infilled with vesiculated basalt.
COLOR: Dark gray.
STRUCTURE: Pillow (zoning in vesicles).
ALTERATION: Fresh, minor mineralization (red brown, yellow green clay) at top of Piece 7 on some other surfaces.
VEINS/FRACTURES: None.
ADDITIONAL COMMENTS: Significant silica(?) precipitated inside large cavity in Piece 2.
UNIT 1: APHYRIC BASALT

Pieces 1–6

CONTACTS: None.
PHENOCRYSTS: None.
GROUNDMASS: Uniformly fine grained.
VESICLES: 15%; <1 mm to 3 mm, maximum, 1 cm; variable; fine uniform; in Piece 6 maximum vesicle size is 2 mm.
COLOR: Dark gray.
STRUCTURE: Massive.
ALTERATION: Fresh, minor mineralization (red brown, yellow green clay) on most pieces.
VEINS/FRACTURES: None.
ADDITIONAL COMMENTS: 4 mm amplitude on core cut.
UNIT 1: APHYRIC BASALT

Pieces 1–2

CONTACTS: None.
PHENOCRYSTS: None.
GROUNDMASS: Uniformly fine grained.
VESICLES: 15%; <1 mm common, maximum 1 cm; variable; fine uniform; in Piece 1 maximum vesicle size is 2 mm.
COLOR: Dark gray.
STRUCTURE: Massive.
ALTERATION: Fresh, minor mineralization (red brown, yellow green clay) on Piece 2. 2 vesicles in Piece 1 are lined with green clay mineral.
VEINS/FRACTURES: None.
UNIT 1: APHYRIC BASALT

Pieces 1-3

CONTACTS: None.
PHENOCRYSTS: None.
GROUNDMASS: Uniformly fine grained.
VESICLES: 15-30%; <1 mm to 5 mm; variable; fine uniform; vesicle content in Piece 3 is 30%.
COLOR: Dark gray.
STRUCTURE: Massive.
ALTERATION: 1 vesicle lined with red hydrothermal mineral.
VEINS/FRACTURES: None.
UNIT 1: APHYRIC BASALT

Piece 1

CONTACTS: None.
PHENOCRYSTS: None.
GROUNDMASS: Uniformly fine grained.
VESICLES: 6%; 1 mm, one 3 mm; variable, fine uniform.
COLOR: Dark gray.
STRUCTURE: Massive.
ALTERATION: Fresh.
VEINS/FRACTURES: None.
UNIT 2: APHYRIC BASALT

Piece 1

CONTACTS: None.
PHENOCRYSTS: Only phenocryst found in core plagioclase - <1%; 3 mm; one grain.
GROUNDMASS: Uniformly fine grained.
VESICLES: 5–10%; 1–3 mm, 3 mm maximum; variable; fine uniform.
COLOR: Dark gray.
STRUCTURE: Massive.
ALTERATION: Fresh.
VEINS/FRACTURES: None.
UNIT 1: UNCONSOLIDATED DEBRIS

Piece 1

CONTACTS: None.
PHENOCRYSTS: None.
GROUNDMASS: None.
VESICLES: None.
COLOR: Mixed.
STRUCTURE: None.
ALTERATION: None.
VEINS/FRACTURES: None.
UNIT 2: APHYRIC BASALT

Pieces 1–6

CONTACTS: None.

PHENOCRYSTS:
GROUNDMASS: Uniformly fine grained.
VESICLES: 5–10%, 1 to 3 mm; variable; fine uniform.
COLOR: Dark gray.
STRUCTURE: Massive.
ALTERATION: Fresh.
VEINS/FRACTURES: None.
ADDITIONAL COMMENTS: Samples were covered with silt-sand particles cleaned of some pieces by ultrasound. Impressions of center bit on Piece 2.
### 132-809F-2Z-01 (Piece 2A, 21-24 cm)

**Observer:** NAT  
**Where Sampled:** Flow Margin

**Rock Name:** Vesicular basalt  
**Grain Size:** Fine  
**Texture:** Spherulitic

<table>
<thead>
<tr>
<th>PRIMARY MINERALOGY</th>
<th>PERCENT</th>
<th>PERCENT SIZE</th>
<th>COMPOSITION</th>
<th>MORPHOLOGY</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cpx</td>
<td>10</td>
<td>.1-.2</td>
<td>Dendritic</td>
<td></td>
<td>SMALL</td>
</tr>
<tr>
<td>Plag</td>
<td>20</td>
<td>&lt;1</td>
<td>Acicular</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ti-Magnetite</td>
<td>5</td>
<td>&lt;.05</td>
<td>Skeletal</td>
<td></td>
<td>TINY, 2 GENERATIONS</td>
</tr>
<tr>
<td>Mesostasis</td>
<td>65</td>
<td>&lt;.01</td>
<td>NONE</td>
<td>TINY XLS</td>
<td></td>
</tr>
<tr>
<td>Sulfides</td>
<td>0</td>
<td>0</td>
<td>NONE</td>
<td>NO SULFIDES</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>VESICLES/CAVITIES</th>
<th>PERCENT</th>
<th>LOCATION (mm)</th>
<th>FILLING</th>
<th>SHAPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vesicles</td>
<td>10</td>
<td>ALL .5-1</td>
<td>EMPTY</td>
<td>IRREG.</td>
</tr>
</tbody>
</table>

### 132-809F-8Z-01 (Piece 1A, 2-4 cm)

**Observer:** NAT  
**Where Sampled:** Pillow/Flow Interior

**Rock Name:** Vesicular basalt  
**Grain Size:** Fine/Med  
**Texture:** Intersertal/Hyalopilitic

<table>
<thead>
<tr>
<th>PRIMARY MINERALOGY</th>
<th>PERCENT</th>
<th>PERCENT SIZE</th>
<th>COMPOSITION</th>
<th>MORPHOLOGY</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phenocrysts</td>
<td>25</td>
<td>.2-.4</td>
<td>Equant</td>
<td></td>
<td>ONE CRYSTAL</td>
</tr>
<tr>
<td>Plagioclase</td>
<td>60</td>
<td>.2-.4</td>
<td>Elongate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ti-Magnetite</td>
<td>5</td>
<td>.1-.2</td>
<td>Skeletal</td>
<td></td>
<td>2 GENERATIONS</td>
</tr>
<tr>
<td>IImenite</td>
<td>TR</td>
<td>TR &lt;.1</td>
<td>Rods</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mesostasis = 10%</td>
<td></td>
<td></td>
<td>Spherules</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>VESICLES/CAVITIES</th>
<th>PERCENT</th>
<th>LOCATION (mm)</th>
<th>FILLING</th>
<th>SHAPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vesicles</td>
<td>5</td>
<td>ALL OVER 1-33</td>
<td>EMPTY</td>
<td>IRREG.</td>
</tr>
</tbody>
</table>

**Comments:** Rock has large segregation veinlet, fine grained, itself with small internal vesicles.
### 132-809F-11Z-02 (Piece 1,37-40 cm)

**Observer:** NAT  
**Where Sampled:** FLOW INTERIOR

**Rock Name:** Vesicular basalt  
**Grain Size:** Fine-Medium  
**Texture:** Intersertal/Hyalopilitic

<table>
<thead>
<tr>
<th>PRIMARY MINERALOGY</th>
<th>PRIMARY PHENOCRYSTS</th>
<th>Filling</th>
<th>Replacing/Filling</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPX</td>
<td>25</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plagioclase</td>
<td>25</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ti-Magnetite</td>
<td>5</td>
<td>&lt;0.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ilmenite</td>
<td>TR</td>
<td>TR &lt;0.01</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfides</td>
<td>TR</td>
<td>Spheres</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**VESICLES/CAVITIES**  
Size: Vesicles

<table>
<thead>
<tr>
<th>LOCATION (mm)</th>
<th>Filling</th>
<th>SHAPE</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Over</td>
<td>EMPTY</td>
<td>IRREG</td>
<td>Segregation veinlets and vesicles. Darker mesostasis is finer-grained than rest of rock. Has CPX, Plag, Ti-Mag and Ilmenite.</td>
</tr>
</tbody>
</table>

### 132-809F-14Z-01 (Piece 18,10-12 cm)

**Observer:** NAT  
**Where Sampled:** NEAR PILLOW/FLOW RIM

**Rock Name:** Basalt  
**Grain Size:** Fine  
**Texture:** Sub-Spherulitic

<table>
<thead>
<tr>
<th>PRIMARY MINERALOGY</th>
<th>PRIMARY PHENOCRYSTS</th>
<th>Filling</th>
<th>Replacing/Filling</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plagioclase</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CPX</td>
<td>15</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ol</td>
<td>TR</td>
<td>TR &lt;0.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ti-Magnetite</td>
<td>TR</td>
<td>TR &lt;0.01</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MESOGRANITE</td>
<td>60</td>
<td>60</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SECONDARY MINERALOGY**  
Replacing/

<table>
<thead>
<tr>
<th>OLVIDDINGSITE</th>
<th>TR</th>
<th>OLIVINE</th>
</tr>
</thead>
</table>

**VESICLES/CAVITIES**  
Size: Vesicles

<table>
<thead>
<tr>
<th>LOCATION (mm)</th>
<th>Filling</th>
<th>SHAPE</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Over</td>
<td>EMPTY</td>
<td>IRREG</td>
<td>Some glass on edges</td>
</tr>
</tbody>
</table>

271
132-809F-162-01 (Piece 5A, 42-45 cm)  
**ROCK NAME:** Basalt  
**WHERE SAMPLED:** FLOW INTERIOR  
**OBSERVER:** BAT  
**GRAIN SIZE:** FINE-MEDIUM  
**TEXTURE:** HYALOPILITIC/INTERSERTAL

### Primary Mineralogy

<table>
<thead>
<tr>
<th>MINERAL</th>
<th>PERCENT PRESENT</th>
<th>SIZE (mm)</th>
<th>COMPOSITION</th>
<th>MORPHOLOGY</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLAGICLASE</td>
<td>5</td>
<td>3x5</td>
<td>EQUANT</td>
<td>ONE CRYSTAL</td>
<td></td>
</tr>
<tr>
<td>CPX</td>
<td>3</td>
<td>1x2</td>
<td>EQUANT</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**GROUNDMASS**

<table>
<thead>
<tr>
<th>MINERAL</th>
<th>PERCENT</th>
<th>SIZE (mm)</th>
<th>COMPOSITION</th>
<th>MORPHOLOGY</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPX</td>
<td>45</td>
<td>0.2-4</td>
<td>DENDRITIC</td>
<td>BROWNISH</td>
<td></td>
</tr>
<tr>
<td>PLAGICLASE</td>
<td>40</td>
<td>0.6-1</td>
<td>MICROLITIC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TI-MAGNETITE</td>
<td>5</td>
<td>0.01</td>
<td>SKELETAL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ILMENITE</td>
<td>7</td>
<td>&lt;0.01</td>
<td>BOGS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SULFIDES</td>
<td>7</td>
<td>&lt;0.01</td>
<td>SPHERULES</td>
<td>(MESOSTASIS = 10%)</td>
<td></td>
</tr>
</tbody>
</table>

### Secondary Mineralogy

**NONE**

**VESICLES/CAVITIES**

<table>
<thead>
<tr>
<th>USUAL SIZED</th>
<th>PERCENT LOCATION</th>
<th>FILLING</th>
<th>SHAPE</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vesicles</td>
<td>10</td>
<td>ALL OVER 1-2</td>
<td>NONE</td>
<td>IRREGULAR</td>
</tr>
</tbody>
</table>

**PERCENT SIZE**

<table>
<thead>
<tr>
<th>USUAL SIZED</th>
<th>LOCATION (mm)</th>
<th>FILLING</th>
<th>SHAPE</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-10</td>
<td></td>
<td>EMPTY</td>
<td>IRREGULAR</td>
<td>SEGREGATION VESICLES</td>
</tr>
</tbody>
</table>

132-809F-172-02 (Piece 3, 36-39 cm)  
**ROCK NAME:** Vesicular basalt  
**WHERE SAMPLED:** PILLOW INTERIOR  
**OBSERVER:** NAT  
**GRAIN SIZE:** FINE-GRAINED  
**TEXTURE:** HYALOPILITIC

### Primary Mineralogy

<table>
<thead>
<tr>
<th>MINERAL</th>
<th>PERCENT PRESENT</th>
<th>SIZE (mm)</th>
<th>COMPOSITION</th>
<th>MORPHOLOGY</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHENOCRYST</td>
<td>NONE</td>
<td>0</td>
<td>INVISIBLE</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**GROUNDMASS**

| OLIVINE | 1 | 0.5-1 | EQUANT | DENDRITIC | |
| CPX | 25 | 0.5-1 | EQUANT | | |
| PLAGICLASE | 40 | 1-3 | ACICULAR | MICROLITIC | |
| TI-MAGNETITE | 3-5 | 3-5 | <0.1 | SKELETAL | |
| ILMENITE | 7 | <0.01 | BOGS | | |

**SECONDARY MINERALOGY**

**NONE**

**VESICLES/CAVITIES**

<table>
<thead>
<tr>
<th>USUAL SIZED</th>
<th>PERCENT LOCATION</th>
<th>FILLING</th>
<th>SHAPE</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vesicles</td>
<td>20</td>
<td>SCATTERED 2-10</td>
<td>EMPTY</td>
<td>IRREGULAR</td>
</tr>
</tbody>
</table>

**PERCENT SIZE**

<table>
<thead>
<tr>
<th>USUAL SIZED</th>
<th>LOCATION (mm)</th>
<th>FILLING</th>
<th>SHAPE</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-10</td>
<td></td>
<td>EMPTY</td>
<td>IRREGULAR</td>
<td>SEGREGATION VESICLES</td>
</tr>
</tbody>
</table>
**SITE 809**

**132-809F-222-01 (Piece 2.5-7 cm)**

**ROCK NAME:** Basalt  
**GRAIN SIZE:** FINE/VERY FINE  
**TEXTURE:** INTERSERTAL/HYALOPILITIC  
**OBSERVER:** NAT  
**WHERE SAMPLED:** FLOW INTERIOR

<table>
<thead>
<tr>
<th>PRIMARY MINERALOGY</th>
<th>PERCENT</th>
<th>PERCENT SIZE</th>
<th>COMPOSITION</th>
<th>MORPHOLOGY</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHENOCRYSTS</td>
<td>0</td>
<td>0</td>
<td>NONE</td>
<td></td>
<td>APHYRIC</td>
</tr>
<tr>
<td>GROUNDMASS</td>
<td>45</td>
<td>45</td>
<td>1-3</td>
<td>DENDRITIC</td>
<td></td>
</tr>
<tr>
<td>PLAGIOCLASE</td>
<td>35</td>
<td>35</td>
<td>1-3</td>
<td>ACICULAR</td>
<td></td>
</tr>
<tr>
<td>Ti-MAGNETITE</td>
<td>5</td>
<td>5</td>
<td>.1</td>
<td>SKELETAL</td>
<td></td>
</tr>
<tr>
<td>MESOSTASIS</td>
<td>10</td>
<td>10</td>
<td>&lt;0.01</td>
<td>TINY</td>
<td>TR ILMENTITE, SULFIDES</td>
</tr>
</tbody>
</table>

**SECONDARY MINERALOGY**

<table>
<thead>
<tr>
<th>VESICLES/CAVITIES</th>
<th>PERCENT</th>
<th>LOCATION (mm)</th>
<th>FILLING</th>
<th>SHAPE</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>0</td>
<td>ALL OVER 0.5-1</td>
<td>EMPTY</td>
<td>IRREGULAR</td>
<td>THE ROCK IS FRESH</td>
</tr>
</tbody>
</table>

**COMMENTS:** ROCK HAS TWO GRAIN SIZES (HYBRID)

---

**132-809F-343-01 (Piece 2.8-10 cm)**

**ROCK NAME:** Basalt  
**GRAIN SIZE:** MEDIUM  
**TEXTURE:** INTERSERTAL/HYALOPILITIC  
**OBSERVER:** NAT  
**WHERE SAMPLED:** FLOW INTERIOR

<table>
<thead>
<tr>
<th>PRIMARY MINERALOGY</th>
<th>PERCENT</th>
<th>PERCENT SIZE</th>
<th>COMPOSITION</th>
<th>MORPHOLOGY</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHENOCRYSTS</td>
<td>0</td>
<td>0</td>
<td>NONE</td>
<td></td>
<td>APHYRIC</td>
</tr>
<tr>
<td>GROUNDMASS</td>
<td>5</td>
<td>5</td>
<td>1-2</td>
<td>EQUANT</td>
<td>NO SPINEL</td>
</tr>
<tr>
<td>OLIVINE</td>
<td>40</td>
<td>40</td>
<td>3-5</td>
<td>MICROBLAST</td>
<td></td>
</tr>
<tr>
<td>CPX</td>
<td>35</td>
<td>35</td>
<td>1-3</td>
<td>EQUANT</td>
<td>DENDRITIC</td>
</tr>
<tr>
<td>PLAGIOCLASE</td>
<td>5</td>
<td>5</td>
<td>&lt;0.03</td>
<td>SKELETAL</td>
<td></td>
</tr>
<tr>
<td>Ti-MAGNETITE</td>
<td>15</td>
<td>15</td>
<td>&lt;0.01</td>
<td>TINY</td>
<td>(TR ILMENTITE, SULFIDES)</td>
</tr>
</tbody>
</table>

**SECONDARY MINERALOGY**

<table>
<thead>
<tr>
<th>VESICLES/CAVITIES</th>
<th>PERCENT</th>
<th>LOCATION (mm)</th>
<th>FILLING</th>
<th>SHAPE</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>0</td>
<td>ALL OVER 0.5-1</td>
<td>EMPTY</td>
<td>IRREGULAR</td>
<td>THE ROCK IS FRESH</td>
</tr>
</tbody>
</table>

**COMMENTS:** SOME ROUND