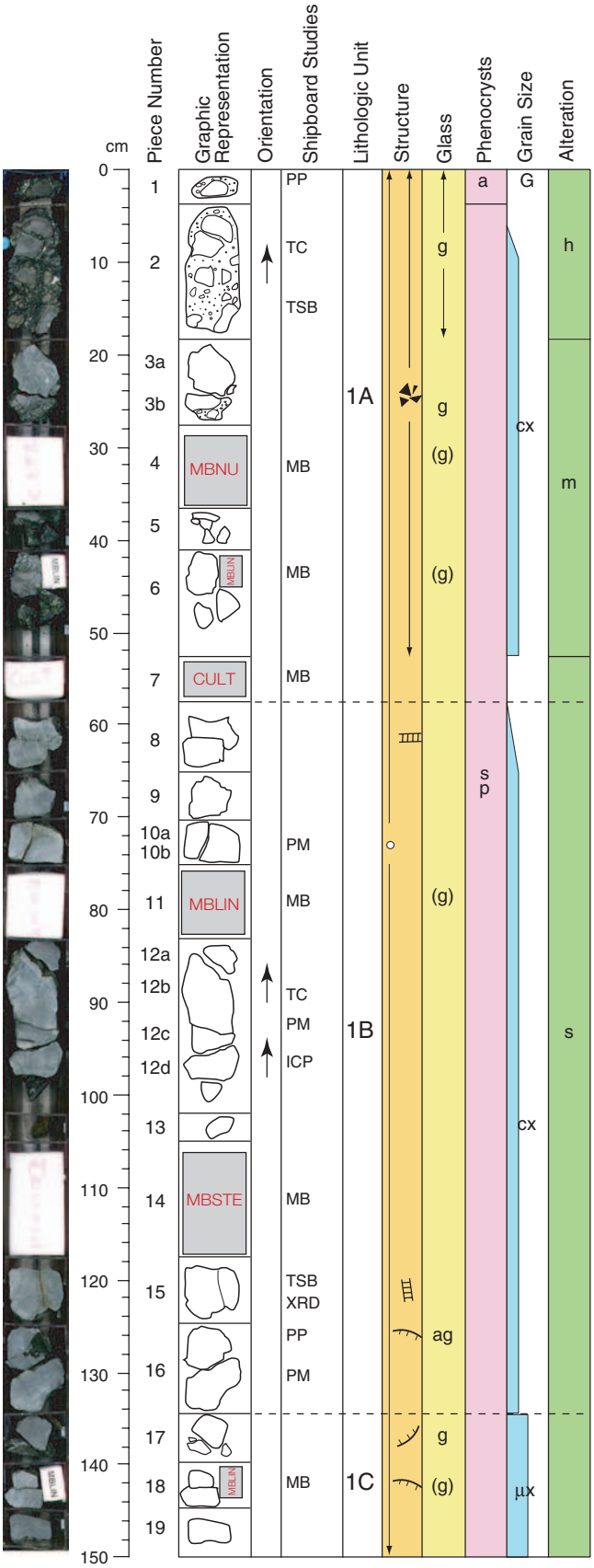
Core Photo



301-U1301B-1R-1 (Section top: 351.2 mbsf)

UNIT IA: Hyaloclastite

PIECES: 1-7

CONTACTS:
Upper: Not recovered
Lower: Not recovered

PHENOCRYSTS: None

GROUNDMASS:
Grain size: Cryptocrystalline basalt fragments with curved glassy margins.
Texture:
VESICLES: None

COLOR: Black (N2.5/)

ALTERATION: Moderately altered clasts in a saponite matrix.

VEINS/FRACTURES: 0.1-0.2 mm saponite veins within basaltic clasts.

ADDITIONAL COMMENTS: This subunit consists of basalt-hyaloclastite breccia. Piece 2 contains 1-3 cm angular clasts of basalt, some with glassy margins, in a saponite + zeolite + carbonate matrix.

UNIT IB: Sparsely olivine-clinopyroxene-plagioclase-phyric cryptocrystalline basalt

PIECES: 8-16

CONTACTS:
Upper: Not recovered
Lower: Not recovered

PHENOCRYSTS:

Plagioclase	3%	0.4-1.4 mm
Olivine	Tr	0.2-0.5 mm
Clinopyroxene	1%	0.2-0.5 mm

GROUNDMASS:
Grain size: Cryptocrystalline
Texture: Intersertal

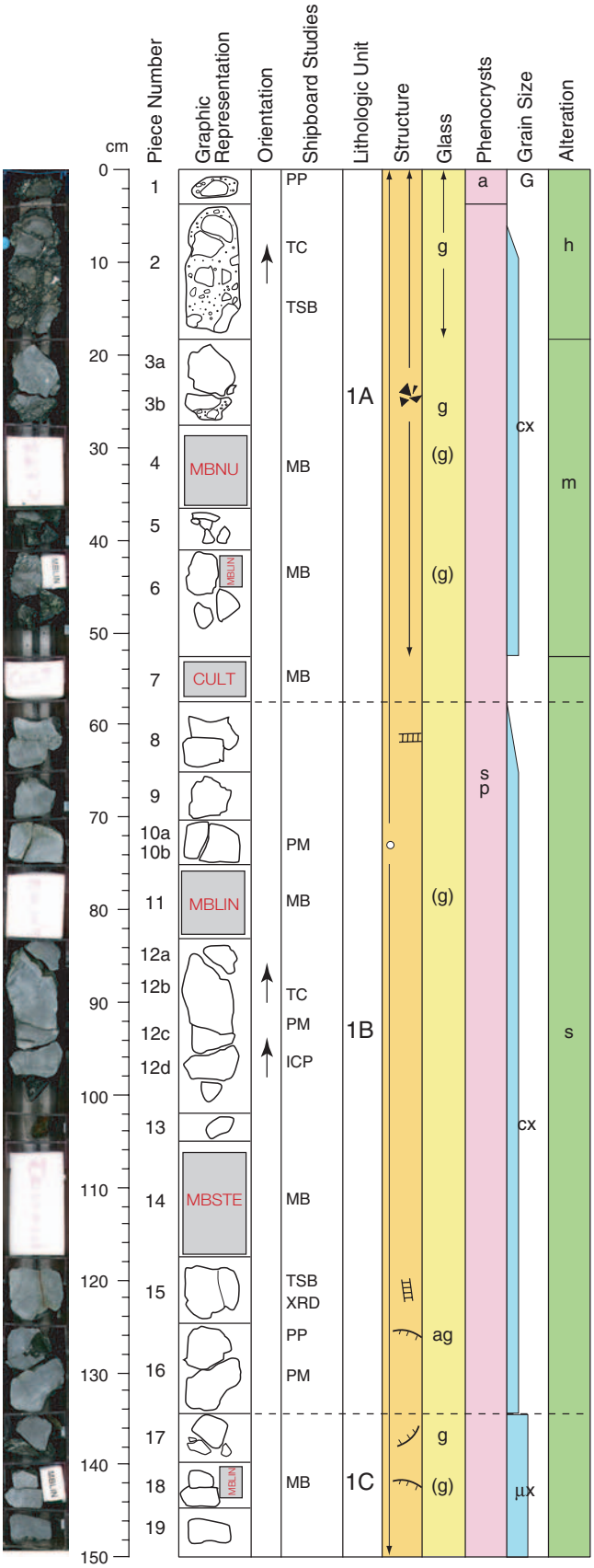
VESICLES: Sparsely vesicular, filled with saponite and some minor iron oxyhydroxide.

COLOR: Very dark gray (N3.0/)

ALTERATION: Moderately altered with 5-10 mm wide black halos along many veins.

VEINS/FRACTURES: 0.1-0.5 mm wide saponite veins with black alteration halos and 1 mm wide saponite, and 2 mm wide iron oxyhydroxide and saponite veins with black halos.

Core Photo



301-U1301B-1R-1 (Section top: 351.2 mbsf)

UNIT IC: Sparsely clinopyroxene-olivine-plagioclase-phyric microcrystalline basalt

PIECES: 17-19 (Continues next section)

CONTACTS:
Upper: Glassy margin at top (1R-1, Piece 17)
Lower: Glassy margin at bottom (11R-1, Piece 11)

PHENOCRYSTS:

Plagioclase	10%	0.2-2 mm
Olivine	5%	0.2-1 mm
Clinopyroxene	3%	0.2-2.5 mm

GROUNDMASS:
Grain size: Crypto- to microcrystalline.
Texture: Hyalo-ophitic.

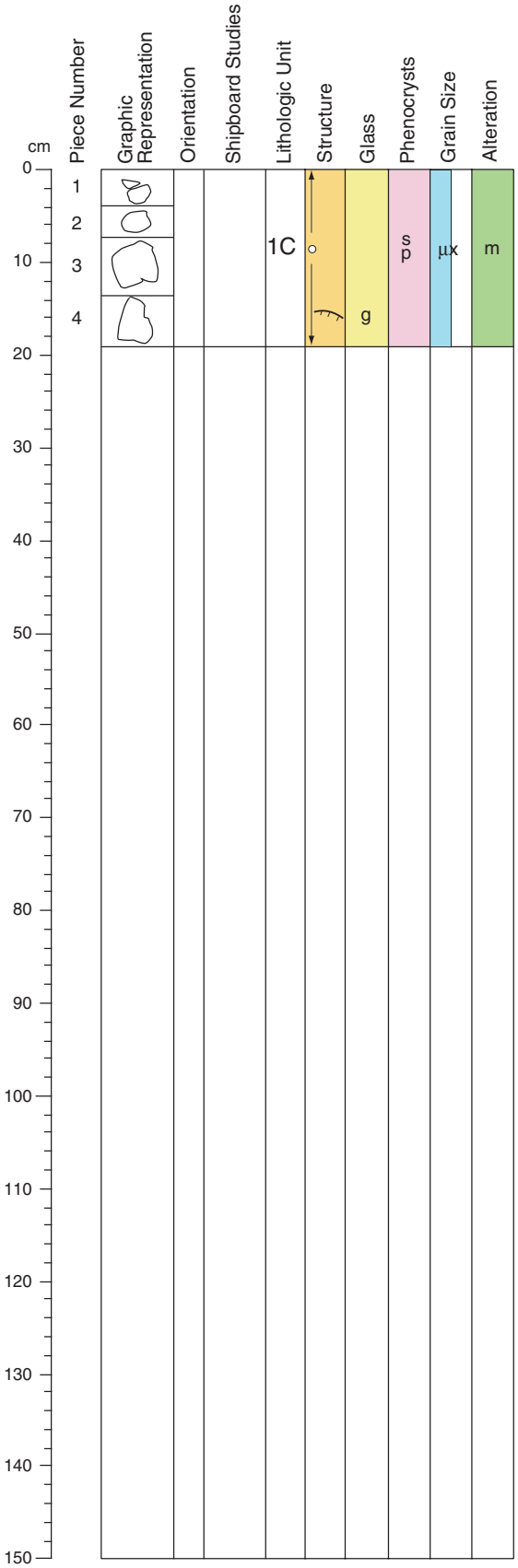
VESICLES: Sparsely vesicular filled with saponite and some minor iron oxyhydroxide.

COLOR: Very dark gray (N3.0/)

ALTERATION: Moderately altered with 5-10 mm wide black halos along many veins.

VEINS/FRACTURES: 0.1-0.5 mm wide saponite veins are common.

Core Photo



301-1301B-1R-2 (Section top: 352.7 mbsf)

UNIT IC: Moderately to highly clinopyroxene-olivine-plagioclase-phyric microcrystalline basalt

PIECES: 1-4 (Continues next core)

CONTACTS:
Upper: Glassy margin at top (1R-1, Piece 17)
Lower: Glassy margin at bottom (11R-1, Piece 11)

PHENOCRYSTS:

Plagioclase	10%	0.2-2 mm
Olivine	5%	0.2-1 mm
Clinopyroxene	3%	0.2-2.5 mm

GROUNDMASS:
Grain size: Microcrystalline.
Texture: Hyalo-ophitic.

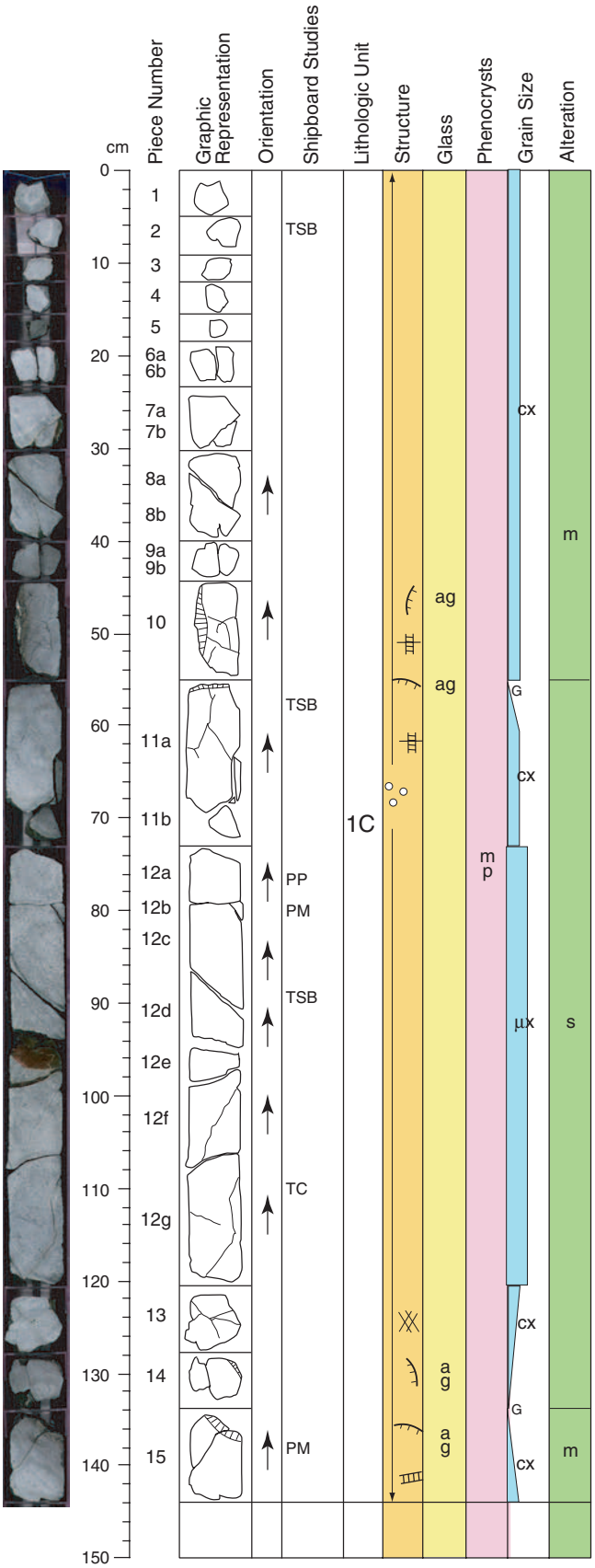
VESICLES: Sparsely vesicular filled with saponite and iron oxyhydroxide.

COLOR: Very dark gray (N3.0/)

ALTERATION: Moderately altered with 5-10mm wide black halos along many veins.

VEINS/FRACTURES: 0.1-0.5 mm wide saponite veins

Core Photo



301-U1301B-2R-1 (Section top: 357.1 mbsf)

UNIT IC: Moderately to highly clinopyroxene-olivine-plagioclase-phyric microcrystalline pillow basalt

PIECES: 1-15 (Continues next section)

CONTACTS:
Upper: Glassy margin at top (1R-1 Piece 17)
Lower: Glassy margin at bottom (11R-1 Piece 11)

PHENOCRYSTS:

Plagioclase	10%	0.3-2.2 mm
Olivine	3%	0.3-1 mm
Clinopyroxene	2%	0.2-1 mm

GROUNDMASS:
Grain size: Crypto to microcrystalline.
Texture: Hyalo-ophitic to intersertal.

VESICLES: Sparsely vesicular, filled with saponite and iron hydroxide.

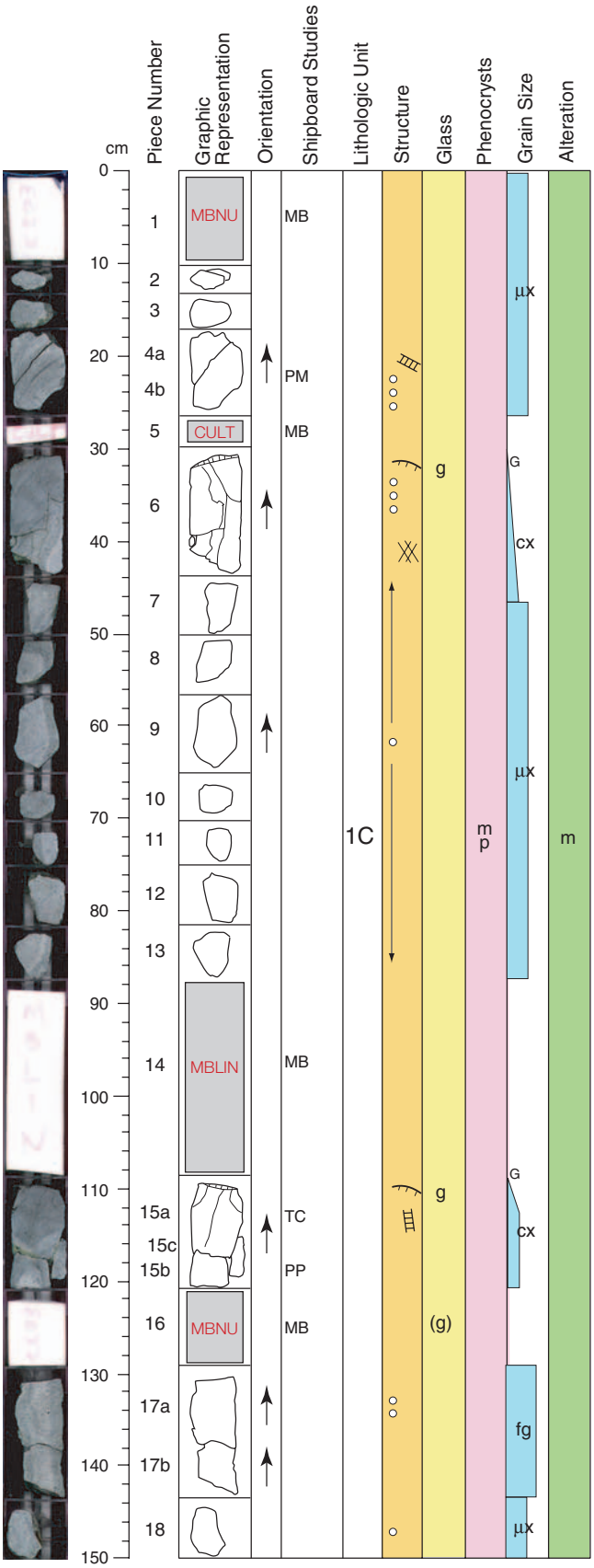
COLOR: Very dark gray (N3.0/)

STRUCTURE: Several pieces have curved glassy margins, with radial cooling cracks, characteristic of pillow lavas.

ALTERATION: Sparsely to moderately altered with 5-10mm wide black halos along many veins.

VEINS/FRACTURES: 0.1-0.8 mm wide saponite veins and iron hydroxide with black alteration halos.

Core Photo



301-U1301B-2R-2 (Section top: 358.54 mbsf)

UNIT IC: Moderately to highly clinopyroxene-olivine-plagioclase-microcrystalline pillow basalt

PIECES: 1-18 (Continues next section)

CONTACTS:
Upper: Glassy margin at top (1R-1, Piece 17)
Lower: Glassy margin at bottom (11R-1, Piece 11)

PHENOCRYSTS:

Plagioclase	10%	0.2-2.2 mm
Olivine	3%	0.2-1 mm
Clinopyroxene	2%	0.2-1 mm

GROUNDMASS:
Grain size: Cryptocrystalline to fine grained.
Texture: Hyalo-ophitic to intersertal.

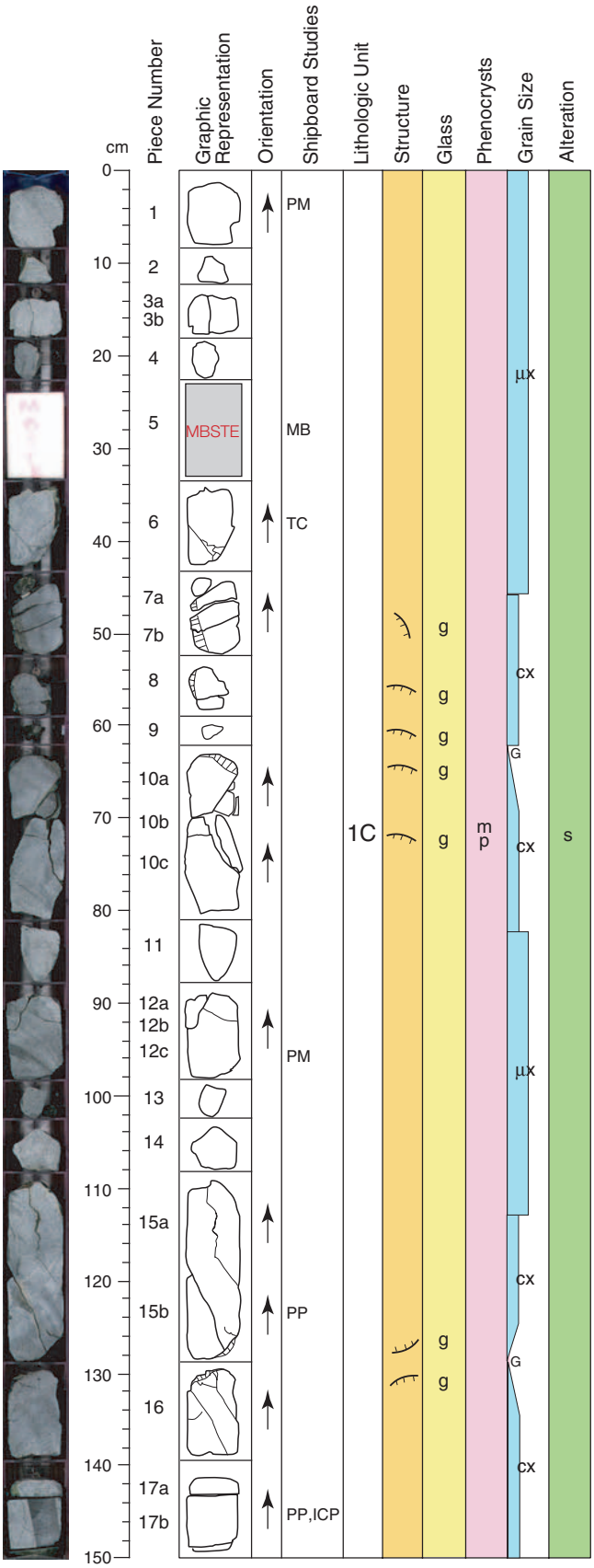
VESICLES: Sparsely vesicular, filled with saponite and iron oxyhydroxide.

COLOR: Very dark gray (N3.0/)

ALTERATION: Sparsely to moderately altered with 3-15 mm wide black halos along many veins.

VEINS/FRACTURES: 0.1-0.8 mm wide saponite and iron oxyhydroxide veins with black alteration halos.

Core Photo



301-U1301B-2R-3 (Section top: 360.04 mbsf)

UNIT IC: Moderately to highly olivine-clinopyroxene-plagioclase-microcrystalline pillow basalt

PIECES: 1-17 (Continues next section)

CONTACTS:
Upper: Glassy margin at top (1R-1, Piece 17)
Lower: Glassy margin at bottom (11R-1, Piece 11)

PHENOCRYSTS:

Plagioclase	10%	0.2-2.2 mm
Olivine	3%	0.2-1 mm
Clinopyroxene	2%	0.2-1 mm

GROUNDMASS:
Grain size: Cryptocrystalline to fine grained.
Texture: Hyalo-ophitic to intersertal.

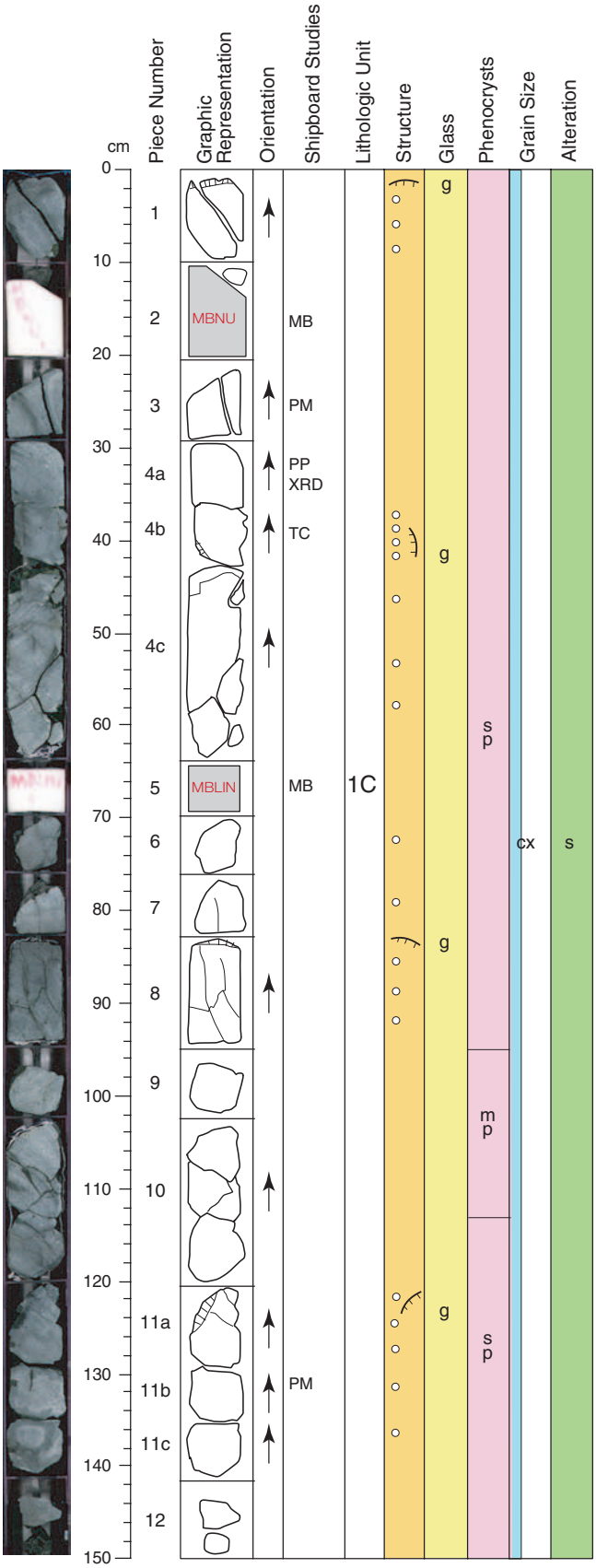
VESICLES: Sparsely vesicular, filled with saponite and iron oxyhydroxide.

COLOR: Very dark gray (N3.0/)

ALTERATION: Sparsely to moderately altered with 3-15 mm wide black halos along many veins.

VEINS/FRACTURES: 0.1-0.8 mm wide saponite and iron oxyhydroxide veins with black alteration halos.

Core Photo



301-U1301B-3R-1 (Section top: 361.1 mbsf)

UNIT IC: Moderately to highly clinopyroxeneolivine-plagioclase-phyric cryptocrystalline pillow basalt

PIECES: 1-12 (Continues next section)

CONTACTS:
Upper: Glassy margin at top (1R-1, Piece 17)
Lower: Glassy margin at bottom (11R-1, Piece 11)

PHENOCRYSTS:

Plagioclase	10%	0.2-2.2 mm
Olivine	5%	0.2-1 mm
Clinopyroxene	3%	0.2-1 mm

GROUNDMASS:
Grain size: Cryptocrystalline
Texture: Hyalo-ophitic to intersertal.

VESICLES: Sparsely to moderately vesicular, filled with saponite and iron oxyhydroxide.

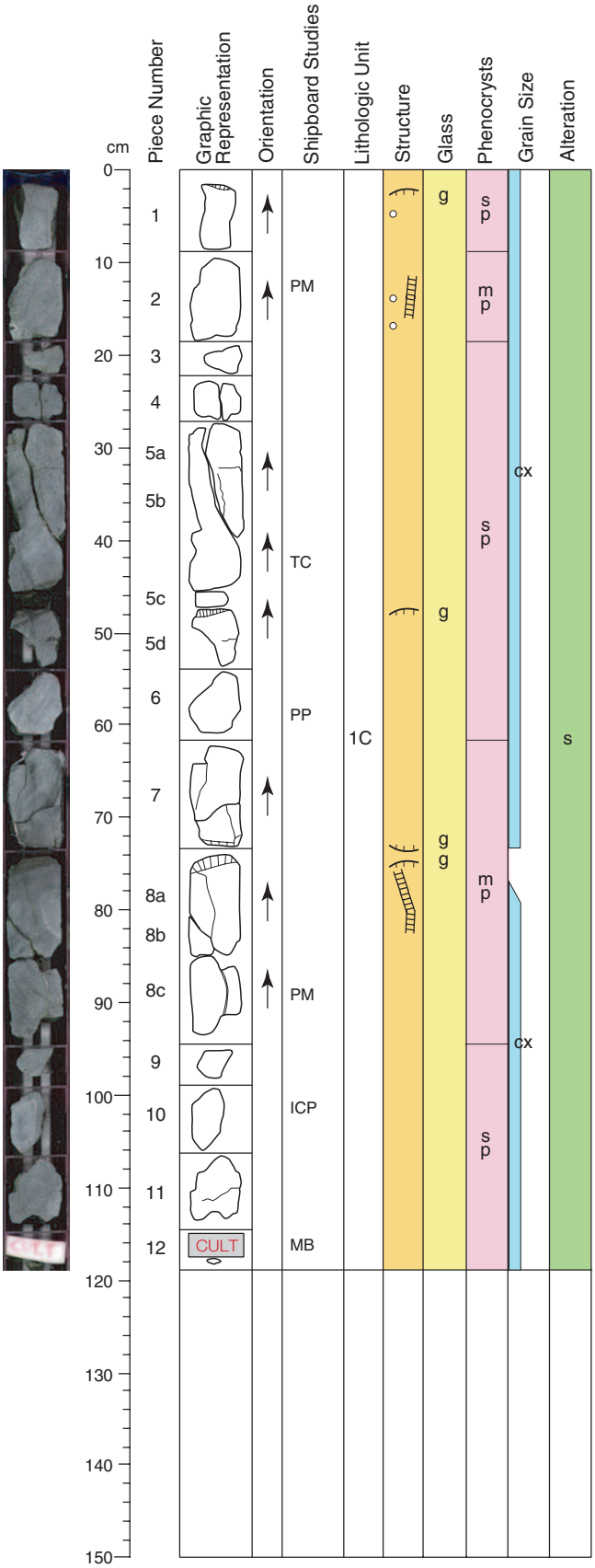
COLOR: Very dark gray (N3.0/)

STRUCTURE: Curved glass margins, with radial cooling cracks in Pieces 1, 4, 8, and 11, characteristic of pillow lavas.

ALTERATION: Slightly altered with 2-12 mm wide black or mixed halos along many veins. Glass is partially altered.

VEINS/FRACTURES: 0.1-0.5 mm wide saponite veins and iron oxyhydroxide with black alteration halos.

Core Photo



301-U1301B-3R-2 (Section top: 362.6 mbsf)

UNIT IC: Moderately to highly clinopyroxene-olivine-plagioclase-phyric cryptocrystalline pillow basalt

PIECES: 1-12 (Continues next core)

CONTACTS:
Upper: Glassy margin at top (1R-1 Piece 17)
Lower: Glassy margin at bottom (11R-1 Piece 11)

PHENOCRYSTS:

Plagioclase	10%	0.5-2.2 mm
Olivine	5%	0.2-1 mm
Clinopyroxene	3%	0.2-1 mm

GROUNDMASS:
Grain size: Cryptocrystalline
Texture: Hyalo-ophitic.

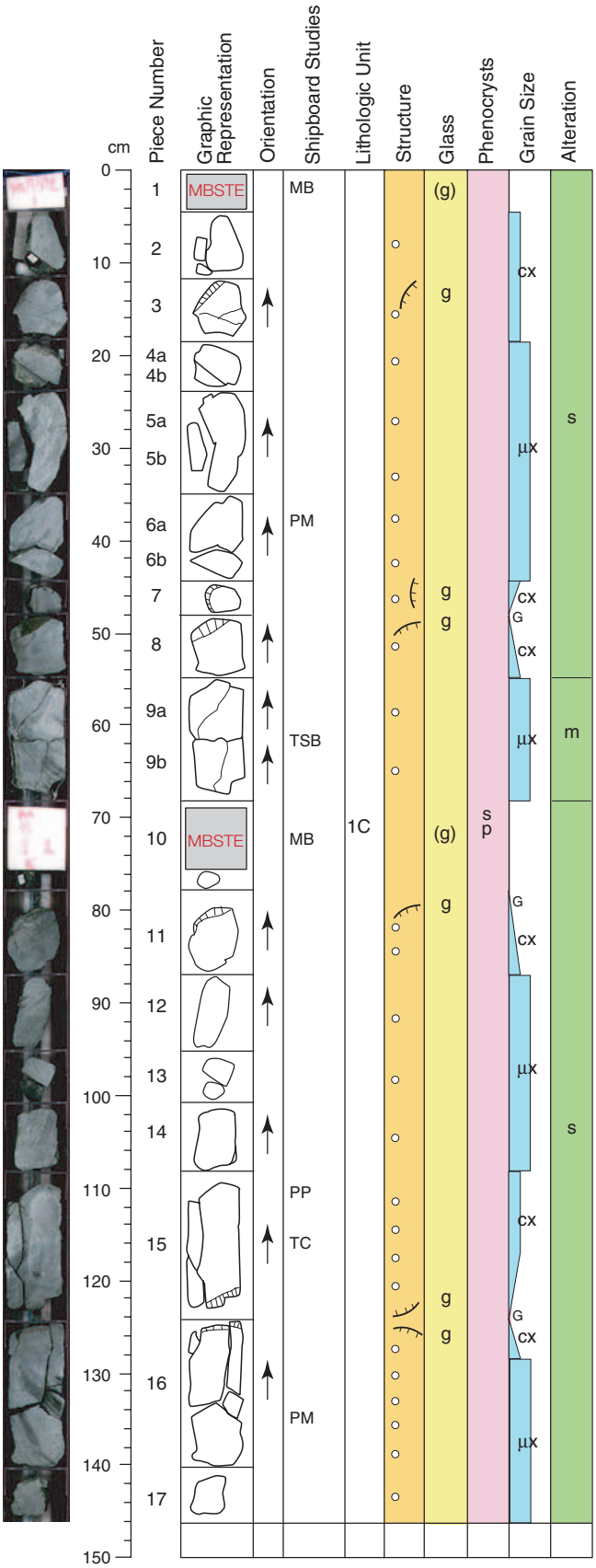
VESICLES: Sparsely vesicular, filled with saponite and iron oxyhydroxide.

COLOR: Very dark gray (N3.0/)

ALTERATION: Slightly altered with 3-10 mm wide mixed alteration halos along many veins. Glass pillow margins are partially altered.

VEINS/FRACTURES: 0.1-0.5 mm wide saponite and iron oxyhydroxide veins with black/mixed alteration halos.

Core Photo



301-U1301B-4R-1 (Section top: 366.6 mbsf)

UNIT IC: Highly olivine-clinopyroxene-plagioclase-cryptocrystalline pillow basalt

PIECES: 1-17 (Continues next section)

CONTACTS:
Upper: Glassy margin at top (1R-1 Piece 17)
Lower: Glassy margin at bottom (11R-1 Piece 11)

PHENOCRYSTS:

Plagioclase	12%	0.2-3 mm
Olivine	3%	0.2-1.2 mm
Clinopyroxene	5%	0.2-1 mm

GROUNDMASS:
Grain size: Crypto to microcrystalline
Texture: Hyalo-ophitic to intersertal.

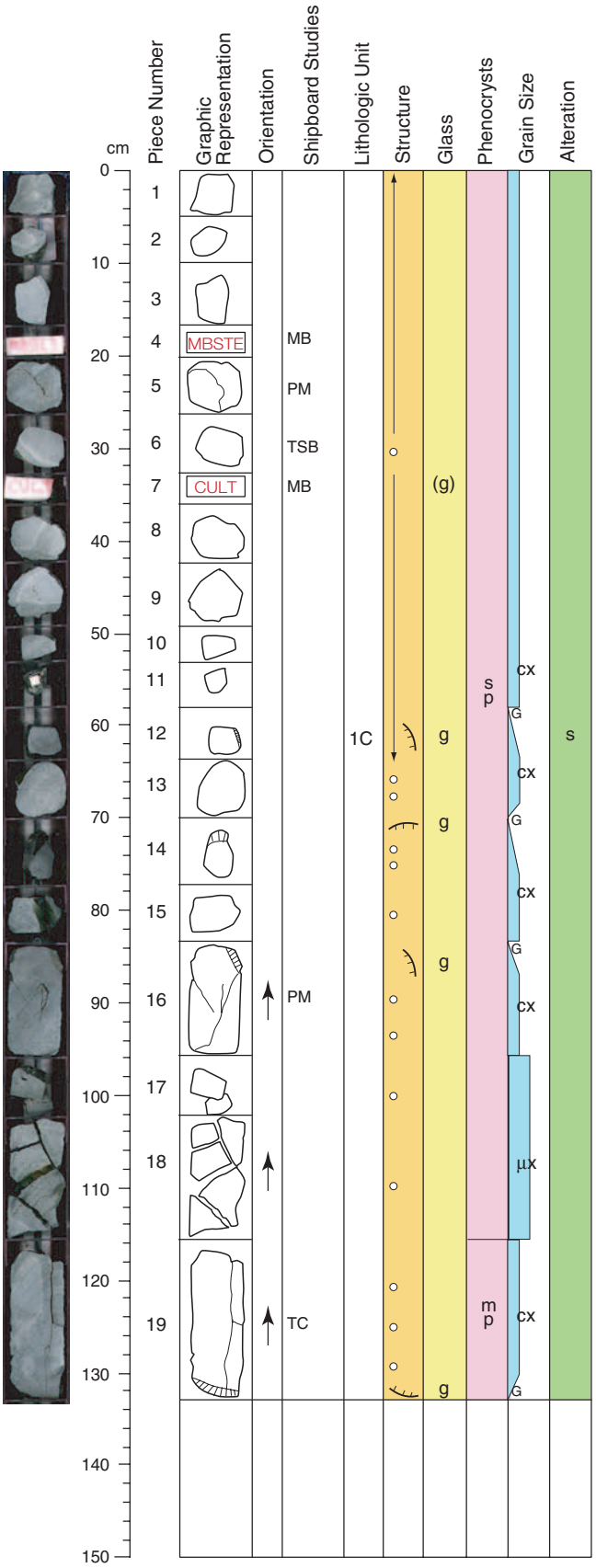
VESICLES: Sparsely to moderately vesicular, filled with saponite.

COLOR: Very dark gray (N3.0/)

ALTERATION: Slightly to moderately altered with 2-15 mm wide mixed halos along many veins. Glass pillow margins are partially altered.

VEINS/FRACTURES: 0.1-0.5 mm wide saponite, celadonite and iron oxyhydroxide veins with black alteration halos.

Core Photo



301-U1301B-4R-2 (Section top: 368.06 mbsf)

UNIT IC: Moderately to highly olivine-clinopyroxene-plagioclase-phyric microcrystalline pillow basalt

PIECES: 1-19 (Continues next section)

CONTACTS:
Upper: Glassy margin at top (1R-1, Piece 17)
Lower: Glassy margin at bottom (11R-1, Piece 11)

PHENOCRYSTS:

Plagioclase	12%	0.3-2.2 mm
Olivine	1%	0.2-1.7 mm
Clinopyroxene	1%	0.4-0.6 mm

GROUNDMASS:
Grain size: Crypto to microcrystalline
Texture: Hyalo-ophitic.

VESICLES: Sparsely vesicular, filled with saponite and iron oxyhydroxide.

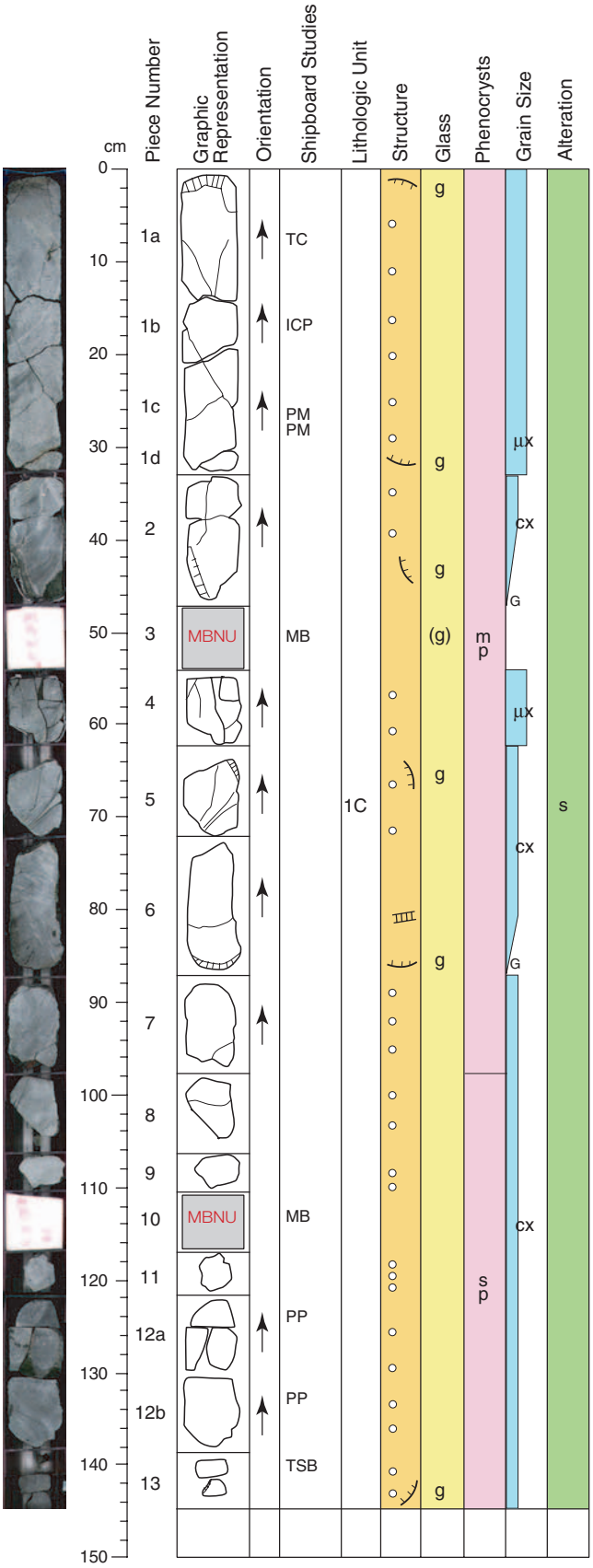
COLOR: Very dark gray (N3.0/)

ALTERATION: Slightly to moderately altered with 2-12 mm wide black and mixed halos along many veins. Glass chilled margins are partially altered.

VEINS/FRACTURES: 0.1-0.5 mm wide saponite, celadonite and iron oxyhydroxide veins with black alteration halos.

ADDITIONAL COMMENTS: Plagioclase and clinopyroxene phenocrysts display a glomeroporphyritic texture.

Core Photo



301-U1301B-4R-3 (Section top: 369.39 mbsf)

UNIT IC: Moderately clinopyroxene-olivine-plagioclase-phyric microcrystalline pillow basalt

PIECES: 1-13 (Continues next section)

CONTACTS:
Upper: Glassy margin at top (1R-1, Piece 17)
Lower: Glassy margin at bottom (11R-1, Piece 11)

PHENOCRYSTS:

Plagioclase	5%	0.3-3 mm
Olivine	3%	0.3-1.8 mm
Clinopyroxene	1%	0.3-1.2 mm

GROUNDMASS:
Grain size: Crypto to microcrystalline
Texture: Hyalo-ophitic

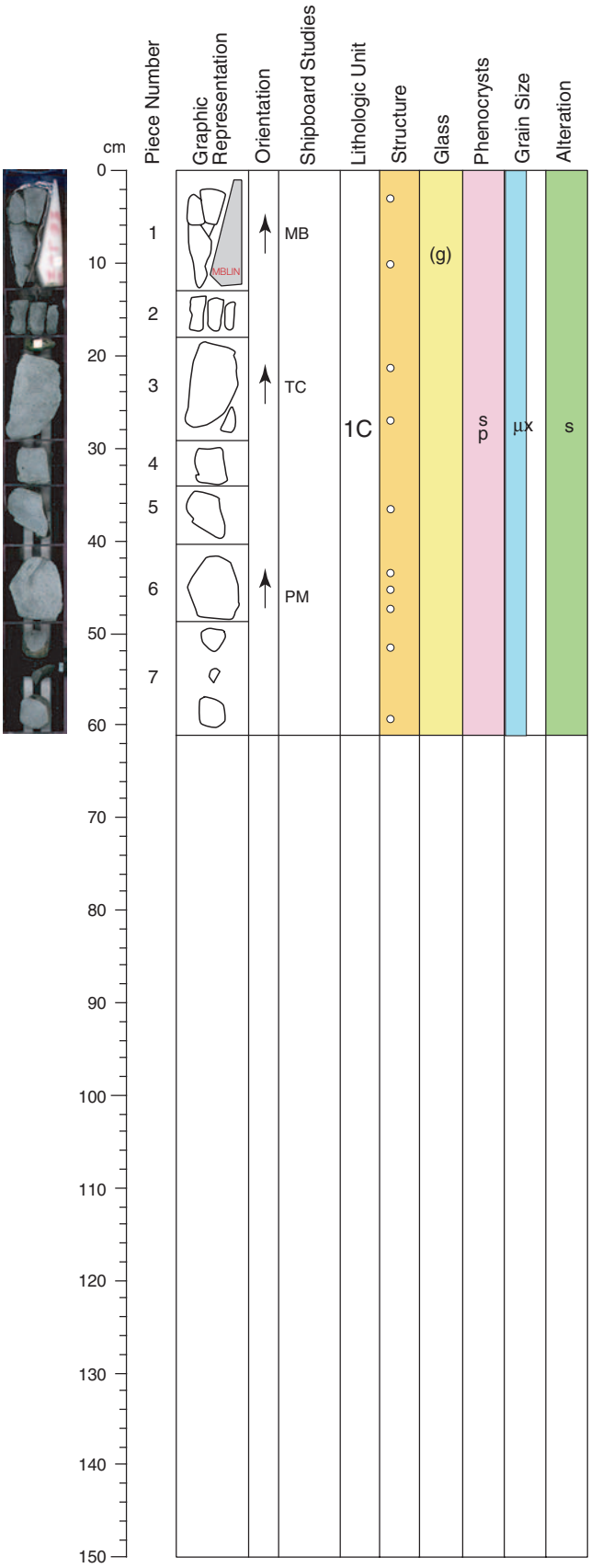
VESICLES: Sparsely to moderately vesicular, filled with saponite and iron oxyhydroxide.

COLOR: Very dark gray (N3.0/)

ALTERATION: Slightly to moderately altered with 2-15 mm wide black and mixed halos along many veins. Glassy chilled pillow margins are partially altered.

VEINS/FRACTURES: 0.1-0.5 mm wide saponite, celadonite and iron oxyhydroxide veins with black alteration halos.

Core Photo



301-U1301B-4R-4 (Section top: 370.84 mbsf)

UNIT IC: Moderately clinopyroxene-olivine-plagioclase-phyric microcrystalline pillow basalt

PIECES: 1-7 (Continues next core)

CONTACTS:
Upper: Glassy margin at top (1R-1, Piece 17)
Lower: Glassy margin at bottom (11R-1, Piece 11)

PHENOCRYSTS:

Plagioclase	5%	0.3-3 mm
Olivine	3%	0.3-1.8 mm
Clinopyroxene	1%	0.3-1.2 mm

GROUNDMASS:
Grain size: Crypto to microcrystalline
Texture: Hyalo-ophitic

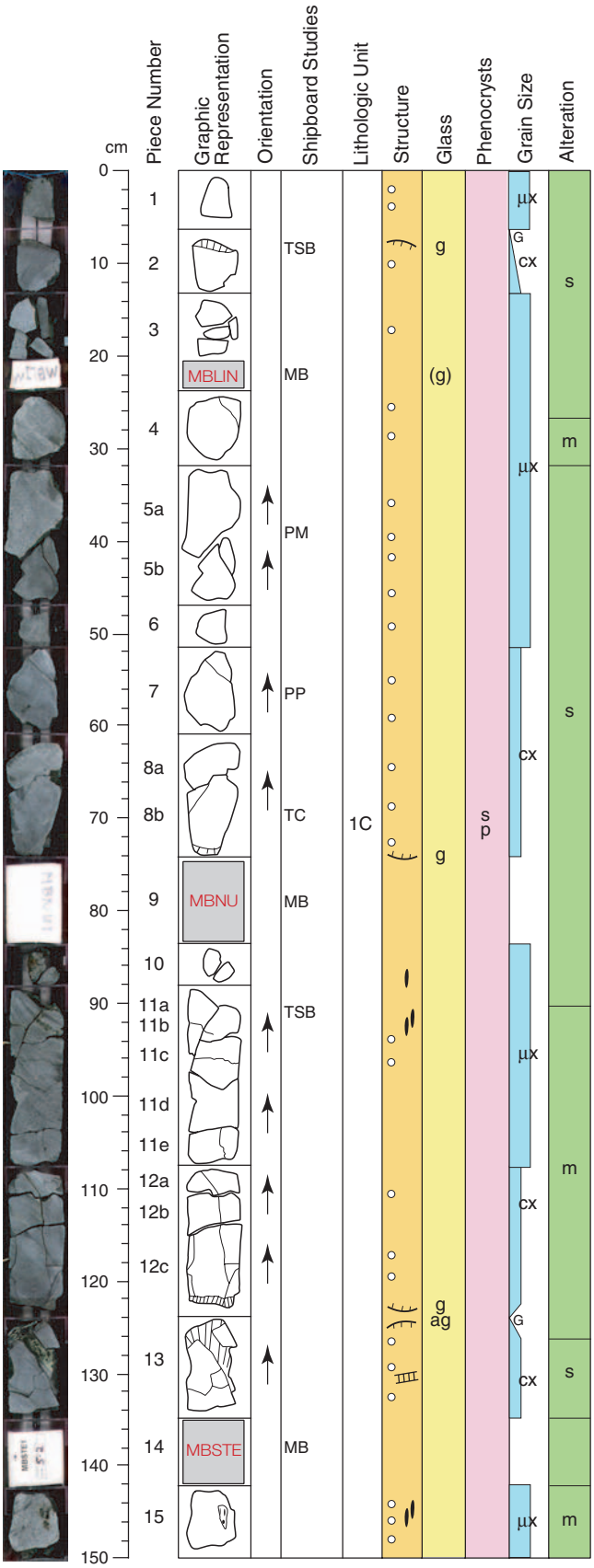
VESICLES: Sparsely to moderately vesicular, filled with saponite and iron oxyhydroxide.

COLOR: Very dark gray (N3.0/)

ALTERATION: Slightly to moderately altered with 2-15 mm wide black and mixed halos along many veins. Glassy chilled pillow margins are partially altered.

VEINS/FRACTURES: 0.1-0.5 mm wide saponite, celadonite and iron oxyhydroxide veins with black alteration halos.

Core Photo



301-U1301B-5R-1 (Section top: 376.3 mbsf)

UNIT IC: Sparsely to moderately olivine-clinopyroxene-plagioclase-phyric microcrystalline pillow basalt

PIECES: 1-15 (Continues next section)

CONTACTS:
Upper: Glassy margin at top (1R-1, Piece 17)
Lower: Glassy margin at bottom (11R-1, Piece 11)

PHENOCRYSTS:

Plagioclase	3%	0.3-2.5 mm
Olivine	1%	0.3-1.2 mm
Clinopyroxene	1%	0.3-1 mm

GROUNDMASS:
Grain size: Crypto to microcrystalline.
Texture: Hyalo-ophitic to intersertal.

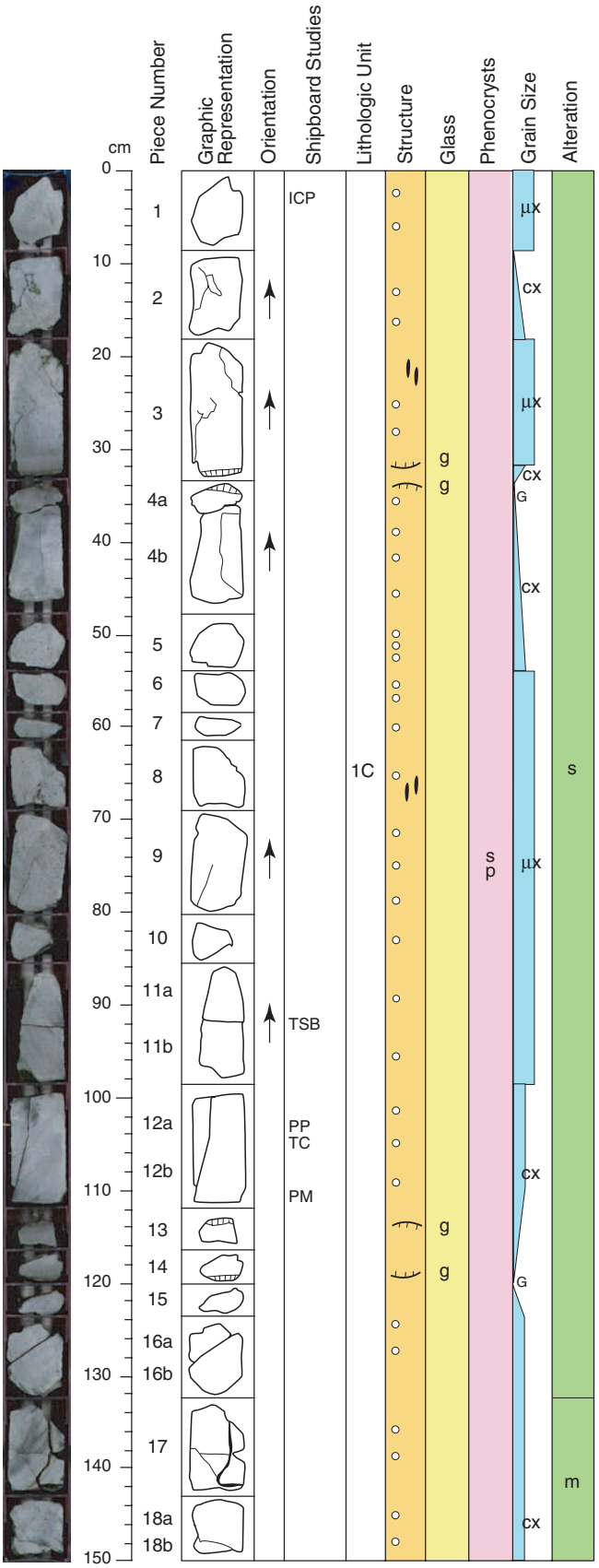
VESICLES: Sparsely vesicular, filled with saponite and iron oxyhydroxide.

COLOR: Very dark gray (N3.0/)

ALTERATION: Slightly to moderately altered with 3-10 mm wide black/mixed halos along many veins. Glassy pillow margins are partially altered.

VEINS/FRACTURES: 0.1-0.4 mm wide saponite, celadonite and iron oxyhydroxide veins with black alteration halos.

Core Photo



301-U1301B-5R-2 (Section top: 377.8 mbsf)

UNIT IC: Sparsely to moderately clinopyroxene-olivine-plagioclase-phyric microcrystalline pillow basalt

PIECE: 1-18 (Continues next section)

CONTACTS:
Upper: Glassy margin at top (1R-1, Piece 17)
Lower: Glassy margin at bottom (11R-1, Piece 11)

PHENOCRYSTS:

Plagioclase	3%	0.5-3 mm
Olivine	2%	0.5-1.5mm
Clinopyroxene	1%	0.3-1.5mm

GROUNDMASS:
Grain size: Crypto to microcrystalline
Texture: Hyalo-ophitic to intersertal

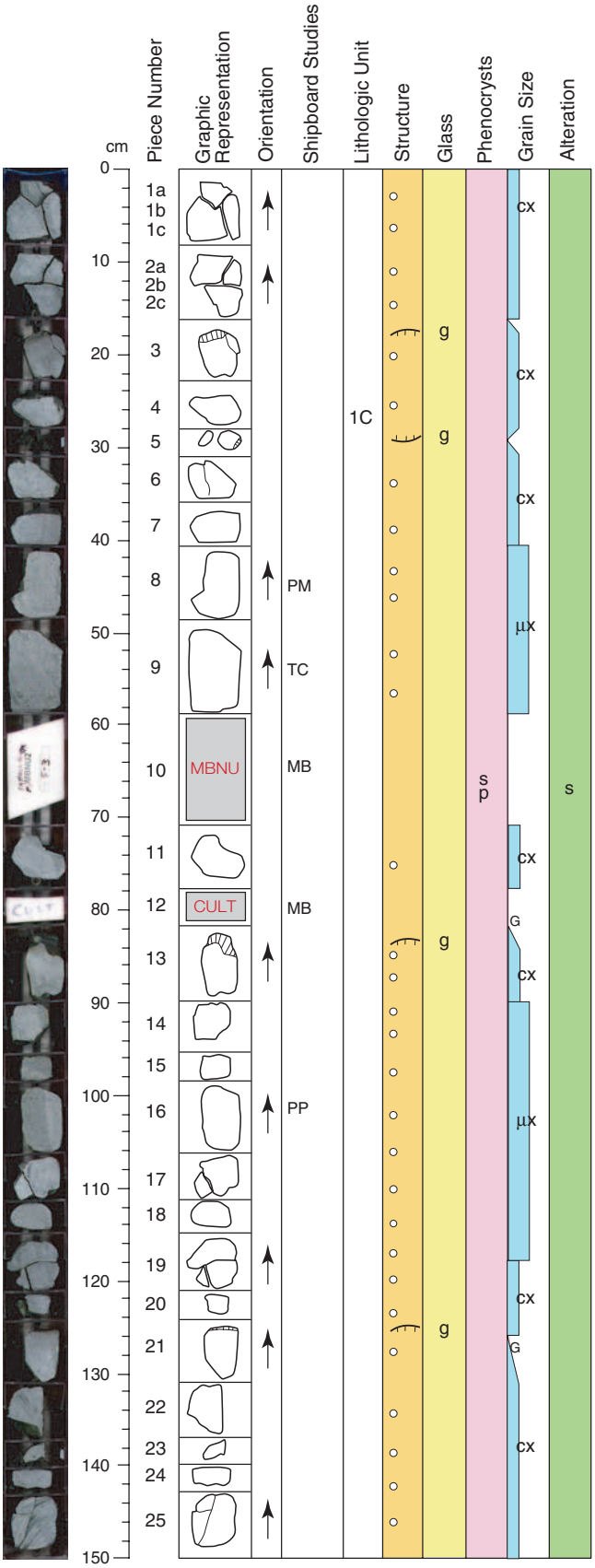
VESICLES: Sparsely to moderately vesicular, filled with saponite and iron oxyhydroxide.

COLOR: Very dark gray (N3.0/)

ALTERATION: Slightly to moderately altered with 1-10 mm wide black/mixed alteration halos along many veins. Glass pillow margins are partially altered.

VEINS/FRACTURES: 0.1-0.4 mm wide saponite, iron hydroxide, celadonite and minor pyrite veins with black alteration halo.

Core Photo



301-U1301B-5R-3 (Section top: 379.3 mbsf)

UNIT IC: Sparsely to moderately clinopyroxene-olivine-plagioclase-phyric microcrystalline pillow basalt

PIECES: 1-25 (continuous next section)

CONTACTS:
Upper: Glassy margin at top (1R-1, Piece 17)
Lower: Glassy margin at bottom (11R-1, Piece 11)

PHENOCRYSTS:

Plagioclase	3%	0.5-3 mm
Olivine	2%	0.5-1.5mm
Clinopyroxene	1%	0.3-1.5mm

GROUNDMASS:
Grain size: Crypto to microcrystalline
Texture: Hyalo-ophitic to intersertal

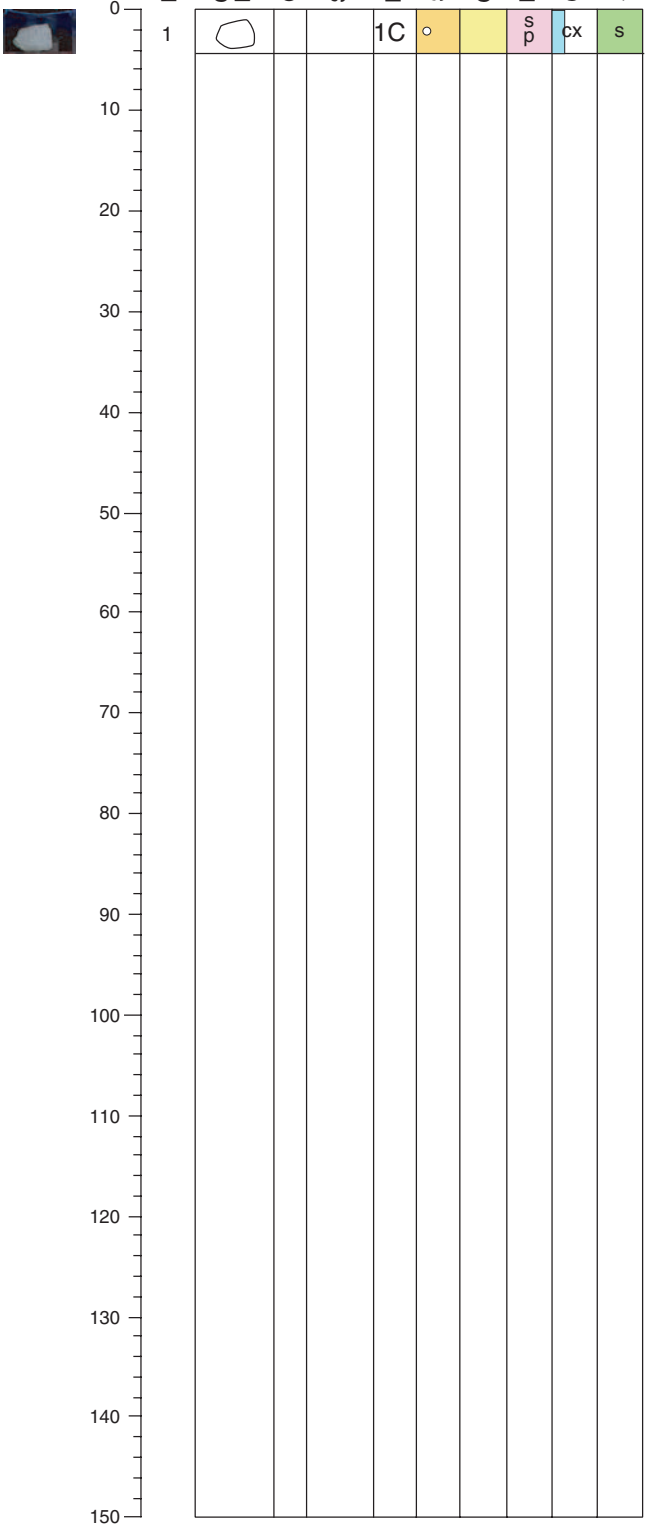
VESICLES: Sparsely to moderately vesicular, filled with saponite and iron oxyhydroxide.

COLOR: Very dark gray (N3.0/)

ALTERATION: Slightly to moderately altered with 1-10 mm wide black/mixed alteration halos along many veins. Glass pillow margins are partially altered.

VEINS/FRACTURES: 0.1-0.4 mm wide saponite, iron hydroxide, celadonite and minor pyrite veins with black alteration halo.

Core Photo



301-U1301B-5R-4 (Section top: 380.8 mbsf)

UNIT IC: Sparsely clinopyroxene-olivine-plagioclase-phyric cryptocrystalline pillow basalt

PIECE: 1 (Continues next section)

CONTACTS:
Upper: Glassy margin at top (1R-1, Piece 17)
Lower: Glassy margin at bottom (11R-1, Piece 11)

PHENOCRYSTS:

Plagioclase	3%	0.5-3 mm
Olivine	2%	0.5-1.5mm
Clinopyroxene	1%	0.3-1.5mm

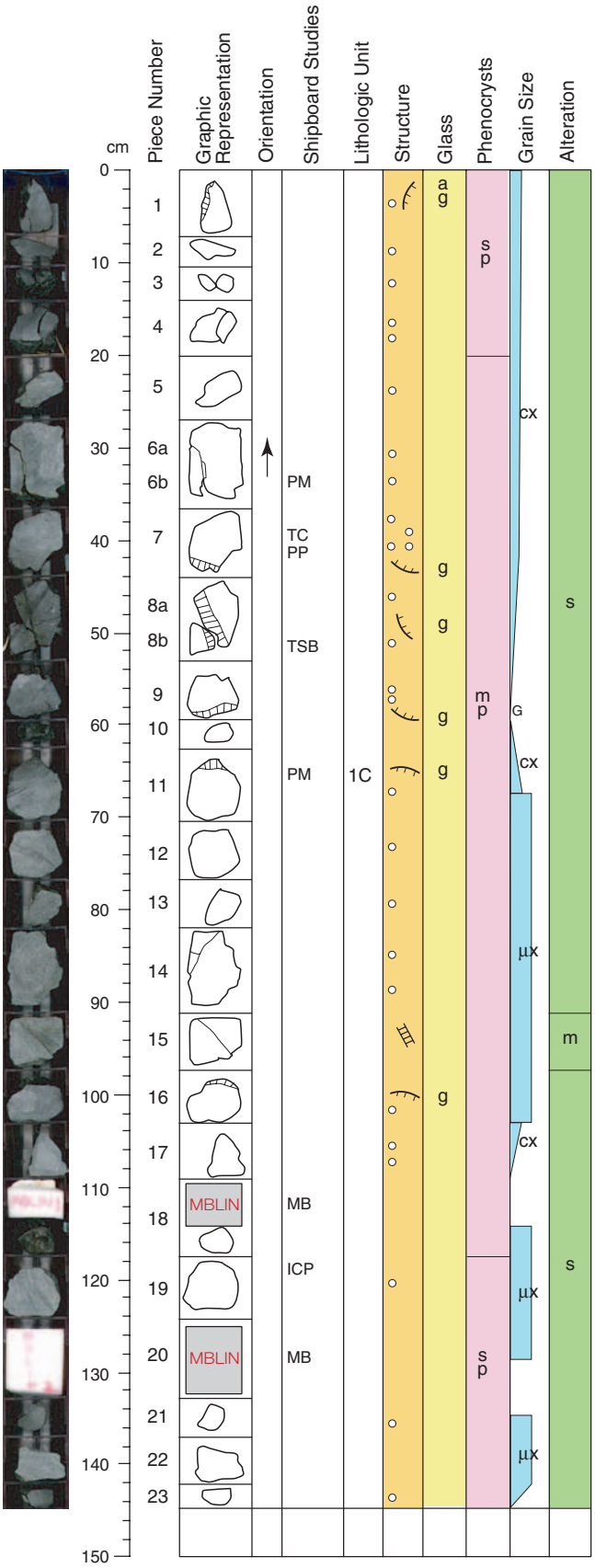
GROUNDMASS:
Grain size: Cryptocrystalline
Texture: Hyalo-ophitic to intersertal

VESICLES: Sparsely to moderately vesicular, filled with saponite and iron oxyhydroxide.

COLOR: Very dark gray (N3.0/)

ALTERATION: Slightly altered.

Core Photo



301-U1301B-6R-1 (Section top: 386.0 mbsf)

UNIT IC: Sparsely to moderately olivine-clinopyroxene-plagioclase-phyric microcrystalline pillow basalt

PIECE: 1-23 (Continues next section)

CONTACTS:
Upper: Glassy margin at top (1R-1, Piece 17)
Lower: Glassy margin at bottom (11R-1, Piece 11)

PHENOCRYSTS:

Plagioclase	5%	0.1-1 mm
Olivine	2%	0.1-0.5 mm
Clinopyroxene	2%	0.1-0.5 mm

GROUNDMASS:
Grain size: Crypto- to microcrystalline
Texture: Hyalo-ophitic

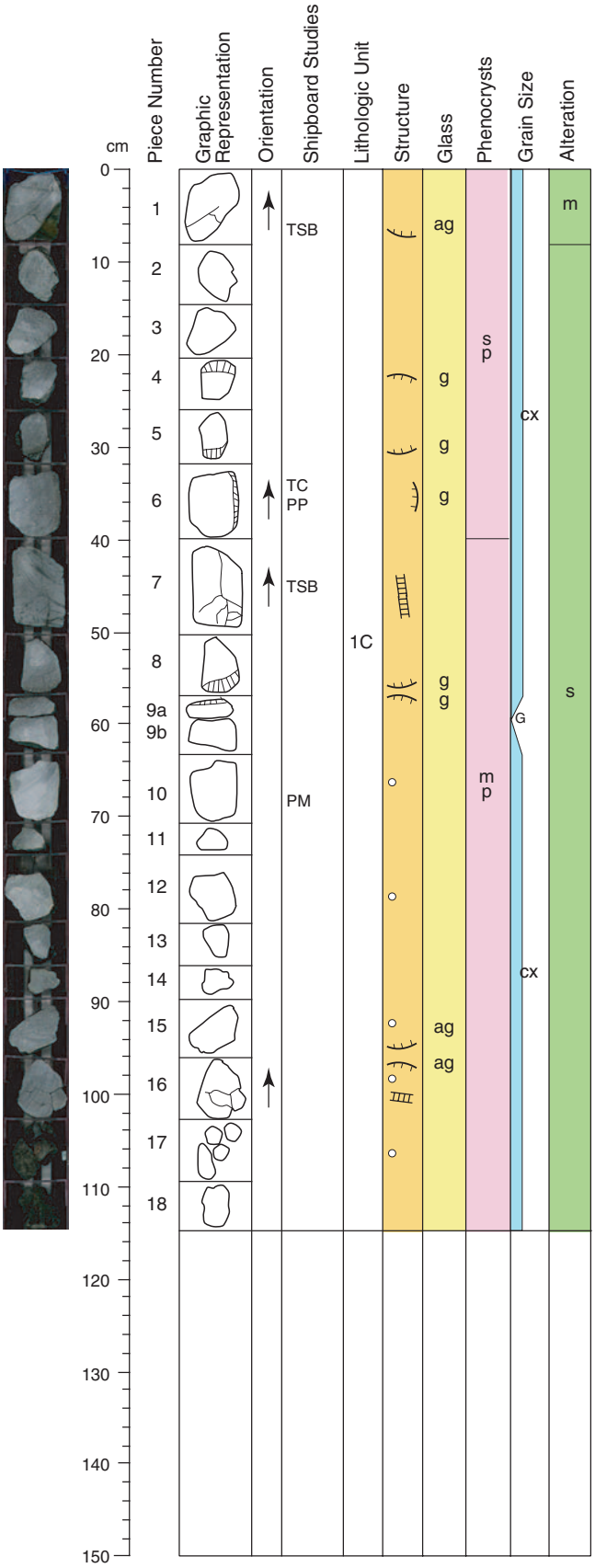
VESICLES: Sparsely to moderately vesicular, filled with saponite and iron oxyhydroxide.

COLOR: Very dark gray (N3.0/)

ALTERATION: Slightly to moderately altered with 2-12 mm wide black halos along many veins. Glassy pillow margins are partially altered.

VEINS/FRACTURES: 0.1-0.5 mm wide saponite, iron oxyhydroxide and minor celadonite veins with alteration halos.

Core Photo



301-U1301B-6R-2 (Section top: 387.45 mbsf)

UNIT IC: Moderately to highly olivine-clinopyroxene-plagioclase-phyric cryrtocrystalline pillow basalt

PIECE: 1-18 (Continues next core)

CONTACTS:
Upper: Glassy margin at top (1R-1, Piece 17)
Lower: Glassy margin at bottom (11R-1, Piece 11)

PHENOCRYSTS:

Plagioclase	7%	0.4-2.5 mm
Olivine	2%	0.3-1.4 mm
Clinopyroxene	3%	0.3-1 mm

GROUNDMASS:
Grain size: Cryptocrystalline
Texture: Hyalo-ophitic to intersertal.

VESICLES: Sparsely vesicular, filled with saponite and iron oxyhydroxide.

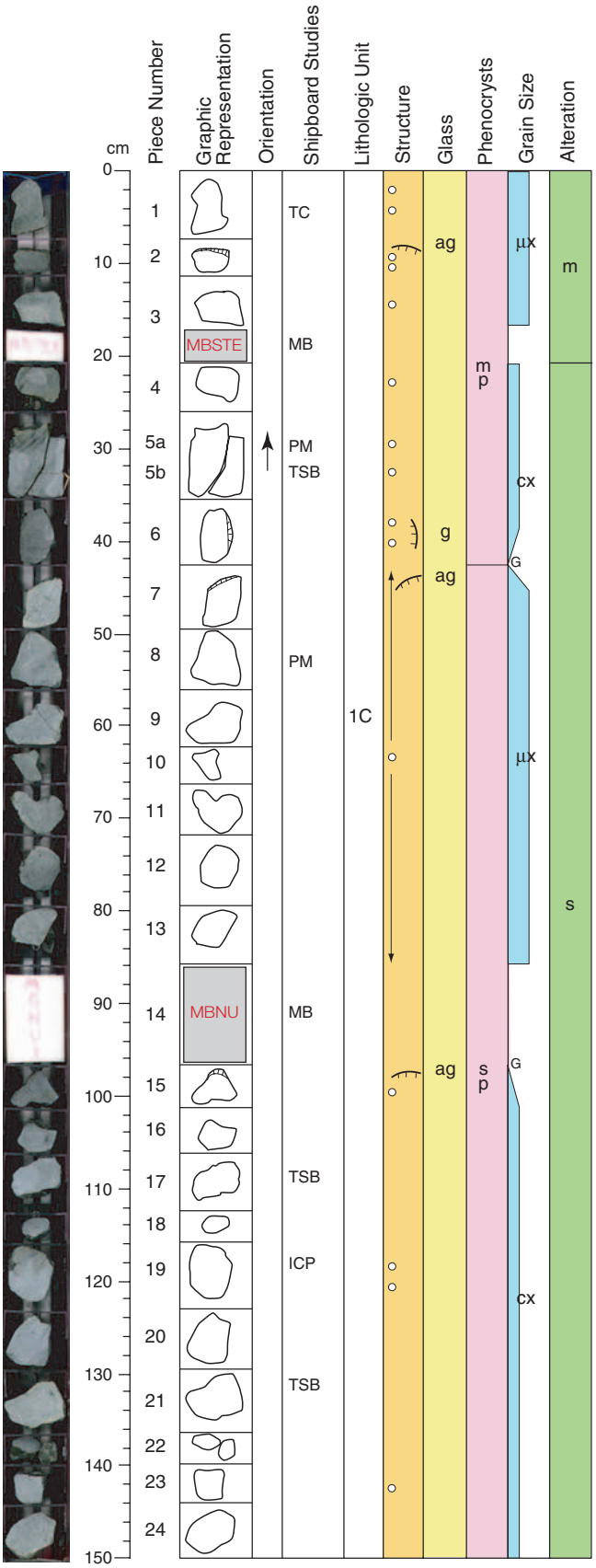
COLOR: Very dark gray (N3.0/)

STRUCTURE:

ALTERATION: Slightly to moderately altered with 3-12 mm wide black/mixed alteration halos.

VEINS/FRACTURES: 0.1-0.2 mm wide saponite, iron oxyhydroxide and rare celadonite veins with alteration halos.

Core Photo



301-U1301B-7R-1 (Section top: 395.6 mbsf)

UNIT IC: Moderately olivine-clinopyroxene-plagioclase-phyric microcrystalline pillow basalt

PIECES: 1-24 (Continues next section)

CONTACTS:
Upper: Glassy margin at top (1R-1. Piece 17)
Lower: Glassy margin at bottom (11R-1. Piece 11)

PHENOCRYSTS:

Plagioclase	7%	0.3-1.5 mm
Olivine	2%	0.3-1.5 mm
Clinopyroxene	2%	0.2-0.5mm

GROUNDMASS:
Grain size: Crypto to microcrystalline
Texture: Hyalo-ophitic

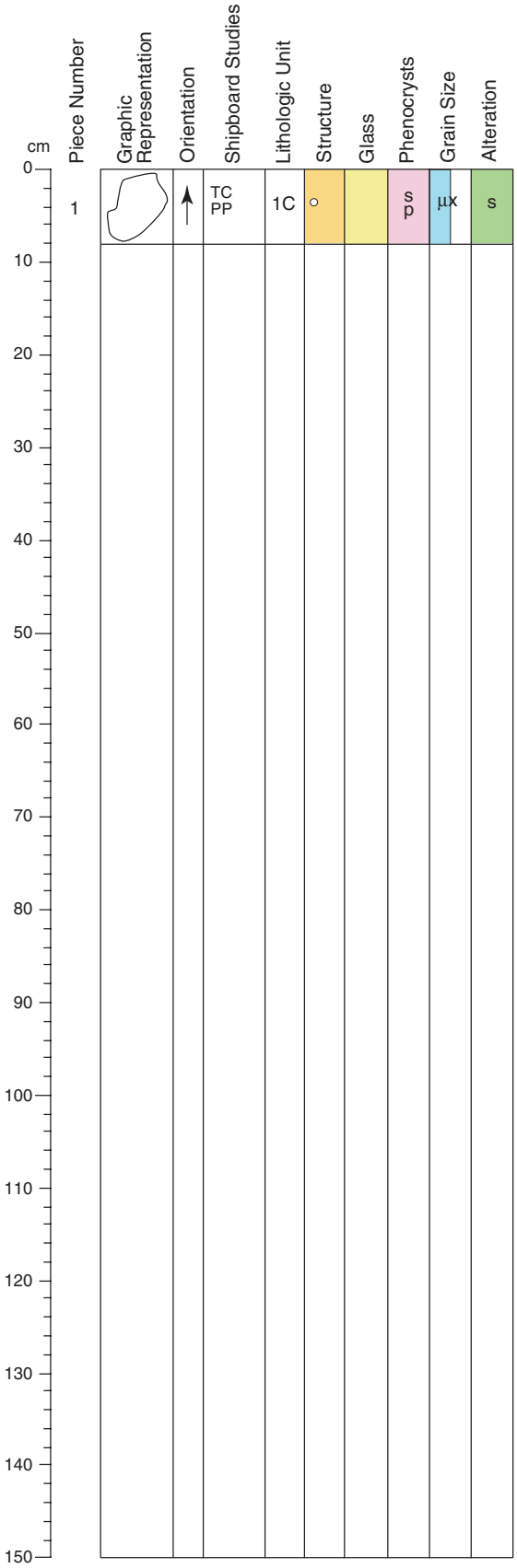
VESICLES: Sparsely vesicular, filled with saponite, iron oxyhydroxide and celadonite.

COLOR: Very dark gray (N3.0/)

ALTERATION: Slightly to moderately altered with 3-12 mm wide black/mixed halos along many veins. Glass margins are partially altered.

VEINS/FRACTURES: 0.1-0.5 mm wide saponite, iron oxyhydroxide and celadonite veins with alteration halos.

Core Photo



301-U1301B-7R-2 (Section top: 397.10 mbsf)

UNIT IC: Moderately olivine-clinopyroxene-plagioclase-phyric microcrystalline pillow basalt

PIECE: 1 (Continues next core)

CONTACTS:
Upper: Glassy margin at top (1R-1, Piece 17)
Lower: Glassy margin at bottom (11R-1, Piece 11)

PHENOCRYSTS:

Plagioclase	7% 0.3-1.5 mm
Olivine	2% 0.3-1.5 mm
Clinopyroxene	2% 0.2-0.5mm

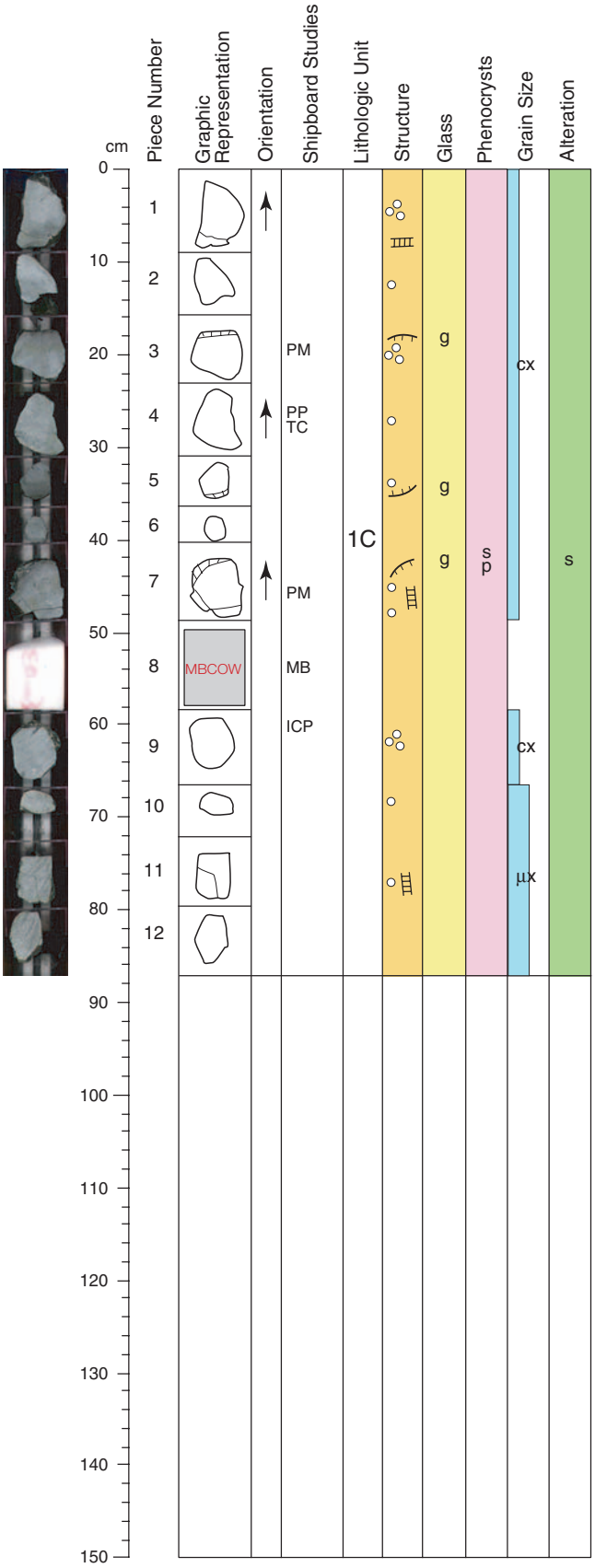
GROUNDMASS:
Grain size: Microcrystalline
Texture: Hyalo-ophitic

VESICLES: Sparsely vesicular, filled with saponite and iron oxyhydroxide.

COLOR: Very dark gray (N3.0/)

ALTERATION: Slightly altered with 3-12 mm wide black/mixed halos along many veins.

Core Photo



301-U1301B-8R-1 (Section top: 405.2 mbsf)

UNIT IC: Moderately clinopyroxene-olivine-plagioclase-phyric microcrystalline pillow basalt

PIECE: 1-12 (Continues next core)

CONTACTS:
Upper: Glassy margin at top (1R-1, Piece 17)
Lower: Glassy margin at bottom (11R-1, Piece 11)

PHENOCRYSTS:

Plagioclase	3%	0.5-2.2 mm
Olivine	1%	0.5-1 mm
Clinopyroxene	1%	0.5-1.1 mm

GROUNDMASS:
Grain size: Crypto to microcrystalline
Texture: Hyalo-ophitic

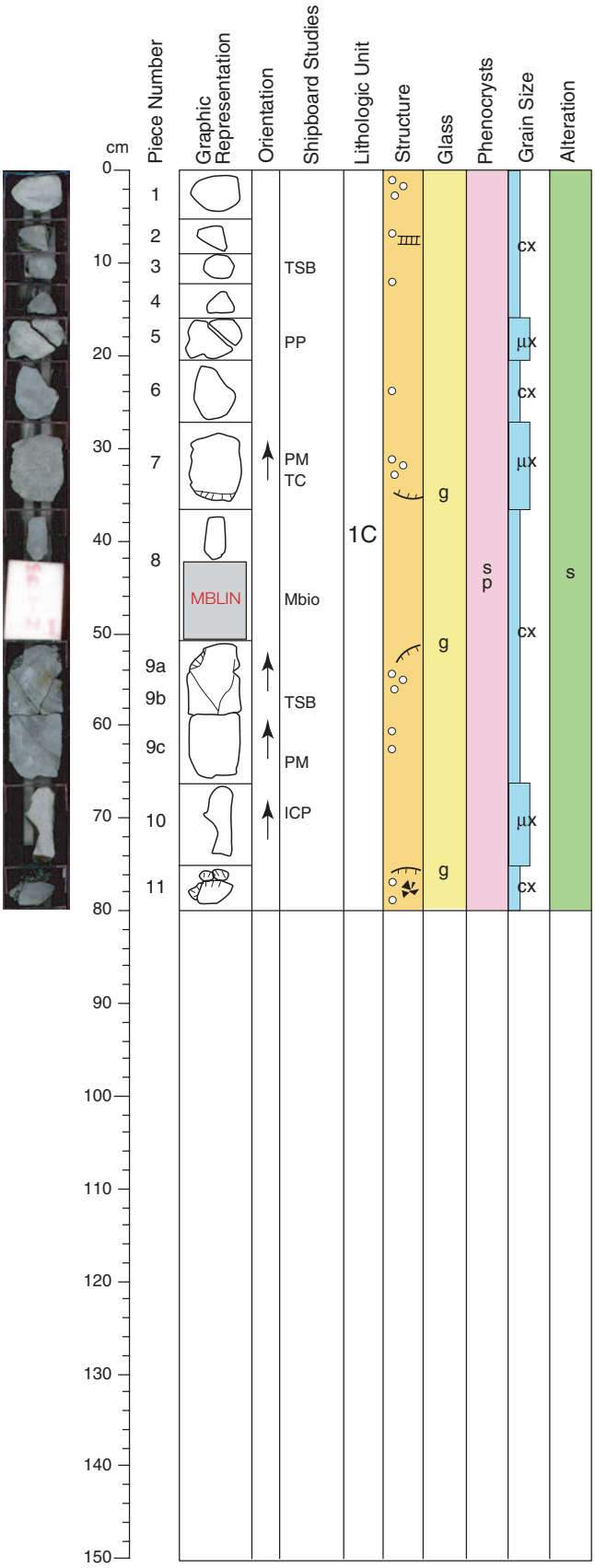
VESICLES: Sparsely vesicular, filled with saponite and iron oxyhydroxide.

COLOR: Very dark gray (N3.0/)

ALTERATION: Slightly to moderately altered with 3-15 mm wide black and green halos along many veins. Glass margins are partially altered.

VEINS/FRACTURES: 0.1-0.5 mm wide saponite and iron oxyhydroxide veins with black alteration halos.

Core Photo



301-U1301B-9R-1 (Section top: 410.2 mbsf)

UNIT IC: Moderately olivine-clinopyroxene-plagioclase-phyric microcrystalline pillow basalt

PIECES: 1-11 (Continues next core)

CONTACTS:
Upper: Glassy margin at top (1R-1, Piece 17)
Lower: Glassy margin at bottom (11R-1, Piece 11)

PHENOCRYSTS:

Plagioclase	3%	0.5-2.2 mm
Olivine	1%	0.5-1 mm
Clinopyroxene	1%	0.5-1.1 mm

GROUNDMASS:
Grain size: Crypto to microcrystalline
Texture: Hyalo-ophitic, pilotaxitic.

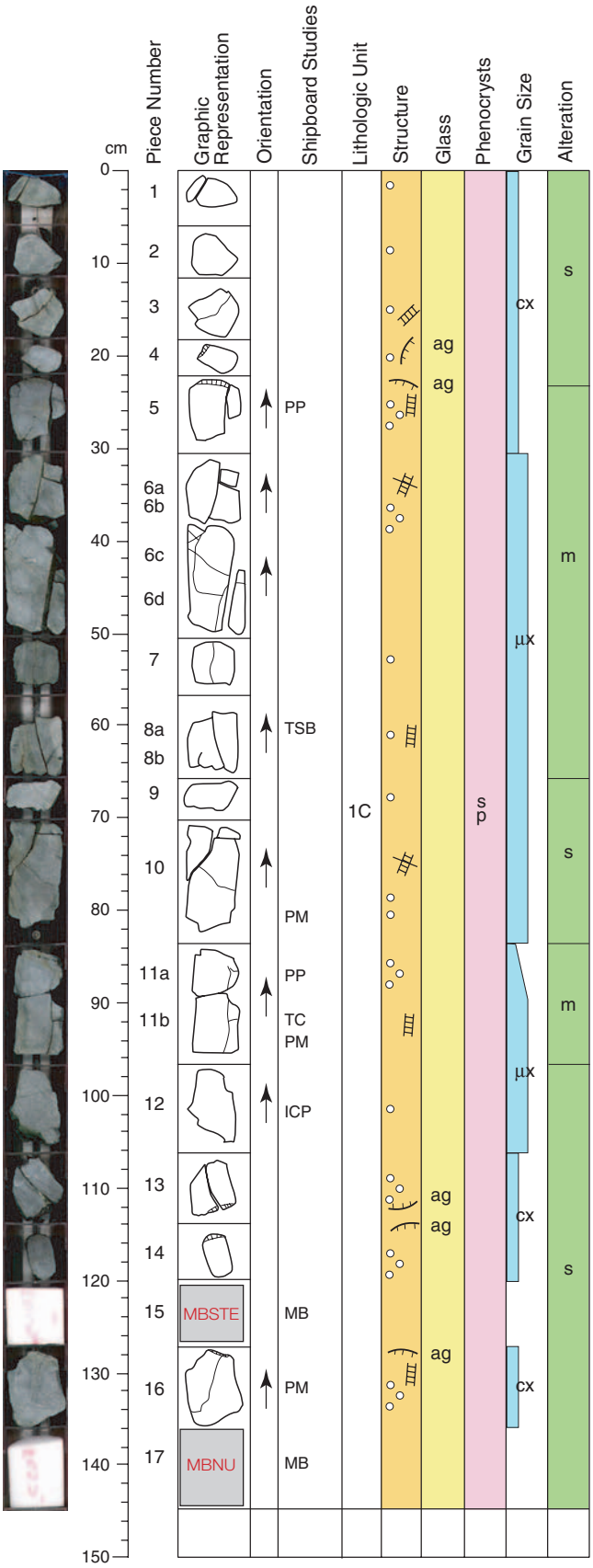
VESICLES: Sparsely vesicular, filled with saponite and iron oxyhydroxide.

COLOR: Very dark gray (N3.0/)

ALTERATION: Slightly to moderately altered with 3-15 mm wide black and green halos along many veins. Glass margins are partially altered.

VEINS/FRACTURES: 0.1-0.5 mm wide saponite and iron oxyhydroxide veins with black alteration halos.

Core Photo



301-U1301B-10R-1 (Section top: 414.8 mbsf)

UNIT IC: Sparsely olivine-clinopyroxene-plagioclase-phyric microcrystalline pillow basalt

PIECES: 1-17 (Continues to next section)

CONTACTS:
Upper: Glassy margin at top (1R-1, Piece 17)
Lower: Glassy margin at bottom (11R-1, Piece 11)

PHENOCRYSTS:

Plagioclase	10%	0.5-3.6 mm
Olivine	2%	0.4-1.2 mm
Clinopyroxene	3%	0.3-1 mm

GROUNDMASS:
Grain size: Cryptocrystalline to microcrystalline
Texture: Intersertal

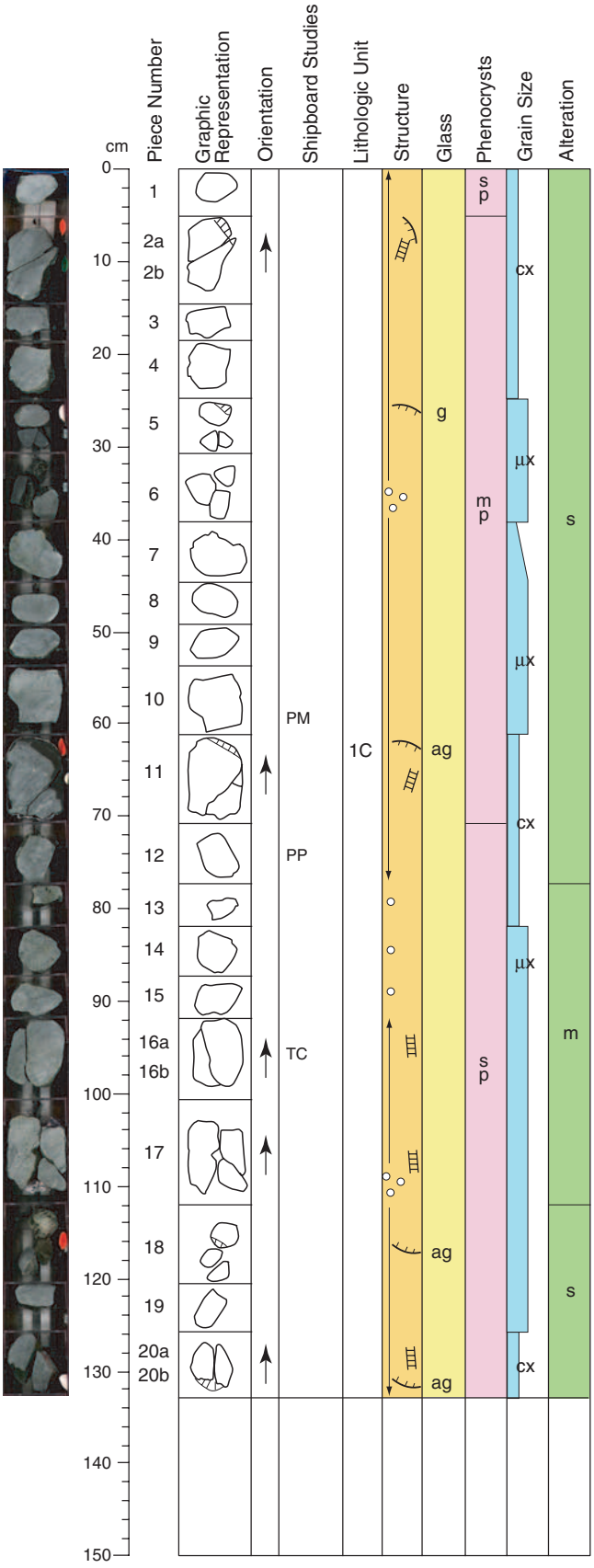
VESICLES: Sparsely vesicular, filled with saponite and iron oxyhydroxide.

COLOR: Very dark gray (N3.0/)

ALTERATION: Slightly to moderately altered with 3-15 mm wide black and green halos along many veins. Glass margins are partially altered.

VEINS/FRACTURES: 0.1-0.5 mm wide saponite and iron oxyhydroxide veins with black alteration halos.

Core Photo



301-U1301B-10R-2 (Section top: 416.25 mbsf)

UNIT IC: Moderately to highly olivine-clinopyroxene-plagioclase-phyric microcrystalline pillow basalt

PIECES: 1-20 (Continues to next core)

CONTACTS:
Upper: Glassy margin at top (1R-1, Piece 17)
Lower: Glassy margin at bottom (11R-1, Piece 11)

PHENOCRYSTS:

Plagioclase	10%	0.5-3.5 mm
Olivine	2%	0.4-1.2 mm
Clinopyroxene	3%	0.3-1 mm

GROUNDMASS:
Grain size: Cryptocrystalline to microcrystalline
Texture: Intersertal.

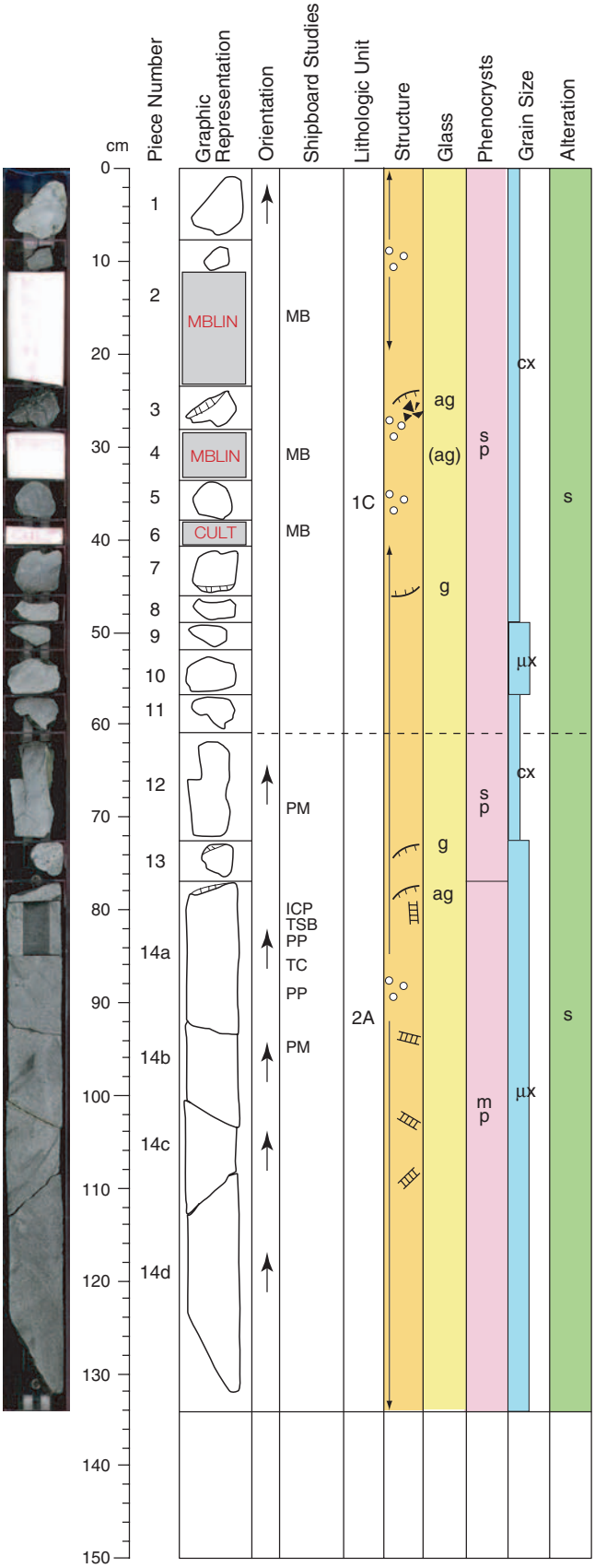
VESICLES: Sparsely vesicular, filled with saponite and iron oxyhydroxide.

COLOR: Very dark gray (N3.0/)

ALTERATION: Slightly to moderately altered with 3-15 mm wide black and green halos along many veins. Glass margins are partially altered.

VEINS/FRACTURES: 0.1-0.5 mm wide saponite and iron oxyhydroxide veins with black alteration halos.

Core Photo



301-U1301B-11R-1 (Section top: 424.4 mbsf)

UNIT IC: Moderately to highly olivine-clinopyroxene-plagioclase-phyric microcrystalline pillow basalt

PIECES: 1-11

CONTACTS:
Upper: Glassy margin at top (1R-1, Piece 17)
Lower: Glassy margin at bottom (11R-1, Piece 11)

PHENOCRYSTS:

Plagioclase	10%	0.5-3.5 mm
Olivine	2%	0.4-1.2 mm
Clinopyroxene	3%	0.3-1 mm

GROUNDMASS:
Grain size: Cryptocrystalline to microcrystalline
Texture: Intersertal.

VESICLES: Sparsely vesicular, filled with saponite and iron oxyhydroxide.

COLOR: Very dark gray (N3.0/)

ALTERATION: Slightly to moderately altered with 3-15 mm wide black and green halos along many veins. Glass margins are partially altered.

VEINS/FRACTURES: 0.1-0.5 mm wide saponite and iron oxyhydroxide veins with black alteration halos.

UNIT 2A: Moderately olivine-clinopyroxene-plagioclase-phyric microcrystalline basalt

PIECES: 12-14d (Continues to next core)

CONTACTS:
Upper: Chilled margin (11R-1, Piece 12)
Lower: Chilled margin (13R-2, Piece 2)

PHENOCRYSTS:

Plagioclase	6%	0.4-3.6 mm
Olivine	1%	0.2-1.2 mm
Clinopyroxene	3%	0.3-1 mm

GROUNDMASS:
Grain size: Crypto- to microcrystalline
Texture: Intersertal

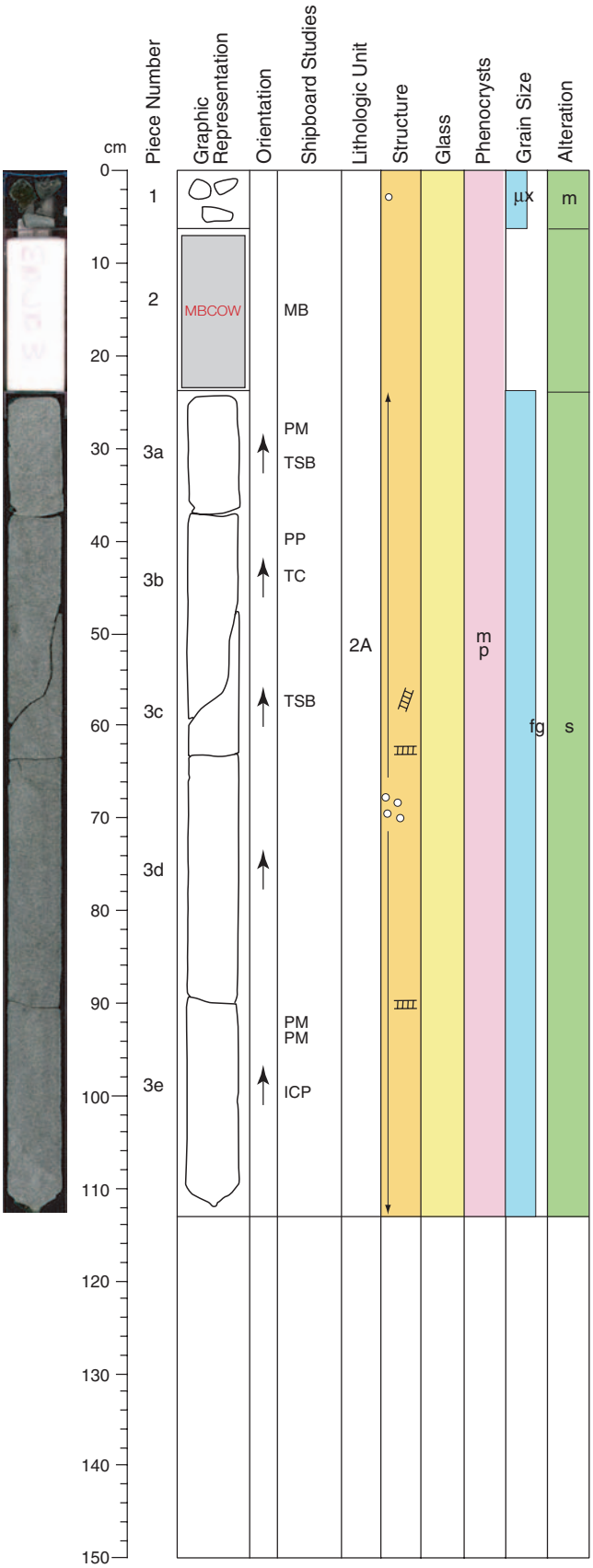
VESICLES: Sparsely to moderately vesicular filled with saponite and celadonite.

COLOR: Very dark gray (N3.0/)

ALTERATION: Slightly altered to dark gray.

VEINS/FRACTURES: Rare <0.5 mm wide saponite, pyrite, and carbonate veins.

Core Photo



301-U1301B-12R-1 (Section top: 428.90 mbsf)

UNIT 2A: Sparsely to moderately olivine-clinopyroxene-plagioclase-phyric fine grained basalt

PIECES: 1-3 (Continues to next core)

CONTACTS:
Upper: Chilled margin (11R-1, Piece 12)
Lower: Chilled margin (13R-2, Piece 2)

PHENOCRYSTS:

Plagioclase	3%	1-2.7 mm
Olivine	2%	0.5-1.2 mm
Clinopyroxene	2%	0.8-2 mm

GROUNDMASS:
Grain size: Microcrystalline to fine grained.
Texture: Intersertal to intergranular.

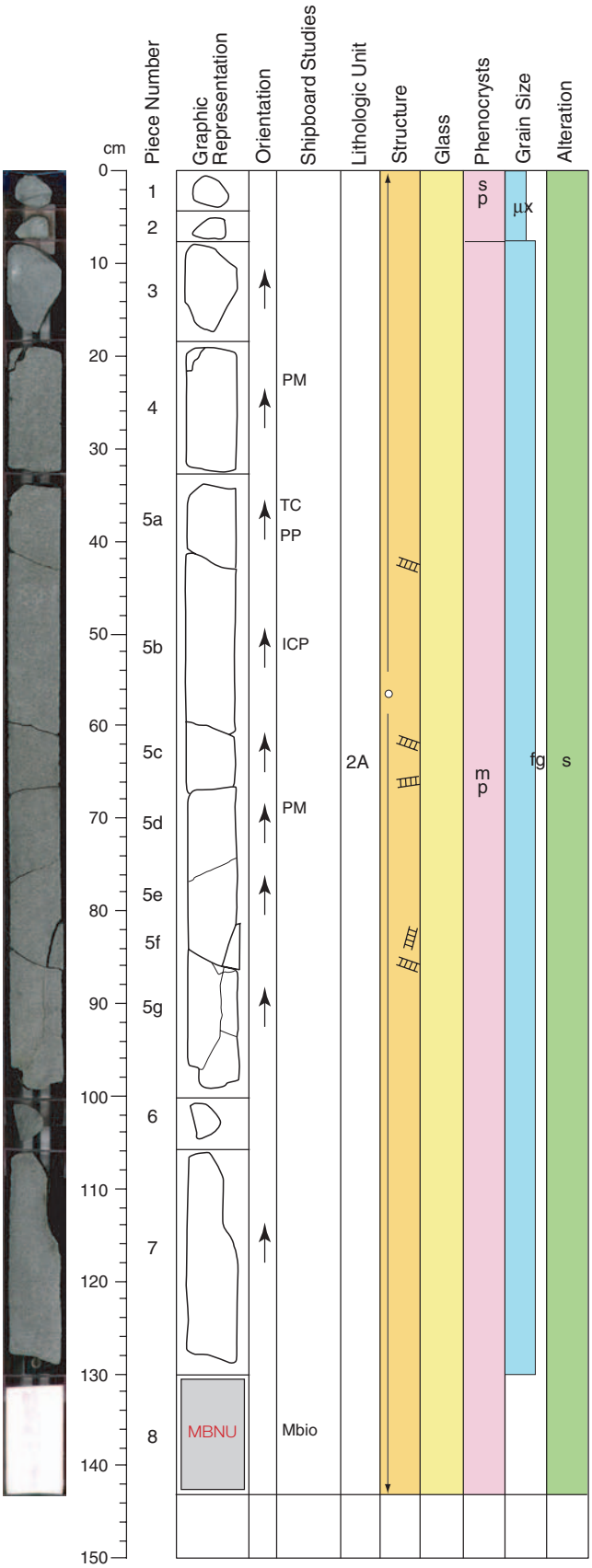
VESICLES: Moderately vesicular filled with saponite and celadonite.

COLOR: Very dark gray (N3.0/)

ALTERATION: Slightly altered to dark gray.

VEINS/FRACTURES: Rare <0.5 mm wide saponite, pyrite, and carbonate veins.

Core Photo



301-U1301B-13R-1 (Section top: 429.90 mbsf)

UNIT 2A: Sparsely to moderately olivine-clinopyroxene-plagioclase-phyric fine grained basalt

PIECES: 1-8 (Continues to next section)

CONTACTS:
Upper: Chilled margin (11R-1, Piece 12)
Lower: Chilled margin (13R-2, Piece 2)

PHENOCRYSTS:

Plagioclase	3%	1-2.7 mm
Olivine	2%	0.5-1.2 mm
Clinopyroxene	2%	0.8-2 mm

GROUNDMASS:
Grain size: Microcrystalline to fine grained.
Texture: Intersertal to intergranular.

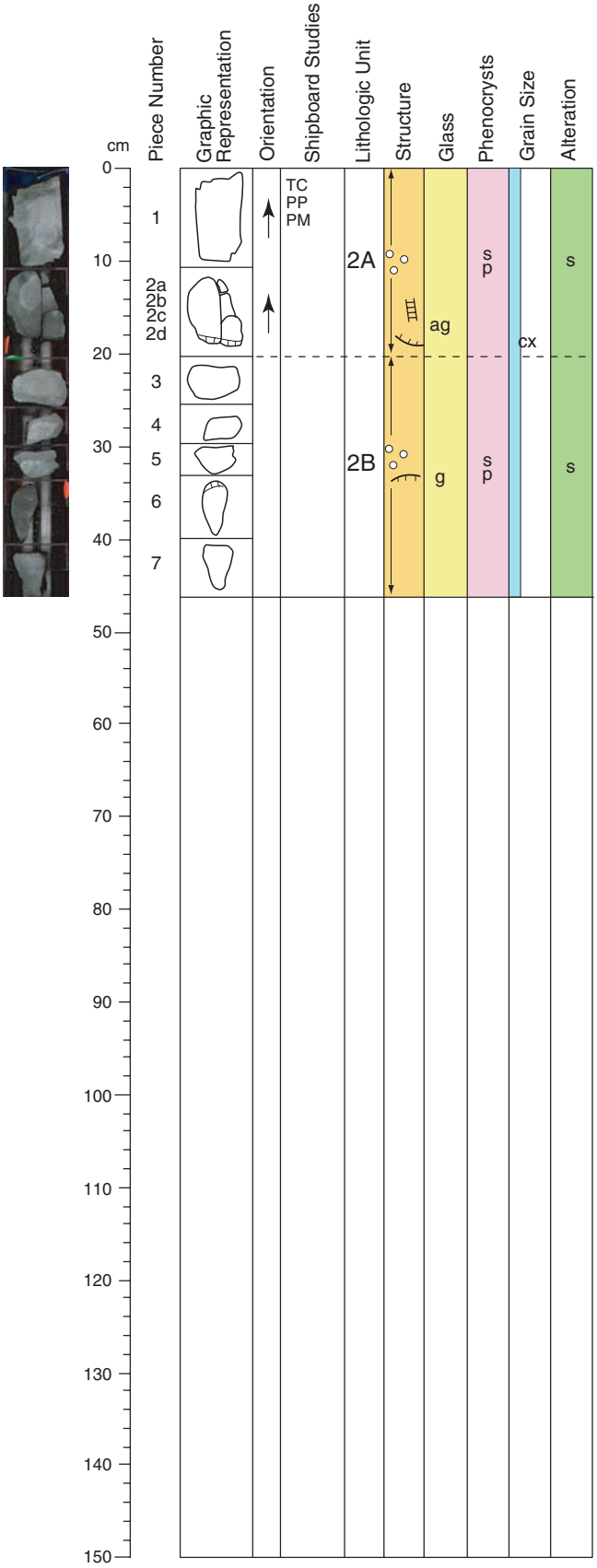
VESICLES: Moderately vesicular filled with saponite and celadonite.

COLOR: Very dark gray (N3.0/)

ALTERATION: Slightly altered to dark gray.

VEINS/FRACTURES: Rare <0.5 mm wide saponite and pyrite veins.

Core Photo



301-U1301B-13R-2 (Section top: 431.33 mbsf)

UNIT 2A: Sparsely to moderately olivine-clinopyroxene-plagioclase-phyric fine grained basalt

PIECES: 1-2

CONTACTS:
Upper: Chilled margin (11R-1, Piece 12)
Lower: Chilled margin (13R-2, Piece 2)

PHENOCRYSTS:

Plagioclase	3%	1-2.7 mm
Olivine	2%	0.5-1.2 mm
Clinopyroxene	2%	0.8-2 mm

GROUNDMASS:
Grain size: Microcrystalline to fine grained.
Texture: Intersertal to intergranular.

VESICLES: Moderately vesicular filled with saponite and celadonite.

COLOR: Very dark gray (N3.0/)

ALTERATION: Slightly altered to dark gray.

VEINS/FRACTURES: Rare <0.5 mm wide saponite and pyrite veins.

UNIT 2B: Sparsely to moderately olivine-clinopyroxene-plagioclase phyric cryptocrystalline basalt

PIECES: 3-7 (Continues to next core)

CONTACTS:
Upper: Chilled margin (13R-2, Piece 3)
Lower: Chilled margin (14R-1, Piece 15)

PHENOCRYSTS:

Plagioclase	5%	0.5-2 mm
Olivine	1%	0.3-0.8 mm
Clinopyroxene	1%	0.9-1.6 mm

GROUNDMASS:
Grain size: Cryptocrystalline
Texture: Hyalo-ophitic to intersertal.

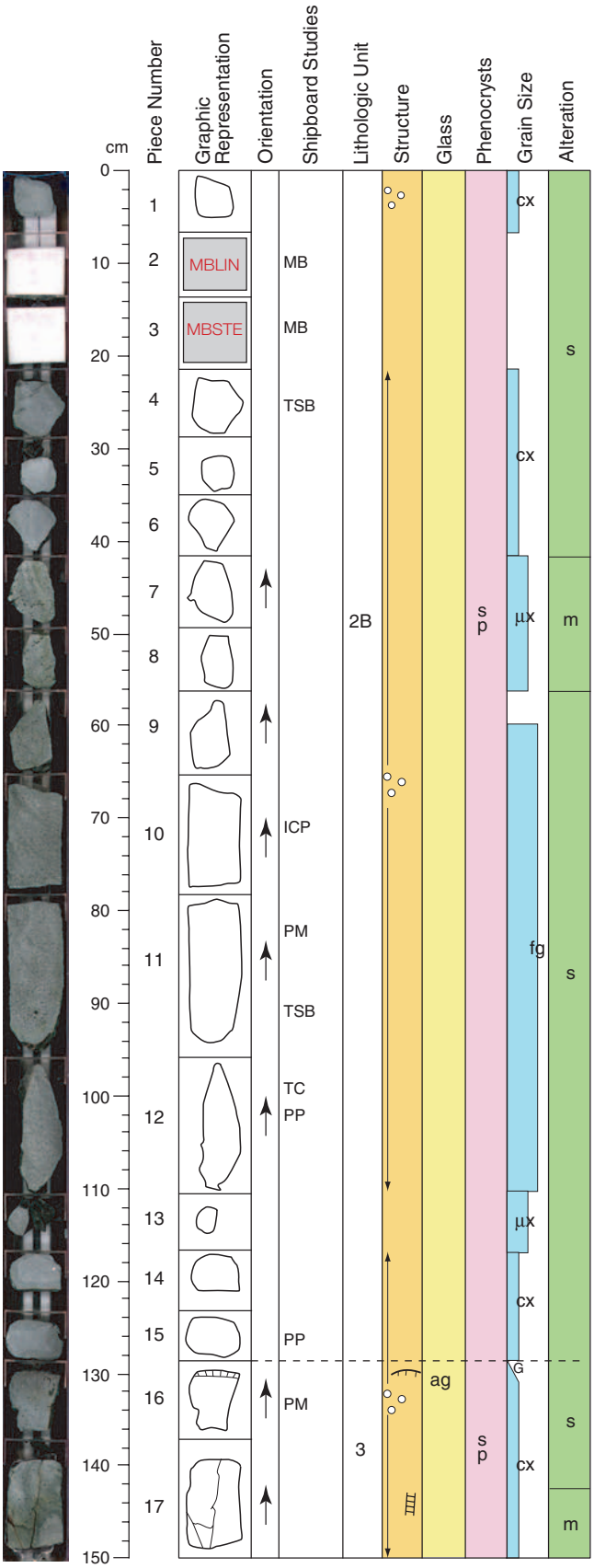
VESICLES: Sparsely to moderately vesicular filled with saponite and pyrite.

COLOR: Very dark gray (N3.0/)

ALTERATION: Slightly altered to dark gray.

VEINS/FRACTURES: Sub-mm pyrite and saponite veins.

Core Photo



301-U1301B-14R-1 (Section top: 434.00 mbsf)

UNIT 2B: Sparsely to moderately olivine-clinopyroxene-plagioclase phyric cryptocrystalline basalt

PIECES: 1-15

CONTACTS:
Upper: Chilled margin (13R-2, Piece 3)
Lower: Chilled margin (14R-1, Piece 15)

PHENOCRYSTS:

Plagioclase	5%	0.5-2 mm
Olivine	1%	0.3-0.8 mm
Clinopyroxene	1%	0.9-1.6 mm

GROUNDMASS:
Grain size: Cryptocrystalline.
Texture: Hyalo-ophitic to intersertal.

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

COLOR: Very dark gray (N3.0/)

ALTERATION: Slightly altered to dark gray.

VEINS/FRACTURES: Sub-mm pyrite and saponite veins.

UNIT 3: Sparsely olivine-clinopyroxene-plagioclase phyric cryptocrystalline pillow basalt

PIECES: 16-17 (Continues next section)

CONTACTS:
Upper: Chilled margin (14R-1, Piece 16)
Lower: Chilled margin (15R-1, Piece 6)

PHENOCRYSTS:

Plagioclase	3%	<0.5 mm
Olivine	1%	<0.5 mm
Clinopyroxene	1%	<0.2 mm

GROUNDMASS:
Grain size: Cryptocrystalline to fine grained.
Texture: Hyalo-ophitic.

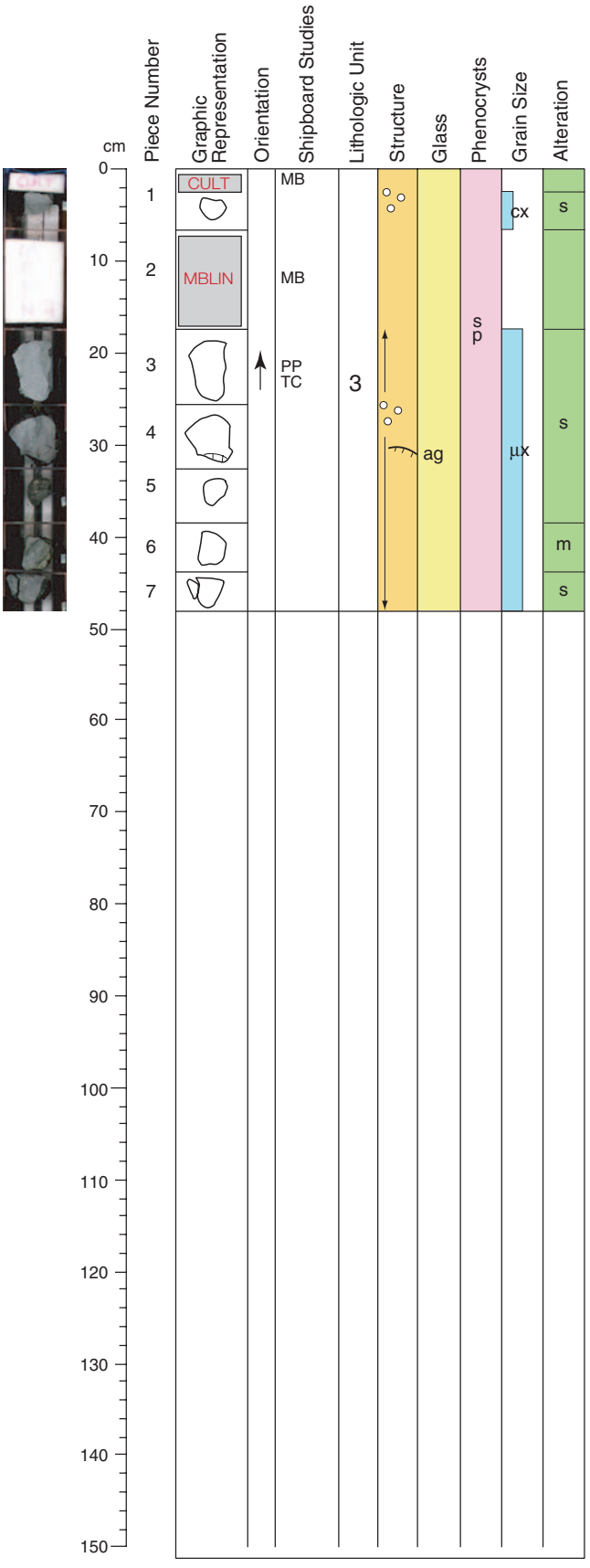
VESICLES: Sparsely to moderately vesicular (<1.5 mm) filled with saponite and iron oxyhydroxide.

COLOR: Very dark gray (N3.0/)

ALTERATION: Slightly to moderately altered with alteration halos.

VEINS/FRACTURES: 0.1 to 0.5 mm wide saponite and iron oxyhydroxide veins.

Core Photo



301-U1301B-14R-2 (Section top: 435.50 mbsf)

UNIT 3: Sparsely olivine-clinopyroxene-plagioclase phyric microcrystalline pillow basalt

PIECES: 1-7 (Continues next core)

CONTACTS:
Upper: Chilled margin (14R-1, Piece 16)
Lower: Chilled margin (15R-1, Piece 6)

PHENOCRYSTS:

Plagioclase	3%	<0.5 mm
Olivine	1%	<0.5 mm
Clinopyroxene	1%	<0.2 mm

GROUNDMASS:
Grain size: Cryptocrystalline to microcrystalline.
Texture: Hyalo-ophitic.

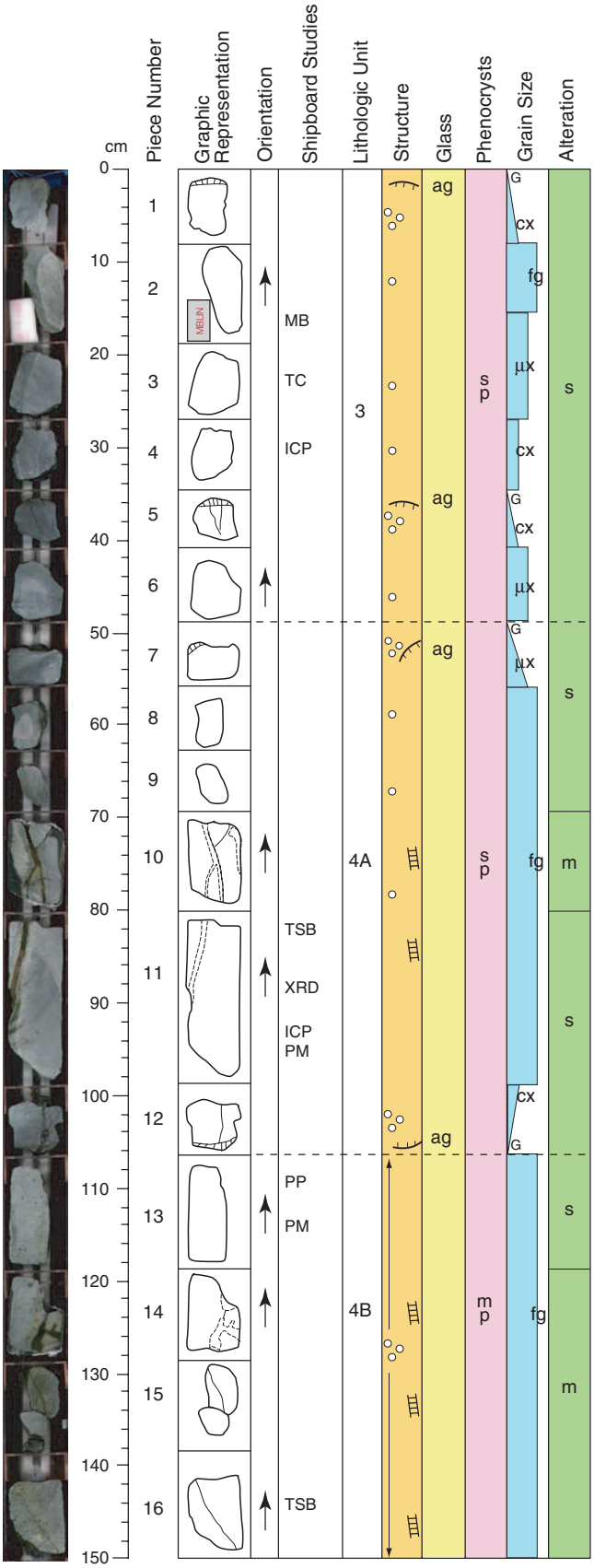
VESICLES: Sparsely to moderately vesicular (<1.5 mm) filled with saponite and iron oxyhydroxide.

COLOR: Very dark gray (N3.0/)

ALTERATION: Slightly to moderately altered with alteration halos.

VEINS/FRACTURES: 0.1 to 0.5 mm wide saponite and iron oxyhydroxide veins.

Core Photo



301-U1301B-15R-1 (Section top: 443.60 mbsf)

UNIT 3: Sparsely olivine-clinopyroxene-plagioclase phyric microcrystalline pillow basalt

PIECES: 1-6

CONTACTS:
Upper: Chilled margin (14R-1, Piece 16)
Lower: Chilled margin (15R-1, Piece 6)

PHENOCRYSTS:

Plagioclase	3%	<0.5 mm
Olivine	1%	<0.5 mm
Clinopyroxene	1%	<0.2 mm

GROUNDMASS:
Grain size: Cryptocrystalline to fine grained.
Texture: Hyalo-ophitic.

VESICLES: Sparsely to moderately vesicular (<1.5 mm) filled with saponite and iron oxyhydroxide.

COLOR: Very dark gray (N3.0/)

ALTERATION: Slightly altered with alteration halos.

VEINS/FRACTURES: 0.1 to 0.5 mm wide saponite and iron oxyhydroxide veins.

UNIT 4A: Sparsely to moderately clinopyroxene-plagioclase phyric massive basalt

PIECES: 7-12

CONTACTS:
Upper: Glassy chilled margin (15R-1, Piece 7)
Lower: Glassy chilled margin (15R-1, Piece 12)

PHENOCRYSTS:

Plagioclase	5%	0.7-2.8 mm
Olivine	1%	<0.8 mm
Clinopyroxene	5%	0.5-0.8 mm

GROUNDMASS:
Grain size: Microcrystalline to fine grained.
Texture: Intersertal to intergranular.

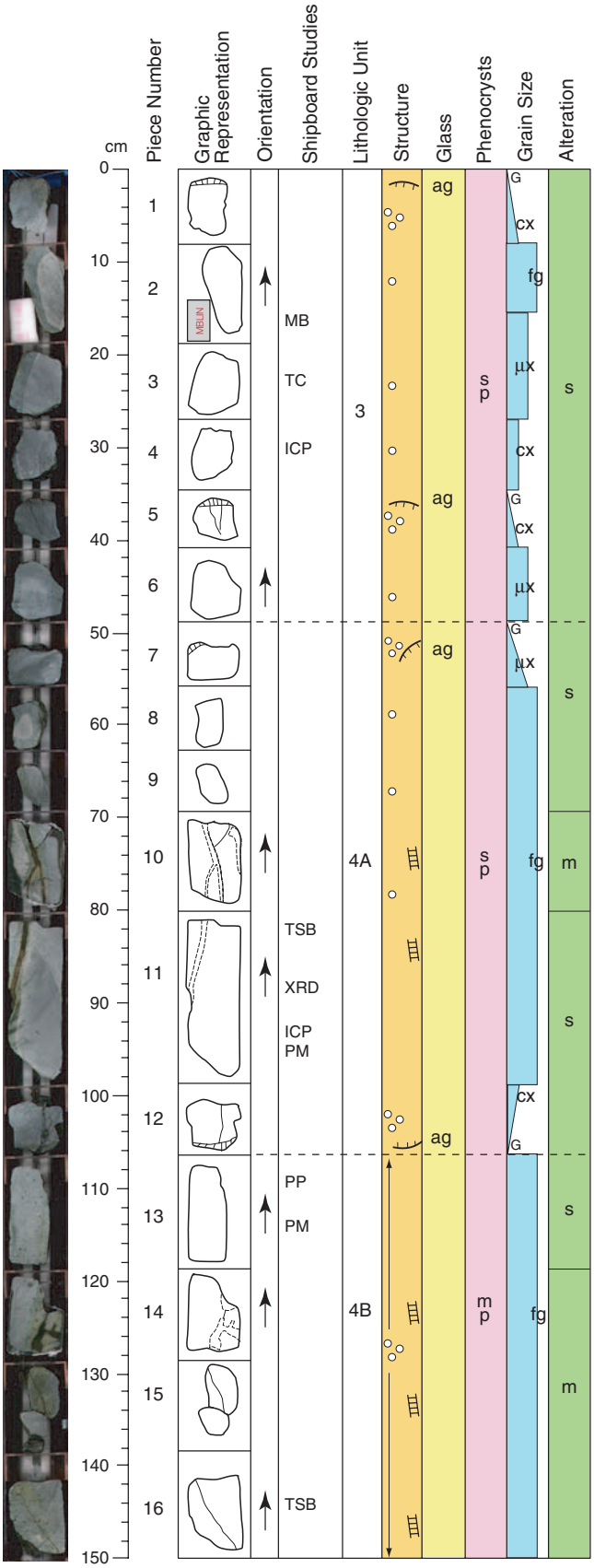
VESICLES: Sparsely vesicular filled with saponite, iron oxyhydroxide or hematite, and celadonite.

COLOR: Gray (N4/) to black (N2.5/)

ALTERATION: Slightly to moderately altered to dark gray, with green and black alteration halos.

VEINS/FRACTURES: A large (7 mm) iron oxyhydroxide and saponite vein in Pieces 10 and 11, with an 11 mm multi halo. Additional <0.2 mm wide saponite veins with black alteration halos.

Core Photo



301-U1301B-15R-1 (Section top: 443.60 mbsf)

UNIT 4B: Sparsely to moderately clinopyroxene-plagioclase phyric fine grained basalt

PIECES: 13-16 (Continues next section)

CONTACTS:
Upper: Chilled margin in15R-1, Piece13 (no glass recovered)
Lower: Chilled margin in15R-3, Piece 11

PHENOCRYSTS:

Plagioclase	5%	0.7-2.8 mm
Olivine	1%	<0.8 mm
Clinopyroxene	1%	<1 mm

GROUNDMASS:
Grain size: Fine grained
Texture: Intersertal to intergranular.

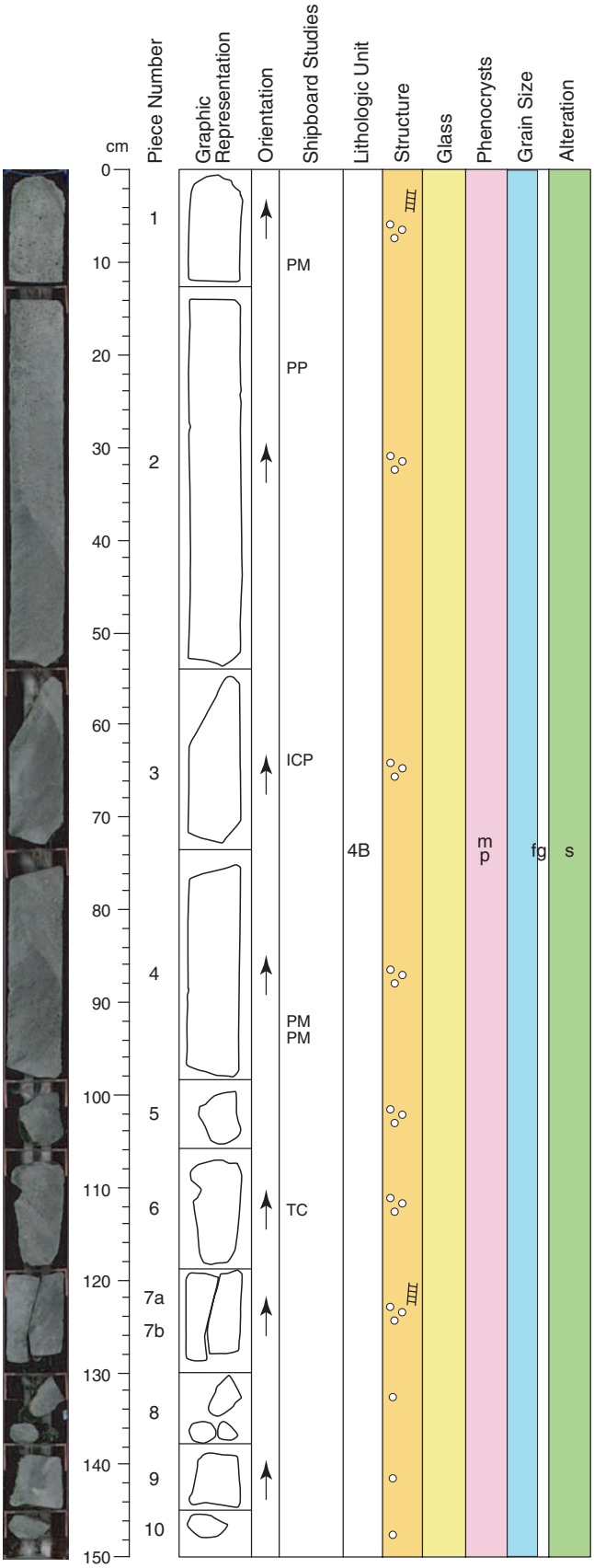
VESICLES: Sparsely to moderately vesicular filled with saponite, some are empty.

COLOR: Very dark gray (N3.0/)

ALTERATION: Slightly altered, Pieces14-16 contain mixed alteration halos with iron oxyhydroxide filled vesicles.

VEINS/FRACTURES: Veins are 0.1-1 mm wide filled with saponite and iron oxyhydroxide.

Core Photo



301-U1301B-15R-2 (Section top: 445.10 mbsf)

UNIT 4B: Sparsely to moderately clinopyroxene-plagioclase phyric fine grained basalt

PIECES: 1-10 (Continues next section)

CONTACTS:
Upper: Chilled margin in15R-1, Piece13 (no glass recovered)
Lower: Chilled margin in 15R-3, Piece 11

PHENOCRYSTS:

Plagioclase	5%	0.7-2.8mm
Olivine	1%	<0.8 mm
Clinopyroxene	1%	<1 mm

GROUNDMASS:
Grain size: Fine grained
Texture: Intersertal to intergranular.

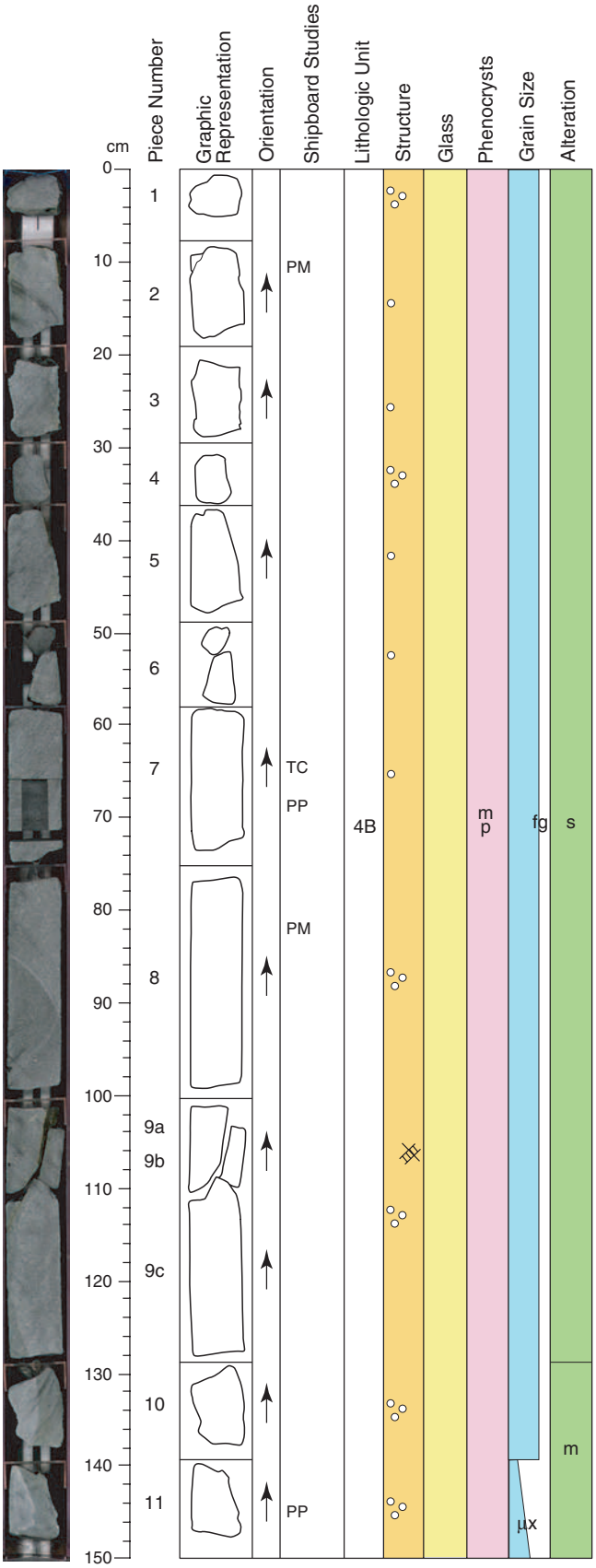
VESICLES: Sparsely to moderately vesicular filled with saponite, some are empty.

COLOR: Very dark gray (N3.0/)

ALTERATION: Slightly altered to dark gray.

VEINS/FRACTURES: Veins are 0.1-1 mm wide filled with saponite and iron oxyhydroxide.

Core Photo



301-U1301B-15R-3 (Section top: 446.60 mbsf)

UNIT 4B: Sparsely to moderately clinopyroxene-plagioclase phyric fine grained basalt

PIECES: 1-11

CONTACTS:
Upper: Chilled margin in15R-1, Piece13 (no glass recovered)
Lower: Chilled margin in 15R-3, Piece 11

PHENOCRYSTS:

Plagioclase	5%	0.7-2.8mm
Olivine	1%	<0.8 mm
Clinopyroxene	1%	<1 mm

GROUNDMASS:
Grain size: Fine grained
Texture: Intersertal to intergranular.

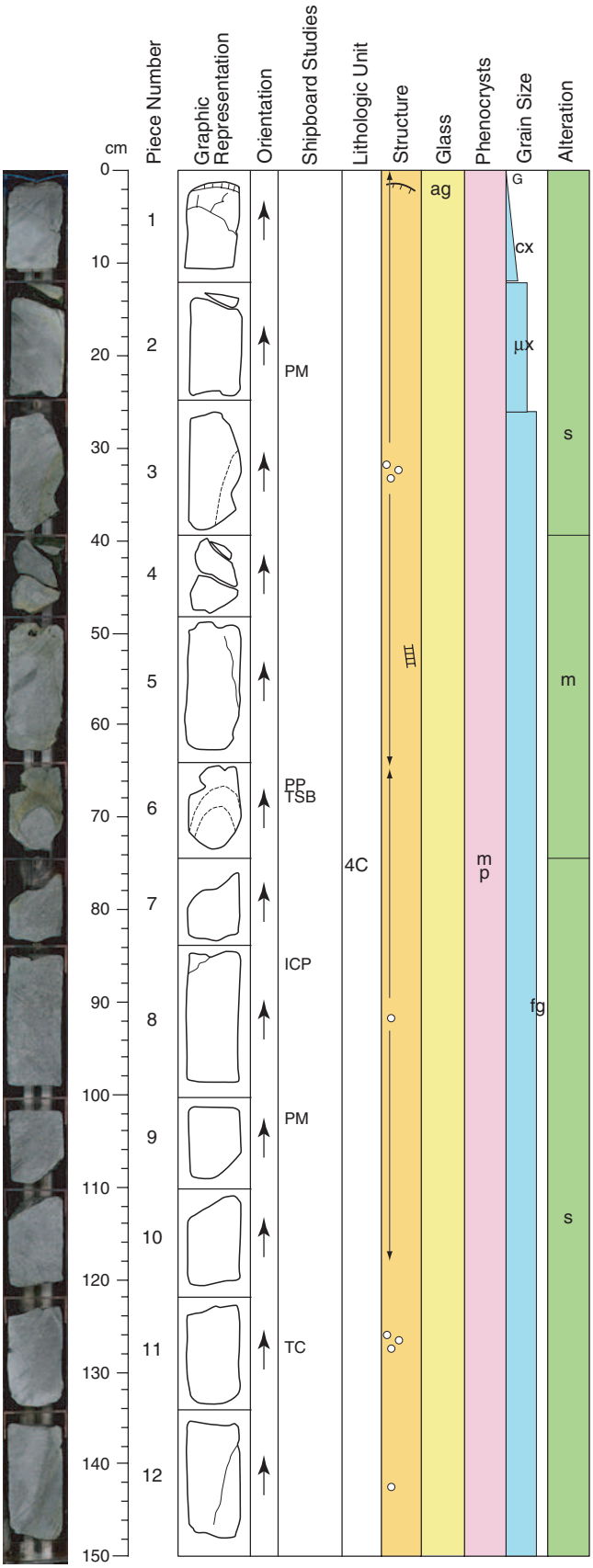
VESICLES: Sparsely to moderately vesicular filled with saponite, some are empty.

COLOR: Very dark gray (N3.0/)

ALTERATION: Slightly to moderately altered.

VEINS/FRACTURES: Veins are 0.1-1 mm wide filled with saponite and iron oxyhydroxide.

Core Photo



301-U1301B-15R-4 (Section top: 448.10 mbsf)

UNIT 4C: Sparsely to moderately olivine-clinopyroxene-plagioclase phyric basalt

PIECES: 1-12 (Continues to next section)

CONTACTS:
Upper: Glassy chilled margin in 15R-4, Piece 1
Lower: Not recovered

PHENOCRYSTS:

Plagioclase	3%	1-1.5mm
Olivine	1%	0.2-1.8mm
Clinopyroxene	3%	0.4-1 mm

GROUNDMASS:
Grain size: Cryptocrystalline to fine grained.
Texture: Intersertal to intergranular.

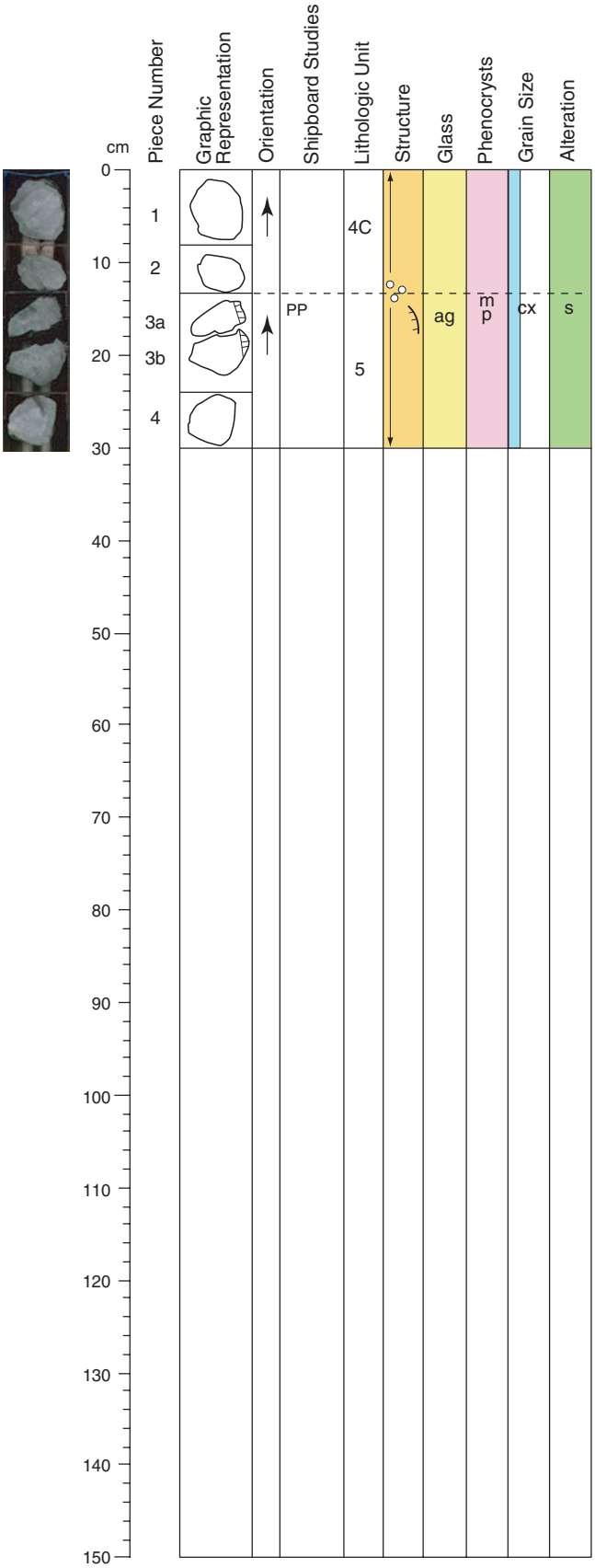
VESICLES: Sparsely to moderately vesicular, up to 2 mm in diameter, lined/filled with saponite/iron oxyhydroxide.

COLOR: Dark gray (N4/)

ALTERATION: Slightly to moderately altered to dark gray, Piece 6 contains a 25 mm multi halo.

VEINS/FRACTURES: Rare <0.5 mm saponite + iron oxyhydroxide, and saponite + pyrite veins.

Core Photo



301-U1301B-15R-5 (Section top: 449.60 mbsf)

UNIT 4C: Sparsely to moderately olivine-clinopyroxene-plagioclase phyric basalt

PIECES: 1-2 (Continues to next core)

CONTACTS:
Upper: Glassy chilled margin in 15R-4, Piece 1
Lower: Not recovered

PHENOCRYSTS:

Plagioclase	3%	1-1.5mm
Olivine	1%	0.2-1.8mm
Clinopyroxene	3%	0.4-1 mm

GROUNDMASS:
Grain size: Cryptocrystalline.
Texture: Intersertal to intergranular.

VESICLES: Sparsely to moderately vesicular, up to 2 mm in diameter, lined/filled with saponite/iron oxyhydroxide.

COLOR: Dark gray (N4/)

ALTERATION: Slightly to moderately altered to dark gray.

UNIT 5: Sparsely to moderately olivine-clinopyroxene-plagioclase phyric pillow basalt

PIECES: 3-4 (Continues next core)

CONTACTS:
Upper: Glassy chilled margin in 15R-5, Piece 3
Lower: Not recovered

PHENOCRYSTS:

Plagioclase	3%	0.2-1.5 mm
Olivine	1%	0.2-1.8 mm
Clinopyroxene	3%	0.2-0.5 mm

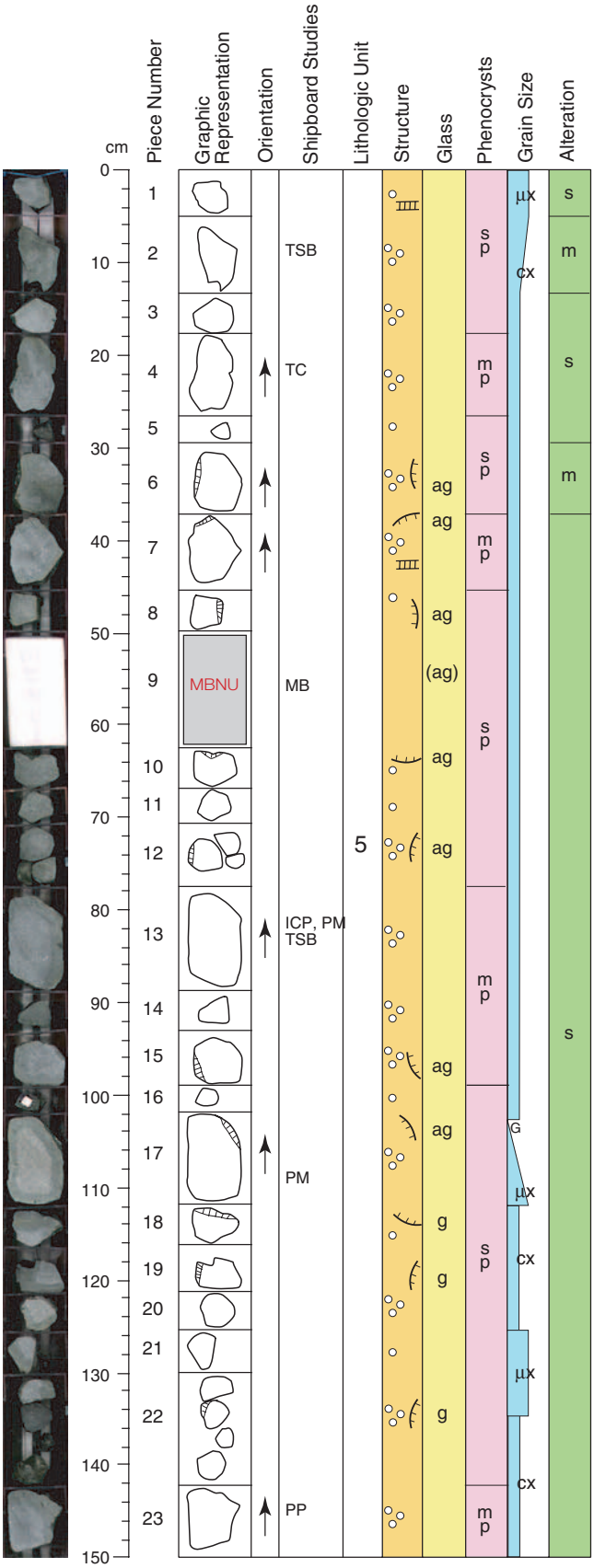
GROUNDMASS:
Grain size: Cryptocrystalline.
Texture: Hyalo-ophitic to intersertal.

VESICLES: Sparsely to moderately vesicular.

COLOR: Very dark gray (N3.0/)

ALTERATION: Slightly altered to dark gray.

Core Photo



301-U1301B-16R-1 (Section top: 453.2 mbsf)

UNIT 5: Sparsely to moderately olivine-clinopyroxene-plagioclase phyric pillow basalt

PIECES: 1-23 (Continues next section)

CONTACTS:
Upper: Glassy chilled margin in 15R-5, Piece 3
Lower: Not recovered

PHENOCRYSTS:

Plagioclase	3%	0.2-1.5 mm
Olivine	1%	0.2-1.8 mm
Clinopyroxene	3%	0.2-0.5 mm

GROUNDMASS:
Grain size: Cryptocrystalline to microcrystalline.
Texture: Hyalo-ophitic to intersertal.

VESICLES: Sparsely to moderately vesicular.

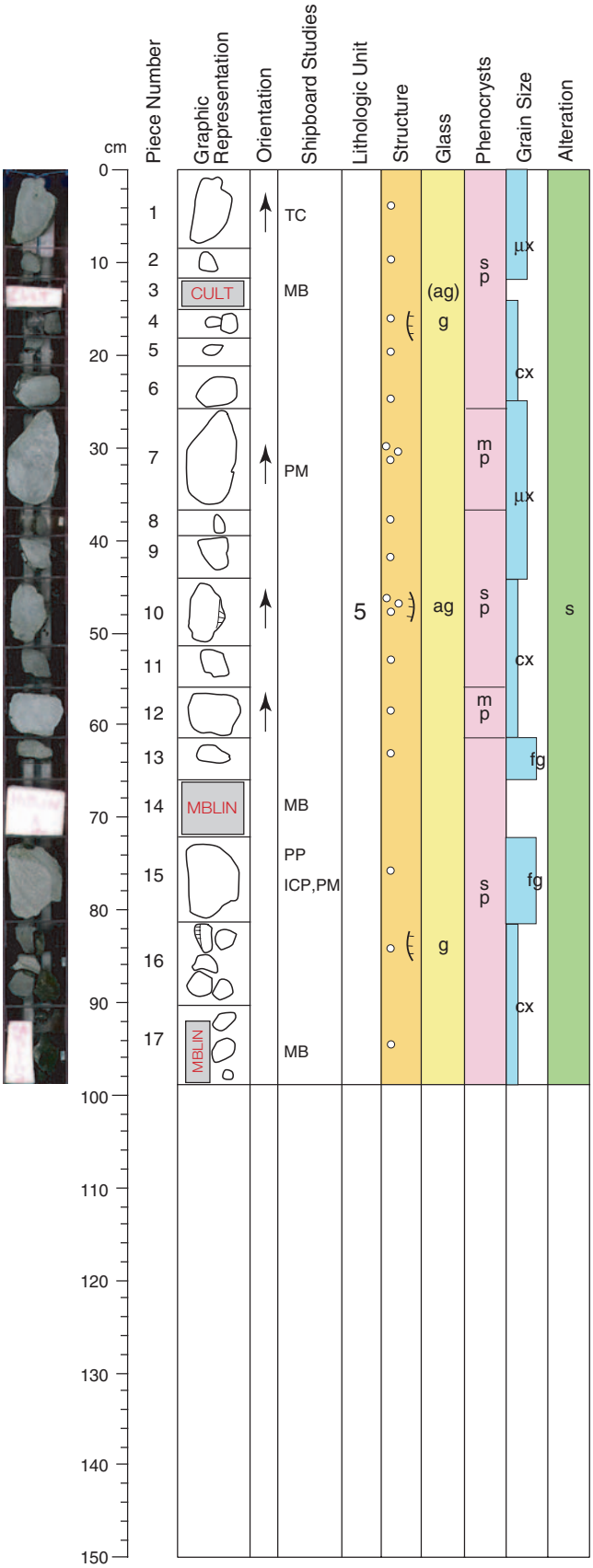
COLOR: Very dark gray (N3.0/)

ALTERATION: Slightly to moderately altered to dark gray, with black/mixed alteration halos.

VEINS/FRACTURES: Many <0.5 mm iron oxyhydroxide and saponite veins.

ADDITIONAL COMMENTS: Numerous small pieces/'rollers' with altered glass patches, interpreted to be fragments of pillow margins.

Core Photo



301-U1301B-17R-1 (Section top: 461.40 mbsf)

UNIT 5: Sparsely to moderately olivine-clinopyroxene-plagioclase phyric fine grained pillow basalt

PIECES: 1-17 (Continues next core)

CONTACTS:
Upper: Glassy chilled margin in 15R-5, Piece 3
Lower: Not recovered

PHENOCRYSTS:

Plagioclase	3%	0.2-1.5 mm
Olivine	1%	0.2-1.8 mm
Clinopyroxene	3%	0.2-0.5 mm

GROUNDMASS:
Grain size: Cryptocrystalline to fine grained.
Texture: Intersertal.

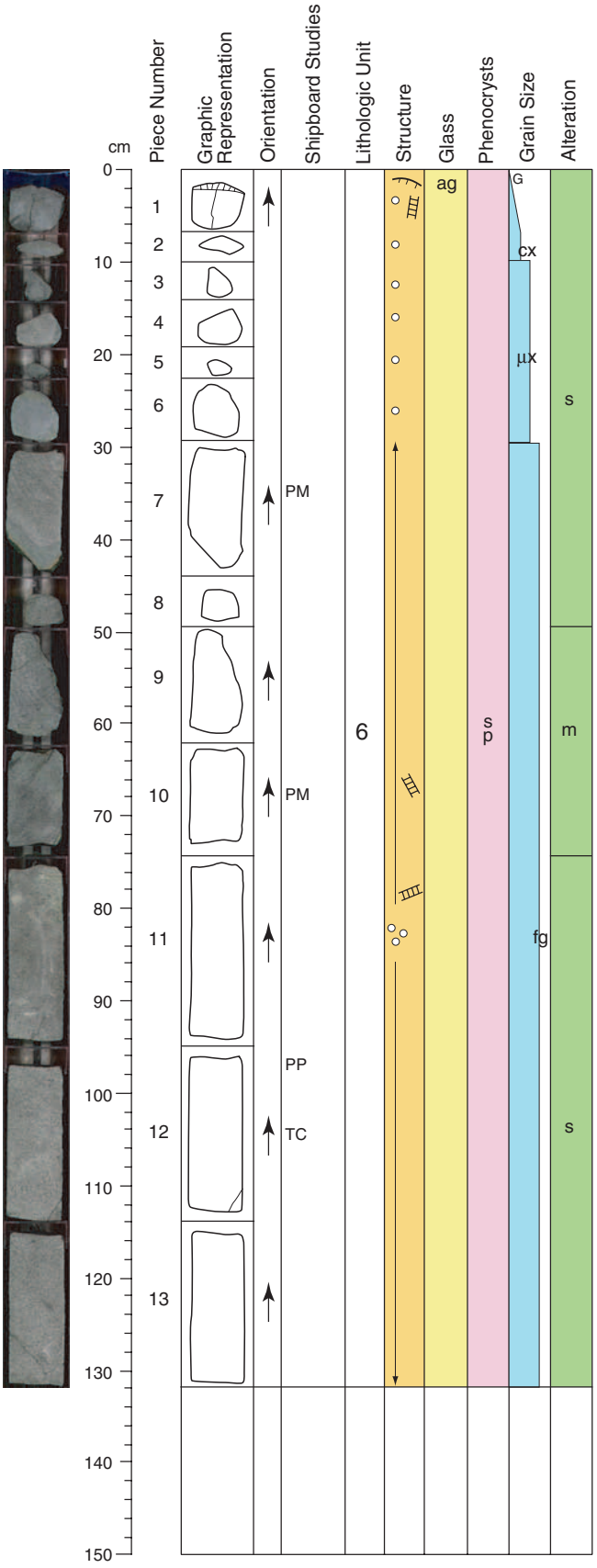
VESICLES: Sparsely to moderately vesicular.

COLOR: Very dark gray (N3.0/)

ALTERATION: Slightly altered to dark gray, with black/mixed alteration halos.

VEINS/FRACTURES: Many <0.5 mm iron oxyhydroxide and saponite veins.

Core Photo



301-U1301B-18R-1 (Section top: 471.00 mbsf)

UNIT 6: Sparsely to moderately olivine-clinopyroxene-plagioclase phyric fine grained massive basalt

PIECES: 1-13 (Continues next section)

CONTACTS:
Upper: Glassy chilled margin in 18R-1, Piece 1
Lower: Chilled margin in 18R-4, Piece 3

PHENOCRYSTS:

Plagioclase	4%	1-2.7 mm
Olivine	3%	0.7-1.1 mm
Clinopyroxene	3%	0.5-0.8 mm

GROUNDMASS:
Grain size: Microcrystalline to fine grained.
Texture: Intersertal to intergranular.

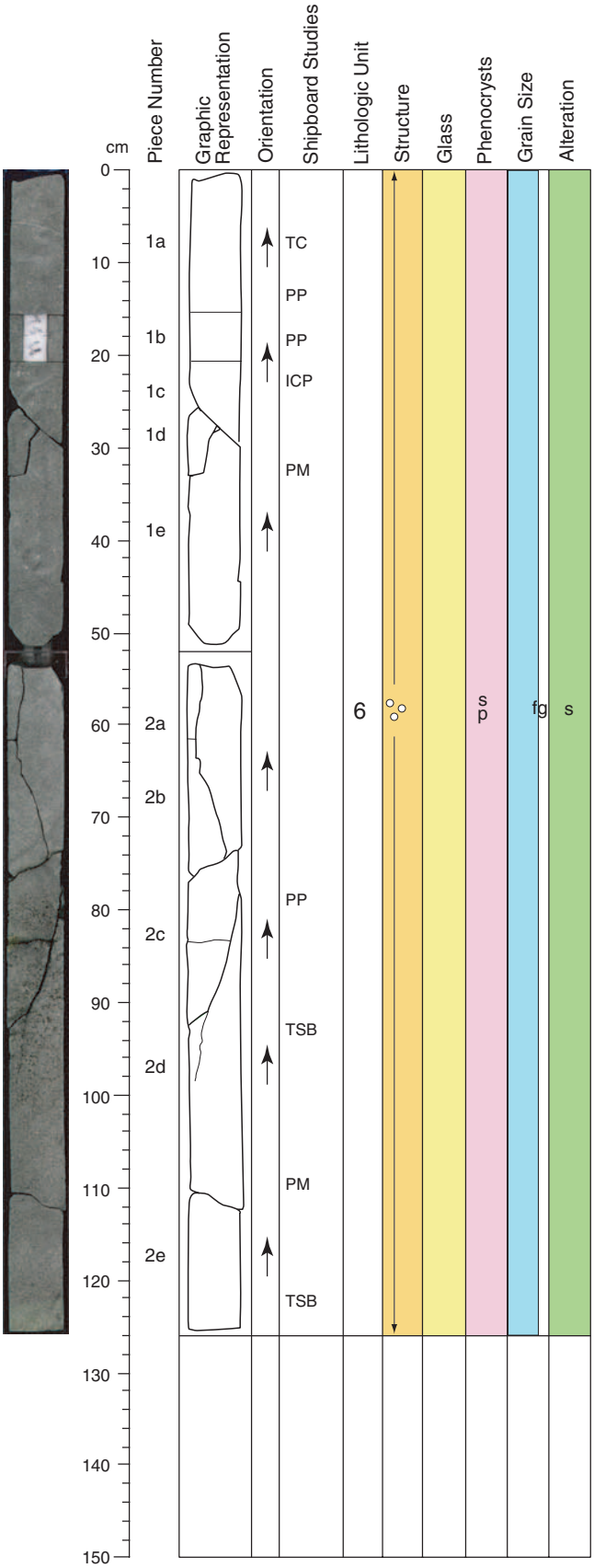
VESICLES: Sparsely to moderately vesicular typically filled with saponite, carbonate, pyrite or iron oxyhydroxide.

COLOR: Dark gray (N4.0/)

ALTERATION: Slightly to moderately altered to dark gray.

VEINS/FRACTURES: Fewer veins than in overlying pillow lavas, veins include long, steeply dipping, stair-stepped carbonate veins and micro-veins filled with saponite and pyrite.

Core Photo



301-U1301B-18R-2 (Section top: 472.30 mbsf)

UNIT 6: Sparsely to moderately olivine-clinopyroxene-plagioclase phyric fine-grained massive basalt

PIECES: 1-2 (Continues next section)

CONTACTS:
Upper: Glassy chilled margin in 18R-1, Piece 1
Lower: Chilled margin in 18R-4, Piece 3

PHENOCRYSTS:

Plagioclase	4%	1-2.7 mm
Olivine	3%	0.7-1.1 mm
Clinopyroxene	3%	0.5-0.8 mm

GROUNDMASS:
Grain size: Fine grained.
Texture: Intersertal to intergranular.

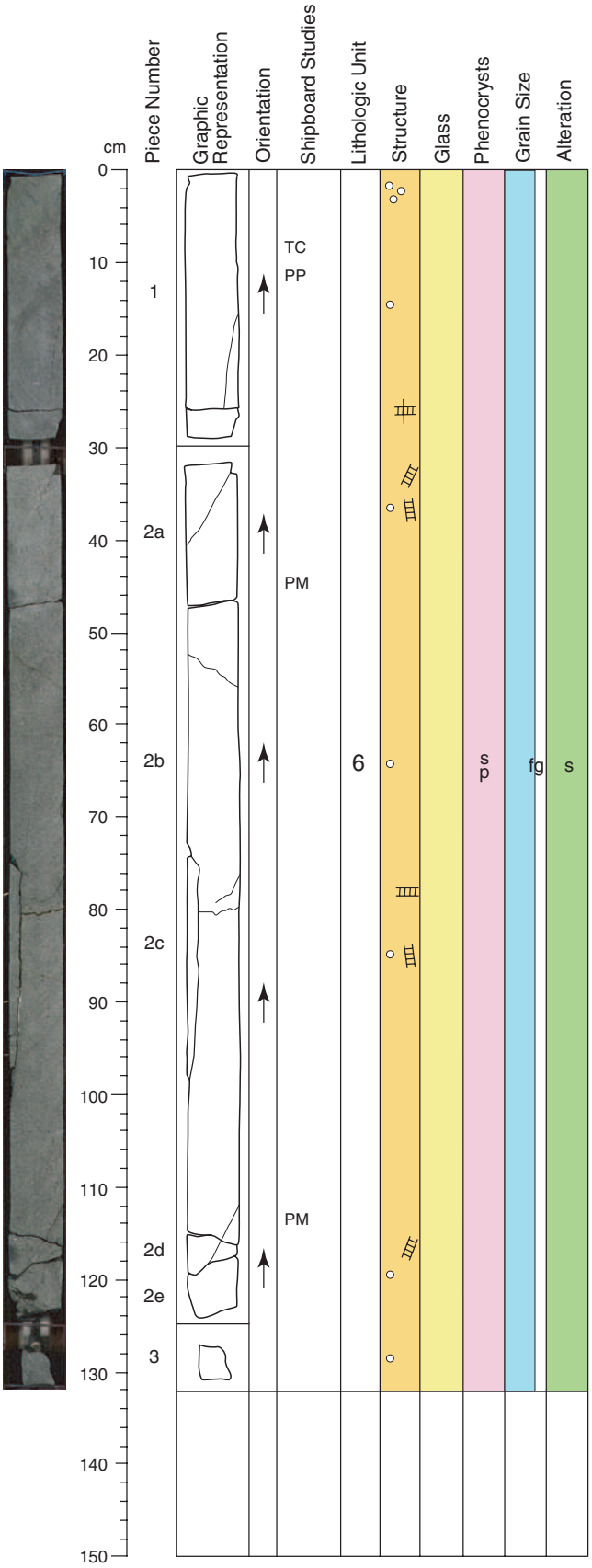
VESICLES: Sparsely to moderately vesicular typically filled with saponite, carbonate, pyrite or iron oxyhydroxide. 20 cm highly vesicular layer in Interval 18R-2, 80-100 cm.

COLOR: Dark gray (N4.0/)

ALTERATION: Slightly to moderately altered to dark gray.

VEINS/FRACTURES: Fewer veins than in overlying pillow lavas, veins include long, steeply dipping, stair-stepped carbonate veins and micro-veins filled with saponite and pyrite.

Core Photo



301-U1301B-18R-3 (Section top: 473.56 mbsf)

UNIT 6: Sparsely to moderately olivine-clinopyroxene-plagioclase phyric fine grained massive basalt

PIECES: 1-3 (Continues next section)

CONTACTS:
Upper: Glassy chilled margin in 18R-1, Piece 1
Lower: Chilled margin in 18R-4, Piece 3

PHENOCRYSTS:

Plagioclase	4%	1-2.7 mm
Olivine	3%	0.7-1.1 mm
Clinopyroxene	3%	0.5-0.8 mm

GROUNDMASS:
Grain size: Fine grained.
Texture: Intersertal to intergranular.

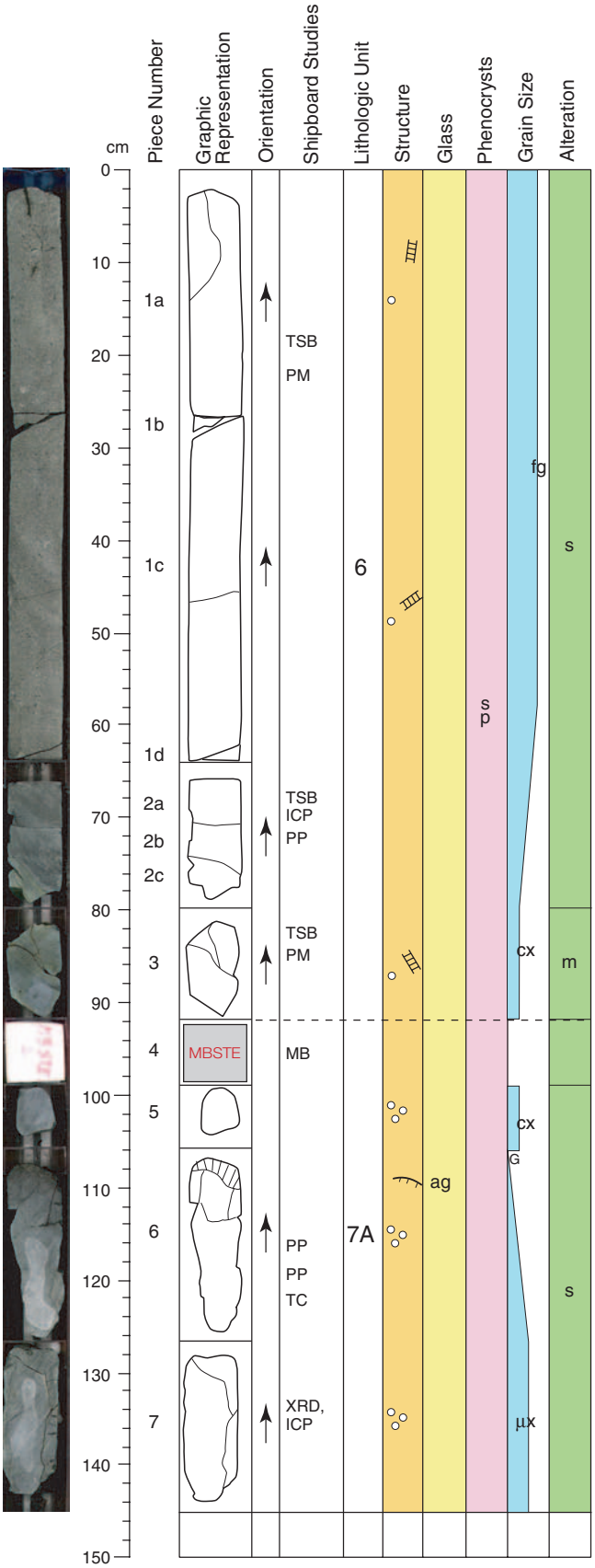
VESICLES: Sparsely to moderately vesicular typically filled with saponite, carbonate, pyrite or iron oxyhydroxide.

COLOR: Dark gray (N4.0/)

ALTERATION: Slightly to moderately altered to dark gray.

VEINS/FRACTURES: Fewer veins than in overlying pillow lavas, veins include long, steeply dipping, stair-stepped carbonate veins and microveins filled with saponite and pyrite. An impressive 1.5 mm wide carbonate, pyrite, saponite and celadonite vein spans the Interval 18R-3, 76-100 cm.

Core Photo



301-U1301B-18R-4 (Section top: 474.88 mbsf)

UNIT 6: Sparsely to moderately olivine-clinopyroxene-plagioclase phyric fine grained massive basalt

PIECES: 1-3

CONTACTS:
Upper: Glassy chilled margin in 18R-1, Piece 1
Lower: Chilled margin in 18R-4, Piece 3

PHENOCRYSTS:

Plagioclase	4%	1-2.7 mm
Olivine	3%	0.7-1.1 mm
Clinopyroxene	3%	0.5-0.8 mm

GROUNDMASS:
Grain size: Cryptocrystalline to fine grained.
Texture: Intersertal to intergranular.

VESICLES: Sparsely to moderately vesicular typically filled with saponite, pyrite or iron oxyhydroxide.

COLOR: Dark gray (N4.0/)

ALTERATION: Slightly to moderately altered to dark gray.

VEINS/FRACTURES: Fewer veins than in overlying pillow lavas, veins are filled with saponite, pyrite, and iron oxyhydroxide.

ADDITIONAL COMMENT: There is a significant, abrupt decrease in grain size in 18R-4 Piece 2, 18R-4 Piece 3 also consists of moderately altered cryptocrystalline basalt, but no glass was recovered.

UNIT 7A: Moderately to highly olivine-clinopyroxene-plagioclase phyric microcrystalline pillow basalt

PIECES: 4-7 (Continues next section)

CONTACTS:
Upper: Not recovered
Lower: Not recovered

PHENOCRYSTS:

Plagioclase	12%	0.5-3.8 mm
Olivine	1%	0.3-0.5 mm
Clinopyroxene	5%	0.3-0.7 mm

GROUNDMASS:
Grain size: Cryptocrystalline to microcrystalline.
Texture: Hyalo-ophitic to intersertal.

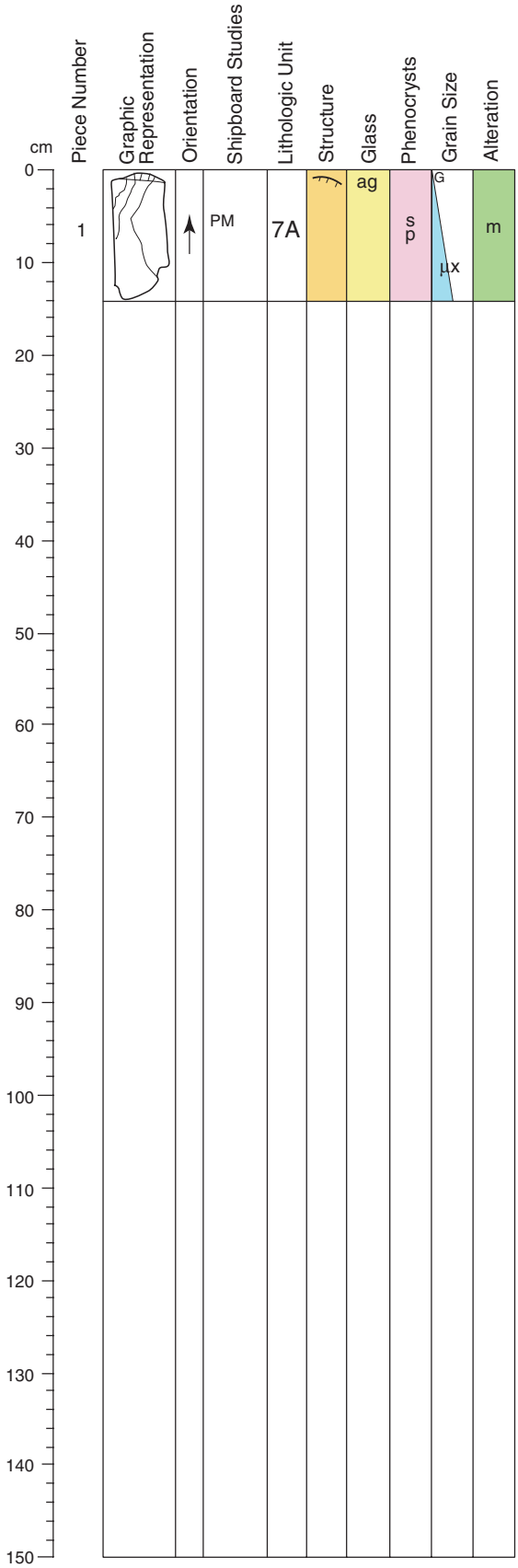
VESICLES: Sparsely vesicular filled with saponite and iron oxyhydroxide.

COLOR: Very dark gray (N3.0/) to dark gray (N4.0/)

ALTERATION: Slightly to moderately altered to dark gray with mixed and black alteration halos.

VEINS/FRACTURES: <0.2 mm saponite and iron oxyhydroxide veins are common. Rare pyrite and celadonite bearing veins.

Core Photo



301-U1301B-18R-5 (Section top: 476.33 mbsf)

UNIT 7A: Moderately to highly olivine-clinopyroxene-plagioclase phyric microcrystalline pillow basalt

PIECE: 1 (Continues next core)

CONTACTS:
Upper: Not recovered
Lower: Not recovered

PHENOCRYSTS:

Plagioclase	12%	0.5-3.8 mm
Olivine	1%	0.3-0.5 mm
Clinopyroxene	5%	0.3-0.7 mm

GROUNDMASS:
Grain size: Cryptocrystalline to microcrystalline.
Texture: Hyalo-ophitic.

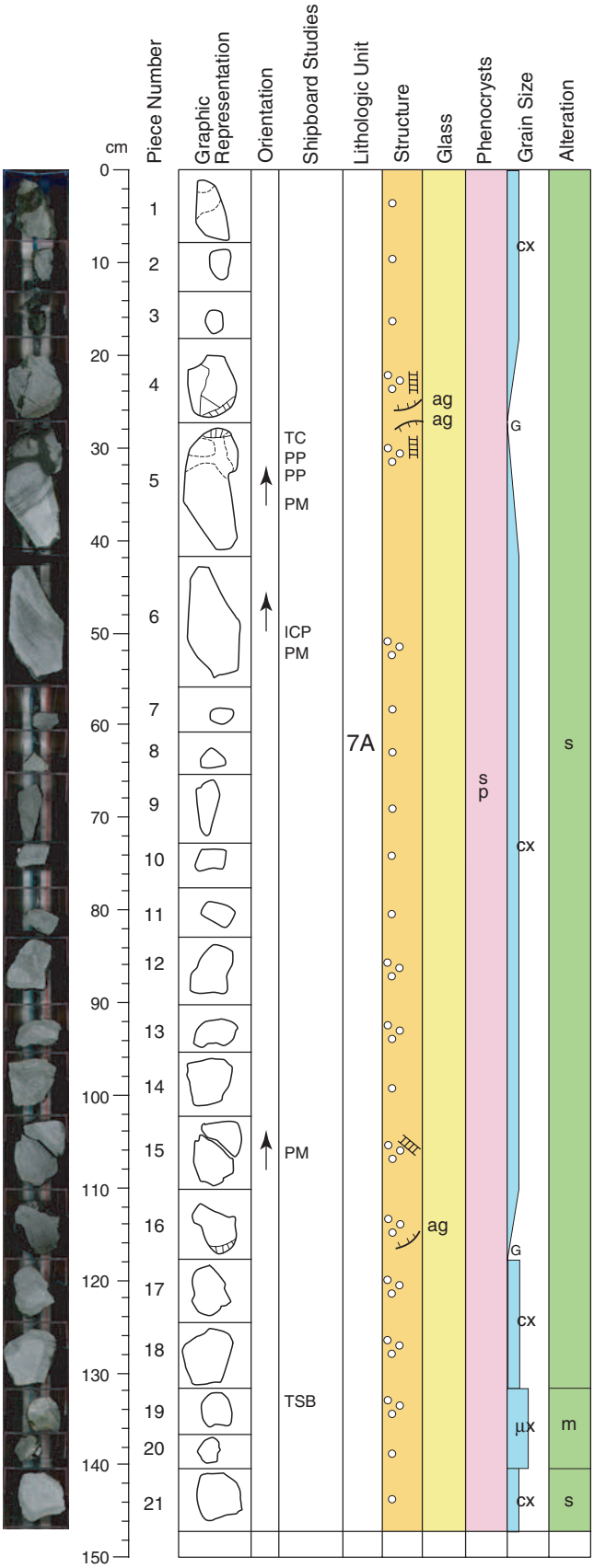
VESICLES: Sparsely vesicular filled with saponite and iron oxyhydroxide.

COLOR: Very dark gray (N3.0/)

ALTERATION: Moderately altered to dark gray.

VEINS/FRACTURES: <0.2 mm saponite and iron oxyhydroxide veins are common.

Core Photo



301-U1301B-19R-1 (Section top: 476.10 mbsf)

UNIT 7A: Moderately to highly olivine-clinopyroxene-plagioclase phyric microcrystalline pillow basalt

PIECES: 1-21 (Continues next section)

CONTACTS:
Upper: Not recovered
Lower: Not recovered

PHENOCRYSTS:

Plagioclase	10%	0.5-4.0 mm
Olivine	1%	0.3-0.5 mm
Clinopyroxene	5%	0.3-0.7 mm

GROUNDMASS:
Grain size: Cryptocrystalline to microcrystalline.
Texture: Hyalo-ophitic to intersertal.

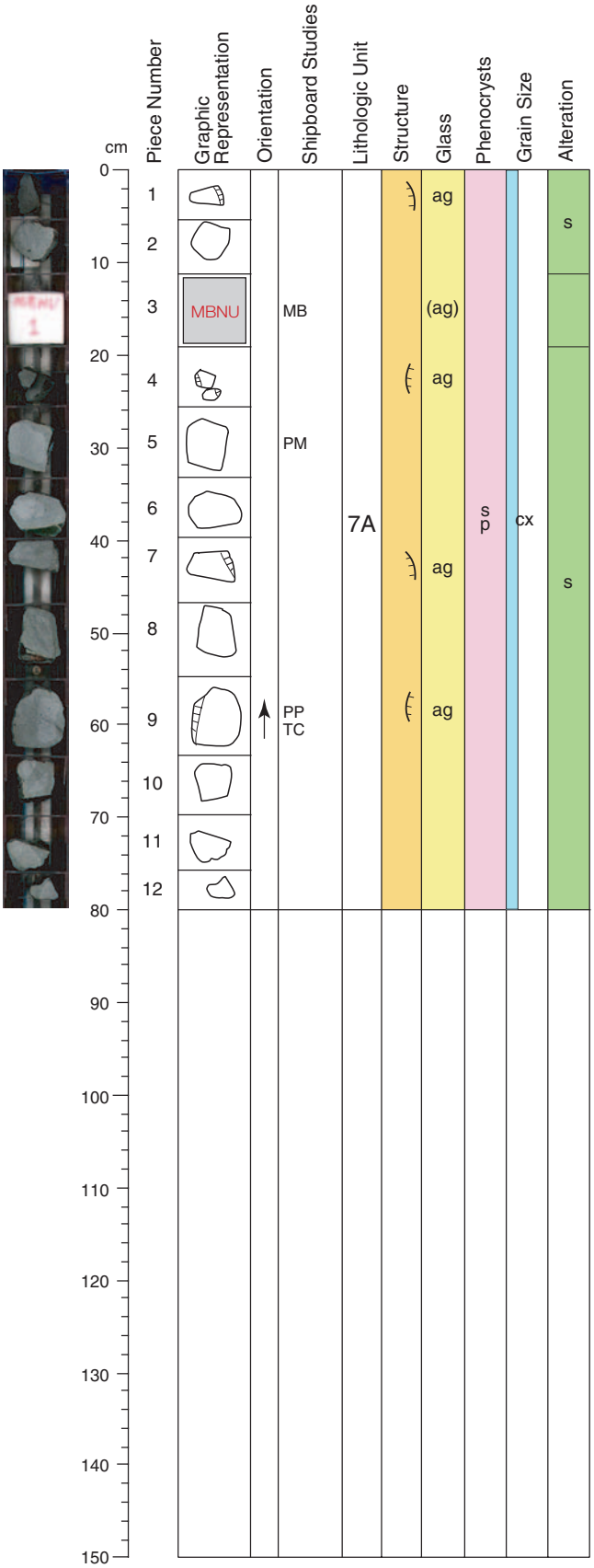
VESICLES: Sparsely to moderately vesicular filled with saponite and iron oxyhydroxide.

COLOR: Very dark gray (N3.0/) to dark gray (N4.0/)

ALTERATION: Slightly to moderately altered to dark gray with mixed/black alteration halos.

VEINS/FRACTURES: <0.2 mm saponite and iron oxyhydroxide veins are common.

Core Photo



301-U1301B-19R-2 (Section top: 477.57 mbsf)

UNIT 7A: Moderately to highly olivine-clinopyroxene-plagioclase phyric microcrystalline pillow basalt

PIECES: 1-12 (Continues next core)

CONTACTS:
Upper: Not recovered
Lower: Not recovered

PHENOCRYSTS:

Plagioclase	10%	0.5-3.5 mm
Olivine	1%	0.3-0.5 mm
Clinopyroxene	5%	0.3-0.7 mm

GROUNDMASS:
Grain size: Cryptocrystalline.
Texture: Hyalo-ophitic to intersertal.

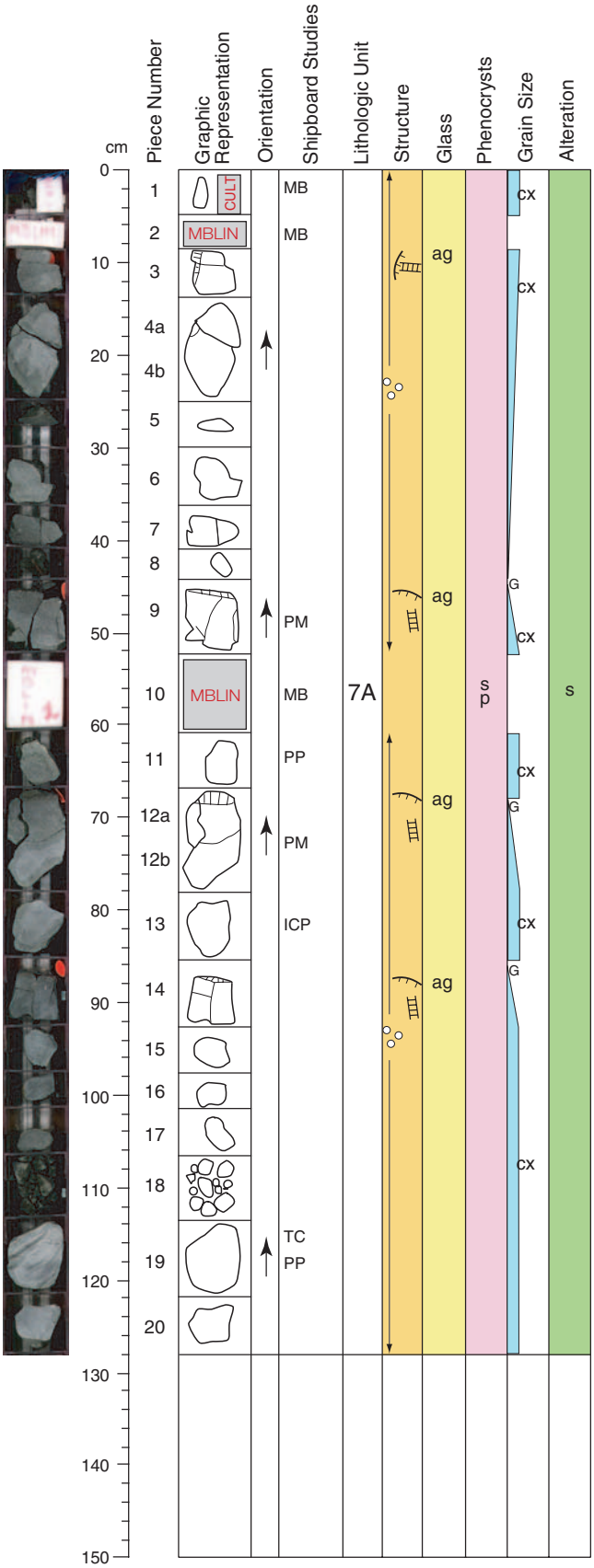
VESICLES: Sparsely vesicular filled with saponite and iron oxyhydroxide.

COLOR: Very dark gray (N3.0/) to dark gray (N4.0/)

ALTERATION: Slightly to moderately altered to dark gray with mixed and black alteration halos.

VEINS/FRACTURES: <0.2 mm saponite and iron oxyhydroxide veins are common.

Core Photo



301-U1301B-20R-1 (Section top: 480.60 mbsf)

UNIT 7A: Moderately to highly olivine-clinopyroxene-plagioclase phyric microcrystalline pillow basalt

PIECES: 1-20 (Continues next core)

CONTACTS:
Upper: Not recovered
Lower: Not recovered

PHENOCRYSTS:

Plagioclase	10%	0.5-3.5 mm
Olivine	1%	0.3-0.5 mm
Clinopyroxene	5%	0.3-0.7 mm

GROUNDMASS:
Grain size: Cryptocrystalline.
Texture: Hyalo-ophitic to intersertal.

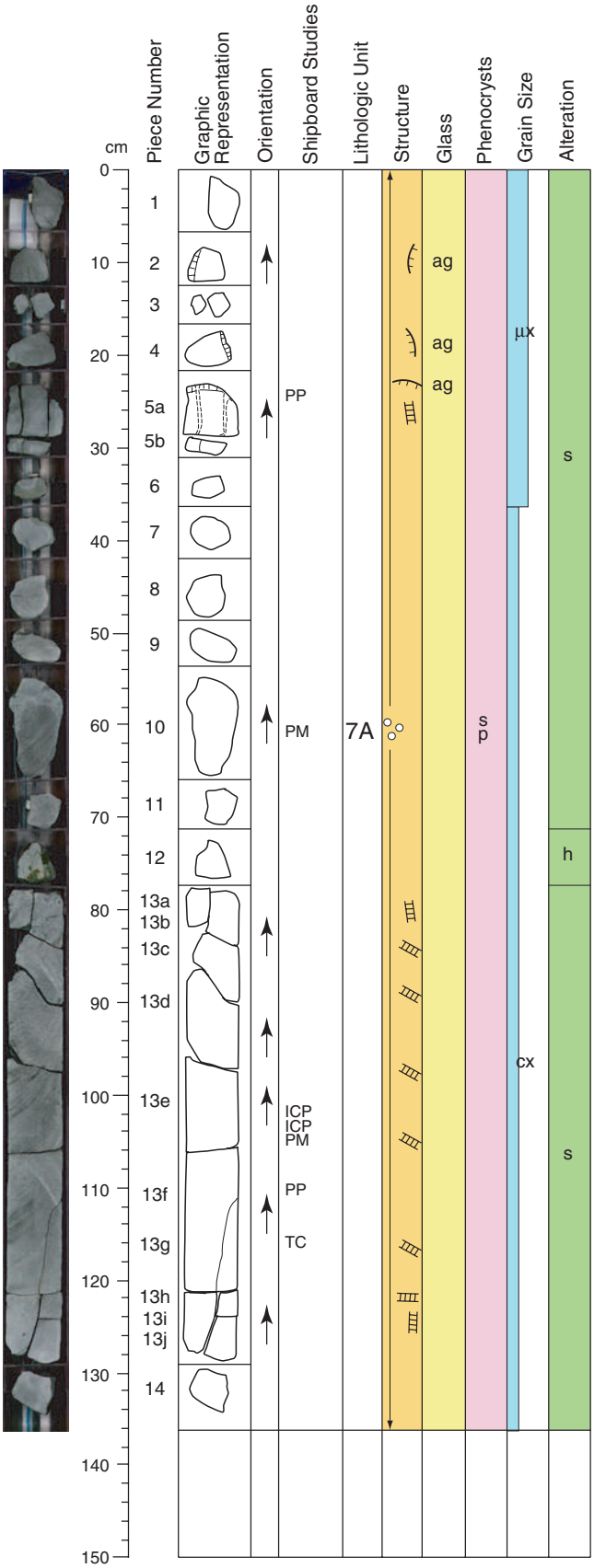
VESICLES: Sparsely to moderately vesicular filled with saponite and iron oxyhydroxide.

COLOR: Very dark gray (N3.0/) to dark gray (N4.0/)

ALTERATION: Slightly to moderately altered to dark gray with mixed and black alteration halos.

VEINS/FRACTURES: <0.2 mm saponite and iron oxyhydroxide veins are common

Core Photo



301-U1301B-21R-1 (Section top: 490.2 mbsf)

UNIT 7A: Moderately to highly olivine-clinopyroxene-plagioclase phyric microcrystalline pillow basalt

PIECES: 1-14 (Continues next section)

CONTACTS:
Upper: Not recovered
Lower: Not recovered

PHENOCRYSTS:

Plagioclase	12%	0.5-3.8 mm
Olivine	Tr	0.3-0.5 mm
Clinopyroxene	5%	0.3-0.7 mm

GROUNDMASS:
Grain size: Cryptocrystalline to microcrystalline.
Texture: Hyalo-ophitic to intersertal.

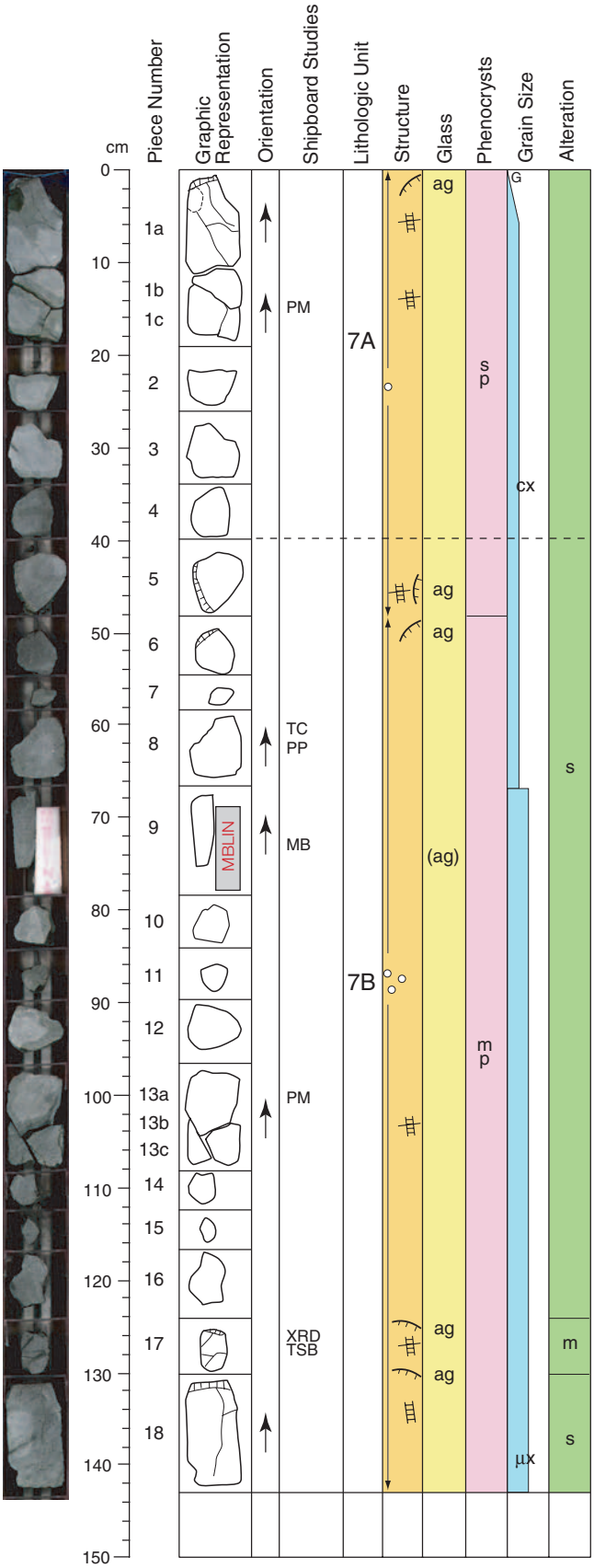
VESICLES: Sparsely to moderately vesicular filled with saponite and iron oxyhydroxide.

COLOR: Very dark gray (N3.0/) to dark gray (N4.0/)

ALTERATION: Slightly to moderately altered to dark gray with mixed and black alteration halos.

VEINS/FRACTURES: <0.2 mm saponite and iron oxyhydroxide veins are common.

Core Photo



301-U1301B-21R-2 (Section top: 491.56 mbsf)

UNIT 7A: Moderately to highly olivine-clinopyroxene-plagioclase phyric microcrystalline pillow basalt

PIECES: 1-4

CONTACTS:
Upper: Not recovered
Lower: Not recovered

PHENOCRYSTS:
Plagioclase 12% 0.5-3.8 mm
Olivine Tr 0.3-0.5 mm
Clinopyroxene 5% 0.3-0.7 mm

GROUNDMASS:
Grain size: Cryptocrystalline to microcrystalline.
Texture: Hyalo-ophitic to intersertal.

VESICLES: Sparsely to moderately vesicular filled with saponite and iron oxyhydroxide.

COLOR: Very dark gray (N3.0/) to dark gray (N4.0/)

ALTERATION: Slightly to moderately altered to dark gray with mixed and black alteration halos.

VEINS/FRACTURES: <0.2 mm saponite and iron oxyhydroxide veins are common.

UNIT 7B: Highly olivine-clinopyroxene-plagioclase phyric microcrystalline pillow basalt

PIECES: 5-18 (Continues next section)

CONTACTS:
Upper: Glassy chilled margin in 21R-2, Piece 5
Lower: Glassy chilled margin in 25R-2, Piece 6

PHENOCRYSTS:

Plagioclase	18%	0.2-2.7 mm
Olivine	3%	0.2-1.2 mm
Clinopyroxene	5%	0.2-3.8 mm

GROUNDMASS:
Grain size: Cryptocrystalline to microcrystalline.
Texture: Hyalo-ophitic, pilotaxitic.

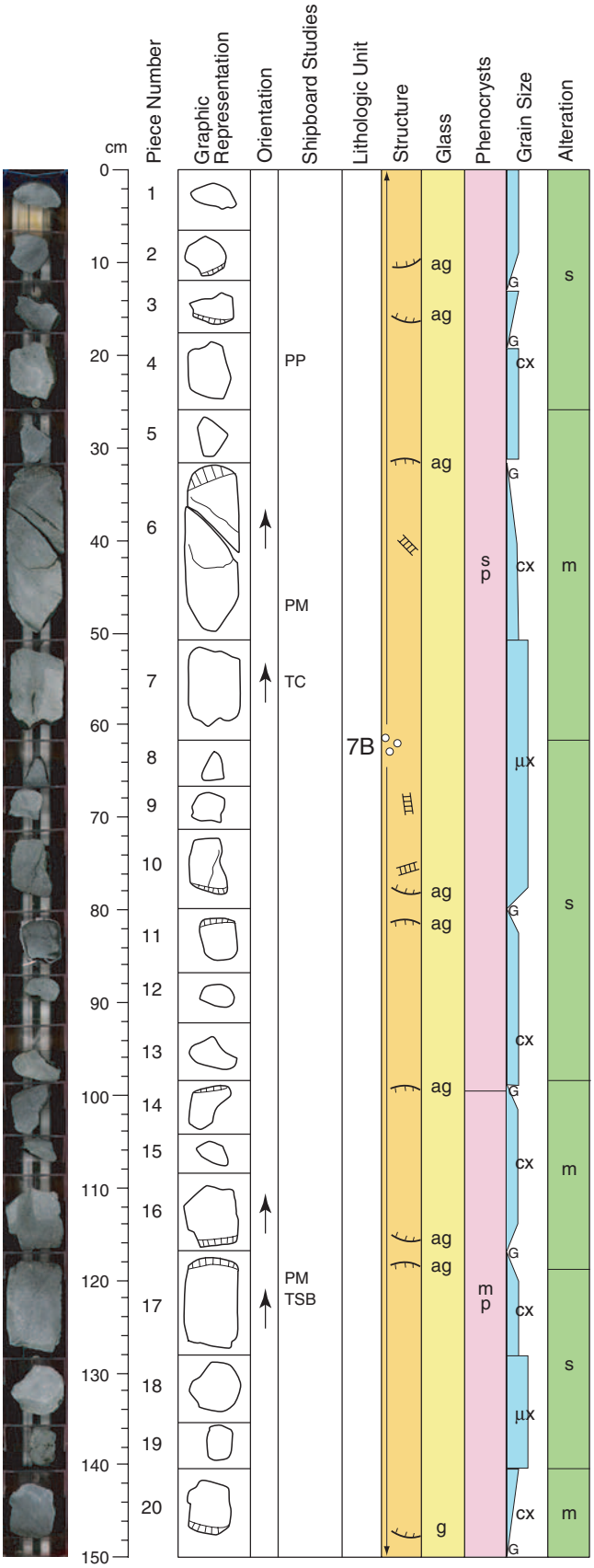
VESICLES: Sparsely to moderately vesicular filled with saponite and iron oxyhydroxide.

COLOR: Very dark gray (N3.0/) to dark gray (N4.0/)

ALTERATION: Slightly to moderately altered to dark gray with many mixed and black alteration halos.

VEINS/FRACTURES: 0.1-1 mm saponite, iron oxyhydroxide, celadonite and pyrite bearing veins.

Core Photo



301-U1301B-21R-3 (Section top: 492.99 mbsf)

UNIT 7B: Highly olivine-clinopyroxene-plagioclase phyric microcrystalline pillow basalt

PIECES: 1-20 (Continues next section)

CONTACTS:
Upper: Glassy chilled margin in 21R-2, Piece 5
Lower: Glassy chilled margin in 25R-2, Piece 6

PHENOCRYSTS:

Plagioclase	15%	0.2-4.5 mm
Olivine	2%	0.2-0.5 mm
Clinopyroxene	3%	0.2-0.5 mm

GROUNDMASS:
Grain size: Cryptocrystalline to microcrystalline.
Texture: Hyalo-ophitic.

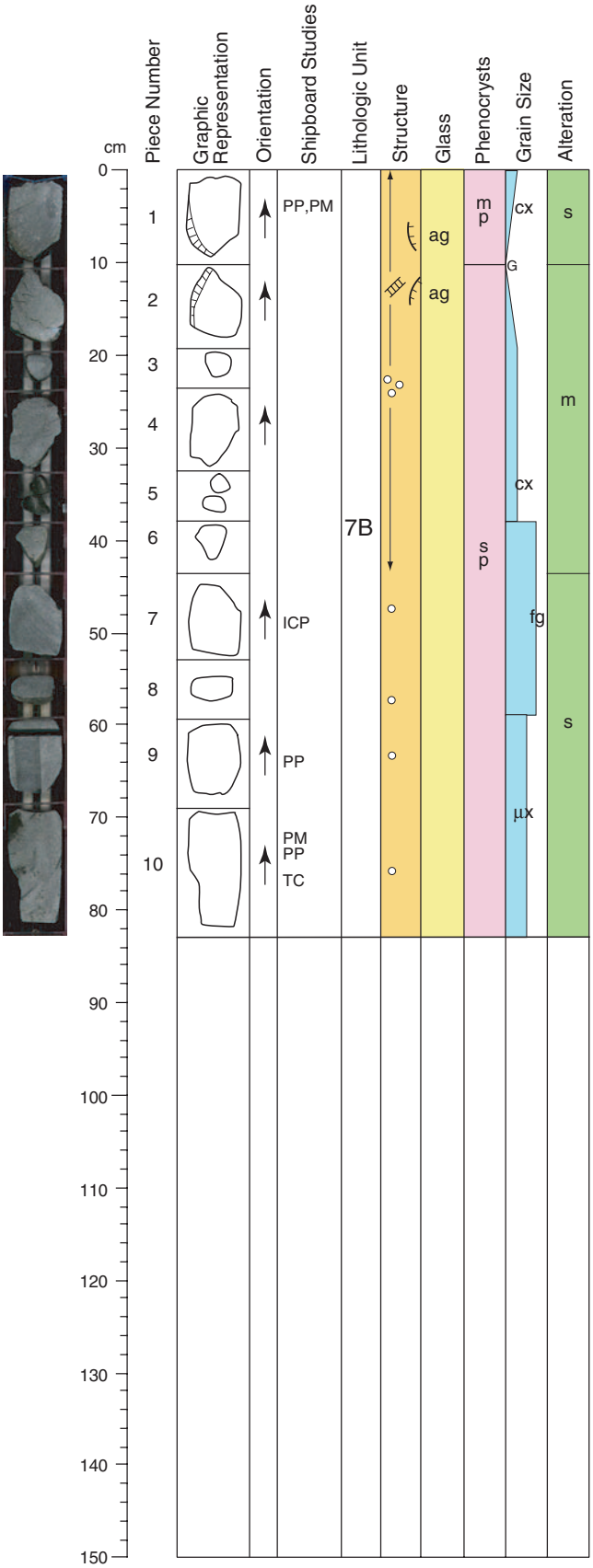
VESICLES: Sparsely to moderately vesicular filled with saponite and iron oxyhydroxide.

COLOR: Very dark gray (N3.0/) to dark gray (N4.0/)

ALTERATION: Slightly to moderately altered to dark gray with many mixed and black alteration halos.

VEINS/FRACTURES: 0.1-1 mm saponite, iron oxyhydroxide, celadonite and pyrite bearing veins.

Core Photo



301-U1301B-21R-4 (Section top: 494.49 mbsf)

UNIT 7B: Highly olivine-clinopyroxene-plagioclase phyric fine grained pillow basalt

PIECES: 1-10 (Continues next core)

CONTACTS:
Upper: Glassy chilled margin in 21R-2, Piece 5
Lower: Glassy chilled margin in 25R-2 ,Piece 6

PHENOCRYSTS:

Plagioclase	15%	0.2-4.5 mm
Olivine	2%	0.2-0.5 mm
Clinopyroxene	3%	0.2-0.5 mm

GROUNDMASS:
Grain size: Cryptocrystalline to fine grained.
Texture: Hyalo-ophitic to intersertal.

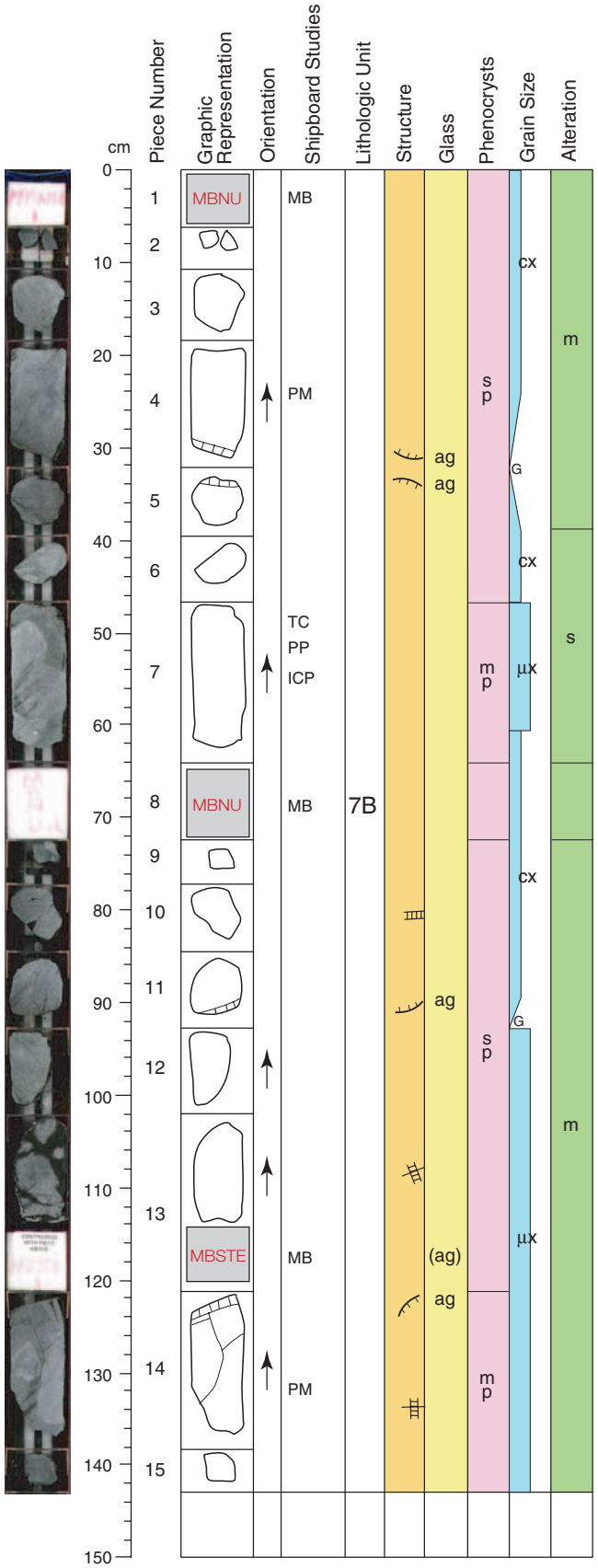
VESICLES: Sparsely to moderately vesicular filled with saponite and iron oxyhydroxide.

COLOR: Very dark gray (N3.0/) to dark gray (N4.0/)

ALTERATION: Slightly to moderately altered to dark gray with many mixed and black alteration halos.

VEINS/FRACTURES: 0.1-1 mm saponite, iron oxyhydroxide, celadonite and pyrite bearing veins.

Core Photo



301-U1301B-22R-1 (Section top: 495.40 mbsf)

UNIT 7B: Highly olivine-clinopyroxene-plagioclase phyric microcrystalline pillow basalt

PIECES: 1-15 (Continues next section)

CONTACTS:
Upper: Glassy chilled margin in 21R-2, Piece 5
Lower: Glassy chilled margin in 25R-2, Piece 6

PHENOCRYSTS:

Plagioclase	15%	0.2-4.5 mm
Olivine	2%	0.2-0.5 mm
Clinopyroxene	3%	0.2-0.5 mm

GROUNDMASS:
Grain size: Cryptocrystalline to microcrystalline.
Texture: Hyalo-ophitic to intersertal.

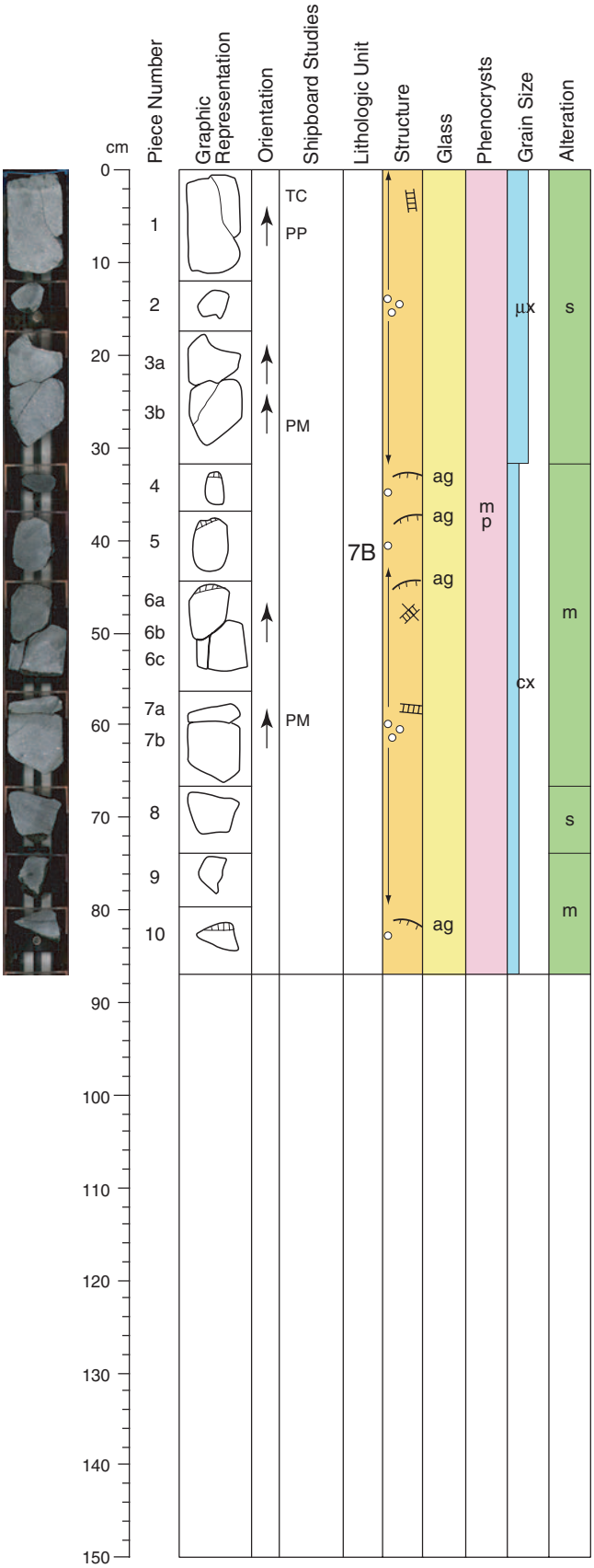
VESICLES: Sparsely vesicular filled with saponite and iron oxyhydroxide.

COLOR: Very dark gray (N3.0/) to dark gray (N4.0/)

ALTERATION: Slightly to moderately altered to dark gray with many mixed and black alteration halos.

VEINS/FRACTURES: 0.1-1 mm saponite, iron oxyhydroxide, celadonite and pyrite bearing veins.

Core Photo



301-U1301B-22R-2 (Section top: 496.83 mbsf)

UNIT 7B: Highly olivine-clinopyroxene-plagioclase phyric microcrystalline pillow basalt

PIECES: 1-10 (Continues next core)

CONTACTS:
Upper: Glassy chilled margin in 21R-2, Piece 5
Lower: Glassy chilled margin in 25R-2, Piece 6

PHENOCRYSTS:

Plagioclase	15%	0.2-4.5 mm
Olivine	2%	0.2-0.5 mm
Clinopyroxene	3%	0.2-0.5 mm

GROUNDMASS:
Grain size: Cryptocrystalline to microcrystalline.
Texture: Hyalo-ophitic to intersertal.

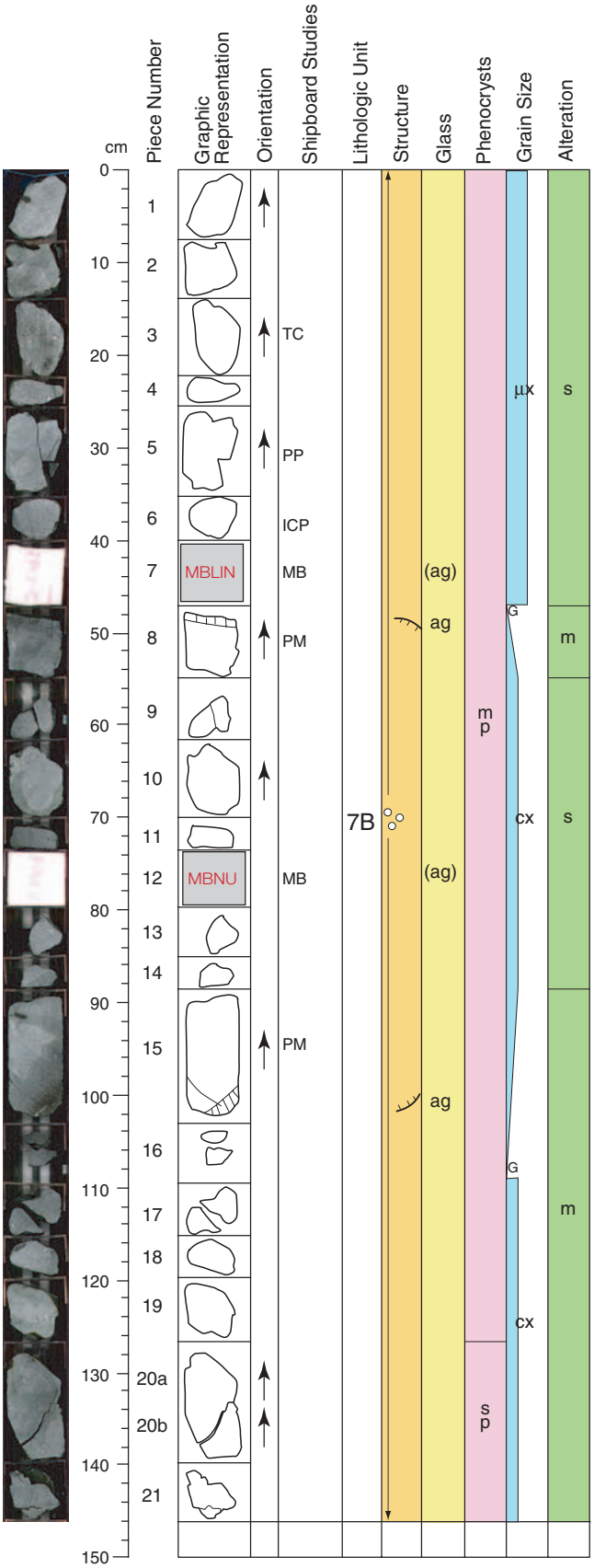
VESICLES: Sparsely to moderately vesicular filled with saponite and iron oxyhydroxide.

COLOR: Very dark gray (N3.0/) to dark gray (N4.0/)

ALTERATION: Slightly to moderately altered to dark gray with many mixed and black alteration halos.

VEINS/FRACTURES: 0.1-1 mm saponite, iron oxyhydroxide, celadonite and pyrite bearing veins.

Core Photo



301-U1301B-23R-1 (Section top: 499.90 mbsf)

UNIT 7B: Highly olivine-clinopyroxene-plagioclase phyric microcrystalline pillow basalt

PIECES: 1-21 (Continues next section)

CONTACTS:
Upper: Glassy chilled margin in 21R-2, Piece 5
Lower: Glassy chilled margin in 25R-2, Piece 6

PHENOCRYSTS:

Plagioclase	15%	0.2-4.5 mm
Olivine	2%	0.2-0.5 mm
Clinopyroxene	3%	0.2-0.5 mm

GROUNDMASS:
Grain size: Cryptocrystalline to microcrystalline.
Texture: Hyalo-ophitic to intersertal.

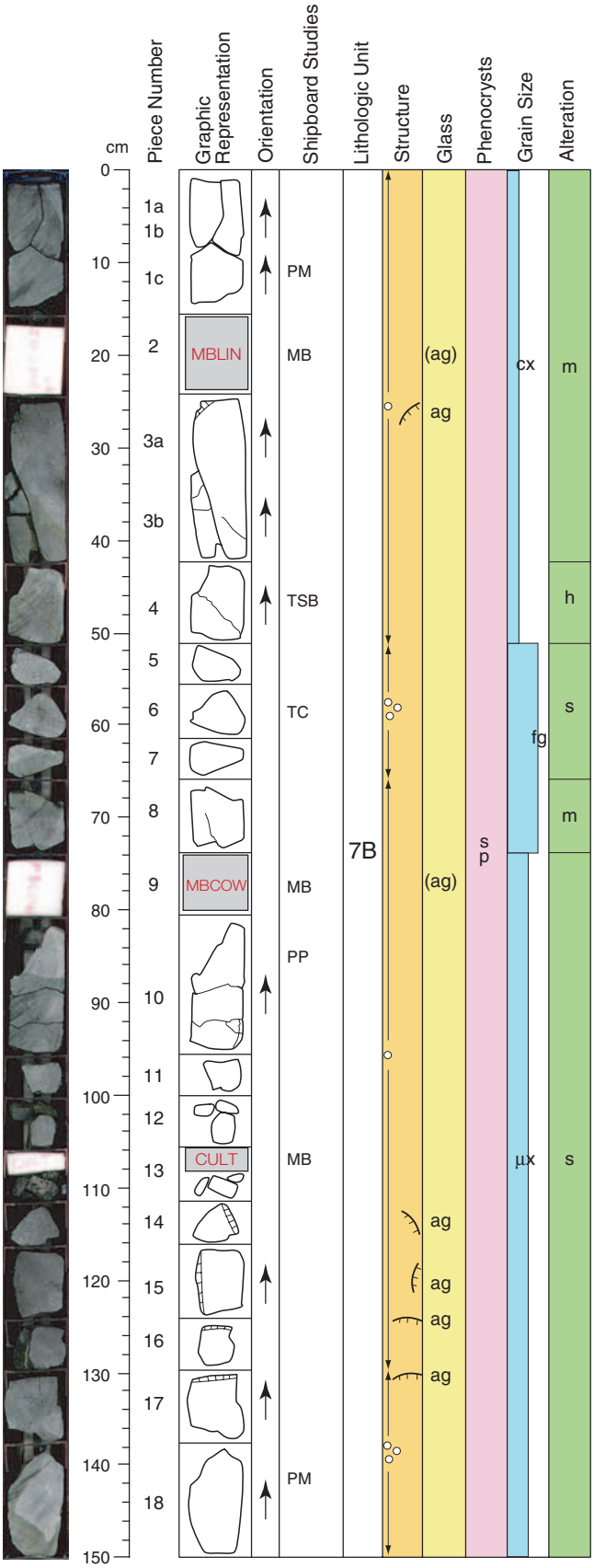
VESICLES: Sparsely vesicular filled with saponite and iron oxyhydroxide.

COLOR: Very dark gray (N3.0/) to dark gray (N4.0/)

ALTERATION: Slightly to moderately altered to dark gray with many mixed and black alteration halos.

VEINS/FRACTURES: 0.1-1 mm saponite, iron oxyhydroxide, celadonite and bearing veins.

Core Photo



301-U1301B-23R-2 (Section top: 501.36 mbsf)

UNIT 7B: Highly clinopyroxene-olivine-plagioclase phyric fine grained pillow basalt

PIECES: 1-18 (Continues next section)

CONTACTS:
Upper: Glassy chilled margin in 21R-2, Piece 5
Lower: Glassy chilled margin in 25R-2, Piece 6

PHENOCRYSTS:

Plagioclase	12%	0.7-4.4 mm
Olivine	2%	0.6-2.8 mm
Clinopyroxene	3%	0.6-3 mm

GROUNDMASS:
Grain size: Cryptocrystalline to fine grained.
Texture: Hyalo-ophitic to intersertal.

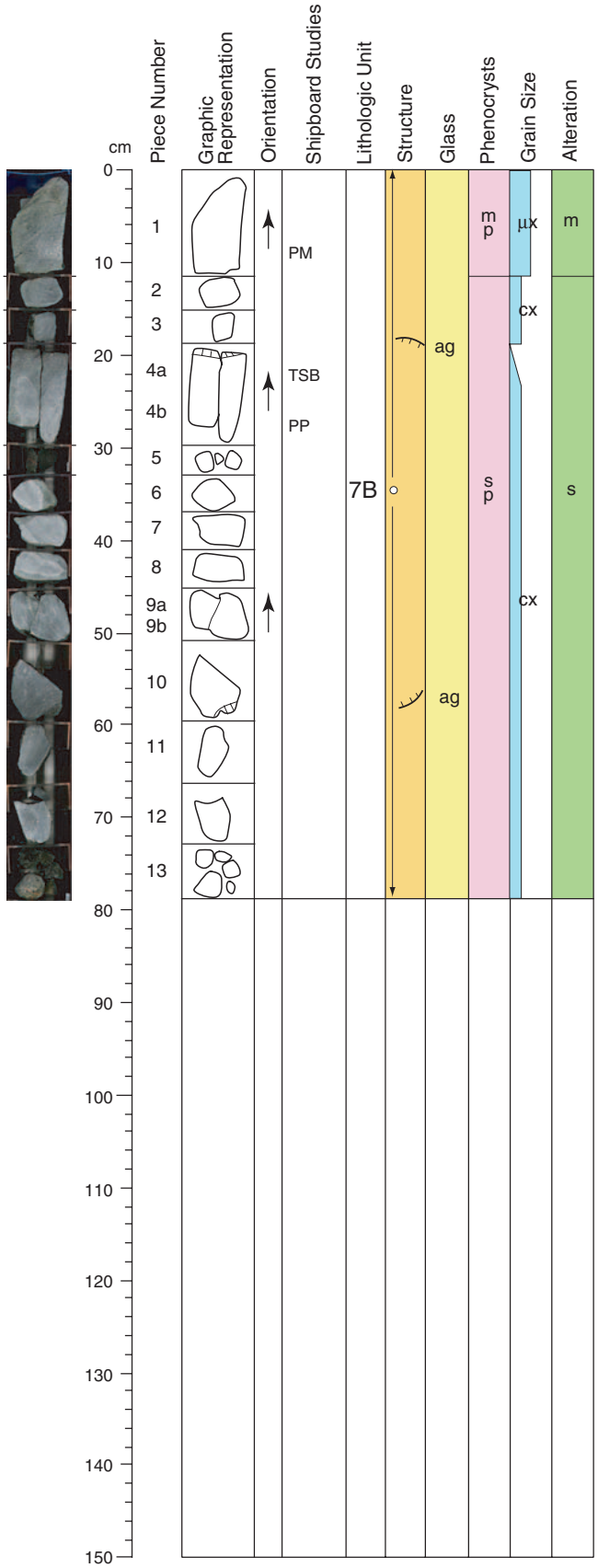
VESICLES: Sparsely to moderately vesicular filled with saponite and iron oxyhydroxide.

COLOR: Very dark gray (N3.0/) to dark gray (N4.0/)

ALTERATION: Slightly to moderately altered to dark gray with many mixed and black alteration halos.

VEINS/FRACTURES: 0.1-1 mm saponite, iron oxyhydroxide, celadonite and bearing veins.

Core Photo



301-U1301B-23R-3 (Section top: 502.86 mbsf)

UNIT 7B: Highly olivine-clinopyroxene-plagioclase phyric microcrystalline pillow basalt

PIECES: 1-13 (Continues next core)

CONTACTS:
Upper: Glassy chilled margin in 21R-2, Piece 5
Lower: Glassy chilled margin in 25R-2, Piece 6

PHENOCRYSTS:

Plagioclase	15%	0.2-3.3 mm
Olivine	3%	0.2-3.2 mm
Clinopyroxene	7%	0.2-1.5 mm

GROUNDMASS:
Grain size: Cryptocrystalline to microcrystalline.
Texture: Hyalo-ophitic.

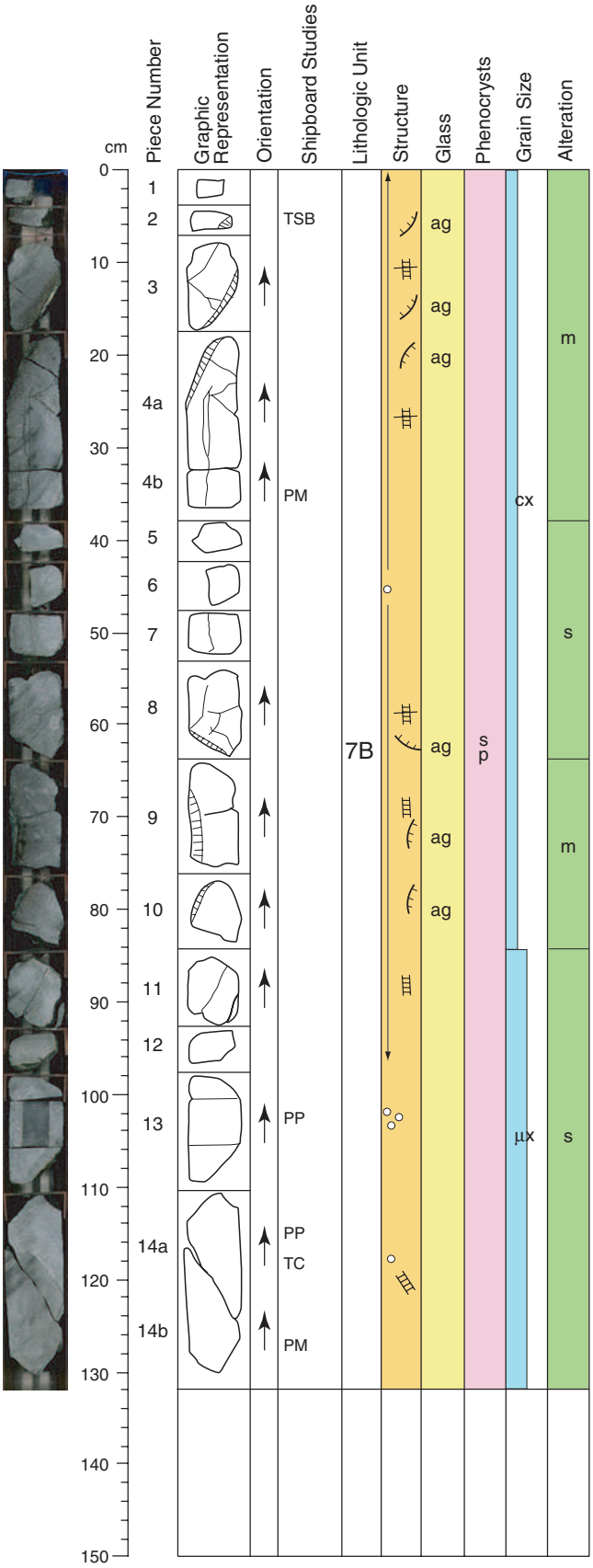
VESICLES: Sparsely vesicular filled with saponite and iron oxyhydroxide.

COLOR: Very dark gray (N3.0/) to dark gray (N4.0/)

ALTERATION: Slightly to moderately altered to dark gray with many mixed and black alteration halos.

VEINS/FRACTURES: 0.1-1 mm saponite and iron oxyhydroxide veins.

Core Photo



301-U1301B-24R-1 (Section top: 505.90 mbsf)

UNIT 7B: Highly olivine-clinopyroxene-plagioclase phyric microcrystalline pillow basalt

PIECES: 1-14 (Continues next section)

CONTACTS:
Upper: Glassy chilled margin in 21R-2 Piece 5
Lower: Glassy chilled margin in 25R-2 Piece 6

PHENOCRYSTS:

Plagioclase	7%	0.2-4.4 mm
Olivine	1%	0.2-0.6 mm
Clinopyroxene	2%	0.2-0.6 mm

GROUNDMASS:
Grain size: Cryptocrystalline to microcrystalline.
Texture: Hyalo-ophitic.

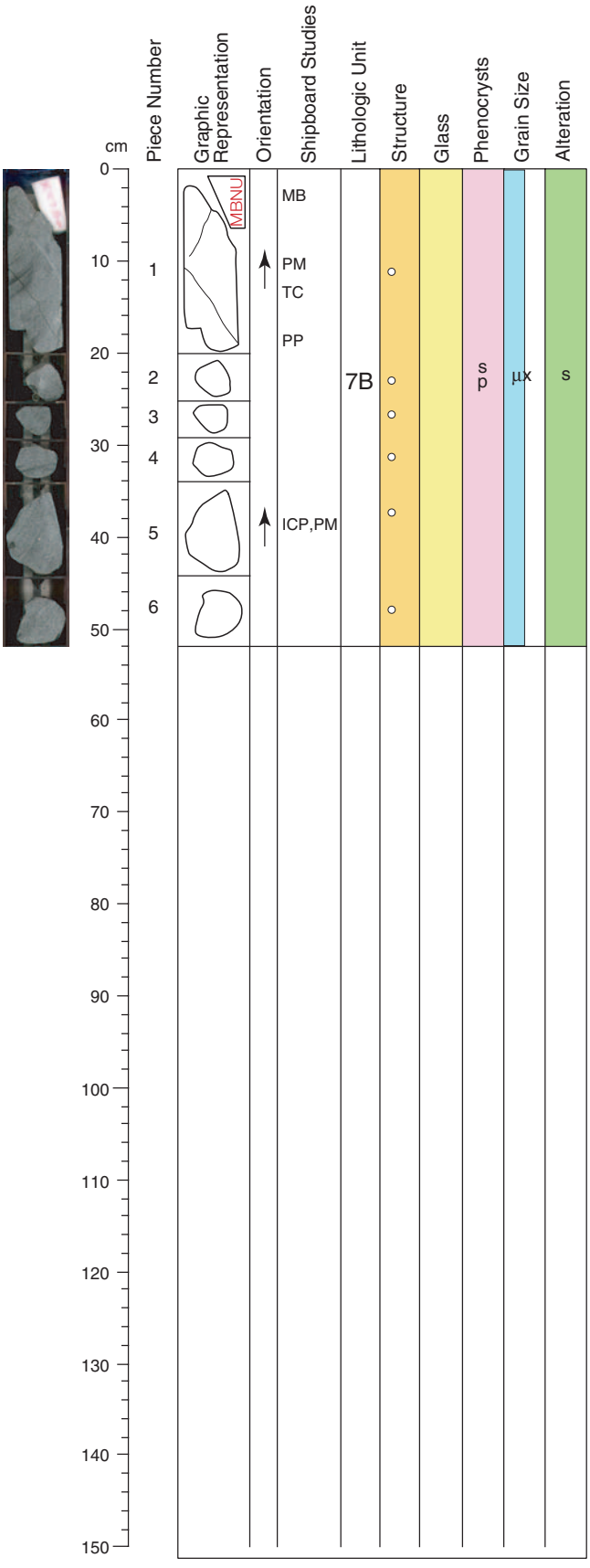
VESICLES: Sparsely vesicular filled with saponite and iron oxyhydroxide.

COLOR: Very dark gray (N3.0/) to dark gray (N4.0/)

ALTERATION: Slightly to moderately altered to dark gray with many mixed and black alteration halos.

VEINS/FRACTURES: 0.1-1 mm saponite and iron oxyhydroxide veins.

Core Photo



301-U1301B-24R-2 (Section top: 507.22 mbsf)

UNIT 7B: Highly olivine-clinopyroxene-plagioclase phyric microcrystalline pillow basalt

PIECES: 1-6 (Continues next core)

CONTACTS:
Upper: Glassy chilled margin in 21R-2, Piece 5
Lower: Glassy chilled margin in 25R-2, Piece 6

PHENOCRYSTS:

Plagioclase	7%	0.2-4.4 mm
Olivine	1%	0.2-0.6 mm
Clinopyroxene	2%	0.2-0.6 mm

GROUNDMASS:
Grain size: Microcrystalline.
Texture: Hyalo-ophitic.

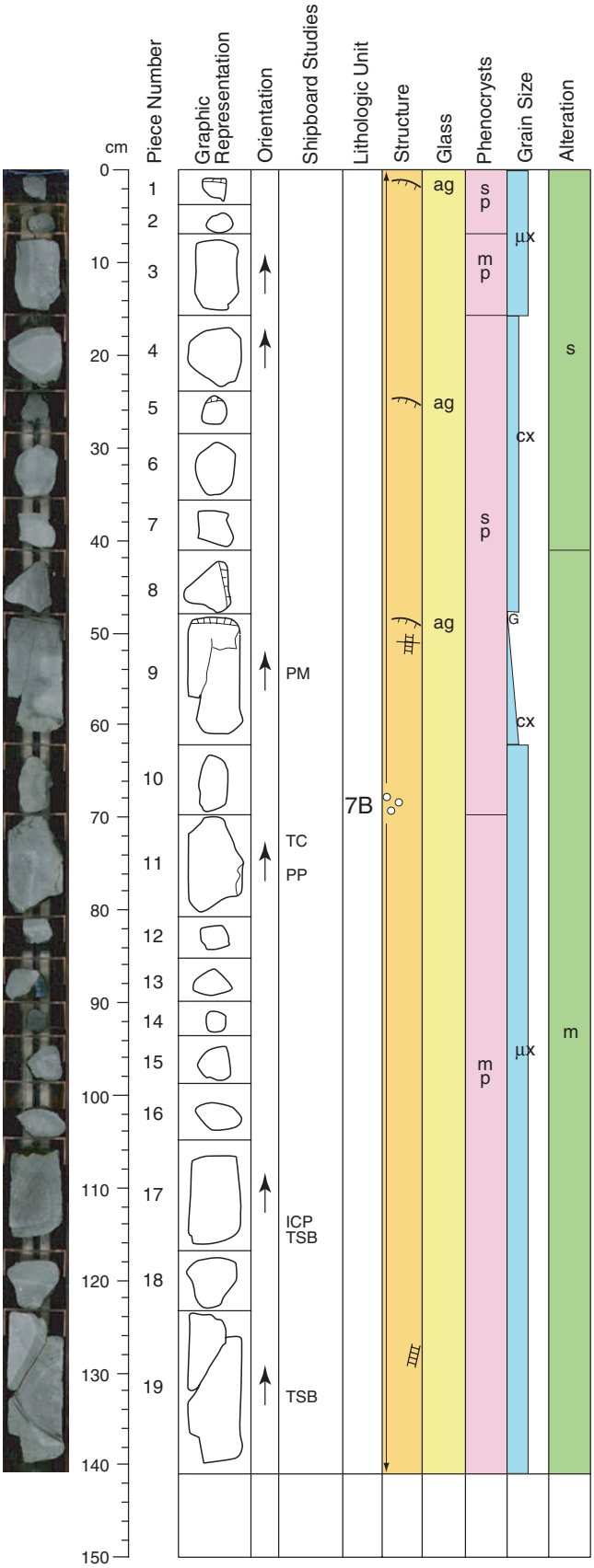
VESICLES: Sparsely vesicular filled with saponite and iron oxyhydroxide.

COLOR: Very dark gray (N3.0/) to dark gray (N4.0/)

ALTERATION: Slightly altered to dark gray.

VEINS/FRACTURES: 0.1-1 mm saponite and iron oxyhydroxide veins.

Core Photo



301-U1301B-25R-1 (Section top: 509.50 mbsf)

UNIT 7B: Highly olivine-clinopyroxene-plagioclase phyric microcrystalline pillow basalt

PIECES: 1-19 (Continues next section)

CONTACTS:
Upper: Glassy chilled margin in 21R-2, Piece 5
Lower: Glassy chilled margin in 25R-2, Piece 6

PHENOCRYSTS:

Plagioclase	10%	0.3-5 mm
Olivine	3%	0.3-1.1 mm
Clinopyroxene	5%	0.3-3 mm

GROUNDMASS:
Grain size: Cryptocrystalline to microcrystalline.
Texture: Hyalo-ophitic to intersertal.

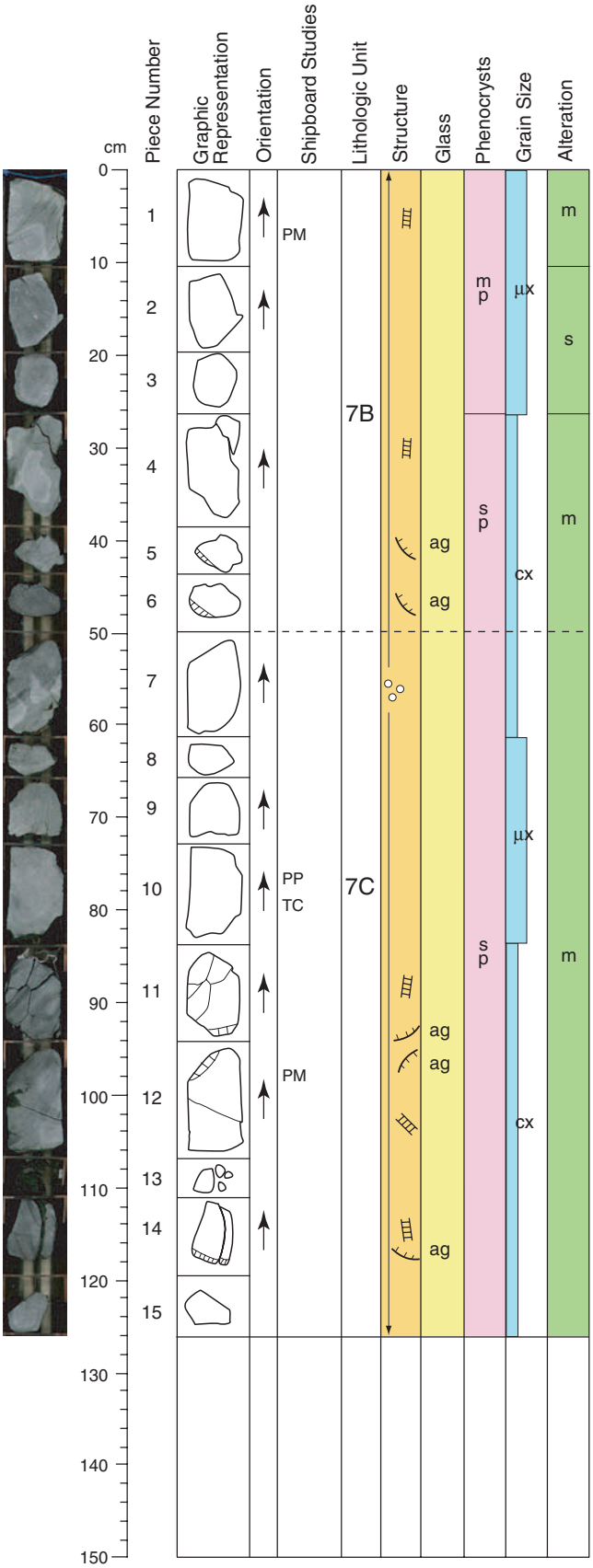
VESICLES: Sparsely vesicular filled with saponite.

COLOR: Very dark gray (N3.0/) to dark gray (N4.0/)

ALTERATION: Slightly to moderately altered to dark gray, with many alteration halos.

VEINS/FRACTURES: 0.1-1 mm saponite and iron oxyhydroxide veins.

Core Photo



301-U1301B-25R-2 (Section top: 510.91 mbsf)

UNIT 7B: Highly olivine-clinopyroxene-plagioclase phyric microcrystalline pillow basalt

PIECES: 1-6

CONTACTS:
Upper: Glassy chilled margin in 21R-2, Piece 5
Lower: Glassy chilled margin in 25R-2, Piece 6

PHENOCRYSTS:

Plagioclase	10%	0.3-5 mm
Olivine	3%	0.3-1.1 mm
Clinopyroxene	5%	0.3-3 mm

GROUNDMASS:
Grain size: Cryptocrystalline to microcrystalline.
Texture: Hyalo-ophitic to intersertal.

VESICLES: Sparsely vesicular filled with saponite.

COLOR: Very dark gray (N3.0/) to dark gray (N4.0/)

ALTERATION: Slightly to moderately altered to dark gray, with many alteration halos.

VEINS/FRACTURES: 0.1-1 mm saponite and iron oxyhydroxide veins.

UNIT 7C: Sparsely to moderately olivine-clinopyroxene-plagioclase phyric microcrystalline pillow basalt

PIECES: 7-15 (Continues next core)

CONTACTS:
Upper: Not recovered
Lower: Not recovered

PHENOCRYSTS:

Plagioclase	3%	0.3-1.2 mm
Olivine	1%	0.3-1 mm
Clinopyroxene	1%	0.3-1.5 mm

GROUNDMASS:
Grain size: Cryptocrystalline to microcrystalline.
Texture: Intersertal to intergranular.

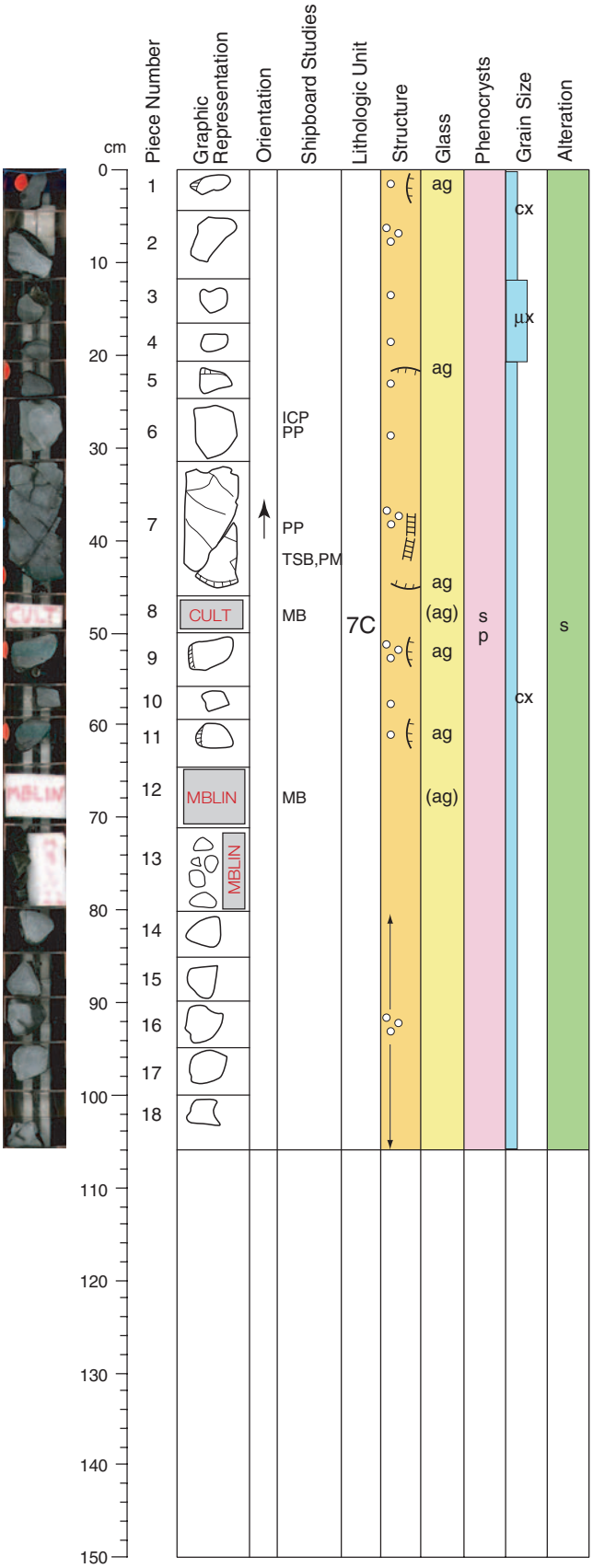
VESICLES: Sparsely to moderately vesicular filled with saponite and iron oxyhydroxide.

COLOR: Very dark gray (N3.0/) to dark gray (N4.0/).

ALTERATION: Slightly altered to dark gray, with many black alteration halos.

VEINS/FRACTURES: 0.1-1 mm saponite and iron oxyhydroxide veins.

Core Photo



301-U1301B-26R-1 (Section top: 515.50 mbsf)

UNIT 7C: Sparsely olivine-clinopyroxene-plagioclase phyric microcrystalline pillow basalt

PIECES: 1-18 (Continues next core)

CONTACTS:
Upper: Not recovered
Lower: Not recovered

PHENOCRYSTS:

Plagioclase	3%	0.3-1.2 mm
Olivine	1%	0.3-1 mm
Clinopyroxene	1%	0.3-1.5 mm

GROUNDMASS:
Grain size: Cryptocrystalline to microcrystalline.
Texture: Intersertal to intergranular.

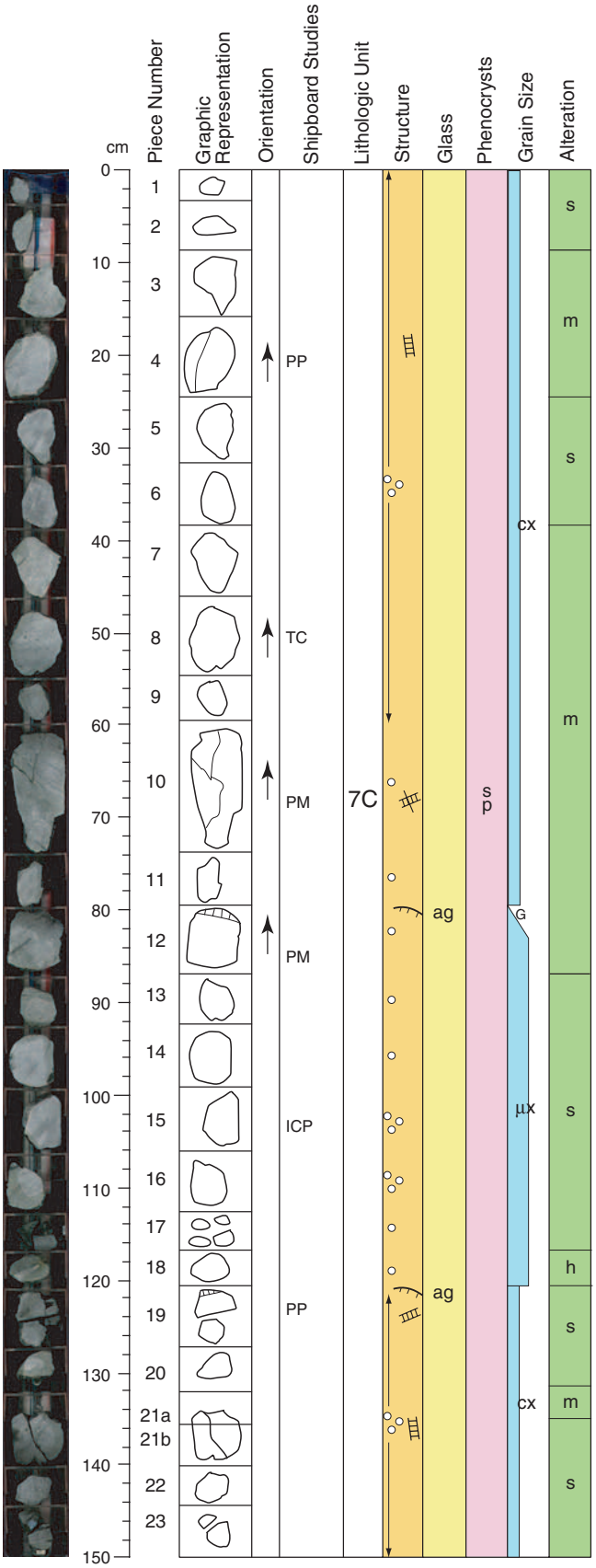
VESICLES: Sparsely to moderately vesicular filled with saponite and iron oxyhydroxide.

COLOR: Very dark gray (N3.0/) to dark gray (N4.0/).

ALTERATION: Slightly altered to dark gray, with many black alteration halos.

VEINS/FRACTURES: 0.1-1 mm saponite and iron oxyhydroxide veins.

Core Photo



301-U1301B-27R-1 (Section top: 519.0 mbsf)

UNIT 7C: Sparsely olivine-clinopyroxene-plagioclase phyric microcrystalline pillow basalt

PIECES: 1-23 (Continues next section)

CONTACTS:
Upper: Not recovered
Lower: Not recovered

PHENOCRYSTS:

Plagioclase	3%	0.3-1.2 mm
Olivine	1%	0.3-1 mm
Clinopyroxene	1%	0.3-1.5 mm

GROUNDMASS:
Grain size: Cryptocrystalline to microcrystalline.
Texture: Hyalo-ophitic, intersertal, and intergranular.

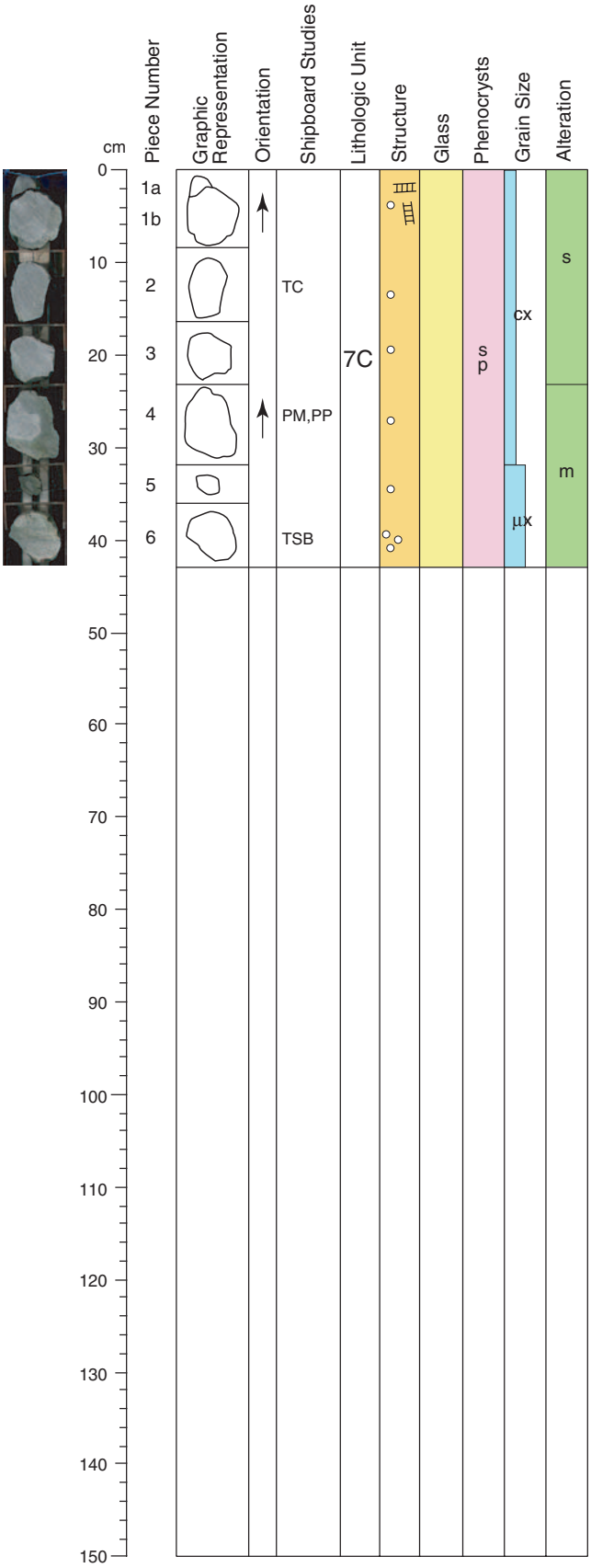
VESICLES: Sparsely to moderately vesicular filled with saponite and iron oxyhydroxide.

COLOR: Very dark gray (N3.0/) to dark gray (N4.0/).

ALTERATION: Slightly to moderately altered to dark gray, with many black alteration halos.

VEINS/FRACTURES: 0.1-1 mm saponite and iron oxyhydroxide veins.

Core Photo



301-U1301B-27R-2 (Section top: 520.50 mbsf)

UNIT 7C: Sparsely olivine-clinopyroxene-plagioclase phyric microcrystalline pillow basalt

PIECES: 1-6 (Continues next section)

CONTACTS:
Upper: Not recovered
Lower: Not recovered

PHENOCRYSTS:

Plagioclase	3%	0.3-1.2 mm
Olivine	1%	0.3-1 mm
Clinopyroxene	1%	0.3-1.5 mm

GROUNDMASS:
Grain size: Cryptocrystalline to microcrystalline.
Texture: Hyalo-ophitic, intersertal, and intergranular.

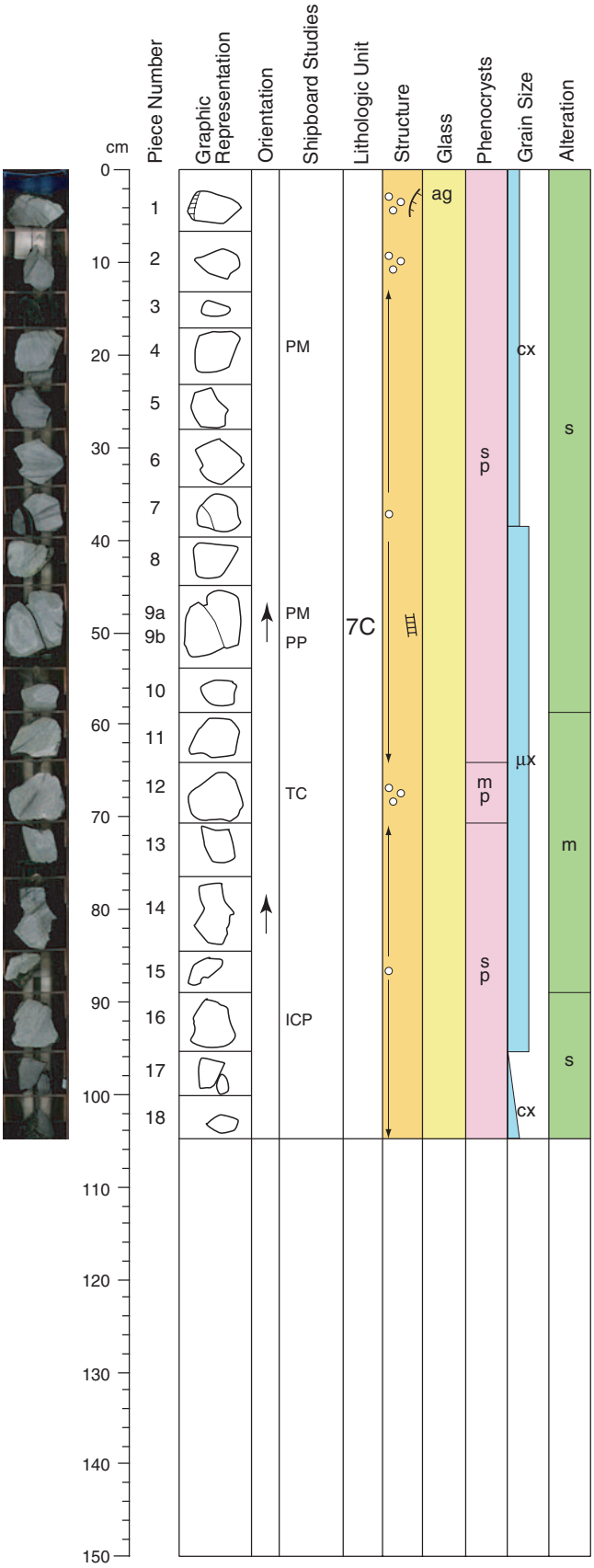
VESICLES: Sparsely to moderately vesicular filled with saponite and iron oxyhydroxide.

COLOR: Very dark gray (N3.0/) to dark gray (N4.0/).

ALTERATION: Slightly to moderately altered to dark gray, with many black alteration halos.

VEINS/FRACTURES: 0.1-1 mm saponite and iron oxyhydroxide veins.

Core Photo



301-U1301B-28R-1 (Section top: 528.60 mbsf)

UNIT 7C: Sparsely olivine-clinopyroxene-plagioclase phyric microcrystalline pillow basalt

PIECES: 1-18 (Continues next core)

CONTACTS:
Upper: Not recovered
Lower: Not recovered

PHENOCRYSTS:

Plagioclase	3%	0.3-1.2 mm
Olivine	1%	0.3-1 mm
Clinopyroxene	1%	0.3-1.5 mm

GROUNDMASS:
Grain size: Cryptocrystalline to microcrystalline.
Texture: Hyalo-ophitic, intersertal, and intergranular.

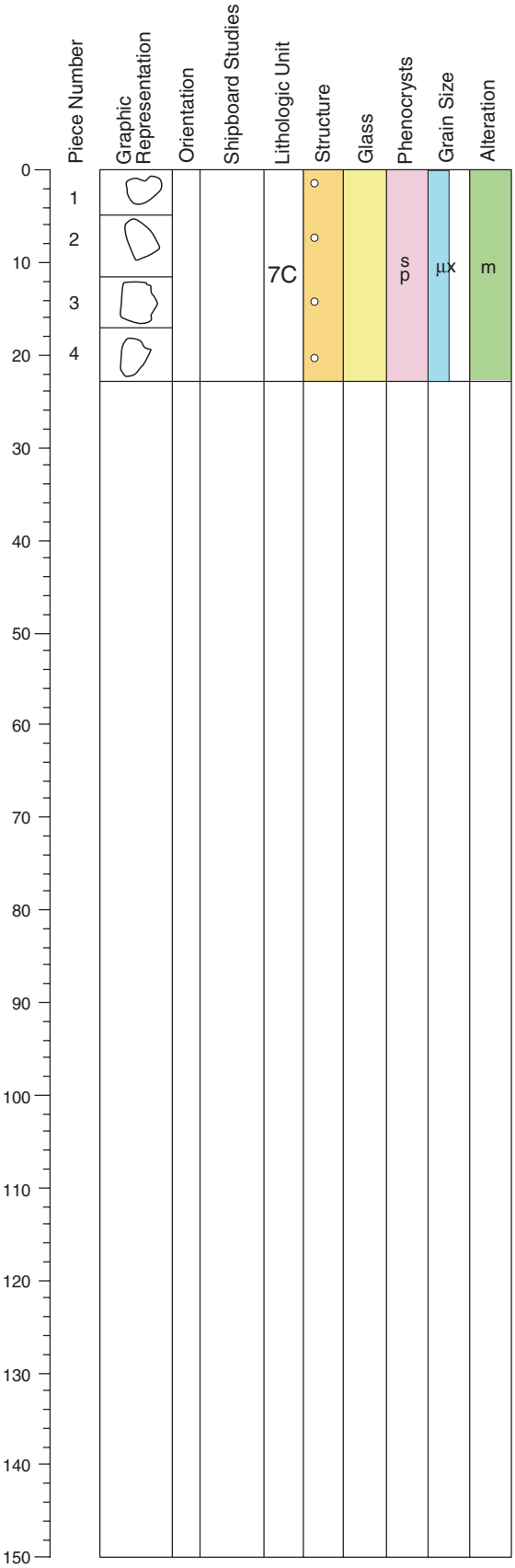
VESICLES: Sparsely to moderately vesicular filled with saponite and iron oxyhydroxide.

COLOR: Very dark gray (N3.0/) to dark gray (N4.0/).

ALTERATION: Slightly to moderately altered to dark gray, with many black alteration halos.

VEINS/FRACTURES: 0.1-1 mm saponite and iron oxyhydroxide veins.

Core Photo



301-U1301B-29R-1 (Section top: 532.2 mbsf)

UNIT 7C: Sparsely olivine-clinopyroxene-plagioclase phyric microcrystalline pillow basalt

PIECES: 1-4 (Continues next core)

CONTACTS:
Upper: Not recovered
Lower: Not recovered

PHENOCRYSTS:

Plagioclase	3%	0.3-1.2 mm
Olivine	1%	0.3-1 mm
Clinopyroxene	1%	0.3-1.5 mm

GROUNDMASS:
Grain size: Cryptocrystalline to microcrystalline.
Texture: Hyalo-ophitic, intersertal, and intergranular.

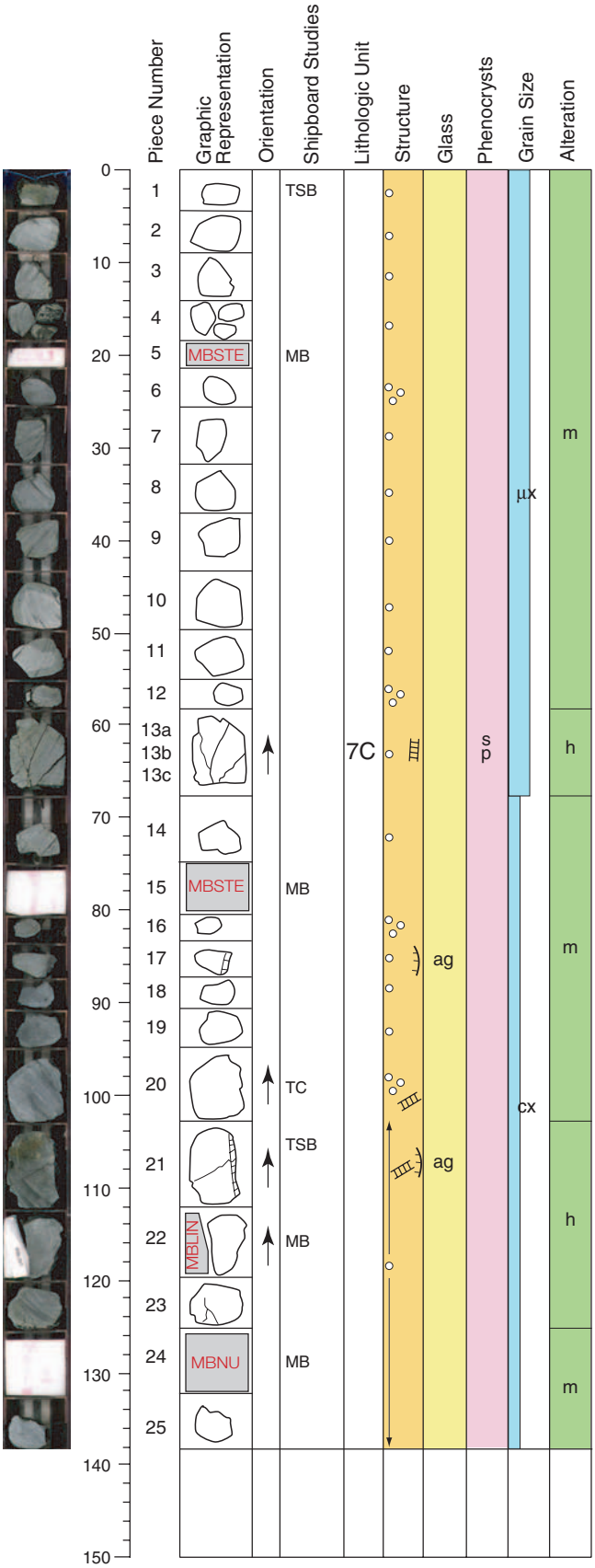
VESICLES: Sparsely vesicular filled with saponite and iron oxyhydroxide.

COLOR: Very dark gray (N3.0/) to dark gray (N4.0/).

ALTERATION: Moderately altered to dark gray, with many black alteration halos.

VEINS/FRACTURES: 0.1-0.3 mm saponite and iron oxyhydroxide veins.

Core Photo



301-U1301B-30R-1 (Section top: 535.2 mbsf)

UNIT 7C: Sparsely olivine-clinopyroxene-plagioclase phyric microcrystalline pillow basalt

PIECES: 1-25 (Continues next core)

CONTACTS:
Upper: Not recovered
Lower: Not recovered

PHENOCRYSTS:

Plagioclase	3%	0.5-2.7 mm
Olivine	Tr	0.5-1.4 mm
Clinopyroxene	1%	0.3-0.5 mm

GROUNDMASS:
Grain size: Cryptocrystalline to microcrystalline.
Texture: Hyalo-ophitic to intersertal.

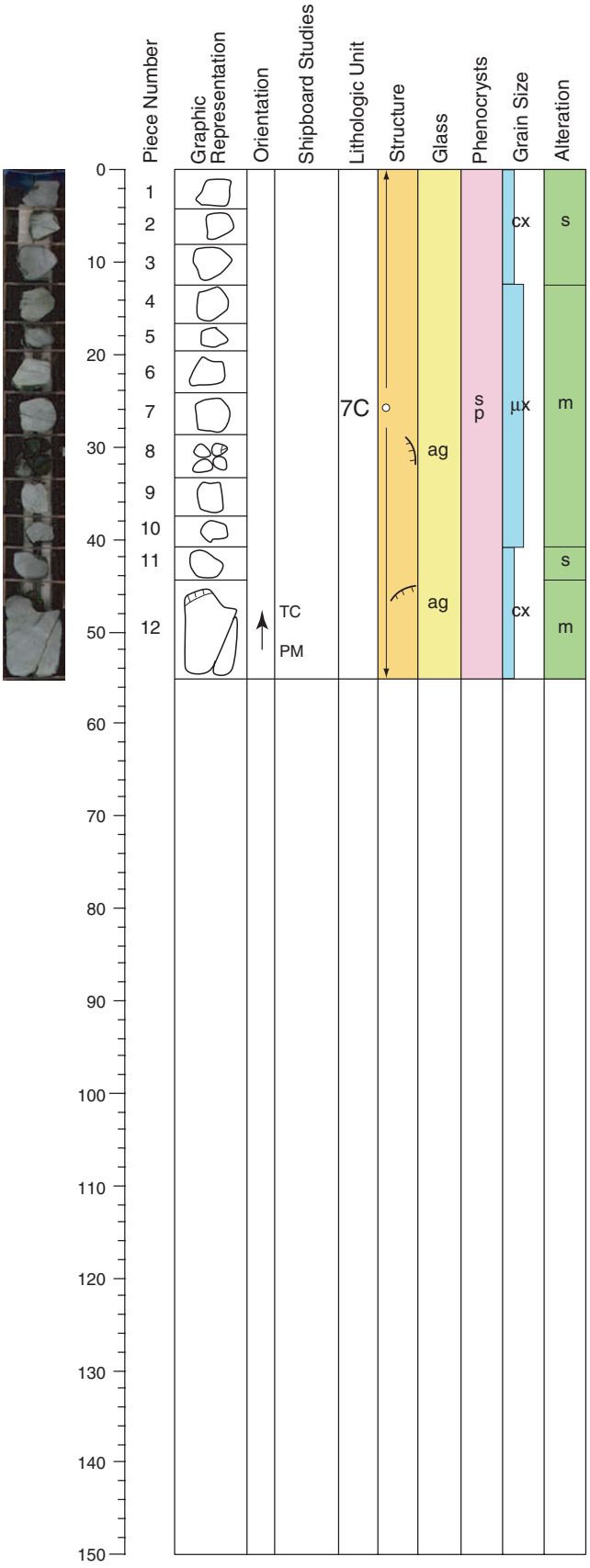
VESICLES: Sparsely to moderately vesicular filled with saponite and iron oxyhydroxide.

COLOR: Very dark gray (N3.0/) to dark gray (N4.0/).

ALTERATION: Moderately to highly altered to dark gray, with many alteration halos.

VEINS/FRACTURES: 0.1-1 mm saponite and iron oxyhydroxide veins.

Core Photo



301-U1301B-31R-1 (Section top: 544.40 mbsf)

UNIT 7C: Sparsely olivine-clinopyroxene-plagioclase phyric microcrystalline pillow basalt

PIECES: 1-12 (Continues next core)

CONTACTS:
Upper: Not recovered
Lower: Not recovered

PHENOCRYSTS:

Plagioclase	3%	0.5-2.7 mm
Olivine	1%	0.5-1.4 mm
Clinopyroxene	1%	0.3-0.5 mm

GROUNDMASS:
Grain size: Cryptocrystalline to microcrystalline.
Texture: Hyalo-ophitic to intersertal.

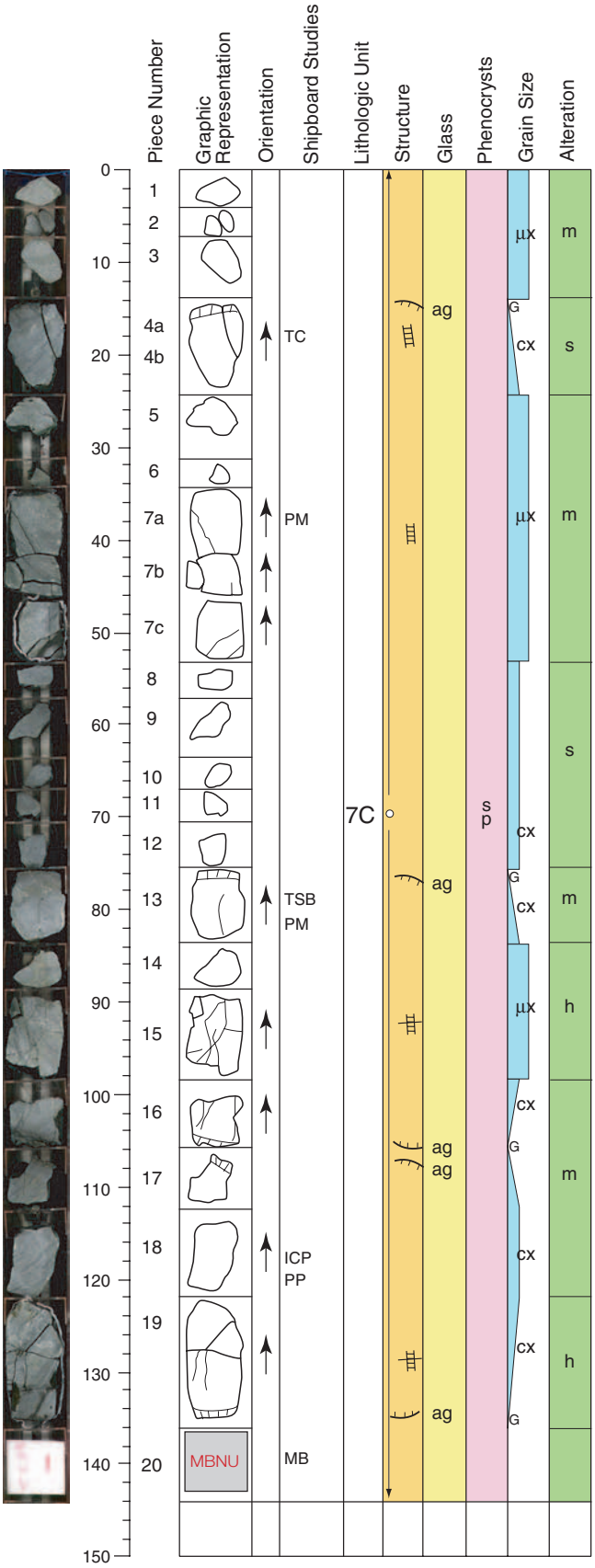
VESICLES: Sparsely vesicular filled with saponite and iron oxyhydroxide.

COLOR: Very dark gray (N3.0/) to dark gray (N4.0/).

ALTERATION: Slightly to moderately altered to dark gray, with alteration halos.

VEINS/FRACTURES: 0.1-1 mm saponite and iron oxyhydroxide veins.

Core Photo



301-U1301B-32R-1 (Section top: 550.00 mbsf)

UNIT 7C: Sparsely olivine-clinopyroxene-plagioclase phyric microcrystalline pillow basalt

PIECES: 1-20 (Continues next section)

CONTACTS:
Upper: Not recovered
Lower: Not recovered

PHENOCRYSTS:

Plagioclase	2%	0.3-1.5 mm
Olivine	Tr	0.3-0.5 mm
Clinopyroxene	1%	0.3-0.5 mm

GROUNDMASS:
Grain size: Cryptocrystalline to microcrystalline.
Texture: Hyalo-ophitic to intersertal, and pilotaxitic.

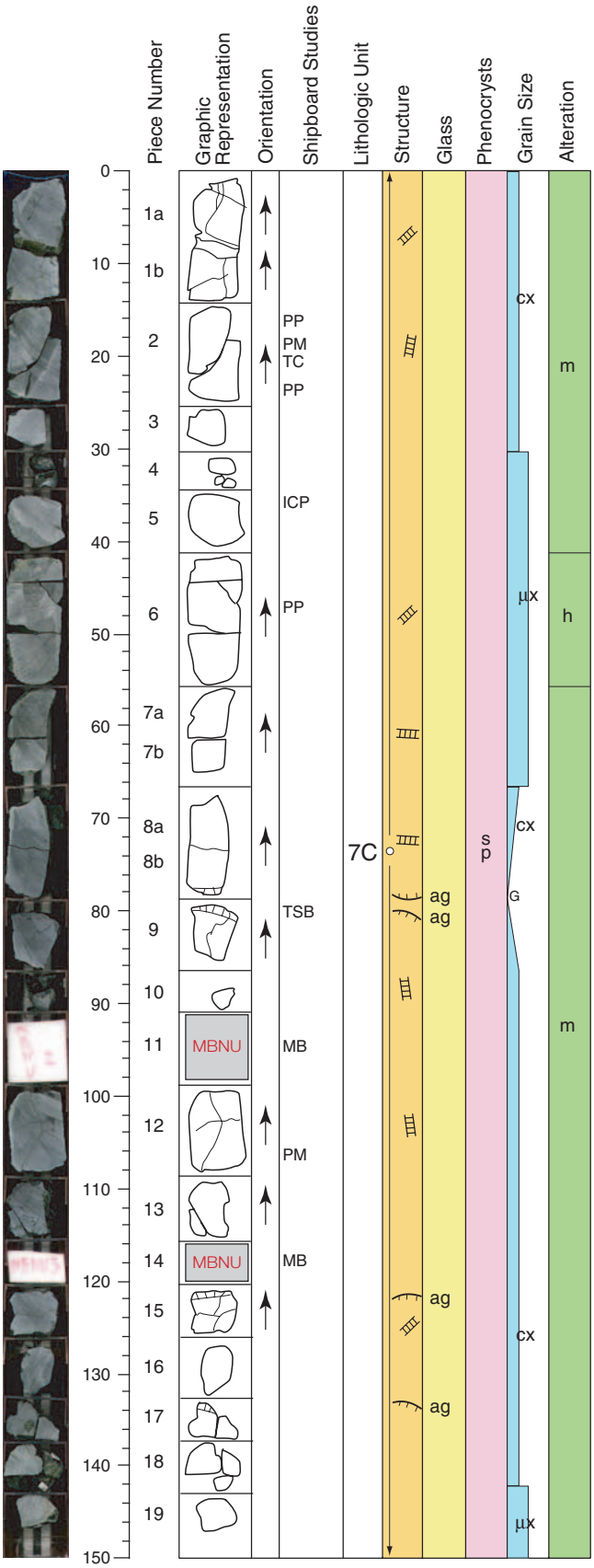
VESICLES: Sparsely vesicular filled with saponite and iron oxyhydroxide.

COLOR: Very dark gray (N3.0/) to dark gray (N4.0/).

ALTERATION: Slightly to highly altered to dark gray, with many alteration halos.

VEINS/FRACTURES: 0.1-1 mm saponite and iron oxyhydroxide veins.

Core Photo



301-U1301B-32R-2 (Section top: 551.44 mbsf)

UNIT 7C: Sparsely olivine-clinopyroxene-plagioclase phyric microcrystalline pillow basalt

PIECES: 1-19 (Continues next section)

CONTACTS:
Upper: Not recovered
Lower: Not recovered

PHENOCRYSTS:
Plagioclase 3% 0.2-1.3 mm
Olivine Tr 0.2-0.6 mm
Clinopyroxene 1% 0.2-1.2 mm

GROUNDMASS:
Grain size: Cryptocrystalline to microcrystalline.
Texture: Hyalo-ophitic to intersertal, and pilotaxitic.

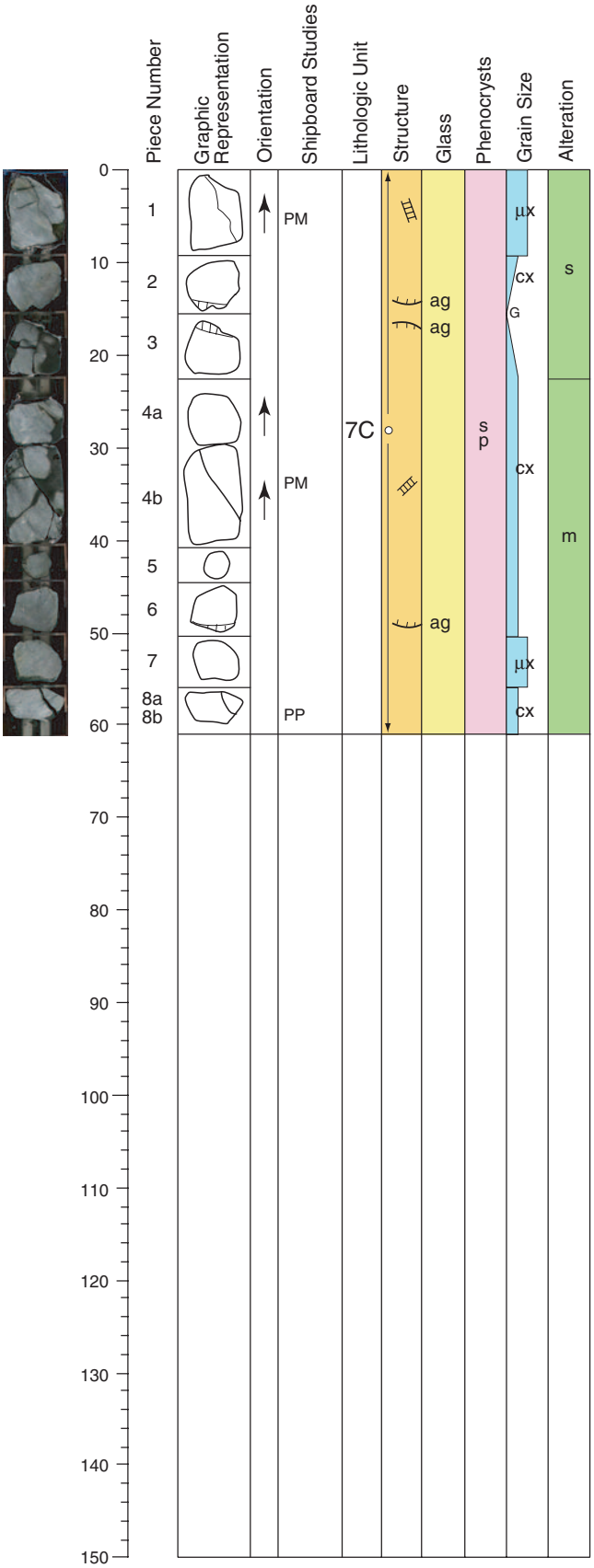
VESICLES: Sparsely vesicular filled with saponite and iron oxyhydroxide.

COLOR: Very dark gray (N3.0/) to dark gray (N4.0/).

ALTERATION: Moderately to highly altered to dark gray, with many alteration halos.

VEINS/FRACTURES: 0.1-1 mm saponite and iron oxyhydroxide veins.

Core Photo



301-U1301B-32R-3 (Section top: 552.94 mbsf)

UNIT 7C: Sparsely olivine-clinopyroxene-plagioclase phyric microcrystalline pillow basalt

PIECES: 1-8 (Continues next core)

CONTACTS:
Upper: Not recovered
Lower: Not recovered

PHENOCRYSTS:

Plagioclase	3%	0.2-1.3 mm
Olivine	Tr	0.2-0.6 mm
Clinopyroxene	1%	0.2-1.2 mm

GROUNDMASS:
Grain size: Cryptocrystalline to microcrystalline.
Texture: Hyalo-ophitic to intersertal.

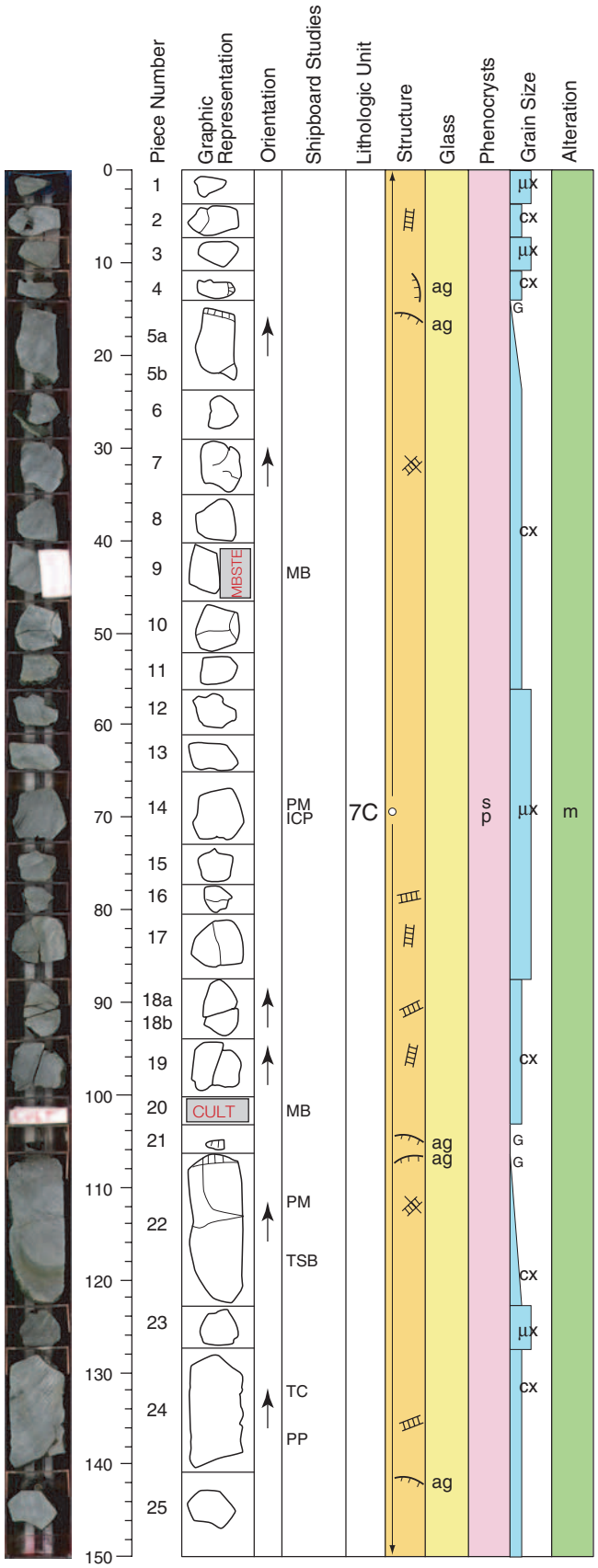
VESICLES: Sparsely vesicular filled with saponite and iron oxyhydroxide.

COLOR: Very dark gray (N3.0/) to dark gray (N4.0/).

ALTERATION: Slightly to moderately altered to dark gray, with black and mixed alteration halos.

VEINS/FRACTURES: 0.1-1 mm saponite and iron oxyhydroxide veins.

Core Photo



301-U1301B-33R-1 (Section top: 554.0 mbsf)

UNIT 7C: Sparsely olivine-clinopyroxene-plagioclase phyric microcrystalline pillow basalt

PIECES: 1-25 (Continues next section)

CONTACTS:
Upper: Not recovered
Lower: Not recovered

PHENOCRYSTS:

Plagioclase	3%	0.5-2.5 mm
Olivine	Tr	<1.8 mm
Clinopyroxene	1%	0.3-1.4 mm

GROUNDMASS:
Grain size: Cryptocrystalline to microcrystalline.
Texture: Hyalo-ophitic to intersertal.

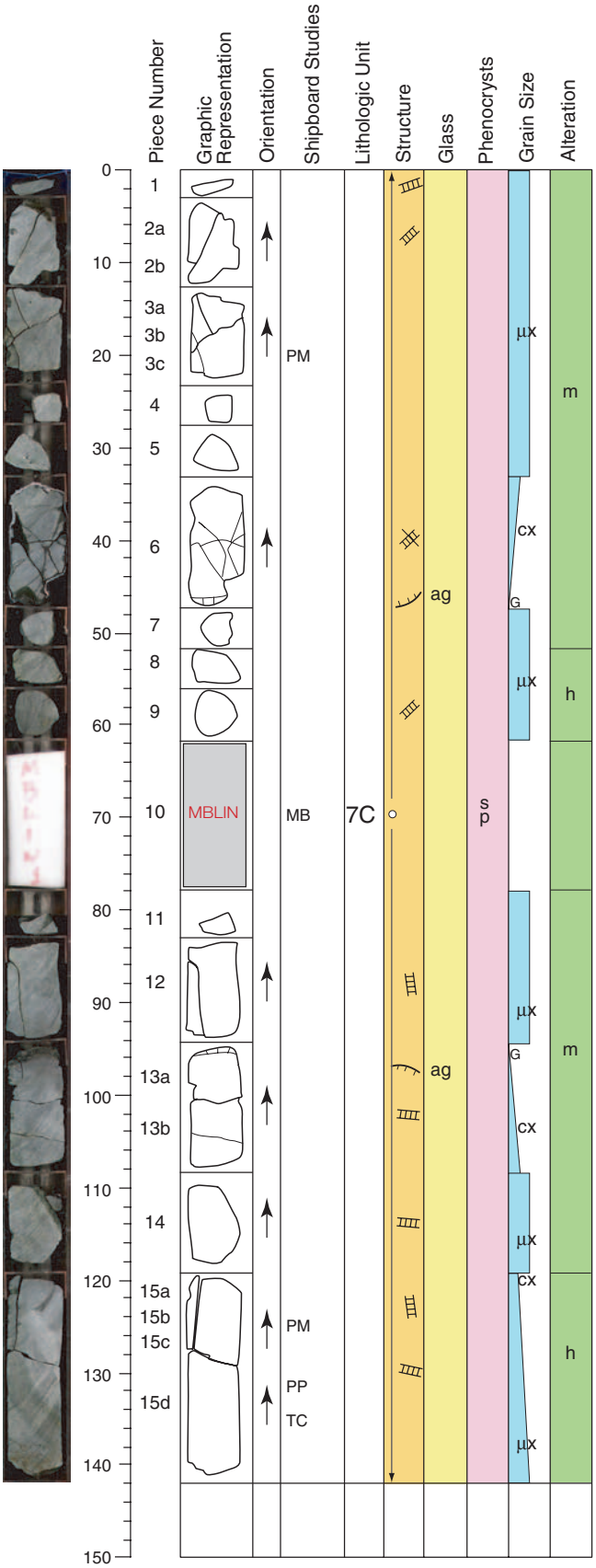
VESICLES: Sparsely vesicular filled with saponite and iron oxyhydroxide.

COLOR: Very dark gray (N3.0/) to dark gray (N4.0/).

ALTERATION: Moderately altered to dark gray, with black and mixed alteration halos.

VEINS/FRACTURES: 0.1-1 mm saponite and iron oxyhydroxide veins.

Core Photo



301-U1301B-33R-2 (Section top: 555.50 mbsf)

UNIT 7C: Sparsely olivine-clinopyroxene-plagioclase phyric microcrystalline pillow basalt

PIECES: 1-15 (Continues next core)

CONTACTS:
Upper: Not recovered
Lower: Not recovered

PHENOCRYSTS:

Plagioclase	3%	0.5-2.5 mm
Olivine	Tr	<1.8 mm
Clinopyroxene	1%	0.3-1.4 mm

GROUNDMASS:
Grain size: Cryptocrystalline to microcrystalline.
Texture: Hyalo-ophitic to intersertal.

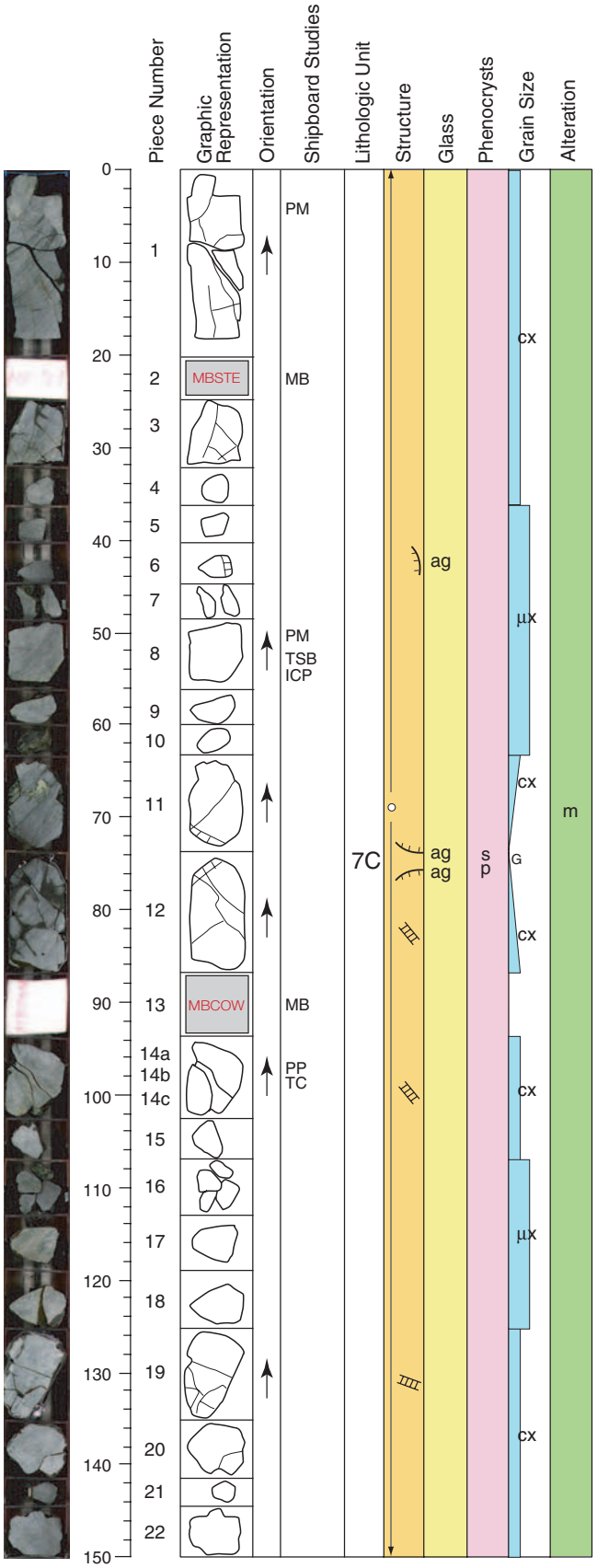
VESICLES: Sparsely vesicular filled with saponite and iron oxyhydroxide.

COLOR: Very dark gray (N3.0/) to dark gray (N4.0/).

ALTERATION: Moderately to highly altered to dark gray, with black and mixed alteration halos.

VEINS/FRACTURES: 0.1-1 mm saponite and iron oxyhydroxide veins.

Core Photo



301-U1301B-34R-1 (Section top: 560.60 mbsf)

UNIT 7C: Sparsely olivine-clinopyroxene-plagioclase phyric microcrystalline pillow basalt

PIECES: 1-22 (Continues next section)

CONTACTS:
Upper: Not recovered
Lower: Not recovered

PHENOCRYSTS:

Plagioclase	3%	0.2-1.4 mm
Olivine	Tr	0.2-0.3 mm
Clinopyroxene	1%	0.2-0.5 mm

GROUNDMASS:
Grain size: Cryptocrystalline to microcrystalline.
Texture: Hyalo-ophitic to intersertal, and pilotaxitic.

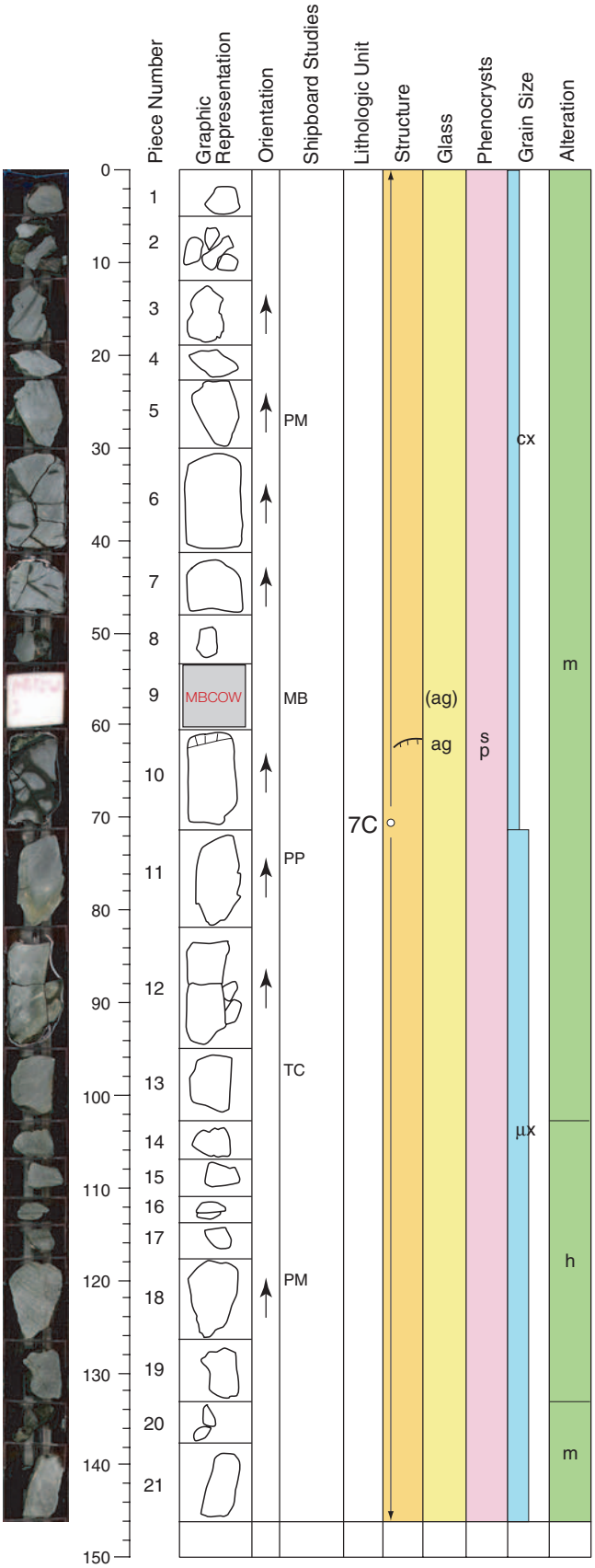
VESICLES: Sparsely vesicular filled with saponite and iron oxyhydroxide.

COLOR: Very dark gray (N3.0/) to dark gray (N4.0/).

ALTERATION: Moderately altered to dark gray, with black and mixed alteration halos.

VEINS/FRACTURES: 0.1-1 mm saponite and iron oxyhydroxide veins.

Core Photo



301-U1301B-34R-2 (Section top: 562.10 mbsf)

UNIT 7C: Sparsely olivine-clinopyroxene-plagioclase phyric microcrystalline pillow basalt

PIECES: 1-21 (Continues next core)

CONTACTS:
Upper: Not recovered
Lower: Not recovered

PHENOCRYSTS:

Plagioclase	3%	0.2-1.4 mm
Olivine	Tr	0.2-0.3 mm
Clinopyroxene	1%	0.2-0.5 mm

GROUNDMASS:
Grain size: Cryptocrystalline to microcrystalline.
Texture: Hyalo-ophitic to intersertal, and pilotaxitic.

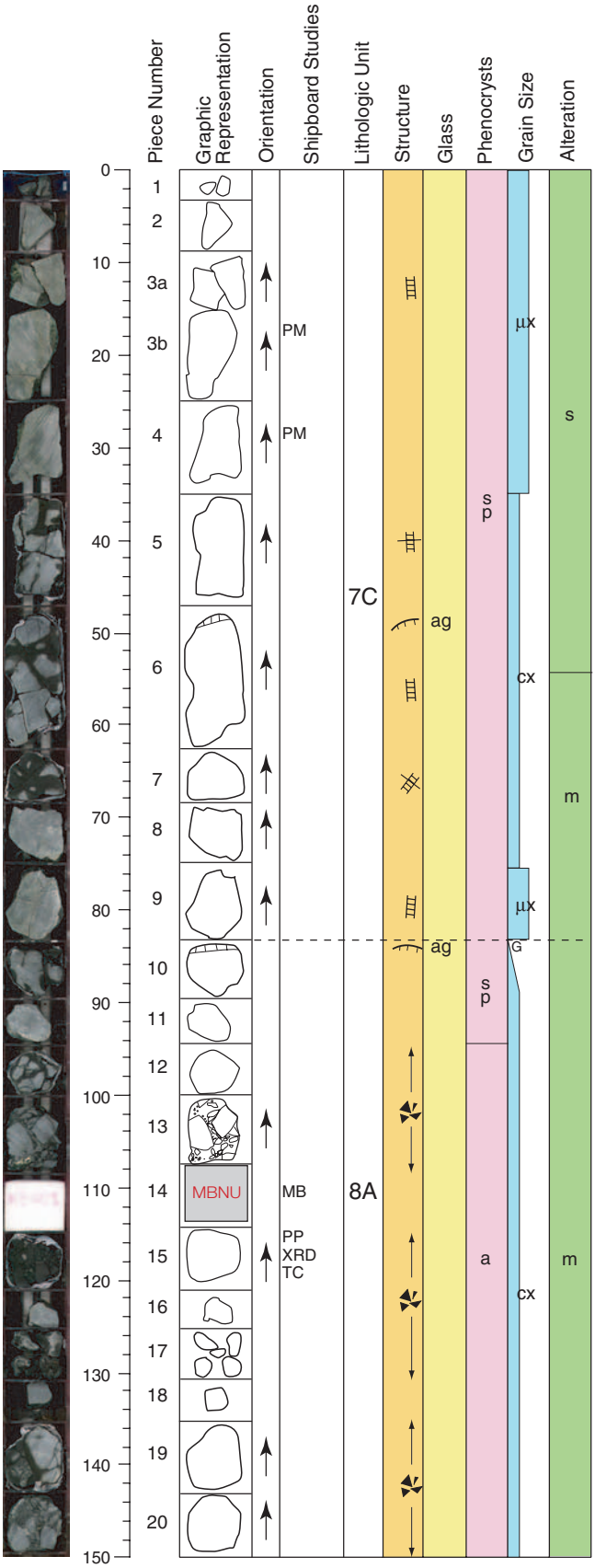
VESICLES: Sparsely vesicular filled with saponite and iron oxyhydroxide.

COLOR: Very dark gray (N3.0/) to dark gray (N4.0/).

ALTERATION: Moderately to highly altered to dark gray, with black and mixed alteration halos along many veins.

VEINS/FRACTURES: 0.1-1 mm saponite and iron oxyhydroxide veins.

Core Photo



301-U1301B-35R-1 (Section top: 563.60 mbsf)

UNIT 7C: Sparsely olivine-clinopyroxene-plagioclase phyric microcrystalline pillow basalt

PIECES: 1-9

CONTACTS:
Upper: Not recovered
Lower: Not recovered

PHENOCRYSTS:

Plagioclase	3%	0.2-1.4 mm
Olivine	Tr	0.2-0.3 mm
Clinopyroxene	1%	0.2-0.5 mm

GROUNDMASS:
Grain size: Cryptocrystalline to microcrystalline.
Texture: Hyalo-ophitic to intersertal, and pilotaxitic.

VESICLES: Sparsely vesicular filled with saponite and iron oxyhydroxide.

COLOR: Very dark gray (N3.0/) to dark gray (N4.0/).

ALTERATION: Moderately altered to dark gray, with black and mixed alteration halos along many veins.

VEINS/FRACTURES: 0.1-1 mm saponite and iron oxyhydroxide veins.

UNIT 8A: Basalt-hyaloclastite breccia

PIECES: 10-20

CONTACTS:
Upper: Glassy margin in 35R-1,Piece 10
Lower: Glassy margin in 35R-2, Piece 7

GROUNDMASS:
Grain size: Cryptocrystalline to microcrystalline.
Texture: Hyalo-ophitic.

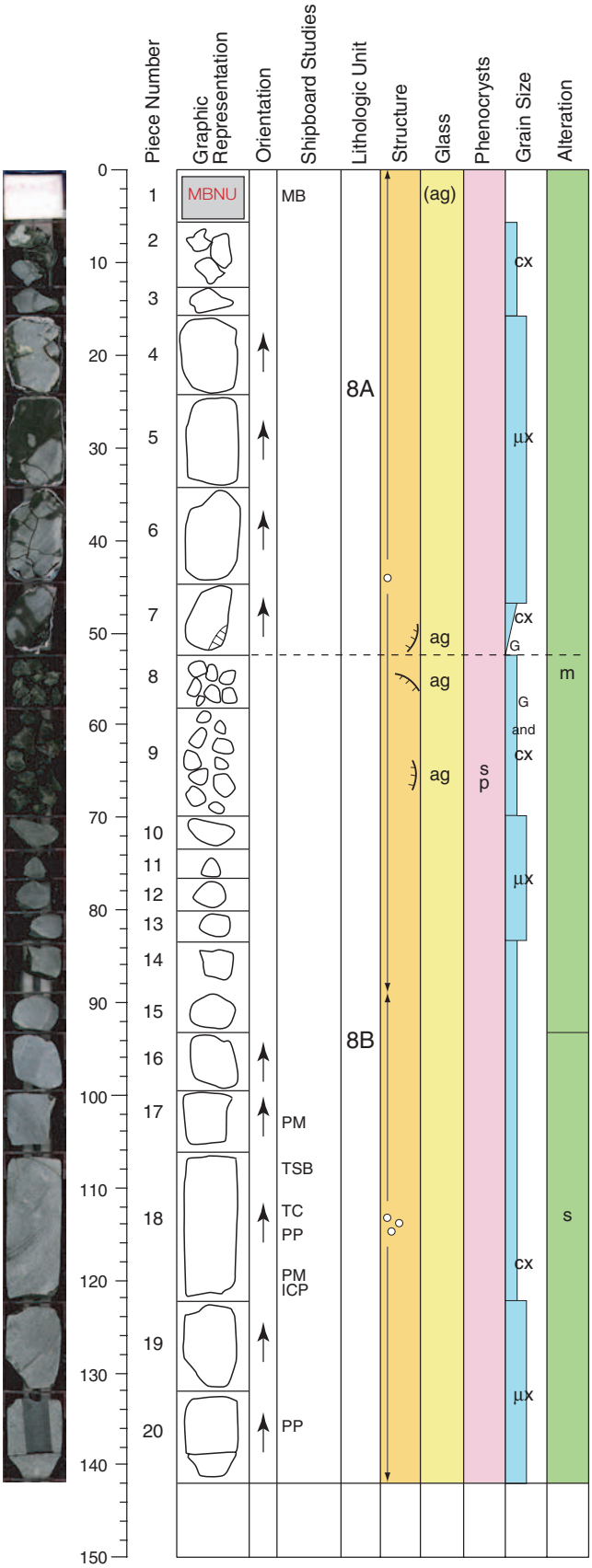
VESICLES: Sparsely vesicular filled with saponite.

COLOR: Very dark gray (N3.0/) to dark gray (N4.0/).

ALTERATION: Highly altered hyaloclastite with slightly to moderately altered basalt clasts in a saponite + zeolite + carbonate matrix.

ADDITIONAL COMMENTS: Angular to sub-angular clasts of basalt, with altered glass shards in a saponitic clay matrix.

Core Photo



301-U1301B-35R-2 (Section top: 565.07 mbsf)

UNIT 8A: Basalt-hyaloclastite breccia

PIECES: 1-7

CONTACTS:
Upper: Glassy margin in 35R-1, Piece 10
Lower: Glassy margin in 35R-2, Piece 7

GROUNDMASS:
Grain size: Cryptocrystalline to microcrystalline.
Texture: Hyalo-ophitic.

VESICLES: Sparsely vesicular filled with saponite.

COLOR: Very dark gray (N3.0/) to dark gray (N4.0/).

ALTERATION: Highly altered hyaloclastite with slightly to moderately altered basalt clasts in a saponite + zeolite + carbonate matrix.

ADDITIONAL COMMENTS: Angular to sub-angular clasts of basalt, with altered glass shards in a saponitic clay matrix.

UNIT 8B: Sparsely to moderately olivine-clinopyroxene-plagioclase phyric microcrystalline basalt

PIECES: 8-20 (Continues next section)

CONTACTS:
Upper: Rubble, some with glass (35R-2, Piece 8)
Lower: Planar chilled margin (35R-3, Piece 3)

PHENOCRYSTS:

Plagioclase	5%	0.4-2.2 mm
Olivine	2%	0.3-1.2 mm
Clinopyroxene	2%	0.4-3 mm

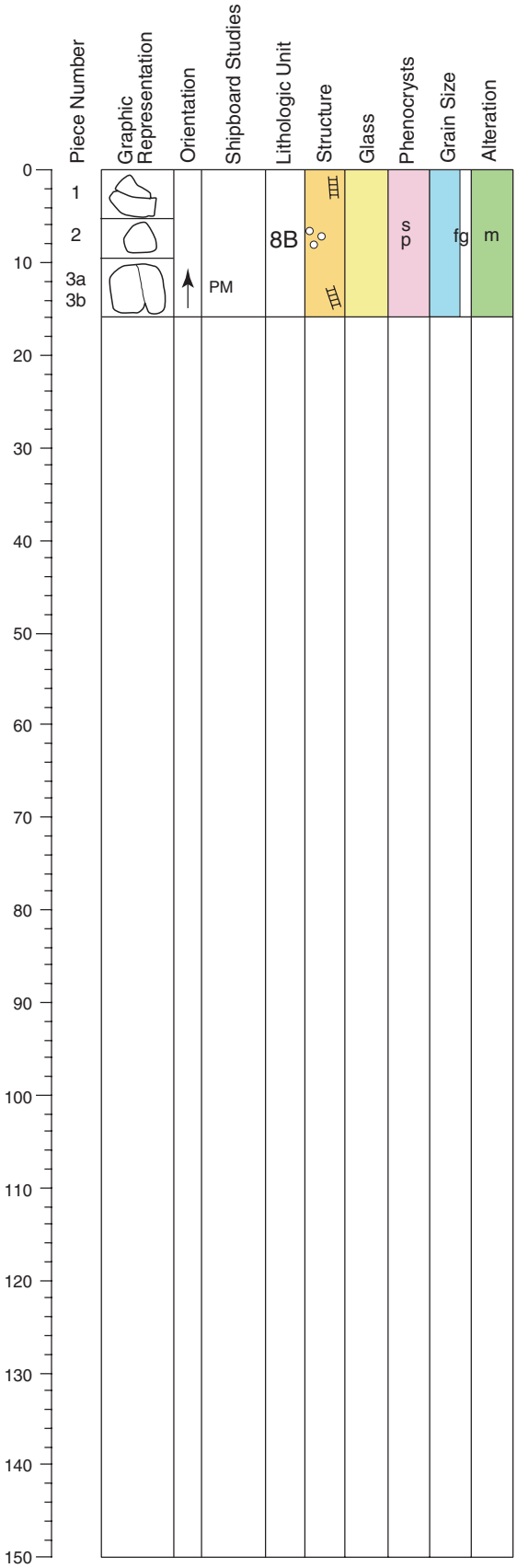
GROUNDMASS:
Grain size: Cryptocrystalline to microcrystalline.
Texture: Hyalo-ophitic.

VESICLES: Sparsely vesicular filled with saponite.

COLOR: Very dark gray (N3.0/).

ALTERATION: Slightly to moderately altered to dark gray, with alteration halos.

Core Photo



301-U1301B-35R-3 (Section top: 566.49 mbsf)

UNIT 8B: Sparsely to moderately olivine-clinopyroxene-plagioclase phyric microcrystalline basalt

PIECES: 1-3

CONTACTS:
Upper: Rubble, some with glass (35R-2, Piece 8)
Lower: Planar chilled margin (35R-3, Piece 3)

PHENOCRYSTS:

Plagioclase	5%	0.4-2.2 mm
Olivine	2%	0.3-1.2 mm
Clinopyroxene	2%	0.4-3 mm

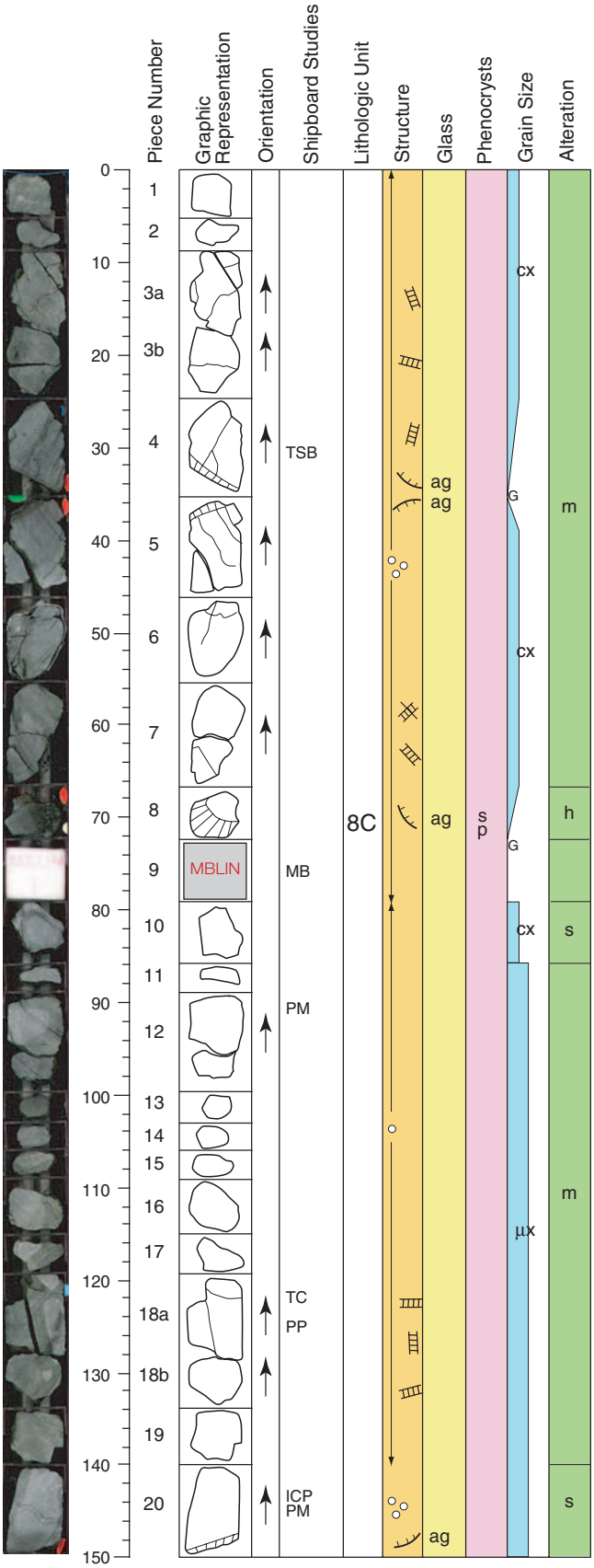
GROUNDMASS:
Grain size: Cryptocrystalline to microcrystalline.
Texture: Hyalo-ophitic.

VESICLES: Sparsely to moderately vesicular filled with saponite.

COLOR: Very dark gray (N3.0/).

ALTERATION: Slightly altered to dark gray, with alteration halos.

Core Photo



301-U1301B-36R-1 (Section top: 573.20 mbsf)

UNIT 8C: Moderately to highly olivine-clinopyroxene-plagioclase phyric pillow basalt

PIECES: 1-20 (Continues next section)

CONTACTS:
Upper: Glassy chilled margin (36R-1, Piece 1)
Lower: Not recovered

PHENOCRYSTS:

Plagioclase	5%	0.2-2 mm
Olivine	2%	<1 mm
Clinopyroxene	2%	0.2-0.8 mm

GROUNDMASS:
Grain size: Cryptocrystalline to microcrystalline.
Texture: Hyalo-ophitic to intersertal.

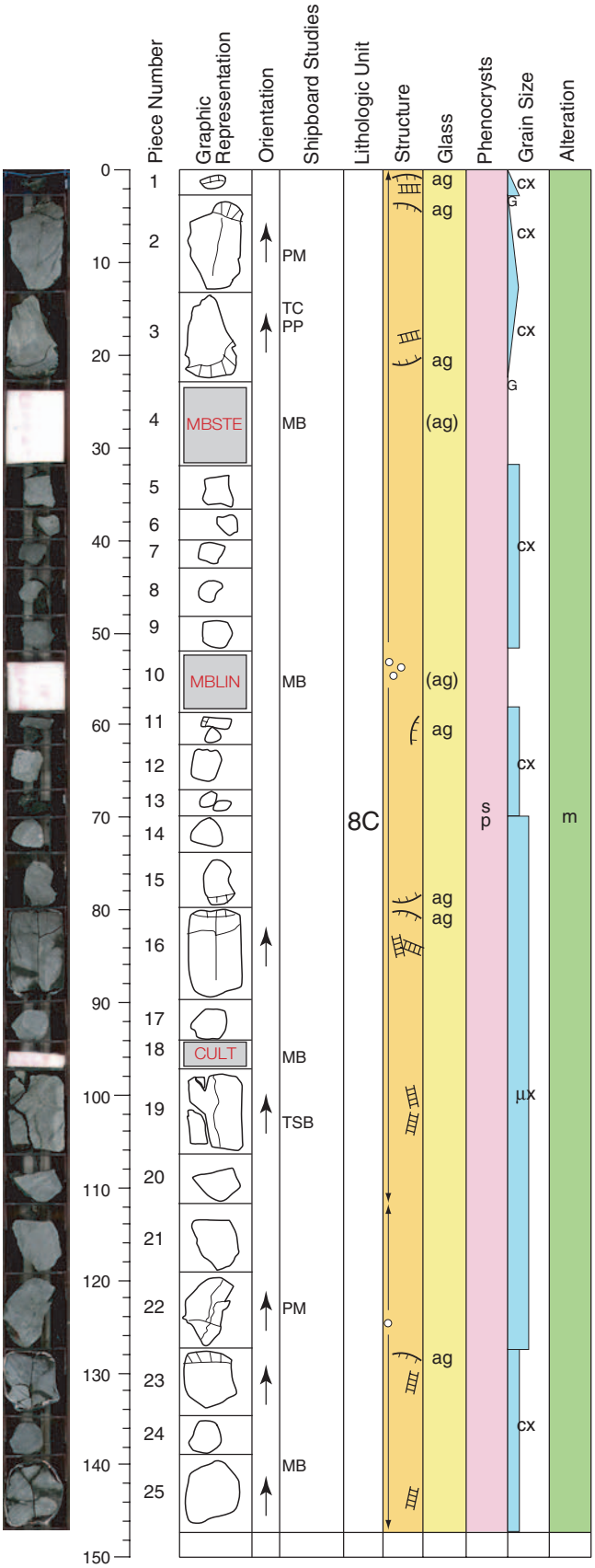
VESICLES: Sparsely to moderately vesicular filled with saponite and iron oxyhydroxide.

COLOR: Very dark gray (N3.0/) to dark gray (N4/)

ALTERATION: Slightly to highly altered to dark gray, with many mixed/black alteration halos.

VEINS/FRACTURES: <1 mm saponite, iron oxyhydroxide, and celadonite veins.

Core Photo



301-U1301B-36R-2 (Section top: 574.70 mbsf)

UNIT 8C: Moderately to highly olivine-clinopyroxene-plagioclase phyric pillow basalt

PIECES: 1-25 (Continues next section)

CONTACTS:
Upper: Glassy chilled margin (36R-1, Piece 1)
Lower: Not recovered

PHENOCRYSTS:

Plagioclase	5%	0.4-4 mm
Olivine	2%	0.4-0.8 mm
Clinopyroxene	3%	0.4-5.5 mm

GROUNDMASS:
Grain size: Cryptocrystalline to microcrystalline.
Texture: Hyalo-ophitic to intersertal.

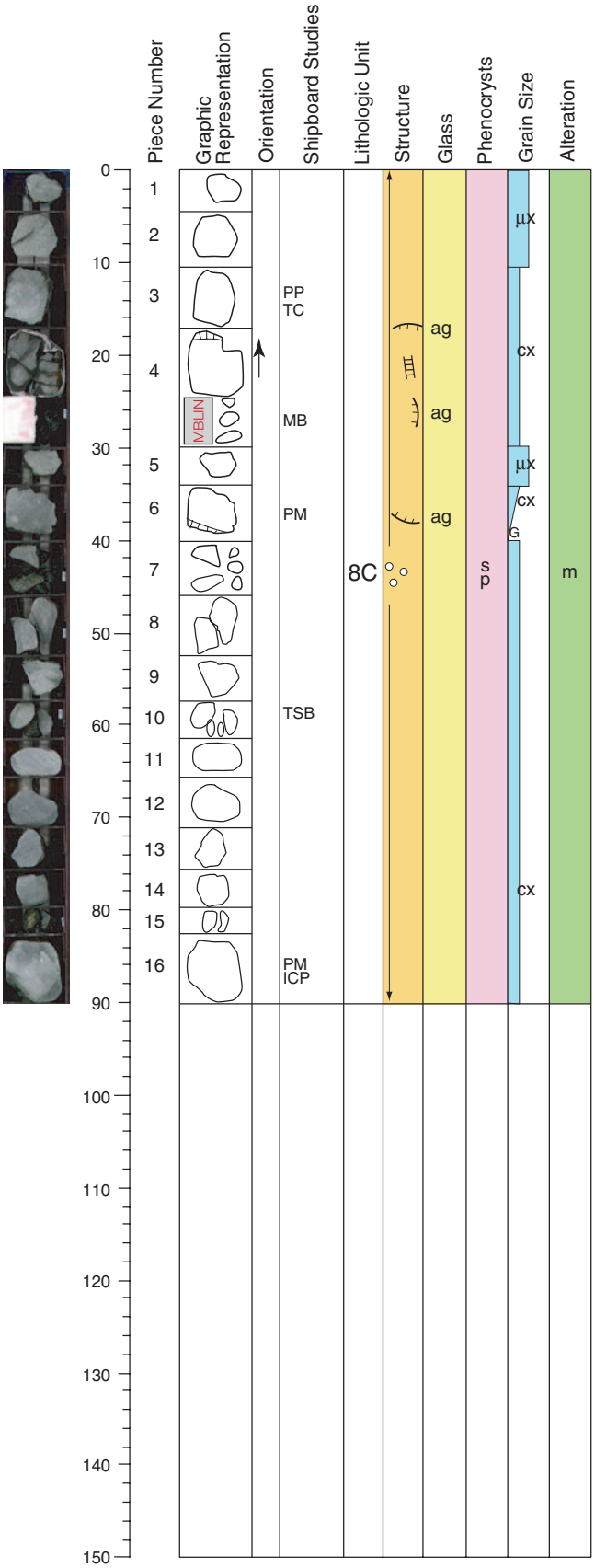
VESICLES: Sparsely to moderately vesicular filled with saponite, celadonite, and iron oxyhydroxide.

COLOR: Very dark gray (N3.0/) to dark gray (N4/)

ALTERATION: Slightly to highly altered to dark gray, with many mixed/black alteration halos.

VEINS/FRACTURES: <1 mm saponite, iron oxyhydroxide, and celadonite veins with black, mixed and green alteration halos.

Core Photo



301-U1301B-36R-3 (Section top: 576.17 mbsf)

UNIT 8C: Moderately to highly olivine-clinopyroxene-plagioclase phyric pillow basalt

PIECES: 1-16

CONTACTS:
Upper: Glassy chilled margin (36R-1, Piece 1)
Lower: Not recovered

PHENOCRYSTS:

Plagioclase	7%	0.5-2.2 mm
Olivine	2%	0.3-0.8 mm
Clinopyroxene	5%	0.3-1.4 mm

GROUNDMASS:
Grain size: Cryptocrystalline to microcrystalline.
Texture: Hyalo-ophitic to intersertal.

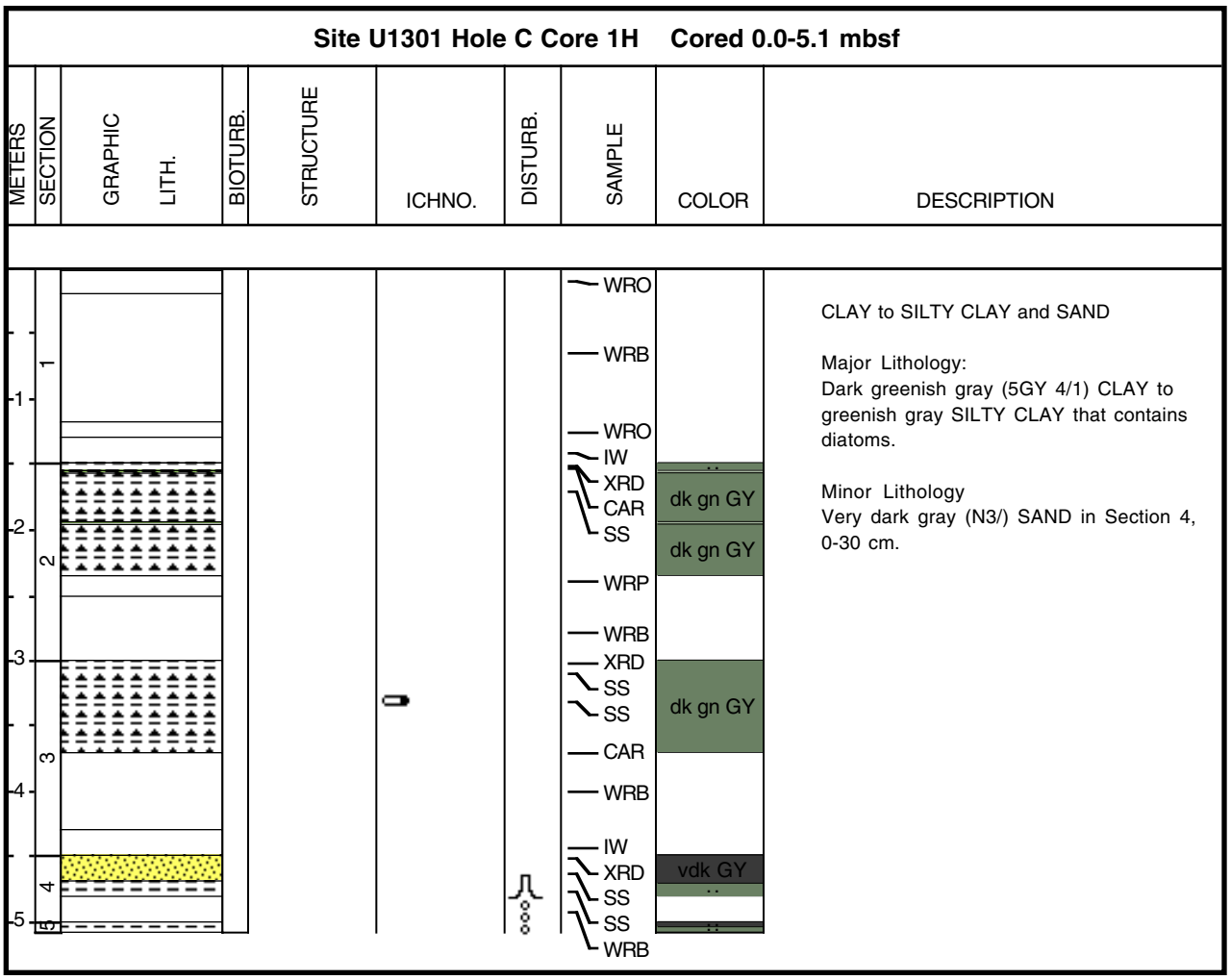
VESICLES: Sparsely to moderately vesicular filled with saponite, celadonite, and iron oxyhydroxide.

COLOR: Very dark gray (N3.0/) to dark gray (N4/)

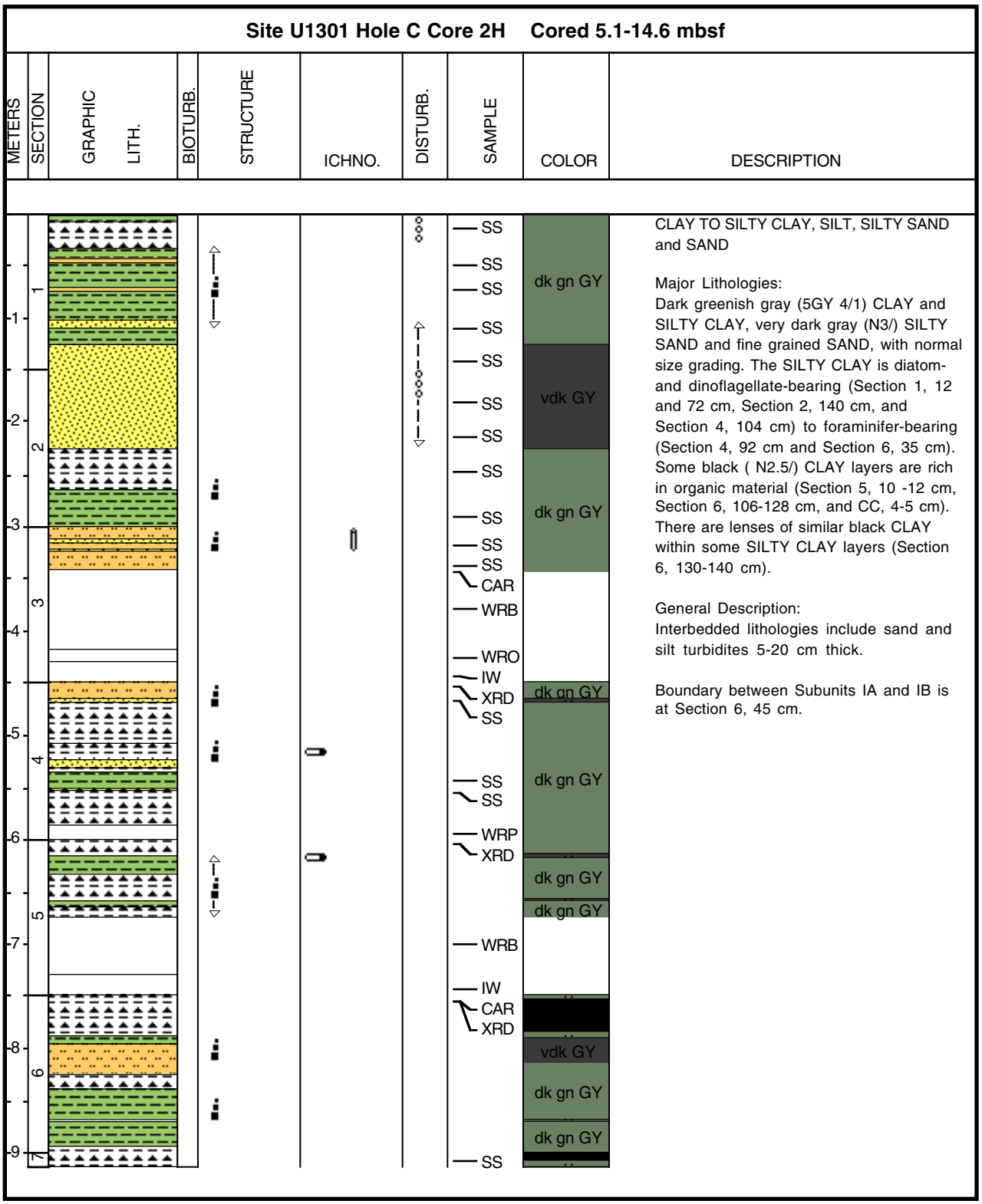
ALTERATION: Moderately altered to dark gray, with many mixed/black alteration halos.

VEINS/FRACTURES: <1 mm saponite, iron oxyhydroxide, and celadonite veins with black, mixed and green alteration halos.

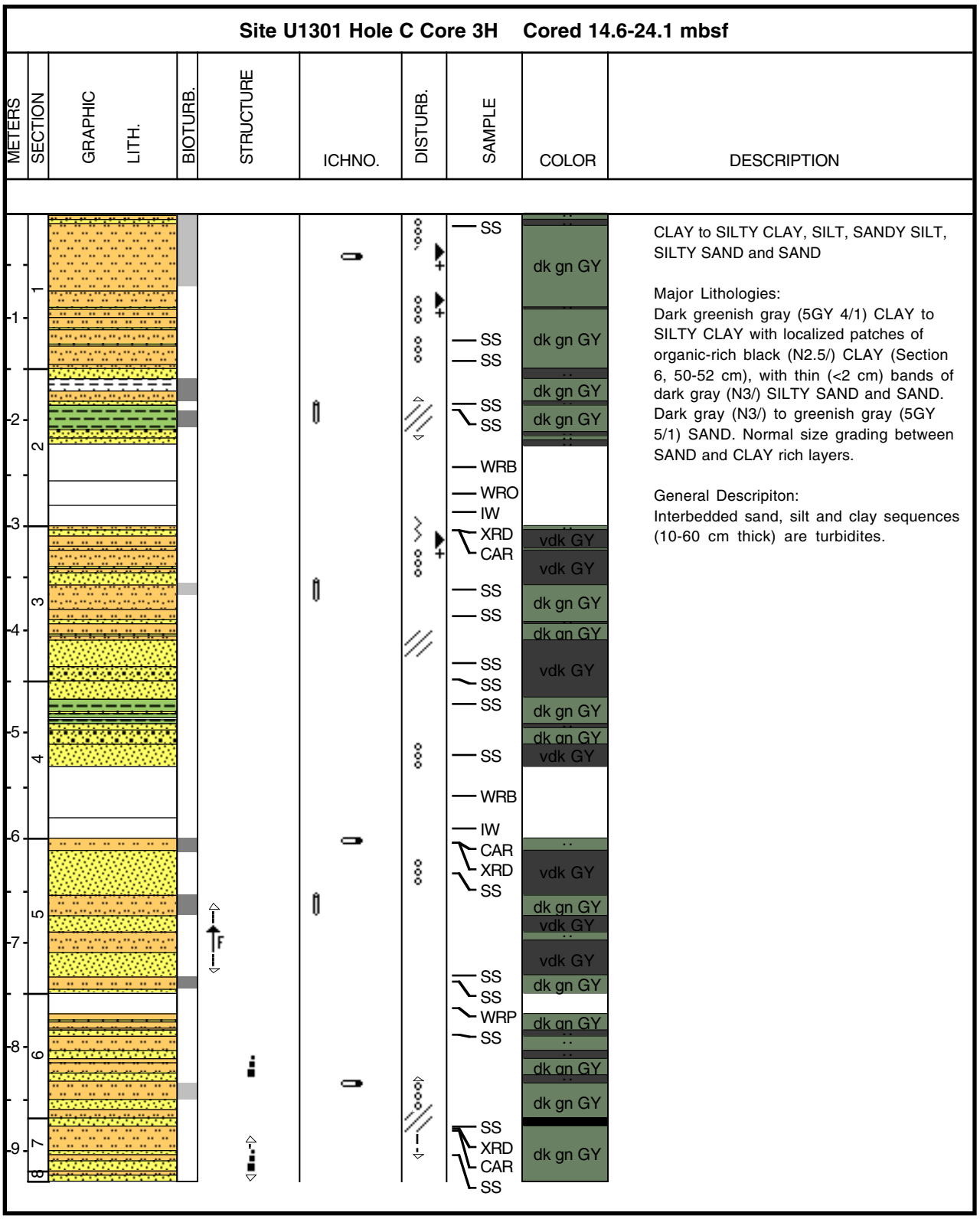
Core Photo


Site U1301 Hole C Core 1H Cored 0.0-5.1 mbsf
METERS
SECTION
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ICHNO.
DISTURB.
SAMPLE
COLOR
DESCRIPTION
WRO
WRB
WRO
IW
XRD
CAR
SS
dk gn GY
dk gn GY
WRP
WRB
XRD
SS
SS
dk gn GY
CAR
WRB
IW
XRD
SS
SS
WRB
vdk GY
CLAY to SILTY CLAY and SAND
Major Lithology:
Dark greenish gray (5GY 4/1) CLAY to greenish gray SILTY CLAY that contains diatoms.
Minor Lithology
Very dark gray (N3/) SAND in Section 4, 0-30 cm.

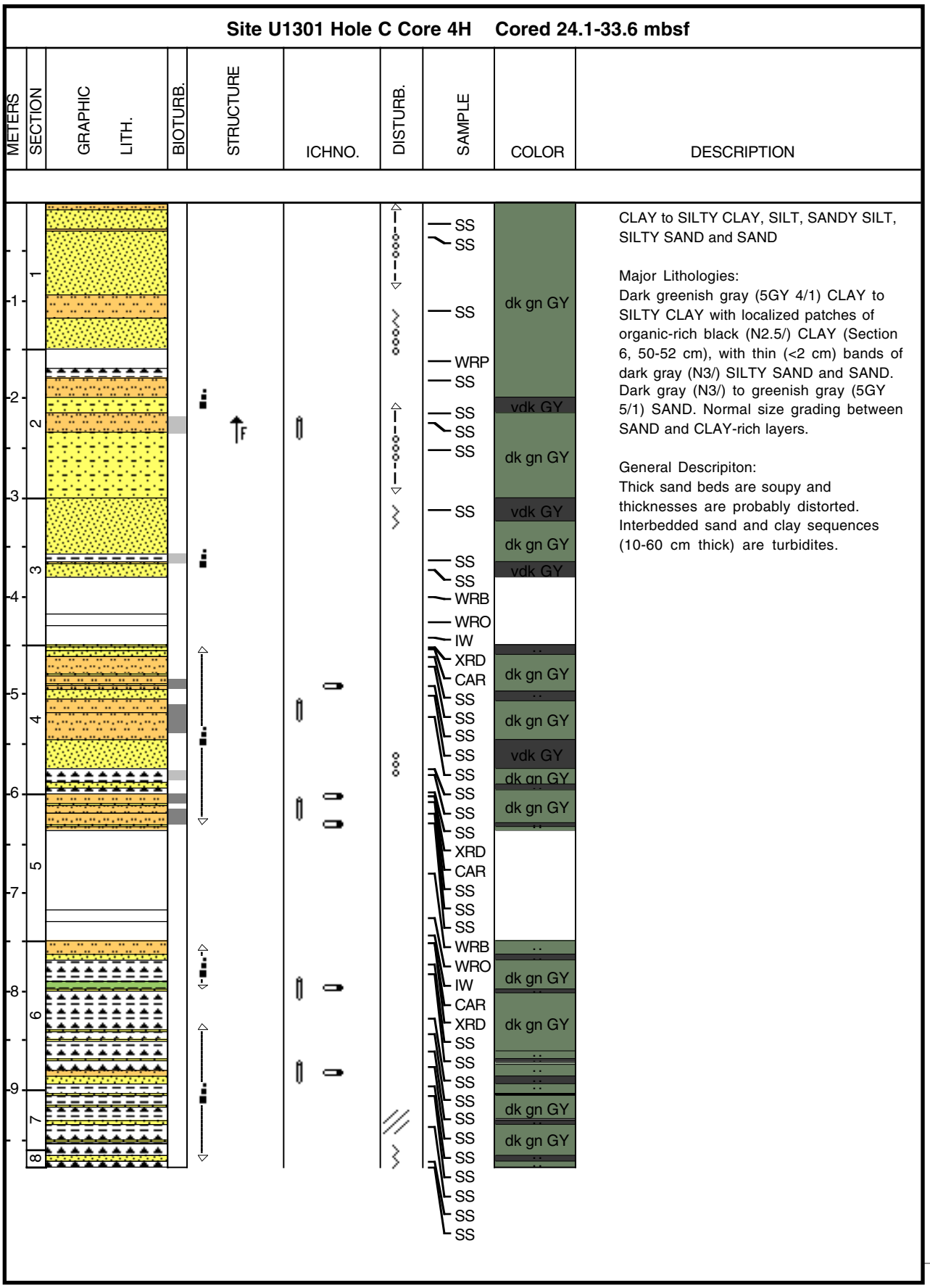
Core Photo


Site U1301 Hole C Core 2H Cored 5.1-14.6 mbsf
METERS
SECTION
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ICHNO.
DISTURB.
SAMPLE
COLOR
DESCRIPTION
SS
CAR
WRB
WRO
IW
XRD
WRP
dk gn GY
vdk GY
CLAY TO SILTY CLAY, SILT, SILTY SAND and SAND
Major Lithologies:
Dark greenish gray (5GY 4/1) CLAY and SILTY CLAY, very dark gray (N3/) SILTY SAND and fine grained SAND, with normal size grading. The SILTY CLAY is diatom- and dinoflagellate-bearing (Section 1, 12 and 72 cm, Section 2, 140 cm, and Section 4, 104 cm) to foraminifer-bearing (Section 4, 92 cm and Section 6, 35 cm). Some black (N2.5/) CLAY layers are rich in organic material (Section 5, 10 -12 cm, Section 6, 106-128 cm, and CC, 4-5 cm). There are lenses of similar black CLAY within some SILTY CLAY layers (Section 6, 130-140 cm).
General Description:
Interbedded lithologies include sand and silt turbidites 5-20 cm thick.
Boundary between Subunits IA and IB is at Section 6, 45 cm.

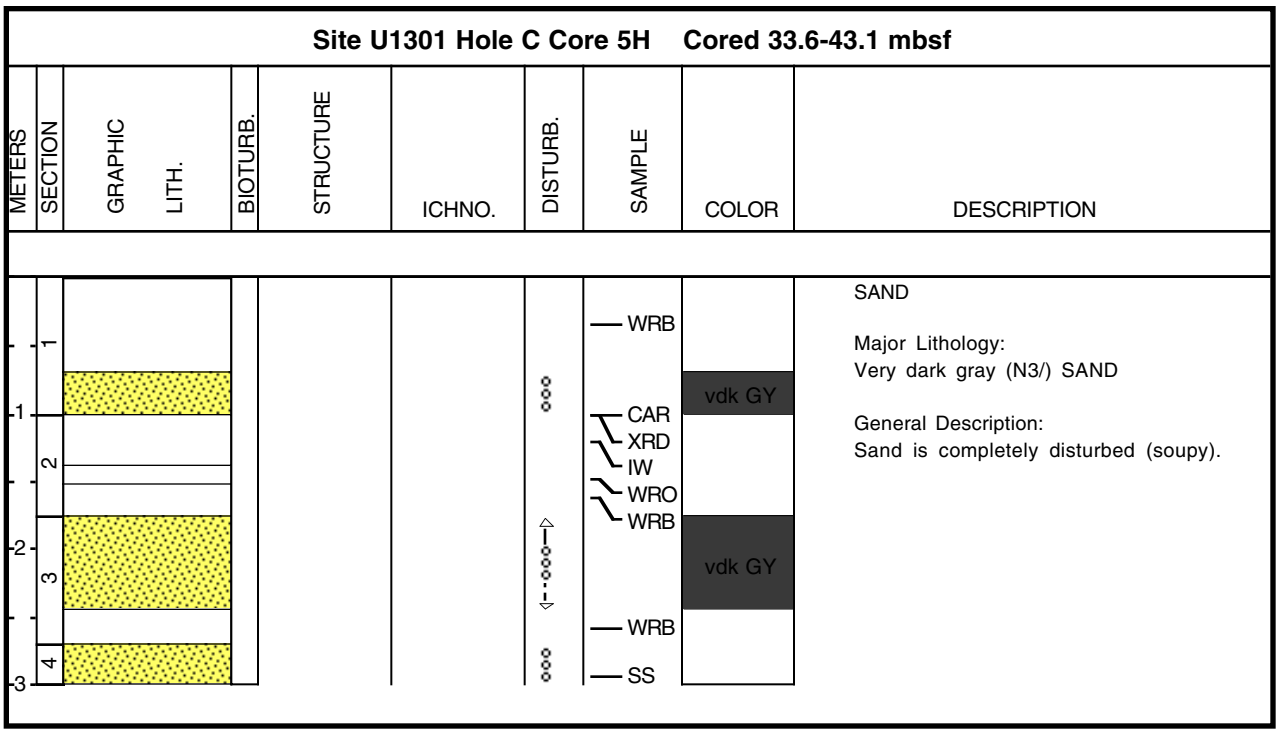
Core Photo


Site U1301 Hole C Core 3H Cored 14.6-24.1 mbsf
METERS
SECTION
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ICHNO.
DISTURB.
SAMPLE
COLOR
DESCRIPTION
SS
WRB
WRO
IW
XRD
CAR
WRP
dk gn GY
vdk GY
F
CLAY to SILTY CLAY, SILT, SANDY SILT, SILTY SAND and SAND
Major Lithologies:
Dark greenish gray (5GY 4/1) CLAY to SILTY CLAY with localized patches of organic-rich black (N2.5/) CLAY (Section 6, 50-52 cm), with thin (<2 cm) bands of dark gray (N3/) SILTY SAND and SAND. Dark gray (N3/) to greenish gray (5GY 5/1) SAND. Normal size grading between SAND and CLAY rich layers.
General Descripiton:
Interbedded sand, silt and clay sequences (10-60 cm thick) are turbidites.

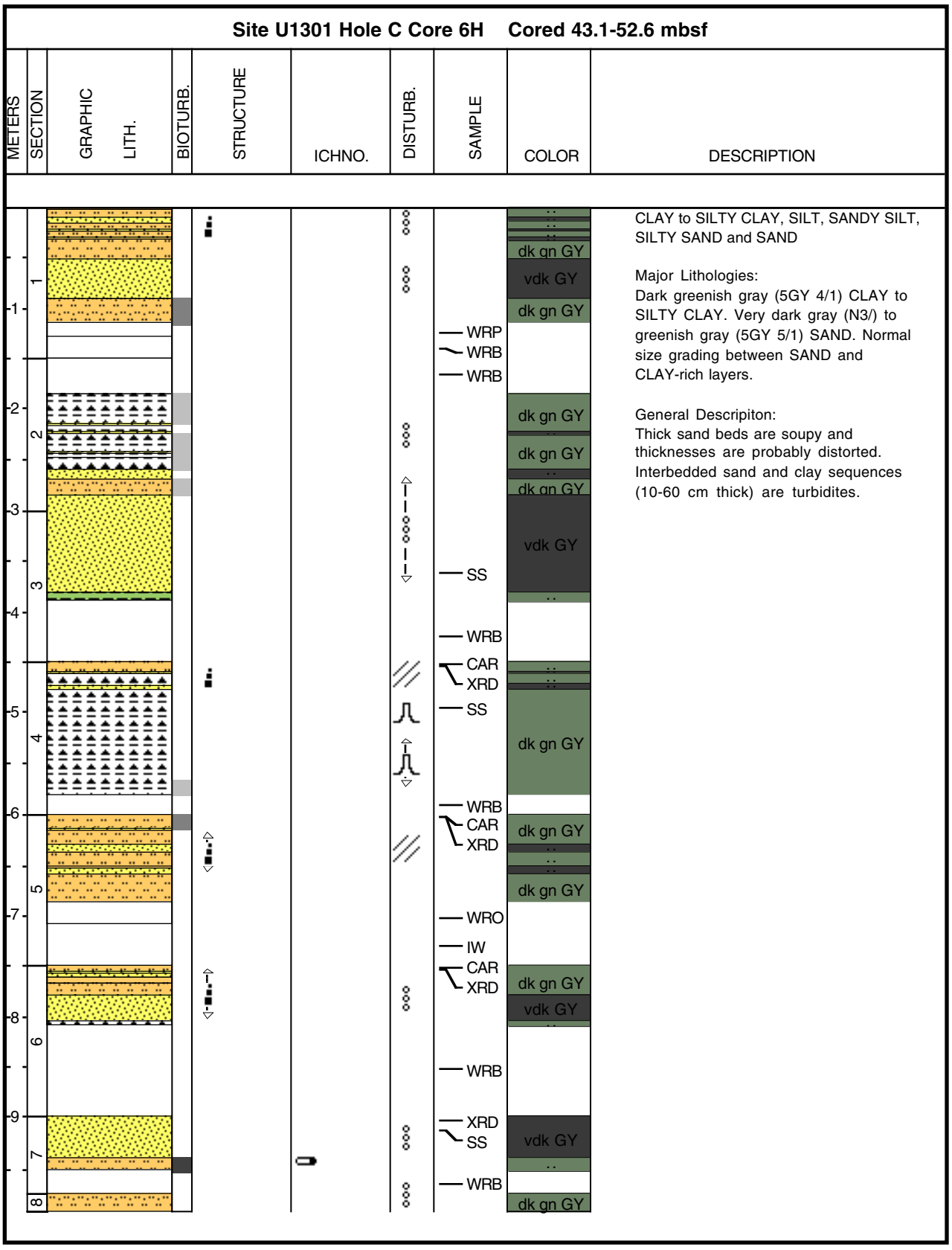
Core Photo


Site U1301 Hole C Core 4H Cored 24.1-33.6 mbsf
METERS
SECTION
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ICHNO.
DISTURB.
SAMPLE
COLOR
DESCRIPTION
SS
WRP
WRB
WRO
IW
XRD
CAR
dk gn GY
vdk GY
F
CLAY to SILTY CLAY, SILT, SANDY SILT, SILTY SAND and SAND
Major Lithologies:
Dark greenish gray (5GY 4/1) CLAY to SILTY CLAY with localized patches of organic-rich black (N2.5/) CLAY (Section 6, 50-52 cm), with thin (<2 cm) bands of dark gray (N3/) SILTY SAND and SAND. Dark gray (N3/) to greenish gray (5GY 5/1) SAND. Normal size grading between SAND and CLAY-rich layers.
General Descripiton:
Thick sand beds are soupy and thicknesses are probably distorted. Interbedded sand and clay sequences (10-60 cm thick) are turbidites.

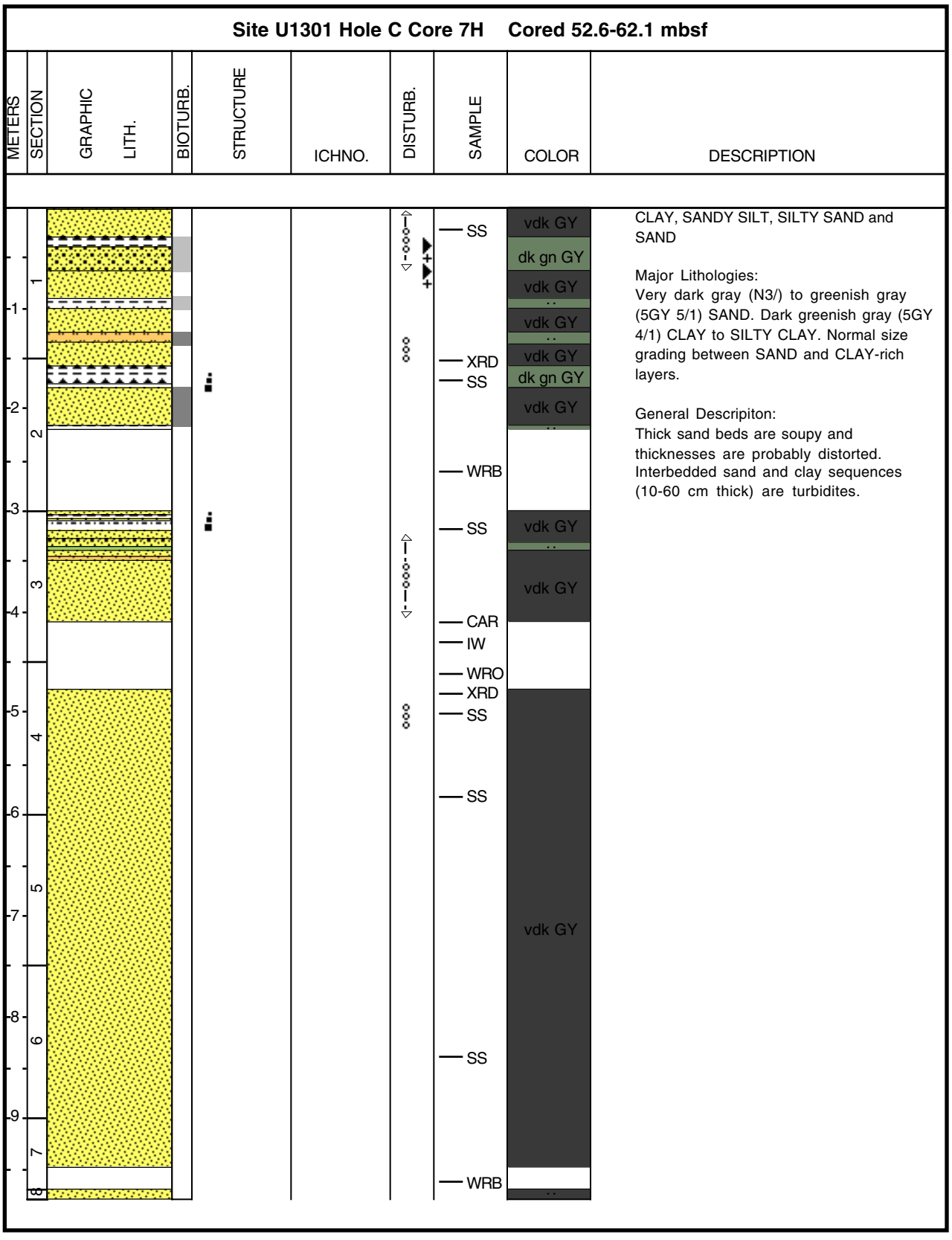
Core Photo


Site U1301 Hole C Core 5H Cored 33.6-43.1 mbsf
METERS
SECTION
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ICHNO.
DISTURB.
SAMPLE
COLOR
DESCRIPTION
WRB
CAR
XRD
IW
WRO
WRB
WRB
SS
vdk GY
vdk GY
SAND
Major Lithology:
Very dark gray (N3/) SAND
General Description:
Sand is completely disturbed (soupy).

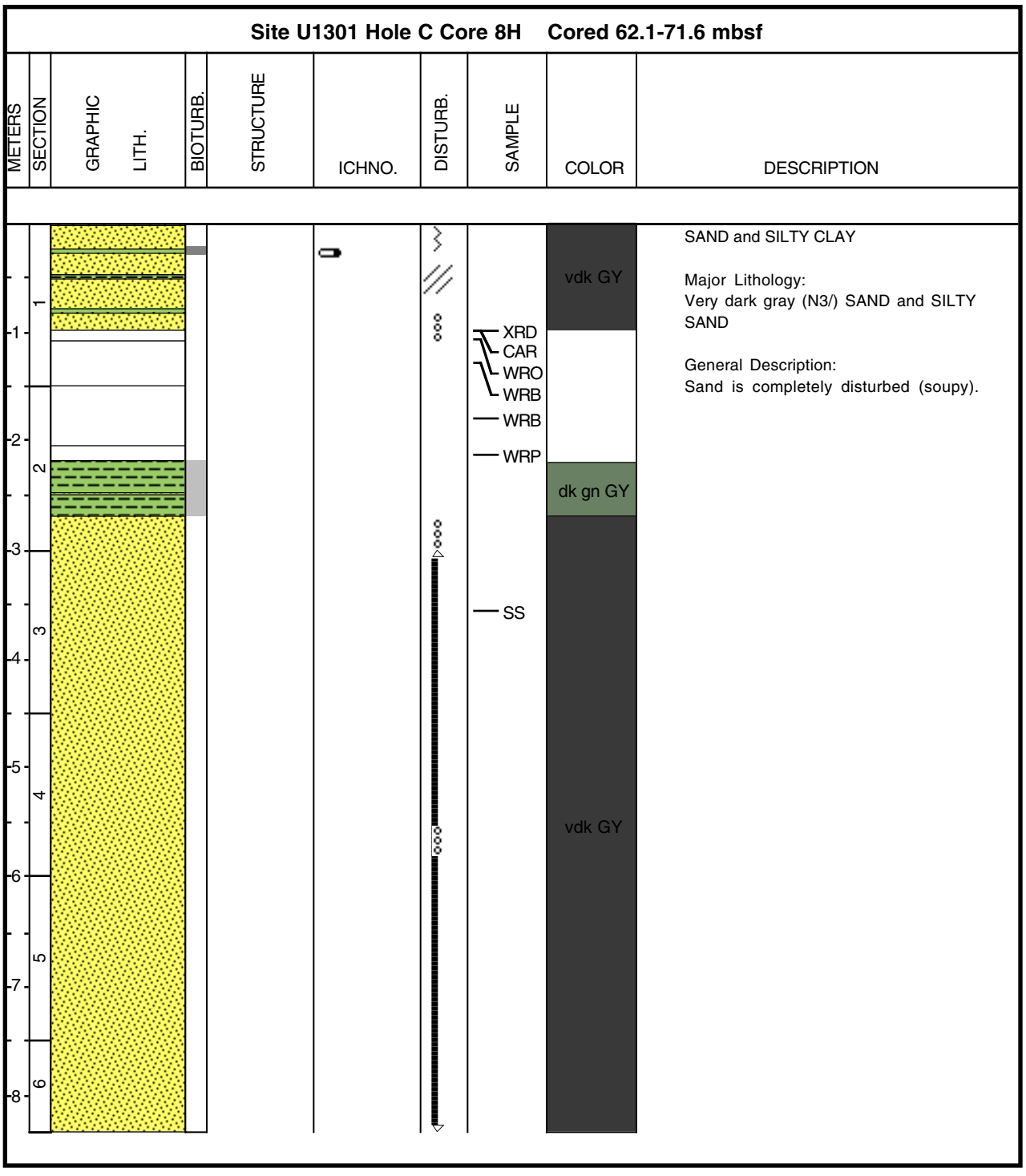
Core Photo


Site U1301 Hole C Core 6H Cored 43.1-52.6 mbsf
METERS
SECTION
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ICHNO.
DISTURB.
SAMPLE
COLOR
DESCRIPTION
dk gn GY
vdk GY
WRP
WRB
SS
CAR
XRD
WRO
IW
CLAY to SILTY CLAY, SILT, SANDY SILT, SILTY SAND and SAND
Major Lithologies:
Dark greenish gray (5GY 4/1) CLAY to SILTY CLAY. Very dark gray (N3/) to greenish gray (5GY 5/1) SAND. Normal size grading between SAND and CLAY-rich layers.
General Descripiton:
Thick sand beds are soupy and thicknesses are probably distorted. Interbedded sand and clay sequences (10-60 cm thick) are turbidites.

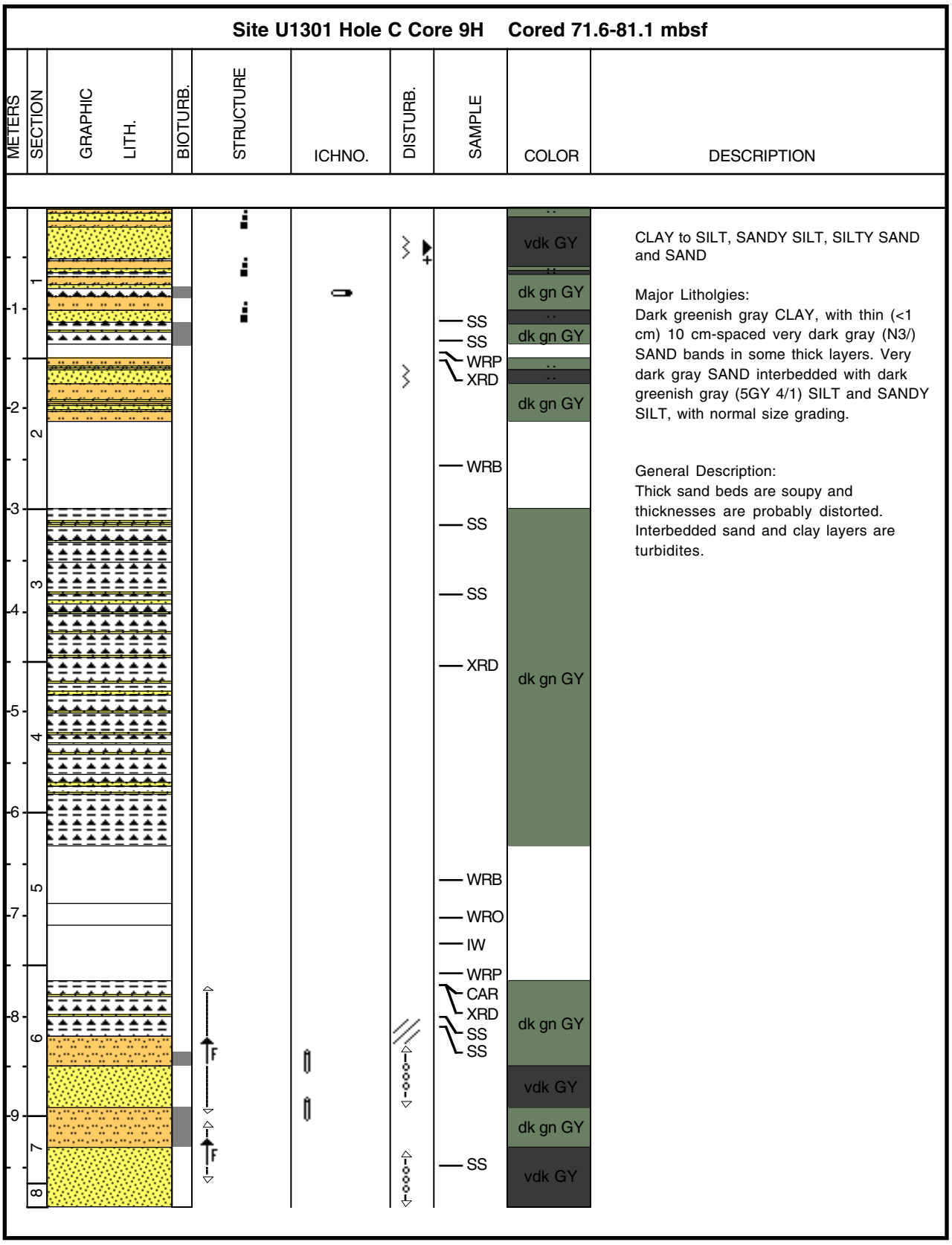
Core Photo


Site U1301 Hole C Core 7H Cored 52.6-62.1 mbsf
METERS
SECTION
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ICHNO.
DISTURB.
SAMPLE
COLOR
DESCRIPTION
SS
XRD
SS
WRB
SS
CAR
IW
WRO
XRD
SS
SS
SS
WRB
vdk GY
dk gn GY
vdk GY
vdk GY
vdk GY
dk gn GY
vdk GY
vdk GY
vdk GY
vdk GY
CLAY, SANDY SILT, SILTY SAND and SAND
Major Lithologies:
Very dark gray (N3/) to greenish gray (5GY 5/1) SAND. Dark greenish gray (5GY 4/1) CLAY to SILTY CLAY. Normal size grading between SAND and CLAY-rich layers.
General Descripiton:
Thick sand beds are soupy and thicknesses are probably distorted. Interbedded sand and clay sequences (10-60 cm thick) are turbidites.

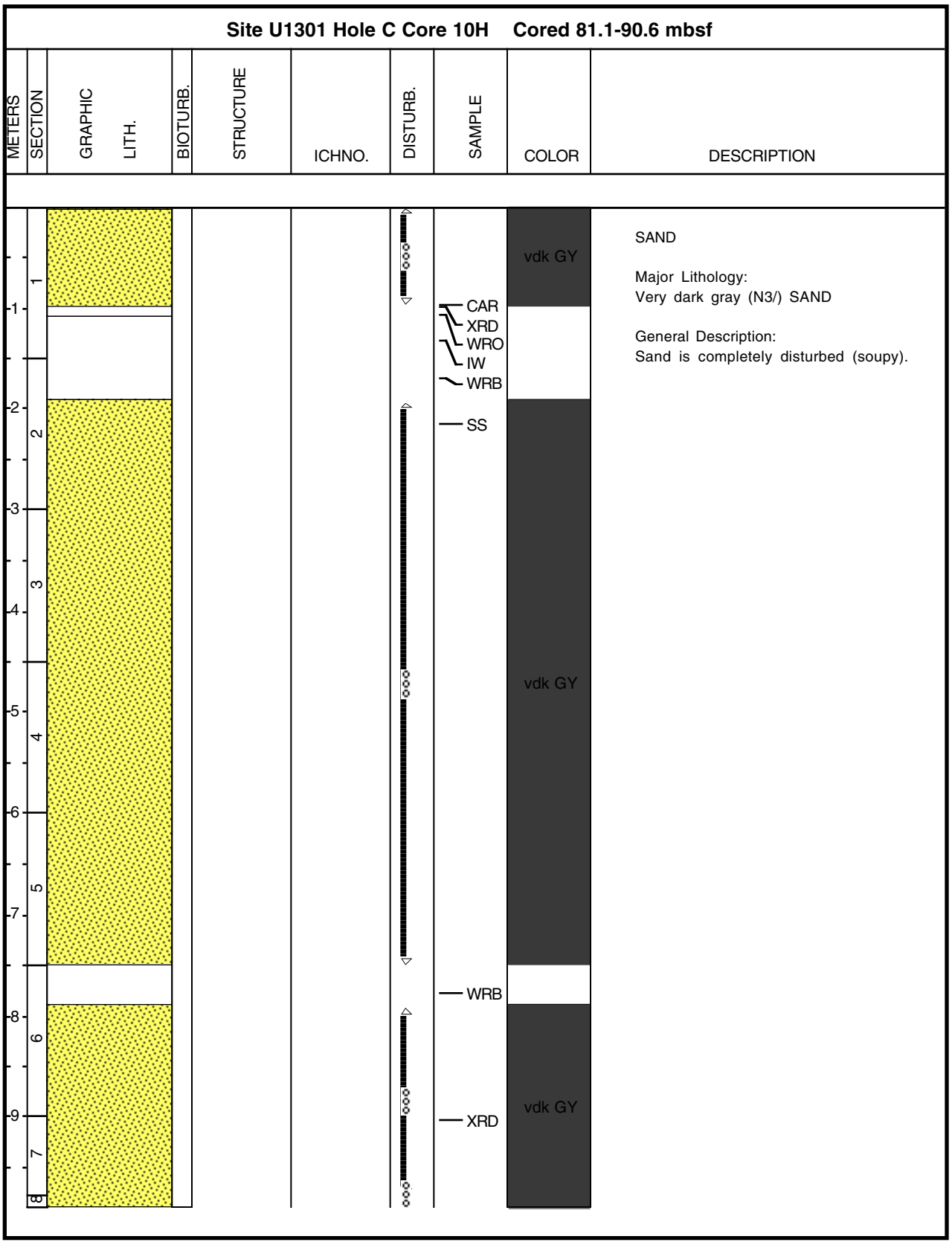
Core Photo


Site U1301 Hole C Core 8H Cored 62.1-71.6 mbsf
METERS
SECTION
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ICHNO.
DISTURB.
SAMPLE
COLOR
DESCRIPTION
XRD
CAR
WRO
WRB
WRB
WRP
SS
vdk GY
dk gn GY
vdk GY
SAND and SILTY CLAY
Major Lithology:
Very dark gray (N3/) SAND and SILTY SAND
General Description:
Sand is completely disturbed (soupy).

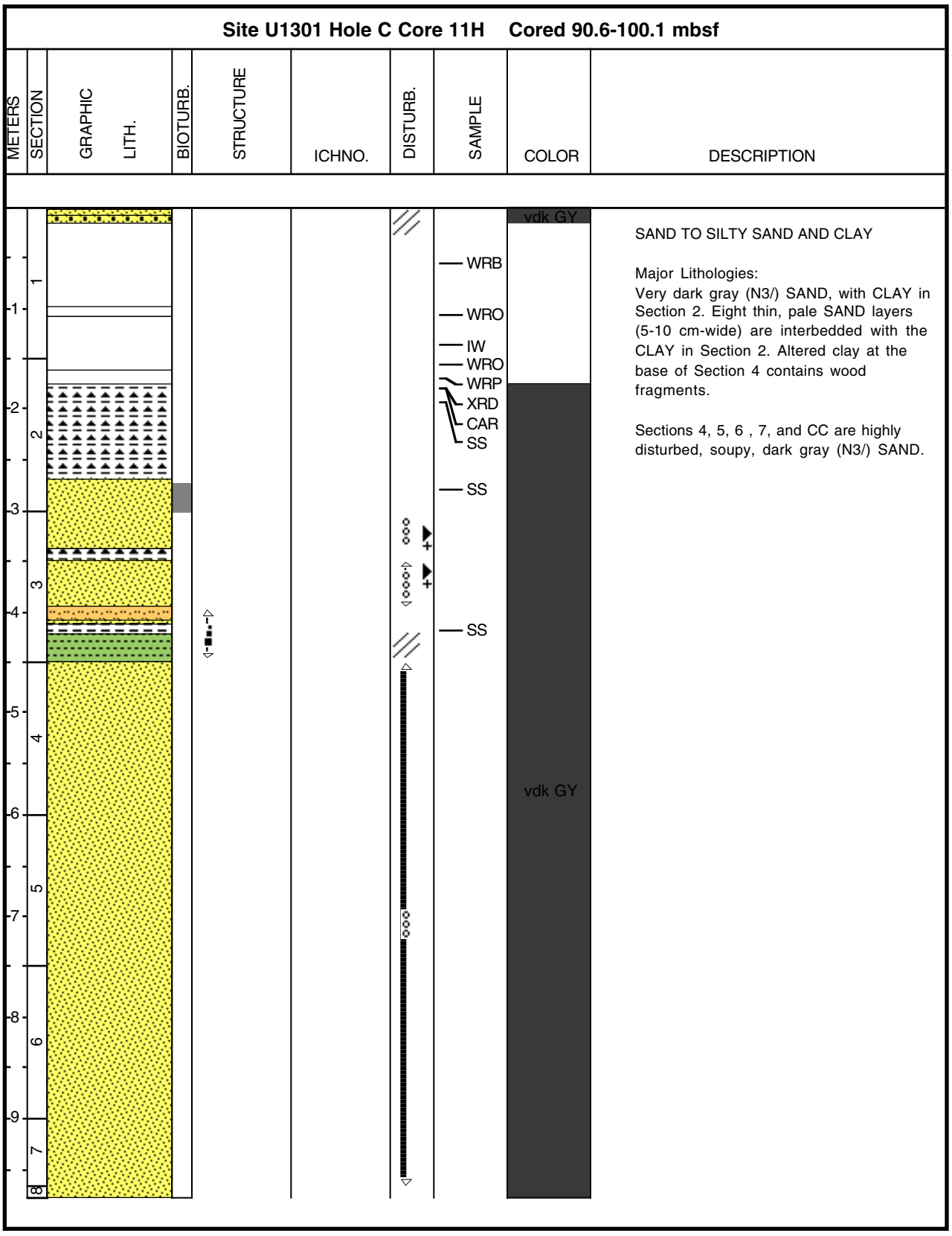
Core Photo


Site U1301 Hole C Core 9H Cored 71.6-81.1 mbsf
METERS
SECTION
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ICHNO.
DISTURB.
SAMPLE
COLOR
DESCRIPTION
vdk GY
dk gn GY
dk gn GY
dk gn GY
dk gn GY
vdk GY
dk gn GY
vdk GY
SS
SS
WRP
XRD
WRB
SS
SS
XRD
WRB
WRO
IW
WRP
CAR
XRD
SS
SS
SS
F
F
CLAY to SILT, SANDY SILT, SILTY SAND and SAND
Major Litholgies:
Dark greenish gray CLAY, with thin (<1 cm) 10 cm-spaced very dark gray (N3/) SAND bands in some thick layers. Very dark gray SAND interbedded with dark greenish gray (5GY 4/1) SILT and SANDY SILT, with normal size grading.
General Description:
Thick sand beds are soupy and thicknesses are probably distorted. Interbedded sand and clay layers are turbidites.

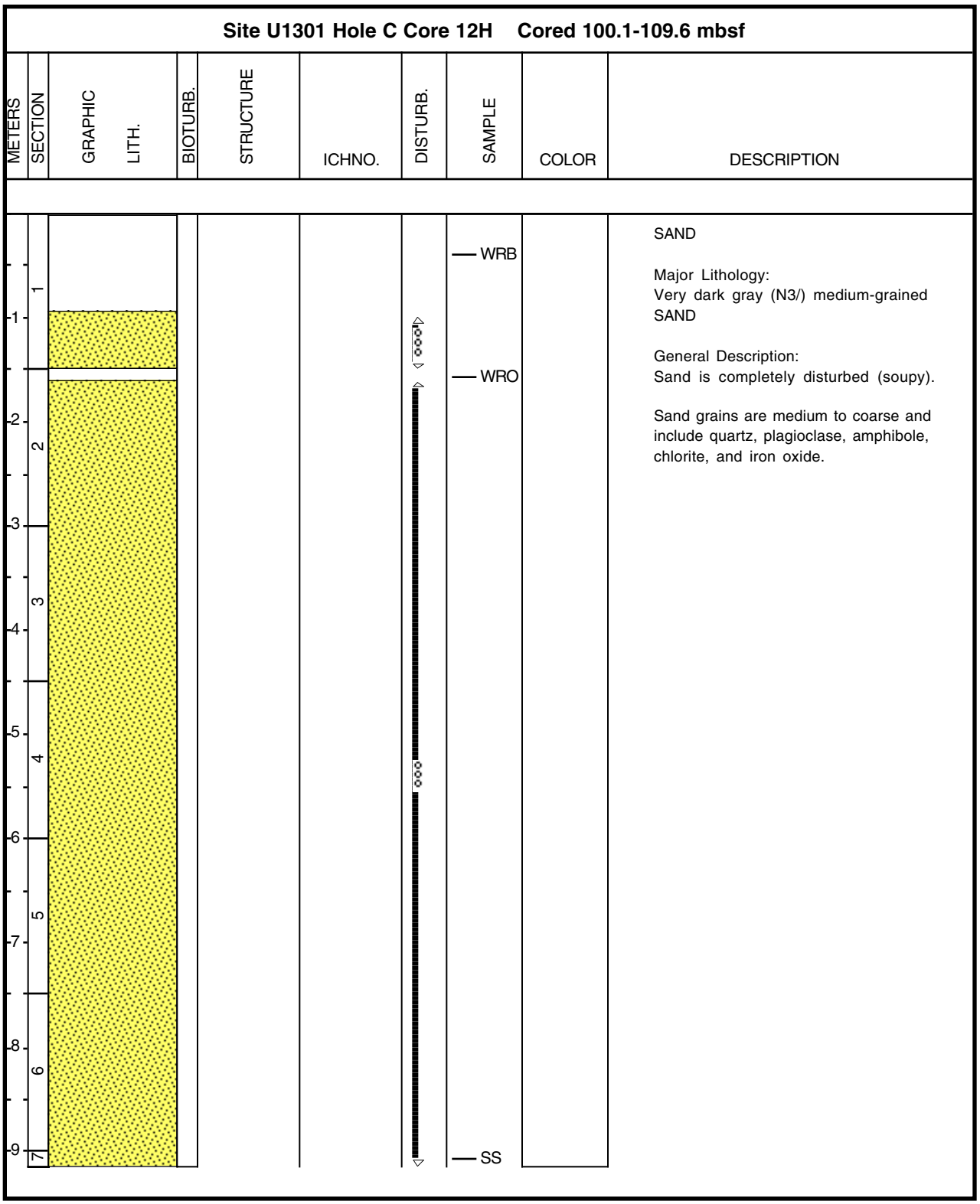
Core Photo


Site U1301 Hole C Core 10H Cored 81.1-90.6 mbsf
METERS
SECTION
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ICHNO.
DISTURB.
SAMPLE
COLOR
DESCRIPTION
CAR
XRD
WRO
IW
WRB
SS
WRB
XRD
vdk GY
vdk GY
vdk GY
SAND
Major Lithology:
Very dark gray (N3/) SAND
General Description:
Sand is completely disturbed (soupy).

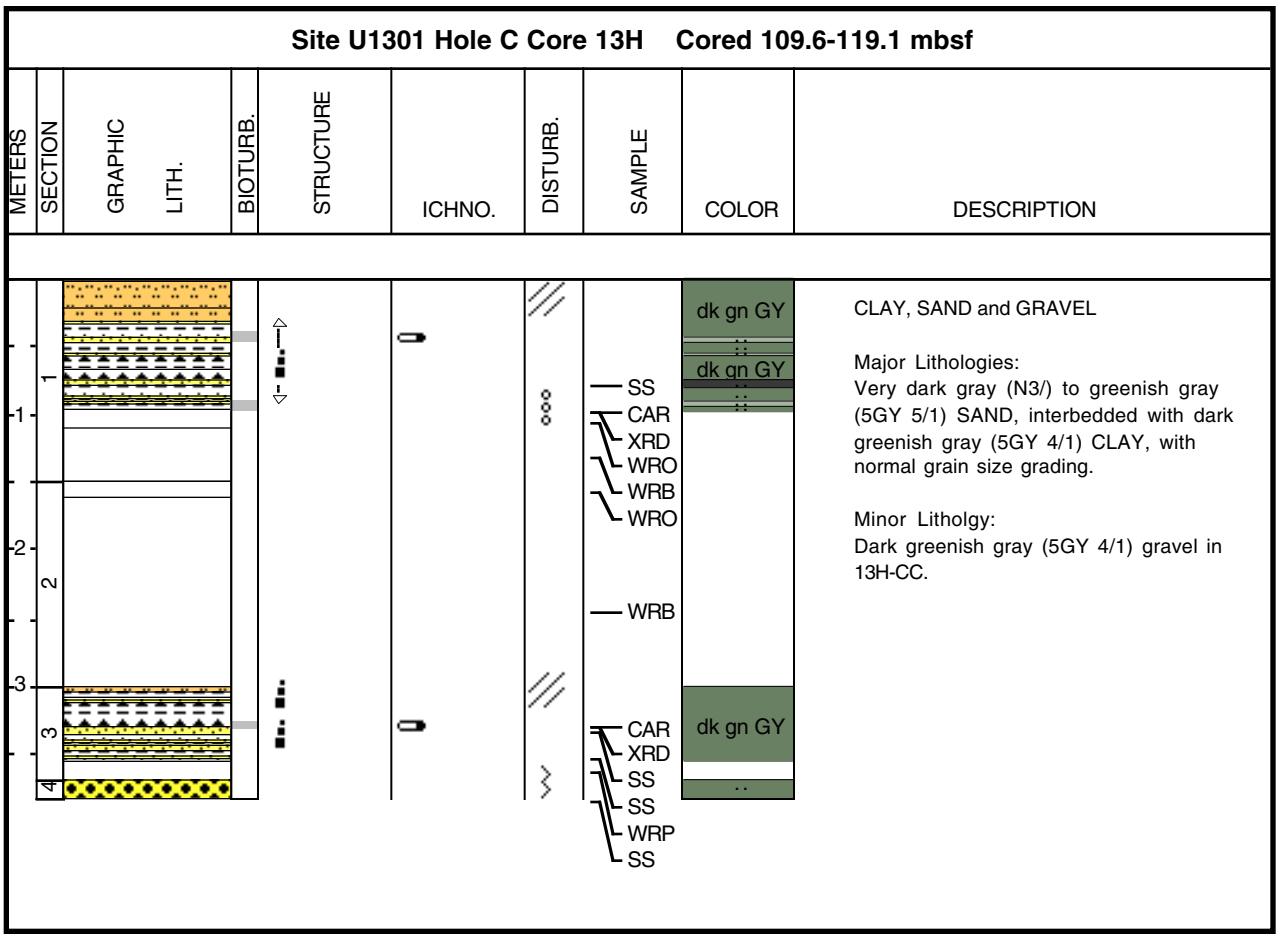
Core Photo


Site U1301 Hole C Core 11H Cored 90.6-100.1 mbsf
METERS
SECTION
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ICHNO.
DISTURB.
SAMPLE
COLOR
DESCRIPTION
WRB
WRO
IW
WRO
WRP
XRD
CAR
SS
SS
SS
vdk GY
vdk GY
SAND TO SILTY SAND AND CLAY
Major Lithologies:
Very dark gray (N3/) SAND, with CLAY in Section 2. Eight thin, pale SAND layers (5-10 cm-wide) are interbedded with the CLAY in Section 2. Altered clay at the base of Section 4 contains wood fragments.
Sections 4, 5, 6 , 7, and CC are highly disturbed, soupy, dark gray (N3/) SAND.

Core Photo


Site U1301 Hole C Core 12H Cored 100.1-109.6 mbsf
METERS
SECTION
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ICHNO.
DISTURB.
SAMPLE
COLOR
DESCRIPTION
WRB
WRO
SS
SAND
Major Lithology:
Very dark gray (N3/) medium-grained SAND
General Description:
Sand is completely disturbed (soupy).
Sand grains are medium to coarse and include quartz, plagioclase, amphibole, chlorite, and iron oxide.

Core Photo

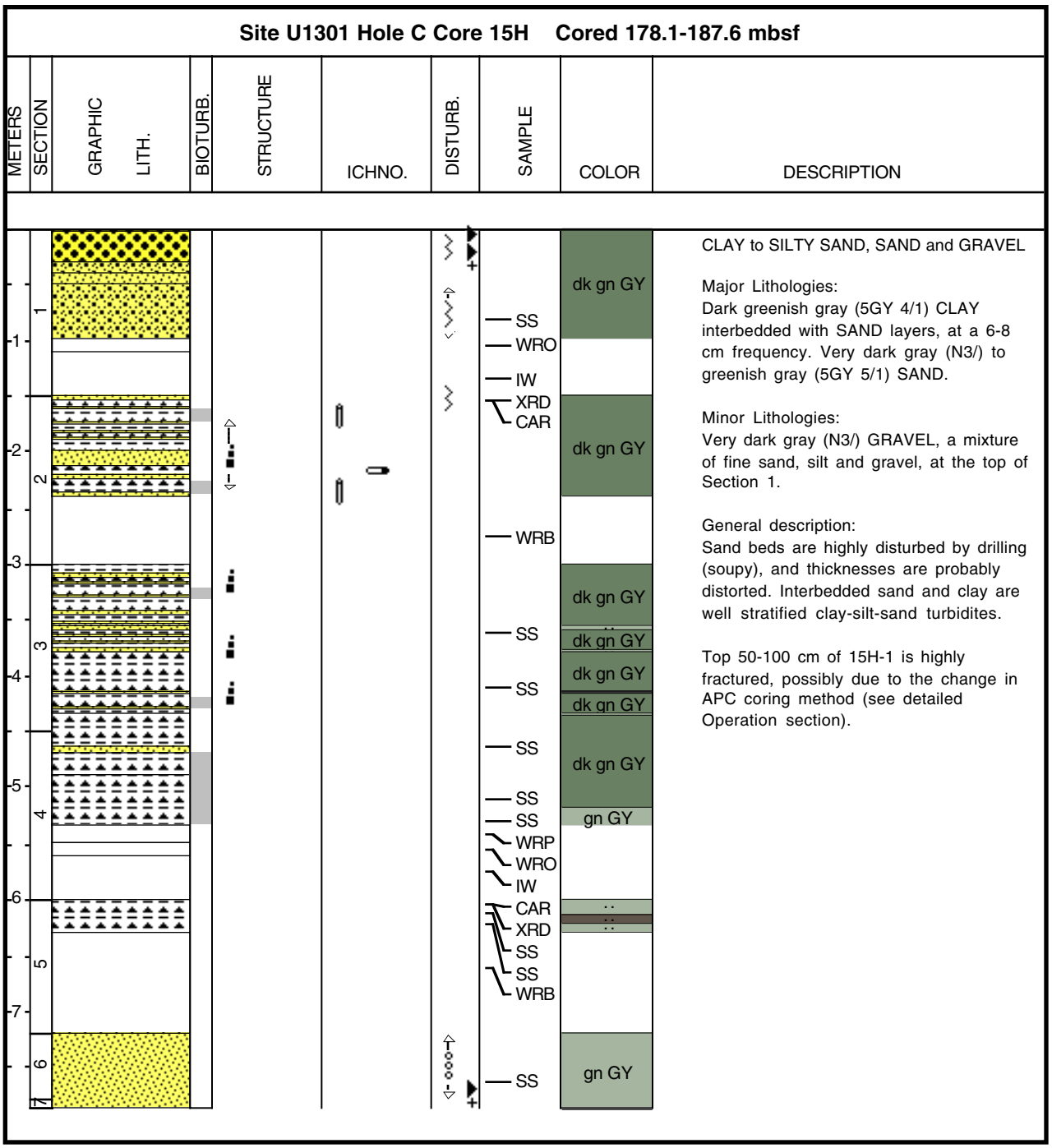

Site U1301 Hole C Core 13H Cored 109.6-119.1 mbsf
METERS
SECTION
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ICHNO.
DISTURB.
SAMPLE
COLOR
DESCRIPTION
1
2
3
4
SS
CAR
XRD
WRO
WRB
WRO
WRB
CAR
XRD
SS
SS
WRP
SS
dk gn GY
dk gn GY
dk gn GY
CLAY, SAND and GRAVEL
Major Lithologies:
Very dark gray (N3/) to greenish gray (5GY 5/1) SAND, interbedded with dark greenish gray (5GY 4/1) CLAY, with normal grain size grading.
Minor Litholgy:
Dark greenish gray (5GY 4/1) gravel in 13H-CC.

Core Photo

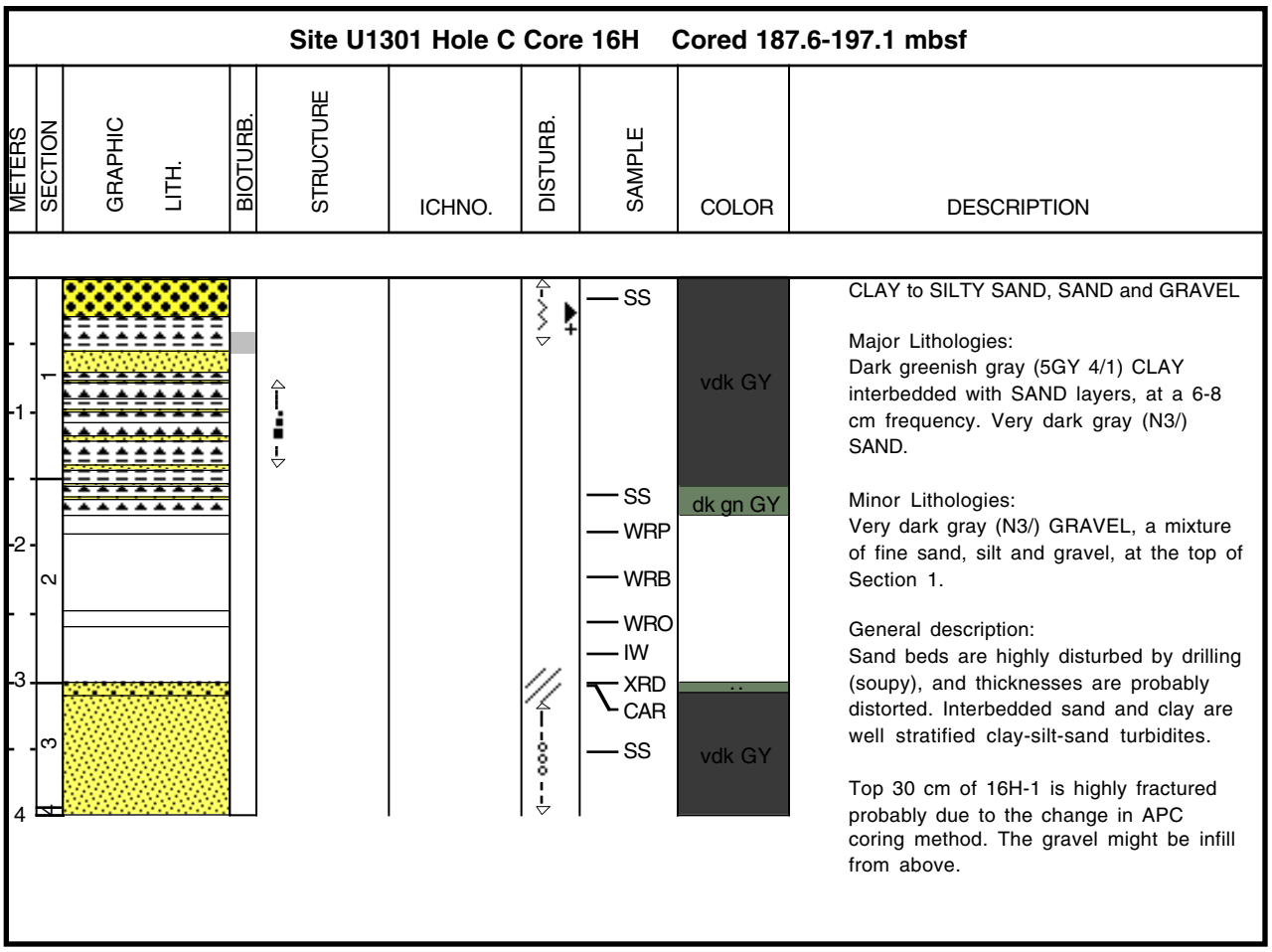
Site U1301 Hole C Core 14H Cored 129.9-130.1 mbsf

METERS	SECTION	GRAPHIC LITH.	BIOTURB.	STRUCTURE	ICHNO.	DISTURB.	SAMPLE	COLOR	DESCRIPTION
	1							dk gn GY	GRAVEL General Description: Highly disturbed dark greenish gray (5GY 4/1) gravel, with subangular clasts (30% silt, 30% sand, and 40% granules). Amphibolite, serpentinite, calcareous sandstone, felsic volcanics, sandstone, shell fragments, and pyrite are identified.

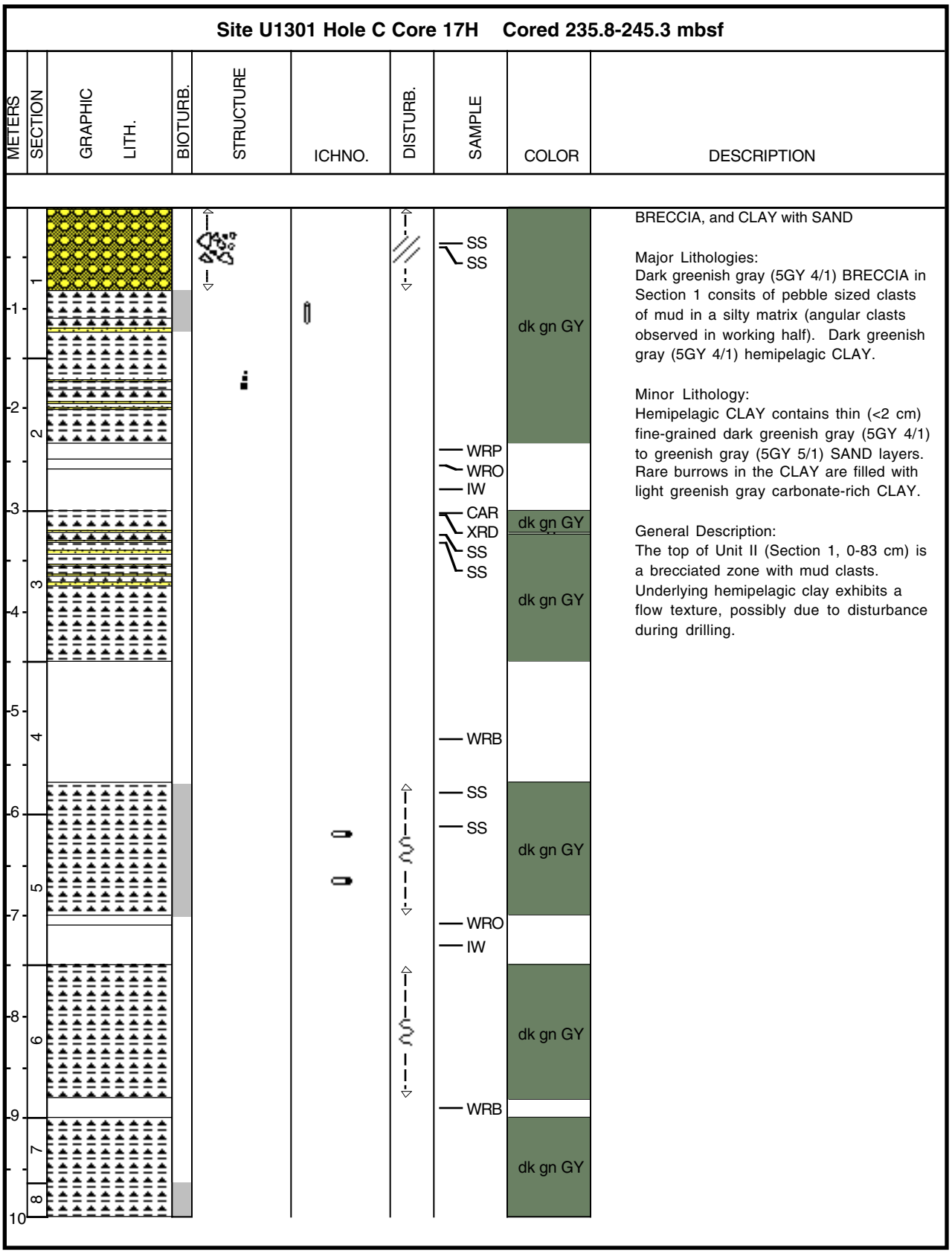
Core Photo


Site U1301 Hole C Core 15H Cored 178.1-187.6 mbsf
METERS
SECTION
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ICHNO.
DISTURB.
SAMPLE
COLOR
DESCRIPTION
SS
WRO
IW
XRD
CAR
WRB
SS
SS
SS
SS
SS
WRP
WRO
IW
CAR
XRD
SS
SS
WRB
SS
dk gn GY
dk gn GY
dk gn GY
dk gn GY
dk gn GY
dk gn GY
gn GY
gn GY
CLAY to SILTY SAND, SAND and GRAVEL
Major Lithologies:
Dark greenish gray (5GY 4/1) CLAY interbedded with SAND layers, at a 6-8 cm frequency. Very dark gray (N3/) to greenish gray (5GY 5/1) SAND.
Minor Lithologies:
Very dark gray (N3/) GRAVEL, a mixture of fine sand, silt and gravel, at the top of Section 1.
General description:
Sand beds are highly disturbed by drilling (soupy), and thicknesses are probably distorted. Interbedded sand and clay are well stratified clay-silt-sand turbidites.
Top 50-100 cm of 15H-1 is highly fractured, possibly due to the change in APC coring method (see detailed Operation section).

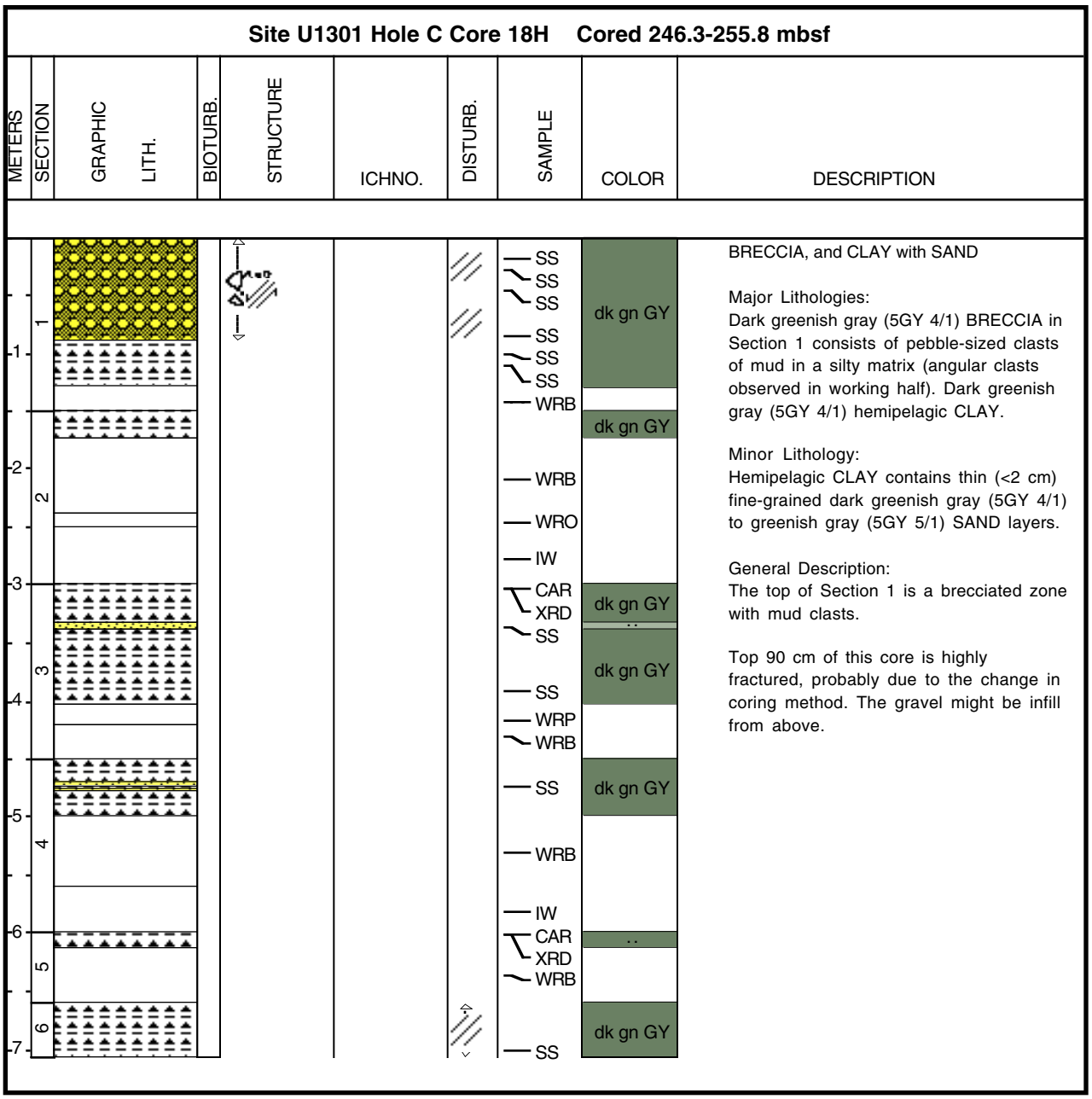
Core Photo


Site U1301 Hole C Core 16H Cored 187.6-197.1 mbsf
METERS
SECTION
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ICHNO.
DISTURB.
SAMPLE
COLOR
DESCRIPTION
SS
SS
WRP
WRB
WRO
IW
XRD
CAR
SS
vdk GY
dk gn GY
vdk GY
CLAY to SILTY SAND, SAND and GRAVEL
Major Lithologies:
Dark greenish gray (5GY 4/1) CLAY interbedded with SAND layers, at a 6-8 cm frequency. Very dark gray (N3/) SAND.
Minor Lithologies:
Very dark gray (N3/) GRAVEL, a mixture of fine sand, silt and gravel, at the top of Section 1.
General description:
Sand beds are highly disturbed by drilling (soupy), and thicknesses are probably distorted. Interbedded sand and clay are well stratified clay-silt-sand turbidites.
Top 30 cm of 16H-1 is highly fractured probably due to the change in APC coring method. The gravel might be infill from above.

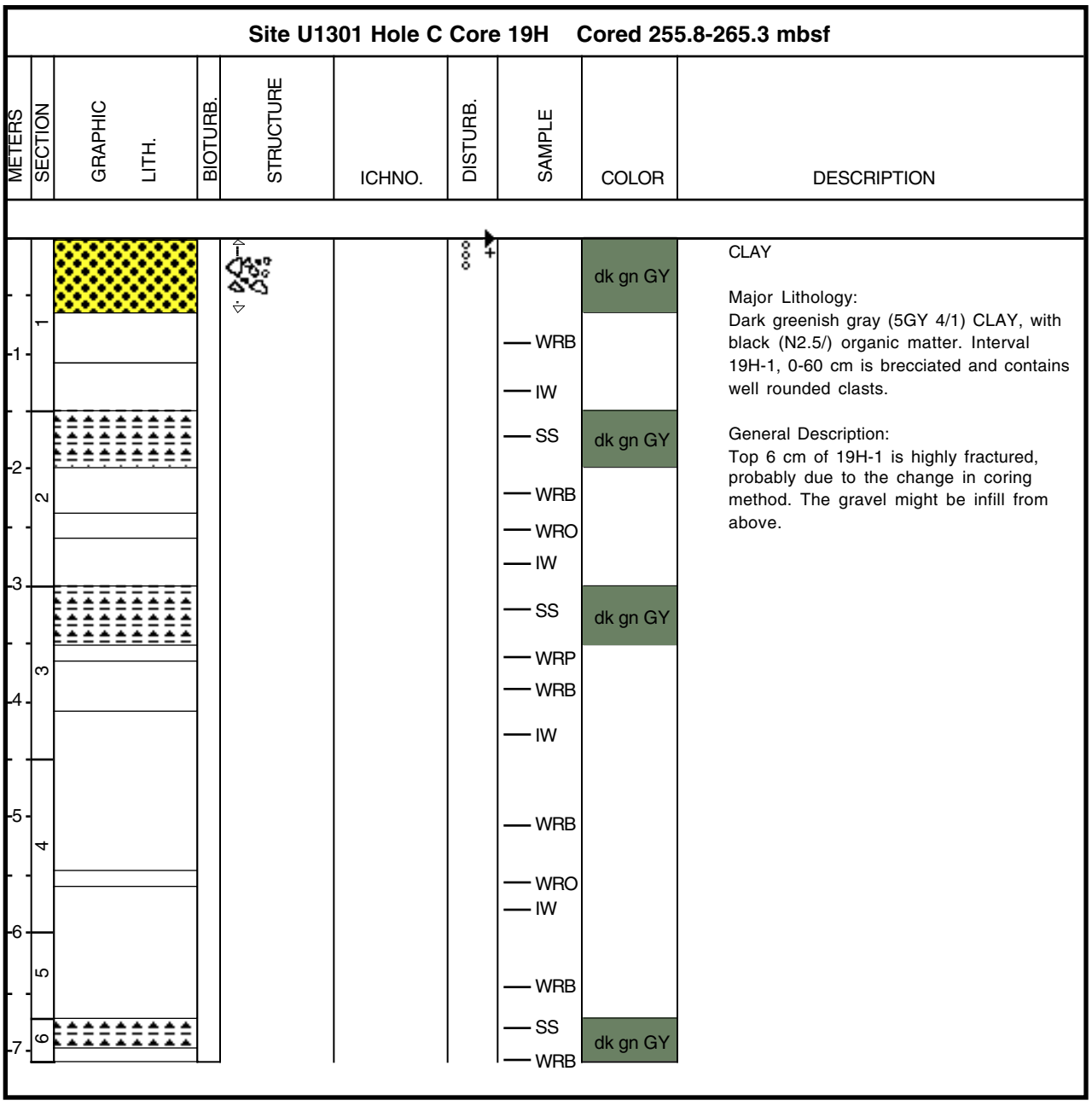
Core Photo


Site U1301 Hole C Core 17H Cored 235.8-245.3 mbsf
METERS
SECTION
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ICHNO.
DISTURB.
SAMPLE
COLOR
DESCRIPTION
SS
SS
WRP
WRO
IW
CAR
XRD
SS
SS
WRB
SS
SS
WRO
IW
WRB
dk gn GY
dk gn GY
dk gn GY
dk gn GY
dk gn GY
BRECCIA, and CLAY with SAND
Major Lithologies:
Dark greenish gray (5GY 4/1) BRECCIA in Section 1 consits of pebble sized clasts of mud in a silty matrix (angular clasts observed in working half). Dark greenish gray (5GY 4/1) hemipelagic CLAY.
Minor Lithology:
Hemipelagic CLAY contains thin (<2 cm) fine-grained dark greenish gray (5GY 4/1) to greenish gray (5GY 5/1) SAND layers. Rare burrows in the CLAY are filled with light greenish gray carbonate-rich CLAY.
General Description:
The top of Unit II (Section 1, 0-83 cm) is a brecciated zone with mud clasts. Underlying hemipelagic clay exhibits a flow texture, possibly due to disturbance during drilling.

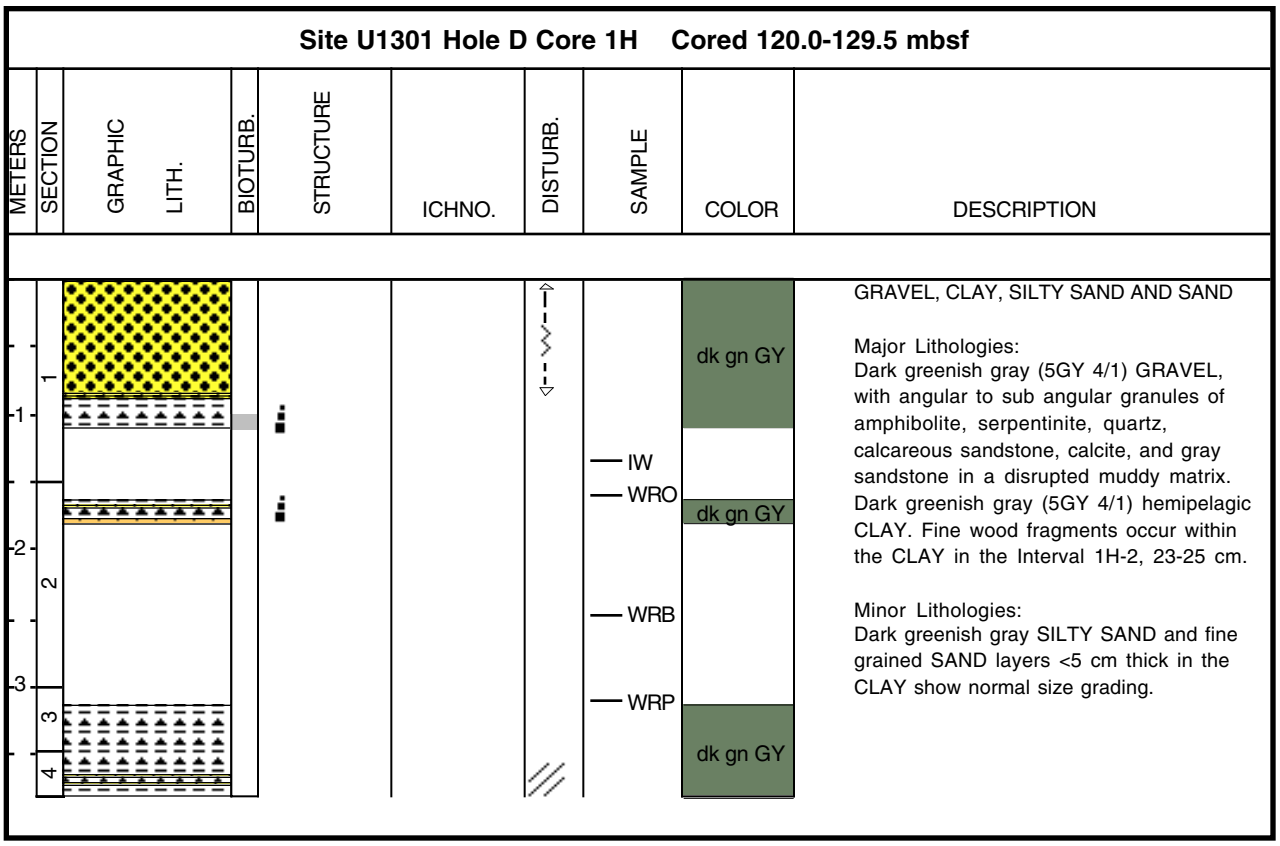
Core Photo


Site U1301 Hole C Core 18H Cored 246.3-255.8 mbsf
METERS
SECTION
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ICHNO.
DISTURB.
SAMPLE
COLOR
DESCRIPTION
SS
SS
SS
SS
SS
SS
WRB
WRB
WRO
IW
CAR
XRD
SS
SS
WRP
WRB
SS
WRB
IW
CAR
XRD
WRB
SS
dk gn GY
dk gn GY
dk gn GY
dk gn GY
dk gn GY
BRECCIA, and CLAY with SAND
Major Lithologies:
Dark greenish gray (5GY 4/1) BRECCIA in Section 1 consists of pebble-sized clasts of mud in a silty matrix (angular clasts observed in working half). Dark greenish gray (5GY 4/1) hemipelagic CLAY.
Minor Lithology:
Hemipelagic CLAY contains thin (<2 cm) fine-grained dark greenish gray (5GY 4/1) to greenish gray (5GY 5/1) SAND layers.
General Description:
The top of Section 1 is a brecciated zone with mud clasts.
Top 90 cm of this core is highly fractured, probably due to the change in coring method. The gravel might be infill from above.

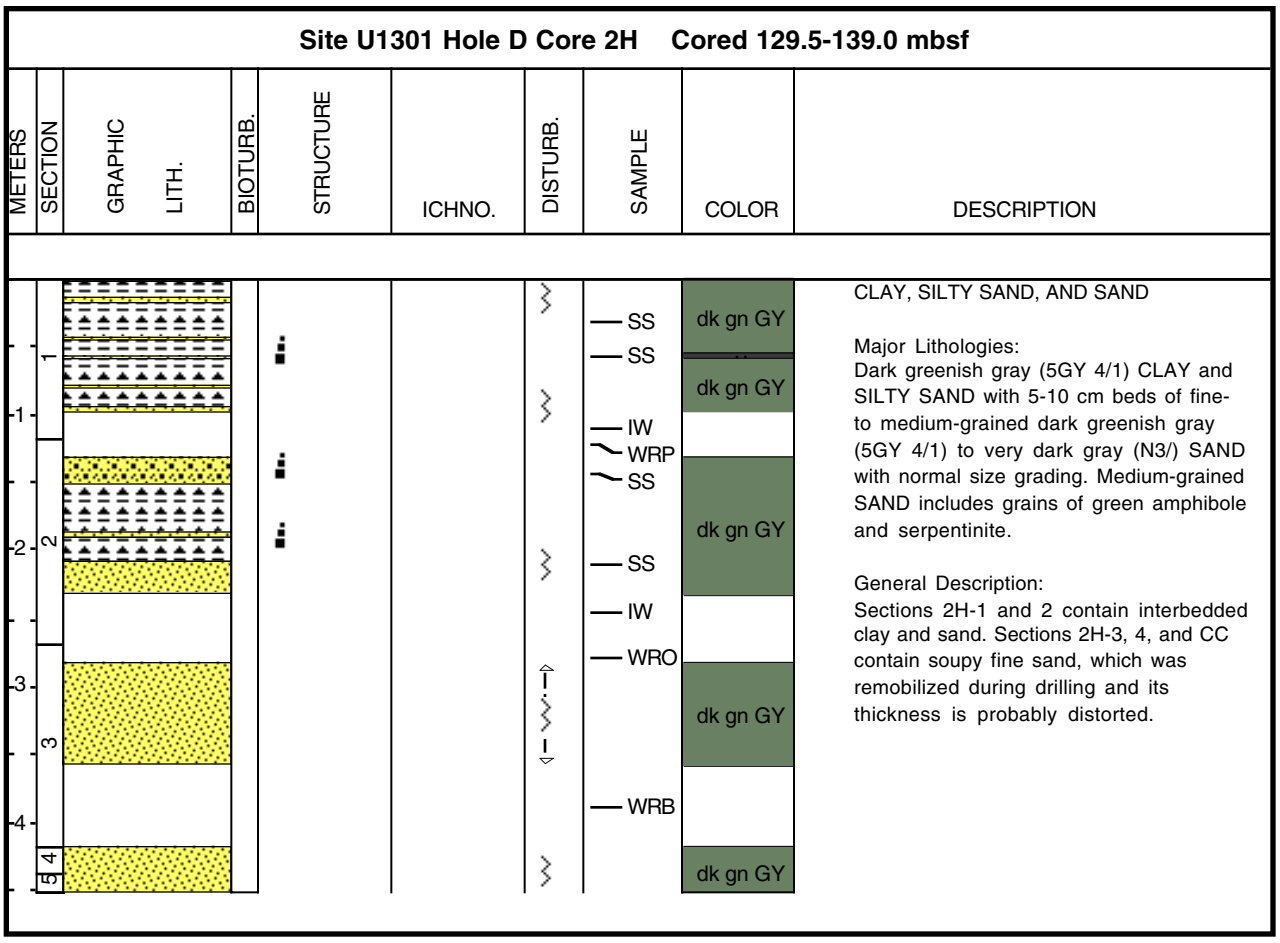
Core Photo


Site U1301 Hole C Core 19H Cored 255.8-265.3 mbsf
METERS
SECTION
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ICHNO.
DISTURB.
SAMPLE
COLOR
DESCRIPTION
WRB
IW
SS
WRB
WRO
IW
SS
WRP
WRB
IW
WRB
WRO
IW
WRB
SS
WRB
dk gn GY
dk gn GY
dk gn GY
dk gn GY
CLAY
Major Lithology:
Dark greenish gray (5GY 4/1) CLAY, with black (N2.5/) organic matter. Interval 19H-1, 0-60 cm is brecciated and contains well rounded clasts.
General Description:
Top 6 cm of 19H-1 is highly fractured, probably due to the change in coring method. The gravel might be infill from above.

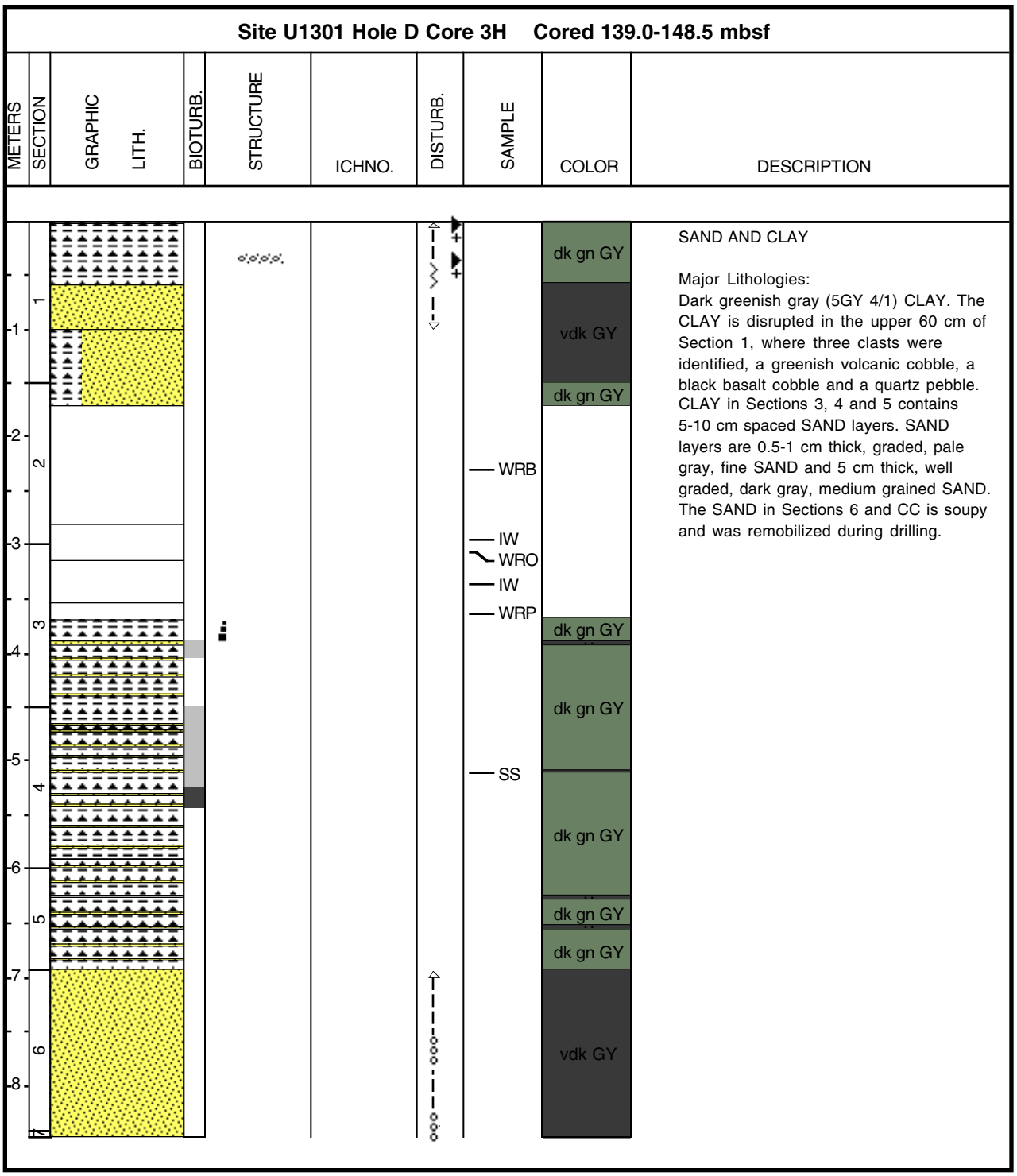
Core Photo


Site U1301 Hole D Core 1H Cored 120.0-129.5 mbsf
METERS
SECTION
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ICHNO.
DISTURB.
SAMPLE
COLOR
DESCRIPTION
1
2
3
4
IW
WRO
WRB
WRP
dk gn GY
dk gn GY
dk gn GY
GRAVEL, CLAY, SILTY SAND AND SAND
Major Lithologies:
Dark greenish gray (5GY 4/1) GRAVEL, with angular to sub angular granules of amphibolite, serpentinite, quartz, calcareous sandstone, calcite, and gray sandstone in a disrupted muddy matrix. Dark greenish gray (5GY 4/1) hemipelagic CLAY. Fine wood fragments occur within the CLAY in the Interval 1H-2, 23-25 cm.
Minor Lithologies:
Dark greenish gray SILTY SAND and fine grained SAND layers <5 cm thick in the CLAY show normal size grading.

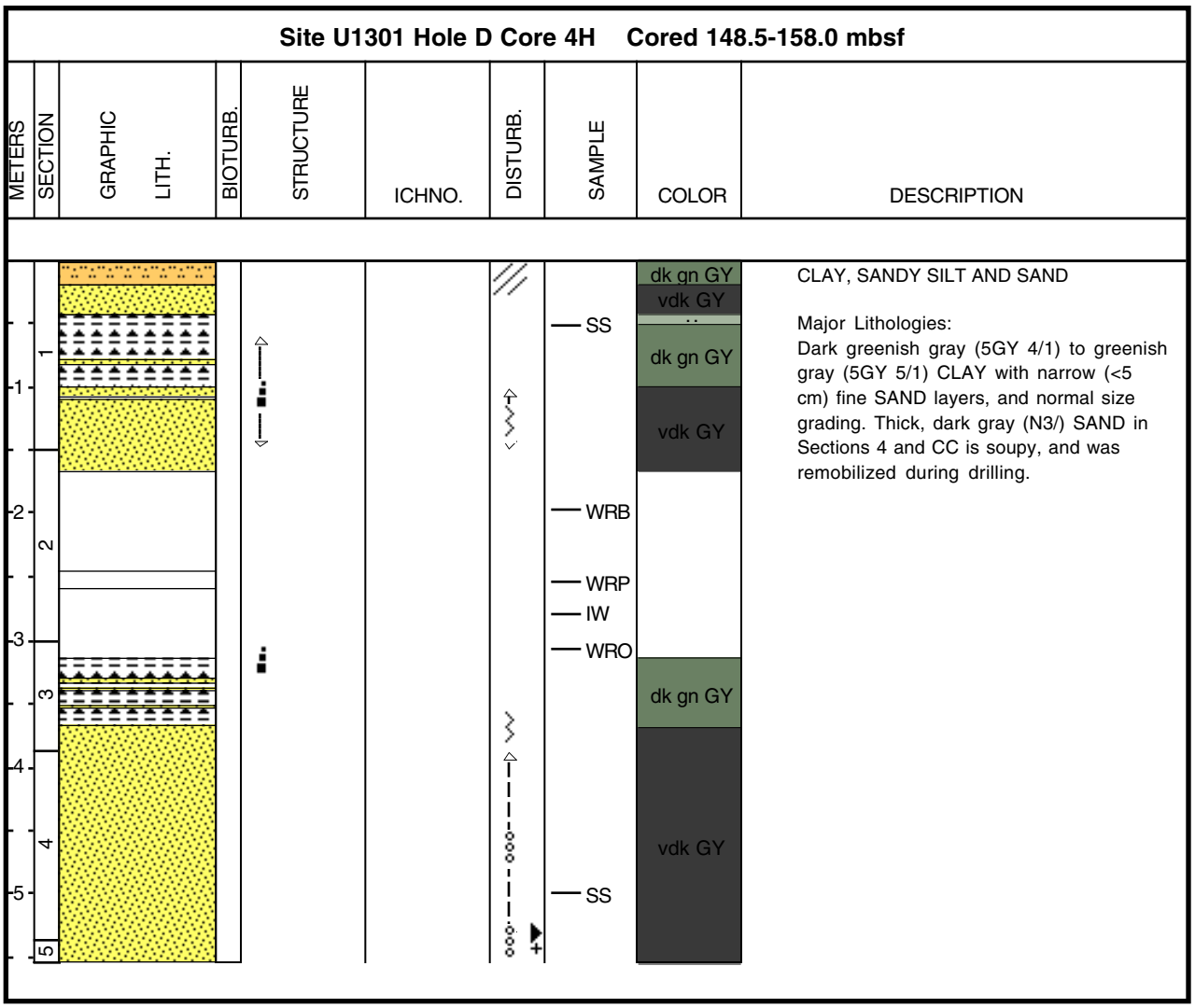
Core Photo


Site U1301 Hole D Core 2H Cored 129.5-139.0 mbsf
METERS
SECTION
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ICHNO.
DISTURB.
SAMPLE
COLOR
DESCRIPTION
SS
SS
IW
WRP
SS
SS
IW
WRO
WRB
dk gn GY
dk gn GY
dk gn GY
dk gn GY
CLAY, SILTY SAND, AND SAND
Major Lithologies:
Dark greenish gray (5GY 4/1) CLAY and SILTY SAND with 5-10 cm beds of fine- to medium-grained dark greenish gray (5GY 4/1) to very dark gray (N3/) SAND with normal size grading. Medium-grained SAND includes grains of green amphibole and serpentinite.
General Description:
Sections 2H-1 and 2 contain interbedded clay and sand. Sections 2H-3, 4, and CC contain soupy fine sand, which was remobilized during drilling and its thickness is probably distorted.

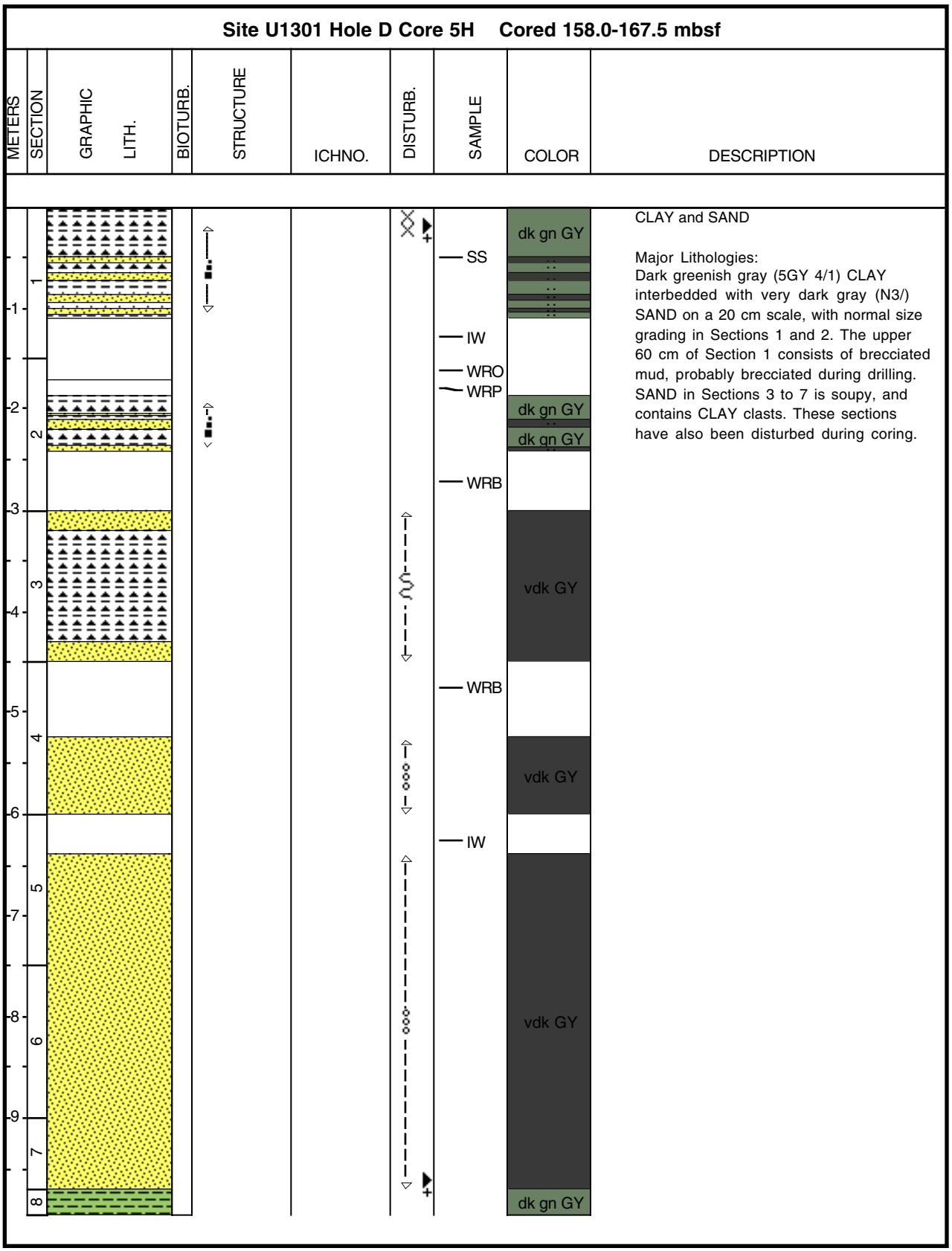
Core Photo


Site U1301 Hole D Core 3H Cored 139.0-148.5 mbsf
METERS
SECTION
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ICHNO.
DISTURB.
SAMPLE
COLOR
DESCRIPTION
WRB
IW
WRO
IW
WRP
SS
dk gn GY
vdk GY
dk gn GY
dk gn GY
dk gn GY
dk gn GY
dk gn GY
vdk GY
SAND AND CLAY
Major Lithologies:
Dark greenish gray (5GY 4/1) CLAY. The CLAY is disrupted in the upper 60 cm of Section 1, where three clasts were identified, a greenish volcanic cobble, a black basalt cobble and a quartz pebble. CLAY in Sections 3, 4 and 5 contains 5-10 cm spaced SAND layers. SAND layers are 0.5-1 cm thick, graded, pale gray, fine SAND and 5 cm thick, well graded, dark gray, medium grained SAND. The SAND in Sections 6 and CC is soupy and was remobilized during drilling.

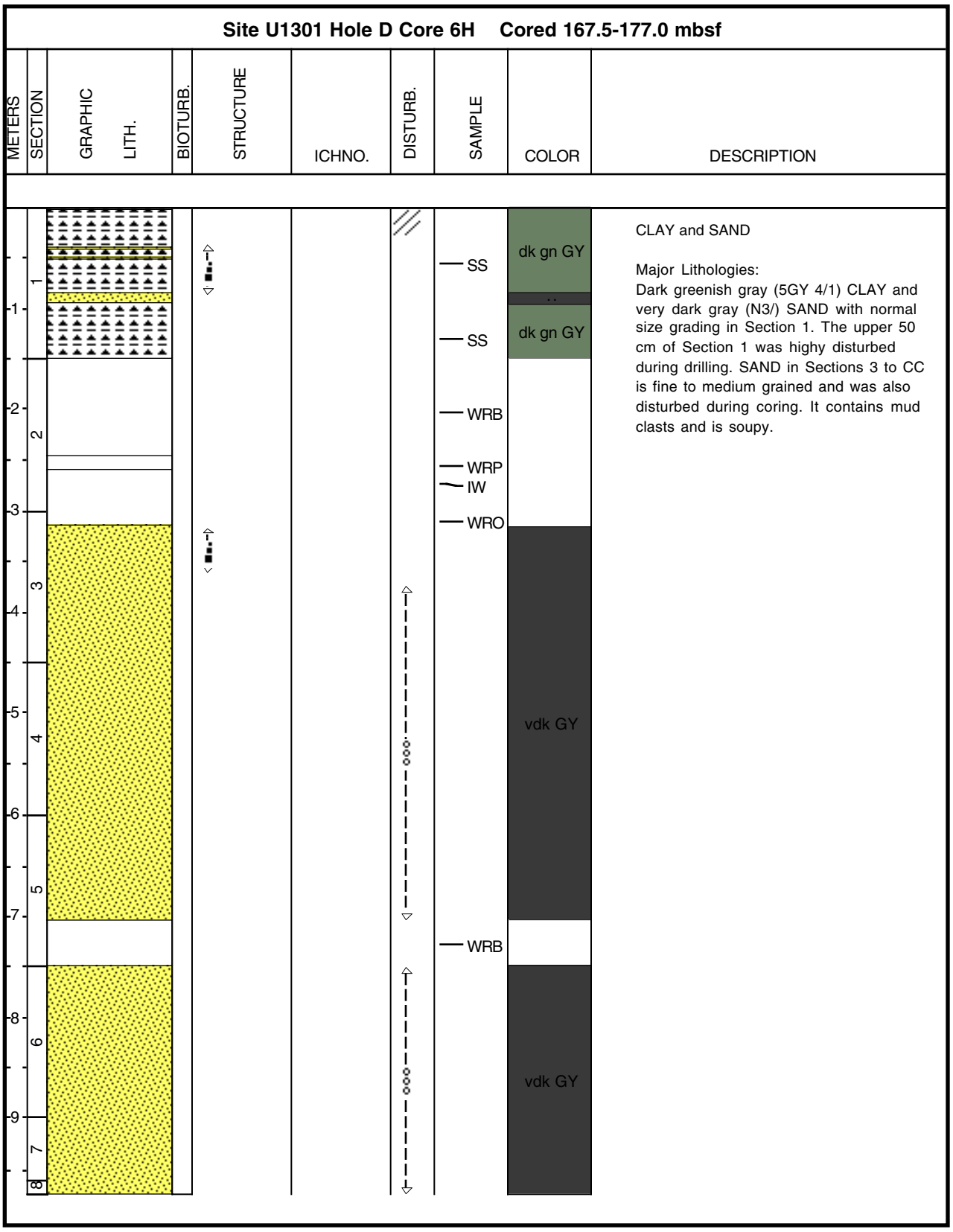
Core Photo


Site U1301 Hole D Core 4H Cored 148.5-158.0 mbsf
METERS
SECTION
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ICHNO.
DISTURB.
SAMPLE
COLOR
DESCRIPTION
SS
WRB
WRP
IW
WRO
SS
dk gn GY
vdk GY
dk gn GY
vdk GY
dk gn GY
vdk GY
CLAY, SANDY SILT AND SAND
Major Lithologies:
Dark greenish gray (5GY 4/1) to greenish gray (5GY 5/1) CLAY with narrow (<5 cm) fine SAND layers, and normal size grading. Thick, dark gray (N3/) SAND in Sections 4 and CC is soupy, and was remobilized during drilling.

Core Photo


Site U1301 Hole D Core 5H Cored 158.0-167.5 mbsf
METERS
SECTION
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ICHNO.
DISTURB.
SAMPLE
COLOR
DESCRIPTION
SS
IW
WRO
WRP
WRB
WRB
IW
dk gn GY
dk gn GY
dk gn GY
vdk GY
vdk GY
vdk GY
dk gn GY
CLAY and SAND
Major Lithologies:
Dark greenish gray (5GY 4/1) CLAY interbedded with very dark gray (N3/) SAND on a 20 cm scale, with normal size grading in Sections 1 and 2. The upper 60 cm of Section 1 consists of brecciated mud, probably brecciated during drilling. SAND in Sections 3 to 7 is soupy, and contains CLAY clasts. These sections have also been disturbed during coring.

Core Photo


Site U1301 Hole D Core 6H Cored 167.5-177.0 mbsf
METERS
SECTION
GRAPHIC LITH.
BIOTURB.
STRUCTURE
ICHNO.
DISTURB.
SAMPLE
COLOR
DESCRIPTION
SS
SS
WRB
WRP
IW
WRO
WRB
dk gn GY
dk gn GY
vdk GY
vdk GY
CLAY and SAND
Major Lithologies:
Dark greenish gray (5GY 4/1) CLAY and very dark gray (N3/) SAND with normal size grading in Section 1. The upper 50 cm of Section 1 was highy disturbed during drilling. SAND in Sections 3 to CC is fine to medium grained and was also disturbed during coring. It contains mud clasts and is soupy.

				Texture			Minerals												Biogenic						Rock	
Core	Type	Section	Top (cm)	Sand	Silt	Clay	Quartz	Feldspar	Muscovite	Biotite	Chlorite	Calcite	Amphibole	Epidote	Clay	Opaques	Fe Oxide	Zircon	Foraminifers	Diatoms	Radiolarians	Sponge	Dianoflagellate	Organic debris	Rock fragments	Comments
Hole C																										
1	H	2	20		50	50	A			C	R				A	R				A		R	R			Silty clay
1	H	3	10		50	50	A			C	R				A	R				A		R	R			Silty clay
1	H	3	10		20	80	A			R						R				A		R				Clay
1	H	3	10	70	30		A	A		C			C			M										Silty sand, very fine-grained
1	H	3	30	90	10		A	A			C			R		C										Sand, fine-grained
1	H	4	10	90	10		A	A			C			R		C										Sand, fine-grained
1	H	4	25			100					R					R				C		M				Clay
2	H	1	12		10	90									C	R				A		R				Clay
2	H	1	47	20	20	60	M				M				A					A		R				Silty clay
2	H	1	72	30	70		A				R					R	R			A		C				Sandy silt
2	H	1	107	90	10		A	A					C	R		C										Sand, fine-grained
2	H	1	140	90	10		A	A					M	T		C	R									Sand, fine-grained
2	H	2	61	90	10		A	A					A	T		C	R									Sand, fine-grained
2	H	2	96			100									A	R	R					R				Clay
2	H	2	141		10	90	R				R				A		R			C		R				Clay
2	H	3	12	90	10		A	C					M	T		C	T									Sand, fine-grained
2	H	3	35		10	90									A		R					R				Clay
2	H	4	16	90	10		A	A					M	T		C			T							Sand, medium-grained
2	H	4	92	10	70	20	A				R		T		A	C	R			M		R				Silt
2	H	4	104	20	70	10	A	C			T				A	M	M			T						Silt
2	H	5	8	20	70	10									A	C	T			T		T				Silt
2	H	5	30		10	90					M				A	T	T			C						Clay
2	H	5	36		20	80									A	T	M			M		M				Silty clay
2	H	5	45	40	60		A	M			T		M		C	M	C			M		T				Sandy silt
2	H	5	60	10	30	60	C				M						T									Silty clay
2	H	6	34	80	20		C						M	T			M		D			M				Foraminifer Sand
2	H	6	63	1	19	80	R								A		M			R		C				Silty clay
2	H	6	118	10	80	10	A						C			C	M		C							Silt
2	H	6	128	10	10	80							C		M		T					M		M		Clay
3	H	1	9		90	10	C			M		T	C													Silt
3	H	1	120		10	90						T	T		D					T						Clay
3	H	1	138	1	99		A	A	T	T	T	T	M				T									Silt
3	H	2	30	1	99		D	A			M	R	C				R									Silt
3	H	2	37		30	70	A										M		T	T						Silty clay
3	H	2	38		20	80	A						T		A	T	R			R						Silty clay
3	H	3	64	80	20		A	C			M	M	M			M	T									Silty sand, coarse-grained
3	H	3	85		10	90	A						R		D		T									Clay
3	H	3	147	60	40		D	A			M		C				R									Silty sand, medium-grained
3	H	4	20		30	70									D											Silty clay
3	H	4	70	50	50		A	A		T	M		A				R									Silty sand, medium-grained
3	H	5	32a	70	30		D	A			R		A			M										Silty sand, medium-grained
3	H	5	32b	70	30		A	A					C			M										Silty sand, medium-grained
3	H	5	130	30	50	20	A	A			R		R			M	T									Sandy silt
3	H	5	135		1	99							T		D		T									Clay
3	H	6	38	70	30		A	A			M		C			M	T									Silty sand, medium-grained

				Texture			Minerals												Biogenic						Rock	
Core	Type	Section	Top (cm)	Sand	Silt	Clay	Quartz	Feldspar	Muscovite	Biotite	Chlorite	Calcite	Amphibole	Epidote	Clay	Opaques	Fe Oxide	Zircon	Foraminifers	Diatoms	Radiolarians	Sponge	Dianoflagellate	Organic debris	Rock fragments	Comments
Hole C (continued)																										
3	H	7	6	70	30		A	A		T	R		C			A	T									Silty sand, coarse-grained
3	H	7	33	90	10		D	A		T	T		A			R	T									Sand, fine grained
4	H	1	22	90	10		D	A			R		C			M	M									Sand, medium-grained
4	H	1	35	20	80		A	A			R		C			C	R									Silt
4	H	1	110		10	90							T		D	T	T									Clay
4	H	2	10	10	90		A	A			M		M			T	M									Silt
4	H	2	42	100			A	A			T		C			C		T							T	Sand, medium-grained
4	H	2	53		5	95	R	R					T				T			T		T				Clay
4	H	2	80	90	10		A	A			R	T	C				R		T							Sand, fine-grained
4	H	3	10	10	60	30	A	A			T	T	M			M										Clayey silt
4	H	3	62		10	90							T				T				T					Clay
4	H	3	77	90	10		A	A		T	M	T	C			R	T									Sand, fine-grained
4	H	4	10	90	10		A	A		R			M			M										Sand, fine-grained
4	H	4	20	80	20		A	A		R		T	C			M	R					T				Silty sand, fine-grained
4	H	4	38		10	90	M		M				R				R					T				Silty clay
4	H	4	50	50	50		A	A		R	R		C			C	R									Silty sand, fine-grained
4	H	4	71	60	30	10	A	A		R			M			M	R									Silty sand, medium-grained
4	H	4	123	70	30		A	A		R	R		C			C										Silty sand, fine-grained
4	H	4	128		5	95	R						R		D		R									Clay
4	H	4	147	10	10	80	M		T				R				R									Silty clay
4	H	5	7		10	90	R		R				R				R									Clay
4	H	5	28	20	20	60	C	M					R				R									Silty clay
4	H	6	20		10	90	D	A					C			M	R									Silty clay, fine-grained
4	H	6	31		20	80	R		T				T				T					T				Silty clay
4	H	6	76	20	50	30	M		R				T			R	T		T			R				Clayey silt
4	H	6	91	30	70		A	A	T			T	C			M	C									Sandy silt
4	H	6	108		10	90							R				R			T		R				Clay
4	H	6	124	80	20		A	A	R	R			C			M	C	T								Silty sand, very fine-grained
4	H	6	145	80	20		A	A	R	T		T	C			M	M									Silty sand, fine grained
4	H	7	5	80	20		A	A		R			M				M									Silty sand, fine-grained
4	H	7	35	80	20		A	A	T	T			M			C	M									Silty sand, fine-grained
4	H	cc	11	80	20		A	A		R			C			C	M									Silty sand, fine-grained
5	H	cc	20	80	20		A	C				T	M			A	R									Sand, medium-grained
6	H	3	60	90	10		A	C					M	R		C	R									Sand, medium-grained
6	H	4	43	95	5		A				T		R			C	C									Sand, fine-grained
6	H	7	10	80	20		A	A					C			M	C	T								Sand, medium-grained
7	H	1	20	90	10		A	C					C			M	M									Sand, fine-grained
7	H	2	21	5	5	90	R				T				C		T			M		T				Clay
7	H	3	15		30	70					T					T	T					T				Silty clay
7	H	4	50	90	10		A	C					C	T		C	M	T								Sand, fine-grained
7	H	4	130	70	30		A	C					C	R			R									Sand
7	H	6	50	70	30		A	C					C	T		C	T	T								Sand, fine-grained
8	H	3	10	60	40		A	M			C		T				M	T						M		Sand
9	H	1	110	50	20	30	A						R	T		T	T									Silty sand, fine-grained
9	H	1	130		50	50	A				C			T			R									Sand
9	H	3	10		20	80	R				T				A	T	T					T				Sand
9	H	3	80		90	10	A	C					C	T		R	R									Silt, fine-grained
9	H	6	50	20	80		A	C					C	T		C	C									Sandy silt, fine-grained
9	H	6	60		20	80	C				M				A							T				Silty clay, fine-grained
9	H	7	45	40	30	30	A	C					C	T		M	M									Silty sand, fine-grained
11	H	2	40		20	80									A		M					T				Silty clay, fine-grained

				Texture			Minerals												Biogenic						Rock	
Core	Type	Section	Top (cm)	Sand	Silt	Clay	Quartz	Feldspar	Muscovite	Biotite	Chlorite	Calcite	Amphibole	Epidote	Clay	Opaques	Fe Oxide	Zircon	Foraminifers	Diatoms	Radiolarians	Sponge	Dianoflagellate	Organic debris	Rock fragments	Comments
Hole C (continued)																										
11	H	2	127	60	30	10	A					T	C	T		M	T	T								Silty sand, fine-grained
11	H	3	118		50	50	M				M				A		C									Silty clay, fine-grained
11	H	cc	6	80	20		A	C					C	T		C	M	R								Silty sand, medium-grained
12	H	cc	10	80	20		A	C					C	T		M	T	T								Silty sand, fine-grained
13	H	1	76	60	40		A	C			M		M			M	R									Silty sand, fine-grained
13	H	3	32	20	80		A	C					C				R									Sandy silt
13	H	3	50		20	80	R								A		T									Silty clay
15	H	1	75	20	30	50	C				R				A		T									Silty clay
15	H	3	56	20	80		A	C					M				M									Silt
15	H	3	7	20	20	60	M				M				A	T	T									Silty clay
15	H	4	3	10	40	50	M				C				A	M	M									Silty clay
15	H	4	58		10	90									A		R									Clay
15	H	4	78		20	80									A		T		T	T						Clay
15	H	5	10			100									A				M	M						Clay
15	H	5	20			100									A				T							Clay
15	H	6	40	80	20		A	A					A	T			R									Sand, very fine-grained
16	H	1	15		50	50									A		R		M							Silty clay
16	H	2	10		10	90									A	T	T		R	T						Clay
16	H	3	50	80	20		A	A					C			C	R									SNAD
17	H	1	33			100									A				R	T		T				Clay, disturbed zone
17	H	1	40		10	90					T			T		R	T					T				Clay
17	H	3	22	20	80		A						C			M	M									Silt, very fine-grained
17	H	3	30	20	80		A						C			M	M									Silt, very fine-grained
17	H	4	125		10	90					T				A		T							M		Clay
17	H	5	9.5		20	80					T				A		M									Clay
17	H	cc	22		5	95					T				A	T										Clay
18	H	1	6		10	90					T				A	T	R									Clay, disturbed zone
18	H	1	26		30	70					R				A		R		T							Silty clay
18	H	1	45		20	80					T				A	T	T									Silty clay
18	H	1	83		10	90					R				A		R									Clay
18	H	1	99		5	95					T				A	R	R		T			T				Clay
18	H	1	110		70	30	A				C				R	M	M									Silt
18	H	3	37		80	20	A				M		C		R	M	M									Silty sand
18	H	3	90		10	90					T				A	T	T		M							Clay
18	H	4	22	70	30		A	C					C			M	R							M		Silty sand, fine-grained
18	H	6	40		30	70	R				R				A	M	M									Silty clay
19	H	2	20		20	80					R				A	R	R									Clay
19	H	3	20		30	70					R				A		T									Silty clay
19	H	cc	5		10	90	T				T				A		T									Clay

				Texture			Minerals											Biogenic		Rock	
Core	Type	Section	Top (cm)	Sand	Silt	Clay	Quartz	Feldspar	Biotite	Chlorite	Calcite	Amphibole	Epidote	Clay	Opaques	Fe Oxide	Zircon	Foraminifers	Diatoms	Rock fragments	Comments
Hole D																					
2	H	1	30		30	70	C							A		C					Silty clay
2	H	1	55	80	20		A		M			C	T			M					Silty sand, Barite?
2	H	2	23.5	20	10	70	C					M	T	A	M	C					Sandy clay
2	H	2	91	80		20	A	A				M	T		C	T					Fine sand, Barite?
3	H	4	61	30	50	20	A	A				C	T		T	M					Sndy silt
4	H	1	51		10	90			M			T		A		T					Clay
4	H	3	67		10	90	C			M				A		M					Clay
4	H	4	107	80	20		A	A				M	T		C	M					Fine sand
5	H	1	49		10	90				T				A		T					Clay
5	H	1	96		20	80								A		C		T			Clay
6	H	1	55		90	10	A			C		C		C	M	M					Silt
6	H	1	130		30	70				M				C		R		M	T		Silty clay
6	H	3	18		20	80	M			M					R	M					Clay
6	H	3	90		90	10	A	C	R	C		M	T		M	M		T			Silt

TS #1 U1301B-1R-1, 14-18 cm (Piece 2) **Unit:1A** **OBSERVER: MS, RC**

ROCK NAME: **Basalt-hyaloclastite breccia**
WHERE SAMPLED: **Hyaloclastite**
GRAIN SIZE: **Clay and clasts**
TEXTURE: **Breccia**

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	APPROX. COMP.	MORPHOLOGY	COMMENTS
PHENOCRYSTS								
GROUNDMASS								
Plagioclase	Tr	Tr		<0.3			Euhedral to subhedral	Microlaths in the fresh and altered glass.
Glass								

SECONDARY MINERALOGY	PERCENT	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	REPLACING / FILLING	COMMENTS
Saponite	10				Matrix of hyaloclastite, vesicles, and mesostasis	Brown to brown-gray color.
Zeolites	2					
Carbonate	1					

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	FILLING / MORPHOLOGY	COMMENTS
Vesicles	Tr	Even	0.2	0.3	0.25	Saponite, zeolite, and pyrite.	

COMMENTS : The matrix of the hyaloclastite consists of saponite, zeolite, and carbonate. Pyrite is present in the altered glass.

TS #2 U1301B-1R-1, 118-121 cm (Piece 15) | **Unit:1B** | **OBSERVER: RC, MS**

ROCK NAME: Sparsely clinopyroxene-plagioclase phyric basalt
WHERE SAMPLED: Vein
GRAIN SIZE: Cryptocrystalline
TEXTURE: Intersertal, glomeroporphyritic.

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	APPROX. COMP.	MORPHOLOGY	COMMENTS
PHENOCRYSTS								
Plagioclase	3	3	0.4	1.4	0.8		Euhedral to subhedral	Normally stubby laths, and in glomeroporhyritic clots.
Clinopyroxene	1	1	0.2	0.5	0.4		Anhedral; round	Predominantly in glomeroporphyritic clots or associated with plagioclase laths.
Olivine	0	Tr	0.2	0.5	0.3		Euhedral to subhedral	Completely replaced by saponite + Feox.
GROUNDMASS								
Plagioclase	38	38		<0.7			Euhedral	Laths and needles.
Clinopyroxene	20	20		<0.5			Euhedral to anhedral	Occurs singly or attached to/intergrown with plagioclase.
Olivine	0	Tr		<0.3			Subhedral	Completely replaced by clay + Feox.
Mesostasis	23	38						
Opaque	Tr							

SECONDARY MINERALOGY	PERCENT	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	REPLACING / FILLING	COMMENTS
Saponite	15				Olivine, mesostasis	Brown to green color in the vesicles and olivine.
Hematite, Feox					Vein fill, vesicles and olivine	

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	FILLING / MORPHOLOGY	COMMENTS
Vesicles	Tr	Even	0.2	0.3	0.25	Saponite, Feox	

COMMENTS : An ~2 mm vein is filled with hematite, iddingsite, and saponite.

TS #3 U1301B-2R-1, 4-8 cm (Piece 2) **Unit:1C** **OBSERVER: MS, RC**

ROCK NAME: **Sparsely olivine-clinopyroxene-plagioclase phyric basalt**
WHERE SAMPLED: **Pillow interior (alteration halo)**
GRAIN SIZE: **Cryptocrystalline**
TEXTURE: **Intersertal, glomeroporphyritic.**

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	APPROX. COMP.	MORPHOLOGY	COMMENTS
PHENOCRYSTS								
Plagioclase	2.2	2.2	1.2	2	1.5		Euhedral to subhedral	Occurs singly, but is more common in monomineralic glomeroporphyritic clots.
Clinopyroxene	1.2	1.2	1.5	2.5	1.3		Anhedral; round	Normally in glomeroporphyritic clots or associated with plagioclase laths.
Olivine	0	Tr	1	1	0.6		Euhedral to subhedral	Completely replaced by green saponite + iddingsite.
GROUNDMASS								
Plagioclase	14.2	14.2		<0.8			Euhedral	Laths and needles.
Clinopyroxene	3.2	3.2		<0.8			Euhedral to anhedral	Occurs singly or attached to/intergrown with plagioclase.
Olivine	0	2		<0.8			Subhedral	Completely replaced by clay + Feox.
Mesostasis	67	74.9						

SECONDARY MINERALOGY	PERCENT	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	REPLACING / FILLING	COMMENTS
Saponite	5				Olivine, mesostasis, vein	Brown to green color in the vesicles and replacing olivine.
Celadonite	2				Vesicles	Present in the vesicle centers.
Zeolite?	Tr				Vesicles	Present in the vesicle centers.
Opaque / FeO(OH)	3				Vesicles	Present in the vesicle centers.

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	FILLING / MORPHOLOGY	COMMENTS
Vesicles	3.1	Even	0.1	1.2	0.5	Saponite, Feox, celadonite	

COMMENTS : Saponite, celadonite, and opaques / Feox often occur in the vesicles of the black halo. Secondary mineral assemblage sequences in the vesicles are Celadonite+Opaque (hematite or geothite)+saponite.

TS #4 U1301B-2R-1, 56-58 cm (Piece 11a) | **Unit:1C** | **OBSERVER: RC, MS**

ROCK NAME: Highly olivine-clinopyroxene-plagioclase phryric basalt
WHERE SAMPLED: Chilled contact
GRAIN SIZE: Cryptocrystalline
TEXTURE: Hyalo-ophytic, spherulitic, gromeroporphyritic.

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	APPROX. COMP.	MORPHOLOGY	COMMENTS
PHENOCRYSTS								
Plagioclase	15	15	0.4	2	1.2		Euhedral to skeletal	Occurs singly and in bimineralic glomeroporphyritic clots with olvine.
Clinopyroxene	2	2	0.2	0.6	0.4		Anhedral; round	Normally in glomeroporphyritic clots or associated with plagioclase laths.
Olivine	0	5	0.2	0.8	0.6		Euhedral to subhedral	Completely replaced by green and pale brown saponite + opaques / FeO(OH).
GROUNDMASS								
Plagioclase	2	2		<0.4			Euhedral	Microlaths and needles.
Clinopyroxene	1	1		<0.2			Euhedral to anhedral	Occurs singly or attached to /intergrown with plagioclase.
Olivine	0	1		<0.2			Subhedral	Completely replaced by clay + opaque.
Mesostasis	67	64						Sheaf-spherulitic texture including small opaque minerals.
Glass	7	12						Fresh to altered glass.

SECONDARY MINERALOGY	PERCENT	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	REPLACING / FILLING	COMMENTS
Saponite	7				Olivine, mesostasis, vein	Brown to green color in the vesicles and the olivine phenocrysts.
Zeolite?	Tr				Vesicles	
Opaque/FeO(OH)	3				Vesicles	

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	FILLING / MORPHOLOGY	COMMENTS
Vesicles	2	Even	0.1	1.2	0.5	Saponite, FeO(OH), celadonite	

COMMENTS : Veins are filled by fiberous saponite + FeO(OH).

TS #5 U1301B-2R-1, 88-90 cm (Piece 12d) **Unit:1C** **OBSERVER: MS, RC**

ROCK NAME: **Sparsely plagioclase phyric basalt**
WHERE SAMPLED: **Pillow interior**
GRAIN SIZE: **Cryptocrystalline**
TEXTURE: **Intersertal, glomeroporphyritic.**

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	APPROX. COMP.	MORPHOLOGY	COMMENTS
PHENOCRYSTS								
Plagioclase	3.2	3.2	0.3	2.8	1.2		Euhedral to skeletal	Occurs singly, and in mono- and poly-mineralic glomeroporphyritic clots.
GROUNDMASS								
Plagioclase	22.9	22.9		<0.3			Euhedral	Microlaths and needles.
Clinopyroxene	12	12		<0.3			Euhedral to anhedral	Occurs singly or attached to/intergrown with plagioclase.
Olivine	0	2.5		<0.3			Subhedral	
Mesostasis	55	59						Intersertal texture. Consist of opaque + plagioclase + clinopyroxene + clay minerals.

SECONDARY MINERALOGY	PERCENT	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	REPLACING / FILLING	COMMENTS
Saponite	5				Olivine, mesostasis, vein	Brown to green color in the vesicles and olivine phenocrysts.
Opaque/Feox	1				Vesicles	Present in the vesicles.

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	FILLING / MORPHOLOGY	COMMENTS
Vesicles	Tr	Even	0.1	0.1	0.1	Saponite	

COMMENTS : Vein consists of green to pale brown saponite and Feox.

TS #6 U1301B-4R-1, 62-63 cm (Piece 9) **Unit:1C** **OBSERVER: RC, MS**

ROCK NAME: **Aphyric basalt**
WHERE SAMPLED: **Vein**
GRAIN SIZE: **Cryptocrystalline**
TEXTURE: **Intersertal, vesicular, glomeroporphyritic**

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	APPROX. COMP.	MORPHOLOGY	COMMENTS
PHENOCRYSTS								
GROUNDMASS								
Plagioclase	24.9	24.9		<0.2			Euhedral; lath	Laths and needles.
Clinopyroxene	5.6	5.6		<0.2			Euhedral to anhedral	Occurs singly or attached to/intergrown with plagioclase.
Olivine	0	3		<0.2			Subhedral	Completely replaced by saponite + celadonite + Feox.
Mesostasis	54	59.5						

SECONDARY MINERALOGY	PERCENT	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	REPLACING / FILLING	COMMENTS
Saponite	5				Olivine, mesostasis, vein, vesicles	Brown to green color in the vesicles and olivine.
Celadonite	5				Olivine, vesicles, vein	Brown to green color in the vesicles and olivine.
FeO(OH)	1				Olivine, vesicles, vein	
Oparue (Py?)	Tr				Mesostasis	

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	FILLING / MORPHOLOGY	COMMENTS
Vesicles	7	Even	0.1	1.2	0.5	Saponite, Feox, celadonite	

COMMENTS : Alteration intensity is strong near the vein (= halo). Saponite in the halo is green in color. Veins filled with celadonite, Feox, and saponite. Celadonite seem to be associated with Feox or hematite.

TS #7 U1301B-4R-2, 29-31 cm (Piece 6) | **Unit:1C** | **OBSERVER: MS, RC**

ROCK NAME: Highly olivine-clinopyroxene-plagioclase phyric basalt
WHERE SAMPLED: Pillow interior
GRAIN SIZE: Cryptocrystalline
TEXTURE: Hyalo-ophitic, glomeroporphyritic, vesicular

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	APPROX. COMP.	MORPHOLOGY	COMMENTS
PHENOCRYSTS								
Plagioclase	12	12	0.3	2.2	15		Euhedral to skeletal	Occurs singly, but is more common in monomineralic, bimineralic, and polymineralic glomeroporphyritic clots with pyroxene + olivine.
Clinopyroxene	1	1	0.4	0.6	0.5		Anhedral; round	Present as glomeroporphyritic clots associated with plagioclase laths.
Olivine	0	1	0.2	1.7	0.8		Euhedral to subhedral	Completely replaced by green or brown saponite + Feox / opaque mineral.
GROUNDMASS								
Plagioclase	5	5		<0.3			Euhedral	Laths and needles.
Clinopyroxene	1	Tr		<0.4			Euhedral to anhedral	Occurs singly or attached to/intergrown with plagioclase.
Olivine	0	Tr		<0.2			Subhedral	Completely replaced by saponite + celadonite + Feox.
Mesostasis	77	81						Including opaque minerals.

SECONDARY MINERALOGY	PERCENT	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	REPLACING / FILLING	COMMENTS
Saponite	5				Olivine, mesostasis, vein, vesicles	Brown to green color in the vesicles and olivine phenocrysts.
Celadonite	Tr				Olivine, vesicles, vein	Present in the vesicle cores
FeO(OH)	1				Olivine, vesicles, vein	
Oparue (Py?)	Tr				Mesostasis	

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	FILLING / MORPHOLOGY	COMMENTS
Vesicles	1	Even	0.1	1	0.7	Saponite, FeO(OH), celadonite	Filling mineral sequence variation: celadonite, Feox, saponite, and Feox, saponite.

COMMENTS : Secondary mineralogy in the alteration halo is dominantly green saponite and celadonite, non-alteration halo contains a brown clay mineral (saponite?).

TS #8 U1301B-4R-3, 138-140 cm (Piece 13) | **Unit:1C** | **OBSERVER: RC, MS**

ROCK NAME: Sparsely plagioclase phyric basalt
WHERE SAMPLED: Chilled contact
GRAIN SIZE: Cryptocrystalline
TEXTURE: Glassy, spherulitic, hyalo-ophitic, glomeroporphyritic, vesicular

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	APPROX. COMP.	MORPHOLOGY	COMMENTS
PHENOCRYSTS								
Plagioclase	3.5	3.5	0.3	3	1.8		Euhedral to skeletal	Occurs singly, but is more common in monomineralic clots.
GROUNDMASS								
Plagioclase	8.2	8.2		<0.3			Euhedral	Laths and needles.
Clinopyroxene	2.9	2.9		<0.3			Euhedral to anhedral	
Olivine	0	5.2		<0.3			Subhedral	
Mesostasis	48	51.5						Including opaque minerals.
Glass	15	17.4						Fresh, transparent, pale brown. Contains rare spherulites, grades to the variolitic zone.

SECONDARY MINERALOGY	PERCENT	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	REPLACING / FILLING	COMMENTS
Saponite	8.2				Olivine, mesostasis, vein, vesicles	Fibrous/round in shape.
FeO(OH)	1				Olivine, vesicles	
Pyrite	Tr				Mesostasis and glass	
Zeolite	2.9					

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	FILLING / MORPHOLOGY	COMMENTS
Vesicles	1.4	Even	0.1	1	0.7	Saponite, Feox	

COMMENTS :

TS #9 U1301B-5R-1, 6-9 cm (Piece 2) | **Unit:1C** | **OBSERVER: MS, RC**

ROCK NAME: Sparsely plagioclase phyric basalt
WHERE SAMPLED: Chilled contact
GRAIN SIZE: Cryptocrystalline
TEXTURE: Glassy, spherulitic, hyalo-ophitic, glomeroporphyritic, pilotaxitic, vesicular

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	APPROX. COMP.	MORPHOLOGY	COMMENTS
PHENOCRYSTS								
Plagioclase	3	3	0.3	3	1.8		Euhedral	Occurs singly, but is more common in monomineralic clots. Contains glass inclusions.
GROUNDMASS								
Plagioclase	4	4		<0.3			Euhedral	Laths and needles.
Clinopyroxene	1	1		<0.3			Euhedral to anhedral	
Olivine	0	2		<0.3			Euhedral	
Mesostasis	69	70						Sheaf-spherulitic texture. Opaque minerals.
Glass	18	20						Fresh, transparent, pale brown. Contains rare spherulites, grades to the variolitic zone.

SECONDARY MINERALOGY	PERCENT	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	REPLACING / FILLING	COMMENTS
Saponite	2				Olivine, mesostasis, vein, vesicles	Fibrous/round in shape.
FeO(OH)	1				Olivine, vesicles	
Zeolite?	Tr				Vesicles	
Pyrite	Tr				Mesostasis and glass	

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	FILLING / MORPHOLOGY	COMMENTS
Vesicles	2	Even	0.1	1.2	0.6	Saponite, Feox	

COMMENTS :

TS #10 U1301B-5R-1, 90-91 cm (Piece 11)							**Unit:1C**	**OBSERVER: RC, MS**
ROCK NAME:	**Sparsely plagioclase phyric basalt**							
WHERE SAMPLED:	**Pillow interior**							
GRAIN SIZE:	**Microcrystalline**							
TEXTURE:	**Intersertal, vesicular, glomeroporphyritic**							
PRIMARY MINERALOGY	**PERCENT PRESENT**	**PERCENT ORIGINAL**	**SIZE (mm) min.**	**max.**	**av.**	**APPROX. COMP.**	**MORPHOLOGY**	**COMMENTS**
PHENOCRYSTS								
Plagioclase	3	3	0.3	2.5	1		Euhedral to subhedral	Occurs singly, but is more common in monomineralic glomeroporphyritic clots
GROUNDMASS								
Plagioclase	20	20		<0.3			Euhedral; lath	Laths and needles.
Clinopyroxene	4	4		<0.5			Euhedral to anhedral	
Olivine	0	2		<0.3			Subhedral	
Mesostasis	61	69						
SECONDARY MINERALOGY	**PERCENT**		**SIZE (mm) min.**	**max.**	**av.**		**REPLACING / FILLING**	**COMMENTS**
Saponite	8						Olivine, mesostasis, vein, vesicles	Brown to green color, present in the vesicles and olivine phenocrysts.
Feox	1						Olivine, vesicles, vein	
Iddingsite	1						Vein, mesostasis, olivine	
Oparue (Py?)	Tr						Mesostasis	
VESICLES/ CAVITIES	**PERCENT**	**LOCATION**	**SIZE (mm) min.**	**max.**	**av.**		**FILLING / MORPHOLOGY**	**COMMENTS**
Vesicles	2	Even	0.1	0.8	0.5		Saponite, Feox	

COMMENTS : Vein and vugs are filled with saponite + iddingsite + Feox, but most of the vein is not preserved in TS.

TS #11 U1301B-5R-2, 91-93 cm (Piece 11b) | **Unit:1C** | **OBSERVER: MS, RC**

ROCK NAME: Sparsely clinopyroxene-plagioclase phyric basalt
WHERE SAMPLED: Vein
GRAIN SIZE: Cryptocrystalline
TEXTURE: Hyalo-ophitic to intersertal, spherulitic, glomeroporphyritic

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	APPROX. COMP.	MORPHOLOGY	COMMENTS
PHENOCRYSTS								
Plagioclase	3	3	0.5	3	1.8		Euhedral to subhedral	Occurs singly, but is more common in monomineralic and bimineralic glomeroporphyritic clots with pyroxene.
Clinopyroxene	1	1	0.3	1.5	0.8		Subhedral to anhedral	Present singly, in glomeroporphyritic clots associated with plagioclase laths. One crystal shows twinning.
GROUNDMASS								
Plagioclase	20	20		<0.5			Euhedral; lath	Microlaths and needles.
Clinopyroxene	2	2		<0.3			Euhedral to anhedral	
Olivine	0	3		<0.5			Subhedral	
Mesostasis	65	71						

SECONDARY MINERALOGY	PERCENT	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	REPLACING / FILLING	COMMENTS
Saponite	4				Olivine, mesostasis, vesicles	Fibrous to granular brown-green saponite.
Feox	1				Olivine, vesicles	
Cabonate	2				Olivine, vesicles	Occur as pseudomorphs of olivine and filling the vesicles.
Pyrite	1				Mesostasis	
Iddingsite	Tr				Vein	
Celadonite	Tr				Vein	

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	FILLING / MORPHOLOGY	COMMENTS
Vesicles	1	Even	0.1	1.2	0.6	Saponite, Feox, carbnonate	

COMMENTS :

TS #12 U1301B-6R-1, 50-52 cm (Piece 8b) | **Unit:1C** | **OBSERVER: RC, MS**

ROCK NAME: Moderately clinopyroxene-plagioclase phyric basalt
WHERE SAMPLED: Chilled contact
GRAIN SIZE: Cryptocrystalline
TEXTURE: Glassy, spherulitic, hyalo-ophitic, glomeroporphyritic, vesicular

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	APPROX. COMP.	MORPHOLOGY	COMMENTS
PHENOCRYSTS								
Plagioclase	5	5	0.1	1	0.5		Euhedral; lath and stabby	Occurs singly, but is more common in monomineralic and bimineralic glomeroporphyritic clots with pyroxene. Contains glass inclusions.
Clinopyroxene	2	2	0.1	0.5	0.3		Euhedral to anhedral	Present as glomeroporphyritic clots associated with plagioclase laths.
GROUNDMASS								
Plagioclase	2	2		<0.1			Euhedral	Laths and needles.
Clinopyroxene	2	2		<0.1			Euhedral to anhedral	
Olivine	0	1		<0.1			Euhedral	
Mesostasis	38	38						Sheaf-spherulitic texture, including opaque minerals.
Glass	47	48						Fresh, transparent, pale brown. Contains rare spherulites, grades to the variolitic zone.

SECONDARY MINERALOGY	PERCENT	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	REPLACING / FILLING	COMMENTS
Saponite	2				Olivine, mesostasis, vein, vesicles	Fibrous/ round in shape.
Zeolite	Tr				Vesicles, veins	
Pyrite	Tr				Mesostasis	Present in the glass.

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	FILLING / MORPHOLOGY	COMMENTS
Vesicles	2	Even	0.1	0.3	0.2	Saponite, zeolite	

COMMENTS : Veins consist of saponite and zeolite. 0.05-0.5 mm microcracks through altered glass.

TS #13 U1301B-6R-2, 6-8 cm (Piece 1)							Unit:1C	OBSERVER: MS, RC
ROCK NAME:	**Moderately clinopyroxene-plagioclase phyric basalt**							
WHERE SAMPLED:	**Chilled contact**							
GRAIN SIZE:	**Cryptocrystalline**							
TEXTURE:	**Glassy, hyalo-ophitic, spherulitic, glomeroporphyritic**							
PRIMARY MINERALOGY	**PERCENT PRESENT**	**PERCENT ORIGINAL**	**SIZE (mm)**			**APPROX. COMP.**	**MORPHOLOGY**	**COMMENTS**
			min.	**max.**	**av.**			
PHENOCRYSTS								
Plagioclase	5	5	0.2	2.2	1.4		Euhedral to subhedral	Some has honeycomb texture, glass inclusions in some crystals.
Clinopyroxene	3	3	0.2	1.2	0.7		Euhedral to anhedral	Present singly, and in glomeroporphyritic clots associated with plagioclase laths.
GROUNDMASS								
Plagioclase	2	2		<0.2			Euhedral	Microlaths.
Clinopyroxene	1	1		<0.2			Euhedral to anhedral	
Olivine	0	3		<0.2			Subhedral	
Mesostasis	72	73						
Glass	8	10						
SECONDARY MINERALOGY	**PERCENT**		**SIZE (mm)**				**REPLACING / FILLING**	**COMMENTS**
			min.	**max.**	**av.**			
Saponite	2						Olivine, mesostasis, vesicles	Fibrous to granular brown-green saponite.
Feox	4						Olivine, vesicles	
Pyrite	Tr						Mesostasis, olivine	
Celadonite	1						Olivine, vesicles	
VESICLES/ CAVITIES	**PERCENT**	**LOCATION**	**SIZE (mm)**				**FILLING / MORPHOLOGY**	**COMMENTS**
			min.	**max.**	**av.**			
Vesicles	3	Even	0.1	3.3	0.6		Saponite, Feox	

COMMENTS : 0.5-1 mm vein, (fill mostly missing from TS). Some saponite remains along edges.

TS #14 U1301B-6R-2, 44-46 cm (Piece 7) **Unit:1C** **OBSERVER: RC, MS**

ROCK NAME: **Highly clinopyroxene-plagioclase phyric basalt**
WHERE SAMPLED: **Pillow interior**
GRAIN SIZE: **Cryptocrystalline**
TEXTURE: **Intersertal, glomeroporphyritic.**

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	APPROX. COMP.	MORPHOLOGY	COMMENTS
PHENOCRYSTS								
Plagioclase	5	5	0.5	2.7	1.2		Euhedral to skeletal	Occurs as laths, and mono- and bi-mineralic glomeroporphyritic clots with pyroxene.
Clinopyroxene	2	2	0.3	0.5	0.4		Subhedral to anhedral	Present as glomeroporphyritic clots associated with plagioclase laths.
GROUNDMASS								
Plagioclase	25	25		<0.5			Euhedral	Microlaths and needles.
Clinopyroxene	5	5		<0.3			Euhedral to anhedral	Occurs singly or attached to/intergrown with plagioclase.
Olivine	0	2		<0.5			Subhedral	
Mesostasis	58	59						

SECONDARY MINERALOGY	PERCENT	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	REPLACING / FILLING	COMMENTS
Saponite	5				Olivine, mesostasis, vein	Brown to green color in the vesicles and olivine phenocrysts.

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	FILLING / MORPHOLOGY	COMMENTS
Vesicles	2	Even	0.1	0.5	0.3	Saponite	

COMMENTS :

TS #15 U1301B-7R-1, 32-34 cm (Piece 5b) | **Unit:1C** | **OBSERVER: MS, RC**

ROCK NAME: Highly olivine-clinopyroxene-plagioclase phyric basalt
WHERE SAMPLED: Vein
GRAIN SIZE: Cryptocrystalline
TEXTURE: Hyalo-ophitic, glomeroporphyritic, vesiclar

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	APPROX. COMP.	MORPHOLOGY	COMMENTS
PHENOCRYSTS								
Plagioclase	5	5	0.3	1.5	1.2		Euhedral to subhedral	Occurs singly, but is more common in monomineralic, bimineralic, and polymineralic glomeroporphyritic clots with pyroxene + olivine.
Clinopyroxene	2	2	0.2	0.5	0.3		Subhedral to anhedral	Present singly, in glomeroporphyritic clots associated with plagioclase laths. One crystal shows twinning.
Olivine	0	2	0.3	1.5	0.8		Euhedral to subhedral	Completely replaced green saponite + celadonite.
GROUNDMASS								
Plagioclase	4	4		<0.3			Euhedral; lath	Microlaths and needles.
Clinopyroxene	2	2		<0.2			Euhedral to anhedral	
Olivine	0	1		<0.3			Subhedral	
Mesostasis	80	82						Includes opaque minerals.

SECONDARY MINERALOGY	PERCENT	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	REPLACING / FILLING	COMMENTS
Saponite	5				Olivine, mesostasis, vesicles	Granular green saponite.
Feox / hematite	2				Olivine, mesostasis, vesicles	
Celadonite	1				Olivine, vesicles	Occurs as pseudomorphs of olivine and filling the vesicles.
Iddingsite	Tr				Olivine	

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	FILLING / MORPHOLOGY	COMMENTS
Vesicles	2	Even	0.1	0.5	0.3	Saponite, Feox, celadonite	

COMMENTS : 0.5 mm vein, Feox and hematite along edges, saponite inside (middle missing), celadonite and Feox in halo adjacent to vein (8-mm halo).

TS #16 U1301B-7R-1, 108-110 cm (Piece 17) | **Unit:1C** | **OBSERVER: RC, MS**

ROCK NAME: Moderately clinopyroxene-olivine-plagioclase phyric basalt
WHERE SAMPLED: Pillow interior
GRAIN SIZE: Cryptocrystalline
TEXTURE: Spherulitic, hyalo-ophitic, vesicular

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	APPROX. COMP.	MORPHOLOGY	COMMENTS
PHENOCRYSTS								
Plagioclase	3	3	0.1	1	0.5		Euhedral; lath and stabby	Occurs singly, but is more common in monomineralic, bimineralic, and polymineralic glomeroporphyritic clots with pyroxene. Contains glass inclusions.
Clinopyroxene	1	1	0.1	0.5	0.3		Subhedral	Present as glomeroporphyritic clots associated with plagioclase laths.
Olivine	0	1	0.1	0.5	0.2		Euhedral	Completely replaced by brown clay minerals in the non-glass part.
GROUNDMASS								
Plagioclase	2	2		<0.1			Euhedral	Laths and needles.
Clinopyroxene	Tr	Tr		<0.1			Anbhedral	
Olivine	0	Tr		<0.1			Euhedral	
Mesostasis	89	94						Sheaf-spherulitic texture, including opaque minerals.

SECONDARY MINERALOGY	PERCENT	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	REPLACING / FILLING	COMMENTS
Saponite	2				Olivine, mesostasis, vein, vesicles	Fibrous/round.
FeO(OH) / hematite	1				Vesicles, vein	
Pyrite	Tr				Mesostasis	Present in the mesostasis.

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	FILLING / MORPHOLOGY	COMMENTS
Vesicles	2	Even	0.1	1.5	0.8	Saponite, Opaques / hematite	

COMMENTS :

TS #17 U1301B-7R-1, 130-132 cm (Piece 21)							**Unit:1C**	**OBSERVER: MS, RC**
ROCK NAME:	**Moderately clinopyroxene-olivine-plagioclase phyric basalt**							
WHERE SAMPLED:	**Pillow interior (alteration halo)**							
GRAIN SIZE:	**Cryptocrystalline**							
TEXTURE:	**Intersertal, spherulitic, hyalo-ophitic, glomeroporphyritic, vesicular**							
PRIMARY MINERALOGY	**PERCENT PRESENT**	**PERCENT ORIGINAL**	**SIZE (mm)**			**APPROX. COMP.**	**MORPHOLOGY**	**COMMENTS**
			min.	**max.**	**av.**			
PHENOCRYSTS								
Plagioclase	5	7	0.4	2.4	1.6		Euhedral	Occurs as single stubby laths.
Clinopyroxene	2	2	0.3	1.2	0.8		Euhedral to anhedral	Present as glomeroporphyritic clots associated with plagioclase laths.
Olivine	0	2	0.3	1	0.5		Euhedral	Completely replaced by brown saponite and Feox.
GROUNDMASS								
Plagioclase	27	27		<0.4			Euhedral	Laths and needles.
Clinopyroxene	5	5		<0.3			Anhedral	
Olivine	0	2		<0.3			Euhedral	
Opaque	Tr						Round	In mesostasis.
Mesostasis	56	57						Sheaf-spherulitic texture, including opaque minerals.
SECONDARY MINERALOGY	**PERCENT**		**SIZE (mm)**				**REPLACING / FILLING**	**COMMENTS**
			min.	**max.**	**av.**			
Saponite	3						Olivine, mesostasis, veins, vesicles	Fibrous/round.
Feox / hematite	2						Vesicles, vein	
Pyrite	Tr						Mesostasis	Present in the mesostasis.
VESICLES/ CAVITIES	**PERCENT**	**LOCATION**	**SIZE (mm)**				**FILLING / MORPHOLOGY**	**COMMENTS**
			min.	**max.**	**av.**			
Vesicles	1	Even	0.1	0.8	0.4		Saponite, Opaque / hematite	

COMMENTS : 4 mm green halo (greater saponite content).

TS #18 U1301B-9R-1, 11-12 cm (Piece 3)							**Unit:1C**	**OBSERVER: RC, MS**
ROCK NAME:	**Sparsely clinopyroxene-plagioclase phyric basalt**							
WHERE SAMPLED:	**Pillow interior**							
GRAIN SIZE:	**Cryptocrystalline**							
TEXTURE:	**Spherulitic, hyalo-ophitic, glomeroporphyritic, pilotaxitic, vesicular**							
PRIMARY MINERALOGY	**PERCENT PRESENT**	**PERCENT ORIGINAL**	**SIZE (mm) min.**	**max.**	**av.**	**APPROX. COMP.**	**MORPHOLOGY**	**COMMENTS**
PHENOCRYSTS								
Plagioclase	**3**	**3**	**0.5**	**2.2**	**1.8**		Euhedral	Laths plus skeletal forms; solitary crystals and in glomeroporphyritic clusters with pyroxene
Clinopyroxene	**1**	**1**	**0.5**	**1.1**	**“1**		Euhedral to anhedral	Mostly in bimineralic glomeroporphyritic clots (plagioclase + pyroxene). Some occur attached to plagioclase laths.
GROUNDMASS								
Plagioclase	**5**	**5**		**<0.5**			Euhedral	Laths and needles, pilotaxitic texture.
Clinopyroxene	**1**	**1**		**<0.5**			Euhedral to anhedral	
Olivine	**1**	**0**		**<0.5**			Euhedral	
Mesostasis	**84**	**86**						Sheaf-spherulitic texture. Contains opaque minerals.
SECONDARY MINERALOGY	**PERCENT**		**SIZE (mm) min.**	**max.**	**av.**		**REPLACING / FILLING**	**COMMENTS**
Saponite	**2**						Olivine, mesostasis, vesicles	Fibrous/round.
Feox	**1**						Olivine, vesicles	
Pyrite	**Tr**						Mesostasis	
VESICLES/ CAVITIES	**PERCENT**	**LOCATION**	**SIZE (mm) min.**	**max.**	**av.**		**FILLING / MORPHOLOGY**	**COMMENTS**
Vesicles	**2**	**Even**	**0.1**	**0.3**	**0.2**		Saponite, Feox	
COMMENTS :	Light grey alteration patch in hand specimen consists of very fine-grained mesostasis.							

TS #19 U1301B-9R-1, 56-58 cm (Piece 9) | **Unit:1C** | **OBSERVER: MS, RC**

ROCK NAME: Sparsely clinopyroxene-plagioclase phyric basalt
WHERE SAMPLED: Pillow interior
GRAIN SIZE: Cryptocrystalline
TEXTURE: Spherulitic, hyalo-ophitic, glomeroporphyritic, pilotaxitic, vesicular

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	APPROX. COMP.	MORPHOLOGY	COMMENTS
PHENOCRYSTS								
Plagioclase	3	3	0.3	2.5	1.8		Euhedral	Laths plus skeletal forms; solitary crystals and in glomeroporphyritic clusters with pyroxene.
Clinopyroxene	1	1	0.3	0.6	1		Euhedral to anhedral	Mostly in bimineralic glomeroporphyritic clots (plagioclase + pyroxene). Some occur attached to plagioclase laths.
GROUNDMASS								
Plagioclase	5	5		<0.3			Euhedral	Laths and needles, pilotaxitic texture.
Clinopyroxene	Tr	1		<0.3			Euhedral to anhedral	
Olivine	0	Tr		<0.5			Euhedral	
Mesostasis	85	87						Sheaf-spherulitic texture, including opaque minerals.

SECONDARY MINERALOGY	PERCENT	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	REPLACING / FILLING	COMMENTS
Saponite	2				Olivine, mesostasis, vesicles	Green and brown, fibrous/round.
Feox / hematite	1				Olivine, mesostasis, vesicles	

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	FILLING / MORPHOLOGY	COMMENTS
Vesicles	3	Even	0.1	1.8	0.5	Saponite, Feox	

COMMENTS : High Feox content in the alteration halo (black to brown).

TS #20 U1301B-10R-1, 58-61 cm (Piece 8b)							**Unit:1C**	**OBSERVER: RC, MS**
ROCK NAME:	**Highly olivine-clinopyroxene-plagioclase phyric basalt**							
WHERE SAMPLED:	**Vein**							
GRAIN SIZE:	**Cryptocrystalline**							
TEXTURE:	**Intersertal, glomeroporphyritic.**							
PRIMARY MINERALOGY	**PERCENT PRESENT**	**PERCENT ORIGINAL**	**SIZE (mm) min.**	**max.**	**av.**	**APPROX. COMP.**	**MORPHOLOGY**	**COMMENTS**
PHENOCRYSTS								
Plagioclase	10	10	0.5	3.6	1.2		Euhedral to skeletal	Occurs as laths and mono- and poly-mineralic glomeroporphyritic clots with olivine +pyroxene.
Clinopyroxene	3	3	0.3	1	0.4		Subhedral to anhedral	Present as glomeroporphyritic clots associated with plagioclase laths.
Olivine	0	2	0.4	1.2	0.6		Euhedral to subhedral	Completely pseudomorphed by brown saponite and Feox / hematite.
GROUNDMASS								
Plagioclase	23	23		<0.5			Euhedral	Microlaths and needles.
Clinopyroxene	7	7		<0.3			Euhedral to anhedral	Occurs singly or attached to/intergrown with plagioclase.
Olivine	0	1		<0.4			Subhedral	
Mesostasis	48	54						
SECONDARY MINERALOGY	**PERCENT**		**SIZE (mm) min.**	**max.**	**av.**		**REPLACING / FILLING**	**COMMENTS**
Saponite	4						Olivine, mesostasis, vein	Brown to green color in the vesicles and olivine phenocrysts.
Celadonite	Tr						Vesicles, veins?	
FeO(OH)	5						Olivine, vesicles, vein	
VESICLES/ CAVITIES	**PERCENT**	**LOCATION**	**SIZE (mm) min.**	**max.**	**av.**		**FILLING / MORPHOLOGY**	**COMMENTS**
Vesicles	2	Even	0.1	0.6	0.3		Saponite	

COMMENTS : 3 veins, (0.1-1 mm wide), filled with saponite, Feox, and celadonite(?).

TS #21 U1301B-11R-1, 80-82 cm (Piece 14a) | **Unit:2A** | **OBSERVER: RC, MS**

ROCK NAME: Highly olivine-clinopyroxene-plagioclase phyric basalt
WHERE SAMPLED: Massive unit
GRAIN SIZE: Cryptocrystalline
TEXTURE: Intersertal, glomeroporphyritic.

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	APPROX. COMP.	MORPHOLOGY	COMMENTS
PHENOCRYSTS								
Plagioclase	12	12	0.4	3.6	1.2		Euhedral to skeletal	Occurs as laths and mono- and poly-mineralic glomeroporphyritic clots with olivine + pyroxene.
Clinopyroxene	3	3	0.3	1	0.4		Subhedral to anhedral	Present as glomeroporphyritic clots associated with plagioclase laths.
Olivine	0	1	0.2	1.2	0.6		Euhedral to subhedral	Completely pseudomorphed by brown and green saponite.
GROUNDMASS								
Plagioclase	23	23		<0.4			Euhedral	Microlaths and needles.
Clinopyroxene	7	7		<0.3			Euhedral to anhedral	Occurs singly or attached to/intergrown with plagioclase.
Olivine	0	2		<0.2			Subhedral	
Mesostasis	48	55						

SECONDARY MINERALOGY	PERCENT	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	REPLACING / FILLING	COMMENTS
Saponite	4				Olivine, mesostasis, vein	Brown to green saponite in the vesicles and olivine phenocrysts.
Celadonite	1				Vesicles.	Present in the cores of vesicles.
Pyrite	Tr					
Oxides	5				Olivine, vesicles, vein	

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	FILLING / MORPHOLOGY	COMMENTS
Vesicles	2	Even	0.2	2.5	0.5	Saponite, celadonite	

COMMENTS :

TS #22 U1301B-12R-1, 31-33 cm (Piece 3a) — **Unit:2A** — **OBSERVER: RC, MS**

ROCK NAME: **Moderately olivine-clinopyroxene-plagioclase phyric basalt**
WHERE SAMPLED: **Vein**
GRAIN SIZE: **Microcrystalline**
TEXTURE: **Intersertal to intergranular, glomeroporphyritic.**

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	APPROX. COMP.	MORPHOLOGY	COMMENTS
PHENOCRYSTS								
Plagioclase	3.1	3.1	1	2.5	1.2		Euhedral to skeletal	Occurs singly and as mono- and poly-mineralic glomeroporphyritic clots with olivine + clinopyroxene.
Clinopyroxene	1.2	1.2	1	2	0.4		Subhedral to anhedral	Present as glomeroporphyritic clots associated with plagioclase laths.
Olivine	0	3.6	0.5	1	0.6		Euhedral to subhedral	Completely pseudomorphed by brown saponite.
GROUNDMASS								
Plagioclase	34.2	34.2		<1			Euhedral	Microlaths and needles.
Clinopyroxene	35.5	35.5		<1			Euhedral to anhedral	Occurs singly or attached to/intergrown with plagioclase.
Olivine	0	12.5		<0.5			Subhedral	
Mesostasis	4	5						
Opaque minerals	1.2	1.2						

SECONDARY MINERALOGY	PERCENT	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	REPLACING / FILLING	COMMENTS
Saponite	22				Olivine, mesostasis, vein	Brown color in the vesicles and olivine phenocrysts.
Pyrite	3				Vein	Present in the vesicle.

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	FILLING / MORPHOLOGY	COMMENTS
Vesicles	7.2	Even	0.3	1.3	0.7	Saponite	

COMMENTS : 1 mm vein consists of pyrite and saponite.

TS #23 U1301B-12R-1, 56-58 cm (Piece 3c) | **Unit:2A** | **OBSERVER: MS, RC**

ROCK NAME: **Moderately clinopyroxene-olivine-plagioclase phyric basalt**
WHERE SAMPLED: **Vein**
GRAIN SIZE: **Microcrystalline to fine grained**
TEXTURE: **Intergranular, glomeroporphyritic, seriate**

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	APPROX. COMP.	MORPHOLOGY	COMMENTS
PHENOCRYSTS								
Plagioclase	5	5	1	2.7	1.8		Euhedral to subhedral	Occurs singly and as mono- and poly-mineralic glomeroporphyritic clots with olivine + clinopyroxene.
Clinopyroxene	2	2	0.8	1.8	1.2		Subhedral to anhedral	Present as glomeroporphyritic clots associated with plagioclase laths.
Olivine	0	2	0.7	1.2	0.9		Subhedral to anhedral	Completely pseudomorphed by brown saponite.
GROUNDMASS								
Plagioclase	45	45		<1			Euhedral	Microlaths and needles.
Clinopyroxene	33	33		<0.8			Anhedral	Occurs singly or attached to/intergrown with plagioclase.
Olivine	0	10		<0.7			Subhedral	
Opaque minerals	3	3						

SECONDARY MINERALOGY	PERCENT	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	REPLACING / FILLING	COMMENTS
Saponite	13				Olivine, mesostasis, vein, vesicles	Brown color in the vesicles and olivine phenocrysts.

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	FILLING / MORPHOLOGY	COMMENTS
Vesicles	Tr	Even	0.8	1.3	1	Saponite	

COMMENTS : 0.05-0.1 mm-wide saponite filled vein.

TS #24 U1301B-14R-1, 24-26 cm (Piece 4) | **Unit:2B** | **OBSERVER: RC, MS**

ROCK NAME: Moderately olivine-clinopyroxene-plagioclase phyric basalt
WHERE SAMPLED: Massive flow
GRAIN SIZE: Cryptocrystalline
TEXTURE: Spherulitic, hyalo-ophitic, vesicular

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	APPROX. COMP.	MORPHOLOGY	COMMENTS
PHENOCRYSTS								
Plagioclase	4	4	0.5	2	1.2		Euhedral; stubby/laths	Occurs singly, but is more common in monomineralic, bimineralic, and polymineralic glomeroporphyritic clots with pyroxene. Contains glass inclusions.
Clinopyroxene	2	2	0.3	0.8	0.5		Subhedral	Present as glomeroporphyritic clots associated with plagioclase laths.
Olivine	0	1	0.3	1.2	0.7		Euhedral	Completely replaced by brown saponite.
GROUNDMASS								
Plagioclase	2	2		<0.5			Euhedral	Laths and needles.
Clinopyroxene	1	1		<0.3			Anhedral	
Olivine	0	1		<0.3			Euhedral	
Mesostasis	86	87						Sheaf-spherulitic texture, contains opaque minerals.

SECONDARY MINERALOGY	PERCENT	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	REPLACING / FILLING	COMMENTS
Saponite	2				Olivine, mesostasis, vesicles	Fibrous/round.
Iddingsite	1				Vesicles, olivine	
Pyrite	Tr				Mesostasis, vesicles	Present in the mesostasis and vesicles.

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	FILLING / MORPHOLOGY	COMMENTS
Vesicles	2	Even	0.1	1.5	0.8	Saponite, pyrite	

COMMENTS : Feox restricted to the 4 mm mixed halo - empty vesicles / saponite lined vesicles in the adjacent part of the thin section.

TS #25 U1301B-14R-1, 90-92 cm (Piece 11) | **Unit:2B** | **OBSERVER: MS, RC**

ROCK NAME: **Moderately olivine-clinopyroxene-plagioclase phyric basalt**
WHERE SAMPLED: **Flow interior**
GRAIN SIZE: **Microcrystalline**
TEXTURE: **Intersertal to intergranular, glomeroporphyritic, vesicular**

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	APPROX. COMP.	MORPHOLOGY	COMMENTS
PHENOCRYSTS								
Plagioclase	5	5	0.7	2	1.6		Euhedral	Occurs as single crystals/stubby laths.
Clinopyroxene	1	1	0.9	1.6	1.4		Euhedral to anhedral	Present as glomeroporphyritic clots associated with plagioclase laths.
Olivine	0	Tr	0.3	0.8	0.5		Euhedral	Completely replaced by brown saponite and Feox.
GROUNDMASS								
Plagioclase	30	30		<0.4			Euhedral	Laths and needles.
Clinopyroxene	32	32		<0.3			Anhedral	
Olivine	0	12		<0.3			Euhedral	
Opaque	Tr						Round	In mesostasis.
Mesostasis	20	20						Sheaf-spherulitic texture, with opaque minerals.

SECONDARY MINERALOGY	PERCENT	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	REPLACING / FILLING	COMMENTS
Saponite + celadonito?	11				Olivine, mesostasis, vesicles	Fibrous/round, brown to green saponite..
Feox / hematite	Tr				Vesicles, mesostasis	
Pyrite	Tr				Mesostasis	Present in the mesostasis.

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	FILLING / MORPHOLOGY	COMMENTS
Vesicles	5	Even	0.5	1.7	1	Saponite, opaque minerals	

COMMENTS : Disseminated micro-pyrite vein (pyrite front, bounding halo portion of slide) green clay restricted to halo area.

TS #26 U1301B-15R-1, 81-82 cm (Piece 11)							Unit:4A	OBSERVER:
ROCK NAME:	Moderately olivine-clinopyroxene-plagioclase phyric basalt							
WHERE SAMPLED:	Massive flow							
GRAIN SIZE:	Cryptocrystalline							
TEXTURE:	Intersertal, glomeroporphyritic							
PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	APPROX. COMP.	MORPHOLOGY	COMMENTS
PHENOCRYSTS								
Plagioclase	7	7	0.8	2.2	1.2		Euhedral to skeletal	Occurs as individual crystals and as monomineralic, and bimineralic glomeroporphyritic clots with clinopyroxene. Some glass inclusions present.
Clinopyroxene	3	3	0.5	1.2	0.5		Euhedral to anhedral	Present in glomeroporphyritic clots associated with plagioclase laths.
Olivine	0	2	0.5	1	0.5		Euhedral to subhedral	Completely replaced by saponite + celadonite + Feox.
GROUNDMASS								
Plagioclase	35	35		<0.8			Euhedral	
Clinopyroxene	20	20		<0.5			Euhedral to anhedral	
Olivine	0	7		<0.5			Subhedral	
Mesostasis	30	26						Includes opaque minerals.

SECONDARY MINERALOGY	PERCENT	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	REPLACING / FILLING	COMMENTS
Saponite	7				Olivine, mesostasis, vesicles, vein	Fibrous to granular brown-green saponite.
Feox + hematite	3				Olivine, mesostasis, vesicles, vein	
Celadonite	1				Olivine, mesostasis, vesicles, vein	
Pyrite	Tr				Mesostasis	

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	FILLING / MORPHOLOGY	COMMENTS
Vesicles	2	Even	0.1	1	0.5	Saponite, celadonite, Feox	

COMMENTS : 8 mm vein, which consists of Feox / hematite + green saponite + celadonite. Thick alteration halo (1 cm) developed along vein.

TS #27 U1301B-15R-1, 81-82 cm (Piece 11)							**Unit:4B**	**OBSERVER: MS, RC**
ROCK NAME:	**Moderately olivine-clinopyroxene-plagioclase phyric basalt**							
WHERE SAMPLED:	**Vein**							
GRAIN SIZE:	**Microcrystalline**							
TEXTURE:	**Intersertal to intergranular, glomeroporphyritic, vesicular**							
PRIMARY MINERALOGY	**PERCENT PRESENT**	**PERCENT ORIGINAL**	**SIZE (mm)**			**APPROX. COMP.**	**MORPHOLOGY**	**COMMENTS**
			min.	**max.**	**av.**			
PHENOCRYSTS								
Plagioclase	5	5	0.7	2.8	1.6		Euhedral to skeletal	Occurs as single crystals (stubby laths).
Clinopyroxene	5	5	0.5	0.8	1.4		Euhedral to anhedral	Present as glomeroporphyritic clots associated with plagioclase laths.
Olivine	0	1	0	0.8	0.5		Euhedral	Completely replaced by brown saponite and Feox.
GROUNDMASS								
Plagioclase	42	42		<0.7			Euhedral	Laths and needles.
Clinopyroxene	24	24		<0.5			Anhedral	
Olivine	0	2		<0.3			Euhedral to subhedral	
Opaque	Tr	Tr					Round	In mesostasis.
Mesostasis	15	21						Including opaque minerals.
SECONDARY MINERALOGY	**PERCENT**		**SIZE (mm)**				**REPLACING / FILLING**	**COMMENTS**
			min.	**max.**	**av.**			
Saponite	5						Olivine, mesostasis, vesicles	Fibrous/round, brown to green saponite..
Celadonite	1						Vesicles	
FeO(OH) / hematite	3						Vesicles, mesostasis, vein	
VESICLES/ CAVITIES	**PERCENT**	**LOCATION**	**SIZE (mm)**				**FILLING / MORPHOLOGY**	**COMMENTS**
			min.	**max.**	**av.**			
Vesicles	5	Even	0.2	2	0.7		Saponite, Feox / hematite, celadonite	

COMMENTS : 1.5-2.0 mm, irregular Feox + green clay vein with 12 mm halo (Saponite + Celadonite).

TS #28 U1301B-15R-4, 66-68 cm (Piece 6) — **Unit:4C** — **OBSERVER: MS, RC**

ROCK NAME: **Moderately olivine-clinopyroxene-plagioclase phyric basalt**
WHERE SAMPLED: **Flow interior (alteration halo)**
GRAIN SIZE: **Microcrystalline**
TEXTURE: **Intersertal to intergranular, glomeroporphyritic, vesicular**

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	APPROX. COMP.	MORPHOLOGY	COMMENTS
PHENOCRYSTS								
Plagioclase	3	3	1	1.5	1.2		Euhedral to subhedral	Some crystals have a honeycomb texture, some contain glass inclusions.
Clinopyroxene	3	3	0.4	1	0.7		Euhedral to anhedral	Present singly, in glomeroporphyritic clots associated with plagioclase lath.
Olivine	0	1	0.2	1.8	1		Euhedral to subhedral	Completely replaced by saponite.
GROUNDMASS								
Plagioclase	37	37		<1			Euhedral	Microlaths.
Clinopyroxene	20	20		<0.4			Euhedral to anhedral	
Olivine	0	Tr		<0.2			Subhedral	
Mesostasis	26	47						

SECONDARY MINERALOGY	PERCENT	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	REPLACING / FILLING	COMMENTS
Saponite	4				Olivine, mesostasis, vein	Fibrous to granular brown-green saponite.
Feox + iddingsite	7				Olivine, vesicles, vein	

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	FILLING / MORPHOLOGY	COMMENTS

COMMENTS : The alteration halo is zoned: 8 mm brown (dominantly Feox), 3 mm green (dominantly saponite). Vein (0.2 mm) cuts across halo.

TS #29 U1301B-16R-1, 8-10 cm (Piece 2)							**Unit:5**	**OBSERVER: MS, RC**
ROCK NAME:	**Moderately olivine-clinopyroxene-plagioclase phyric basalt**							
WHERE SAMPLED:	**Vein**							
GRAIN SIZE:	**Cryptocrystalline**							
TEXTURE:	**Intersertal, glomeroporphyritic, pilotaxitic/hyalopilitic**							
PRIMARY MINERALOGY	**PERCENT PRESENT**	**PERCENT ORIGINAL**	**SIZE (mm)**			**APPROX. COMP.**	**MORPHOLOGY**	**COMMENTS**
			min.	**max.**	**av.**			
PHENOCRYSTS								
Plagioclase	3	3	0.2	1.5	1.2		Euhedral to subhedral	Solitary crystals and as monomineralic and bimineralic glomeroporphyritic clots with clinopyroxene.
Clinopyroxene	3	3	0.2	0.5	0.3		Euhedral to anhedral	Present as glomeroporphyritic clots associated with plagioclase laths.
Olivine	0	1	0.2	1.8	1		Euhedral to subhedral	Completely replaced by saponite.
GROUNDMASS								
Plagioclase	20	20		<0.2			Euhedral	Microlaths.
Clinopyroxene	3	3		<0.2			Euhedral to anhedral	
Olivine	0	5		<0.2			Subhedral	
Mesostasis	63	67						

SECONDARY MINERALOGY	**PERCENT**	**SIZE (mm)**			**REPLACING / FILLING**	**COMMENTS**
		min.	**max.**	**av.**		
Saponite	4				Olivine, mesostasis, vesicles	Fibrous to granular brown-green saponite.
Feox + iddingsite	2				Olivine, mesostasis, vesicles	
Celadonite?	1					

VESICLES/ CAVITIES	**PERCENT**	**LOCATION**	**SIZE (mm)**			**FILLING / MORPHOLOGY**	**COMMENTS**
			min.	**max.**	**av.**		
Vesicles	3	Patchy	0.2	1.3	0.7		

COMMENTS : Grain size decreases across the thin section towards the glassy chilled margin, groundmass plagioclase displays a hyalopilitic texture. Green and brown saponite present in the alteration halo.

TS #30 U1301B-16R-1, 83-85 cm (Piece 13) | **Unit:5** | **OBSERVER: RC, MS**

ROCK NAME: **Moderately olivine-clinopyroxene-plagioclase phyric basalt**
WHERE SAMPLED: **Pillow interior**
GRAIN SIZE: **Cryptocrystalline**
TEXTURE: **Intersertal, glomeroporphyritic**

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	APPROX. COMP.	MORPHOLOGY	COMMENTS
PHENOCRYSTS								
Plagioclase	5.4	5.4	0.5	4.5	1.3		Euhedral to subhedral	Solitary crystals and as monomineralic and bimineralic glomeroporphyritic clots with clinopyroxene; some glass inclusions present.
Clinopyroxene	3.4	3.4	0.2	1	0.5		Euhedral to anhedral	Present as glomeroporphyritic clots associated with plagioclase laths.
Olivine	0	3	0.2	1	0.5		Euhedral to subhedral	Completely replaced by saponite.
GROUNDMASS								
Plagioclase	28.3	28.3		<0.5		s5	Euhedral	Microlath.
Clinopyroxene	19.6	19.6		<0.2			Euhedral to anhedral	
Olivine	0	5		<0.2			Subhedral	
Mesostasis	31	32.6						

SECONDARY MINERALOGY	PERCENT	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	REPLACING / FILLING	COMMENTS
Saponite	5				Olivine, mesostasis, vesicles	Fibrous to granular brown-green saponite.
Feox + iddingsite	2				Olivine, mesostasis, vesicles	
Celadonite?	4					

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	FILLING / MORPHOLOGY	COMMENTS
Vesicles	2.7	Even	0.1	1	0.5		

COMMENTS : Olivine phenocrysts and vesicles in black halos are replaced/filled by saponite and Feox.

TS #31 U1301B-18R-2, 92-94 cm (Piece 2d) | **Unit:6** | **OBSERVER: MS, RC**

ROCK NAME: Sparsely olivine-plagioclase phyric basalt
WHERE SAMPLED: Massive lava
GRAIN SIZE: Microcrystalline to fine grained
TEXTURE: Intersertal to intergranular, glomeroporphyritic

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	APPROX. COMP.	MORPHOLOGY	COMMENTS
PHENOCRYSTS								
Plagioclase	3.7	3.7	1.2	2.7	1.5		Euhedral to skeletal	Occurs singly, nomo- and bi-mineralic glomeroporphyritic clots with olivine + clinopyroxene.
Olivine	0	1.2	0.6	1.2	0.9		Subhedral to anhedral	Completely pseudomorphed by brown saponite.
GROUNDMASS								
Plagioclase	32.9	32.9		<1			Euhedral to subhedral	Present as microlaths and needles.
Clinopyroxene	31	31		<0.5			Anhedral	Occurs singly or attached to intergrown with plagioclase.
Olivine	0	17.4		<0.7			Subhedral	
Mesostasis	1	1.7						

SECONDARY MINERALOGY	PERCENT	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	REPLACING / FILLING	COMMENTS
Saponite	15				Olivine, mesostasis, vein, vesicles	Brown in color in the vesicles/replacing olivine phenocrysts.
Carbonate	2					

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	FILLING / MORPHOLOGY	COMMENTS
Vesicles	10	Even	0.3	2.7	1.5	Saponite	

COMMENTS : Vesicles generally lined with granular saponite (+/-) opaque minerals; some are filled with saponite /or empty, some filled with carbonate.

TS #32 U1301B-18R-2, 123-125 cm (Piece 2e) **Unit:6** **OBSERVER: RC, MS**

ROCK NAME: **Sparsely clinopyroxene-olivine-plagioclase phyric basalt**
WHERE SAMPLED: **Massive lava**
GRAIN SIZE: **Microcrystalline**
TEXTURE: **Intersertal to intergranular, glomeroporphyritic**

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	APPROX. COMP.	MORPHOLOGY	COMMENTS
PHENOCRYSTS								
Plagioclase	3	3	1	2.7	1.5		Euhedral to skeletal	Occurs singly, and in mono- and polymineralic glomeroporphyritic clots with olivine + clinopyroxene.
Clinopyroxene	Tr	Tr	0.5	0.8	0.7		Subhedral to anhedral	Present as glomeroporphyritic clots associated with plagioclase laths.
Olivine	0	1	0.7	1.1	0.9		Euhedral to subhedral	Completely pseudomorphed by brown or green saponite + Feox.
GROUNDMASS								
Plagioclase	50	50		<1			Euhedral to subhedral	Present as microlaths and needles.
Clinopyroxene	20	20		<0.5			Anhedral	Occurs singly or attached to/intergrown with plagioclase.
Olivine	0	14		<0.7			Euhedral to subhedral	
Mesostasis	10	10						

SECONDARY MINERALOGY	PERCENT	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	REPLACING / FILLING	COMMENTS
Saponite	8				Olivine, mesostasis, vein, vesicles	Brown in color in the vesicles and olivine phenocrysts.
Celadonite	3				Vesicles	
Feox	4				Vesicles, mesostasis	

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	FILLING / MORPHOLOGY	COMMENTS
Vesicles	2	Even	0.3	1	0.7	Saponite, Feox	

COMMENTS : Grain size changes across the thin section, but abundances of phenocrysts do not change (near the chilled margin).

TS #33 U1301B-18R-4, 17-19 cm (Piece 1a) **Unit:6** **OBSERVER: MS, RC**

ROCK NAME: **Moderately olivine-clinopyroxene-plagioclase phyric basalt**
WHERE SAMPLED: **Vein**
GRAIN SIZE: **Crypto to microcrystalline**
TEXTURE: **Intersertal to intergranular, glomeroporphyritic**

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	APPROX. COMP.	MORPHOLOGY	COMMENTS
PHENOCRYSTS								
Plagioclase	5	5	1.1	3.8	1.8		Euhedral to subhedral	Stubby laths, and in mono- and poly-mineralic glomeroporphyric clots. Pale green or brown glass inclusions in the cores of some crystals.
Clinopyroxene	2	2	0.5	1.2	0.8		Euhedral to anhedral	Occurs singly, but more frequently in glomeroporphyritic clots or associated with plagioclase laths.
Olivine	0	1	0.8	1.2	1		Euhedral to subhedral	Completely replaced by saponite.
GROUNDMASS								
Plagioclase	55	55		<1.1			Euhedral to subhedral	Laths.
Clinopyroxene	20	20		<0.5			Euhedral to anhedral	Occurs singly or attached to/intergrown with plagioclase.
Olivine	0	12		<0.8			Euhedral to subhedral	Completely replaced by saponite.
Opaque minerals	5	5						

SECONDARY MINERALOGY	PERCENT	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	REPLACING / FILLING	COMMENTS
Saponite	12				Olivine, mesostasis, vein, vesicles	Brown to brown-gray color.
Carbonate	1				Vein	

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	FILLING / MORPHOLOGY	COMMENTS
Vesicles	Tr	Even	0.1	0.3	0.2	Saponite	

COMMENTS : Veins: 0.05-0.2 mm, anastamosing saponite and carbonate veins. These microveins cut through crystals, or 'step' around them. Carbonate does not occur along the entire length of the vein. Carbonate forms a fibrous central vein fill suggesting it formed after the saponite.

TS #34 U1301B-18R-4, 66-67 cm (Piece 2a) **Unit:6** **OBSERVER: MS, RC**

ROCK NAME: **Sparsely clinopyroxene-olivine-plagioclase phyric basalt**
WHERE SAMPLED: **Massive flow margin**
GRAIN SIZE: **Crypto to microcrystalline**
TEXTURE: **Intersertal to intergranular, glomeroporphyritic**

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	APPROX. COMP.	MORPHOLOGY	COMMENTS
PHENOCRYSTS								
Plagioclase	3	3	0.7	1.7	1.2		Euhedral to subhedral	Laths and skeletal crystals, and in mono- and polymineralic glomeroporphyritic clots.
Clinopyroxene	1	1	0.5	1.2	0.8		Euhedral to anhedral	Occurs singly, but more frequently in glomeroporphyritic clots or associated with plagioclase laths.
Olivine	0	1	0.3	1.8	0.8		Euhedral to subhedral	Completely replaced by saponite.
GROUNDMASS								
Plagioclase	63	63		<0.7			Euhedral to subhedral	Laths and needles.
Clinopyroxene	17	17		<0.5			Euhedral to anhedral	Occurs singly or attached to/intergrown with plagioclase.
Olivine	0	5		<0.3			Euhedral to subhedral	Completely replaced by clay.
Mesostasis	3	5						

SECONDARY MINERALOGY	PERCENT	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	REPLACING / FILLING	COMMENTS
Saponite	15				Olivine, mesostasis	Brown to brown-gray color.

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	FILLING / MORPHOLOGY	COMMENTS
Vesicles	Tr	Even	0.2	0.3	0.25		

COMMENTS : There is a marked change of groundmass grain size, this texture is associated with quenching.

TS #35 U1301B-18R-4, 82-83 cm (Piece 3) **Unit:6** **OBSERVER: MS, RC**

ROCK NAME: **Sparsely clinopyroxene-olivine-plagioclase phyric basalt**
WHERE SAMPLED: **Vein**
GRAIN SIZE: **Crypto to microcrystalline**
TEXTURE: **Intersertal to intergranular, glomeroporphyritic**

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	APPROX. COMP.	MORPHOLOGY	COMMENTS
PHENOCRYSTS								
Plagioclase	3	3	0.3	1.7	1.2		Euhedral to subhedral	Laths and skeletal crystals, and in mono- and polymineralic glomeroporphyritic clots.
Clinopyroxene	1	1	0.2	1.2	0.8		Euhedral to anhedral	Occurs singly, but more frequently in glomeroporphyritic clots or associated with plagioclase laths.
Olivine	0	1	0.2	1.8	1		Euhedral to subhedral	Completely replaced by saponite.
GROUNDMASS								
Plagioclase	39	39		<0.3			Euhedral to subhedral	Laths and needles.
Clinopyroxene	23	23		<0.2			Euhedral to anhedral	Occurs singly or attached to/intergrown with plagioclase.
Olivine	0	15		<0.2			Euhedral to subhedral	Completely replaced by clay.
Opaque minerals	3	3						
Mesostasis	10	12						

SECONDARY MINERALOGY	PERCENT	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	REPLACING / FILLING	COMMENTS
Saponite	12				Olivine, mesostasis, vesicles	Brown to brown-gray color.
Celadonite	3				vesicles, vein	Present in the interior of vesicles and vein.
Feox+iddingsite	3				vesicles, vein, mesostasis	

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	FILLING / MORPHOLOGY	COMMENTS
Vesicles	2	Even	0.3	1.6	0.8	Saponite, celadonite, Feox	

COMMENTS : Highly altered rock, hand specimen is pale green in color. There is a significant grain size change across the thin section.

TS #36 U1301B-19R-1, 132-134 cm (Piece 19) **Unit:7A** **OBSERVER: RC, MS**

ROCK NAME: **Moderately olivine-clinopyroxene-plagioclase phyric basalt**
WHERE SAMPLED: **Pillow interior (alteration halo)**
GRAIN SIZE: **Cryptocrystalline**
TEXTURE: **Hyalo-ophytic to intersertal, glomeroporphyritic.**

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	APPROX. COMP.	MORPHOLOGY	COMMENTS
PHENOCRYSTS								
Plagioclase	1.8	1.8	1.5	3.8	1.5		Euhedral to subhedral	Occurs singly, but more commonly in monomineralic, bimineralic, and polymineralic glomeroporphyritic clots with pyroxene.
Clinopyroxene	5	5	1	2.5	1.3		Subhedral to anhedral	Normally in glomeroporphyritic clots or associated with plagioclase laths.
Olivine	0	1.6	0.8	1.5	0.6		Euhedral to subhedral	Completely replaced by green to brown saponite + Feox / iddingsite.
GROUNDMASS								
Plagioclase	29.2	29.2		<0.5			Euhedral	Laths and needles.
Clinopyroxene	10.7	10.7		<0.3			Subhedral to anhedral	Occurs singly or attached to/intergrown with plagioclase.
Olivine	0	3.8		<0.3			Euhedral to subhedral	Completely replaced by clay + Feox.
Mesostasis	26	51.6						

SECONDARY MINERALOGY	PERCENT	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	REPLACING / FILLING	COMMENTS
Saponite	5				Olivine, mesostasis, vein	Brown to green color in the vesicles and olivine phenocrysts.
Celadonite	2				Vesicles	
Hematite / Feox	5				Vesicles	

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	FILLING / MORPHOLOGY	COMMENTS
Vesicles	1.3	Even	0.1	1.9	0.6	Saponite, Feox, celadonite	

COMMENTS : Two veins are recognized in the alteration halo, and consist of saponite, hematite / Feox and celadonite. The vein composition varies along its length, with zones of: hematite /Feox; saponite+hematite /Feox; and hematite /Feox+celadonite fill.

TS #37 U1301B-21R-2, 126-128 cm (Piece 17) | **Unit:7B** | **OBSERVER: MS, RC**

ROCK NAME: Highly olivine-clinopyroxene-plagioclase phyric basalt
WHERE SAMPLED: Vein
GRAIN SIZE: Cryptocrystalline
TEXTURE: Spherulitic, hyalo-ophitic, glomeroporphyritic, pilotaxitic, vesicular

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	APPROX. COMP.	MORPHOLOGY	COMMENTS
PHENOCRYSTS								
Plagioclase	5.4	5.4	0.8	2.7	1.2		Euhedral	Stubby laths, and in mono- and poly-mineralic glomeroporphyritic clots. Pale green or brown glass inclusions in the cores.
Clinopyroxene	3.5	3.5	0.8	3.8	2		Euhedral to anhedral	Occurs singly, but more frequently in glomeroporphyritic clots or associated with plagioclase laths.
Olivine	0	2.1	0.8	1.2	1		Euhedral to subhedral	Completely replaced by saponite.
GROUNDMASS								
Plagioclase	12.7	12.7		<0.7			Euhedral to subhedral	Laths
Clinopyroxene	6.7	6.7		<0.7			Euhedral to anhedral	Occurs singly or attached to/intergrown with plagioclase.
Olivine	0	2.1		<0.7			Euhedral to subhedral	Completely replaced by saponite.
Mesostasis	52	67.5						

SECONDARY MINERALOGY	PERCENT	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	REPLACING / FILLING	COMMENTS
Saponite	15				Olivine, vesicles, vein	Brown to brown-gray color.
Zeolite?	3				Vein	

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	FILLING / MORPHOLOGY	COMMENTS
Vesicles	Tr	Even	0.1	1.2	0.2	Saponite	

COMMENTS : Anastomosing vein net of <0.1-2 mm veins, filled with spherulitic saponite.

TS #38 U1301B-21R-3, 121-123 cm (Piece 17) — **Unit:7B** — **OBSERVER: Rc, MS**

ROCK NAME: Highly olivine-clinopyroxene-plagioclase phyric basalt
WHERE SAMPLED: Pillow rim
GRAIN SIZE: Cryptocrystalline
TEXTURE: Spherulitic, hyalo-ophitic, glomeroporphyritic, vesicular

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	APPROX. COMP.	MORPHOLOGY	COMMENTS
PHENOCRYSTS								
Plagioclase	10	10	0.2	4.5	1.2		Euhedral	Laths and stubby crystals, and mono- and polymineralic glomeroporphyritic clots. Pale green or brown glass inclusions in the core
Clinopyroxene	3	3	0.2	0.5	0.8		Euhedral to anhedral	Occurs singly, but more frequently in glomeroporphyritic clots or associated with plagioclase laths.
Olivine	0	2	0.2	0.5	1		Euhedral to subhedral	Completely replaced by saponite.
GROUNDMASS								
Plagioclase	10	10		<0.2			Euhedral to subhedral	Microlaths.
Clinopyroxene	5	5		<0.2			Euhedral to anhedral	Occurs singly or attached to/intergrown with plagioclase.
Olivine	0	4		<0.2			Euhedral to subhedral	Completely replaced by saponite.
Mesostasis	63	64						

SECONDARY MINERALOGY	PERCENT	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	REPLACING / FILLING	COMMENTS
Saponite	4				Olivine, vesicles, vein	Brown to green in color.
Feox + iddingsite	1				Olivine, vesicles, vein	

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	FILLING / MORPHOLOGY	COMMENTS
Vesicles	2	Even	0.2	1	0.5	Saponite, Feox	

COMMENTS : Microvein runs through halo <0.1 mm, filled with saponite (green or brown).

TS #39 U1301B-23R-3, 21-24 cm (Piece 4) | **Unit:7B** | **OBSERVER: MS, RC**

ROCK NAME: Highly olivine-clinopyroxene-plagioclase phyric basalt
WHERE SAMPLED: Vein
GRAIN SIZE: Cryptocrystalline
TEXTURE: Hyalo-ophitic, spherulitic, glomeroporphyritic

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	APPROX. COMP.	MORPHOLOGY	COMMENTS
PHENOCRYSTS								
Plagioclase	10	10	0.2	3.3	1.4		Euhedral to subhedral	Laths and stubby crystals; occur singly and within monomineralic glomeroporphyritic clots; minor simple zoning.
Clinopyroxene	7	7	0.2	1.5	0.7		Euhedral to anhedral	Present singly and in glomeroporphyritic clots associated with plagioclase laths.
Olivine	0	3	0.2	3.2	1		Euhedral to subhedral	Completely replaced by green to pale brown saponite.
GROUNDMASS								
Plagioclase	10	10		<0.2			Euhedral	Microlaths.
Clinopyroxene	3	3		<0.2			Euhedral to anhedral	
Olivine	0	2		<0.2			Subhedral	
Mesostasis	66	67						Characterized by sheaf-spherulitic to plumose texture.

SECONDARY MINERALOGY	PERCENT	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	REPLACING / FILLING	COMMENTS
Saponite	5				Olivine, mesostasis, vesicles	Fibrous to granular brown-green saponite.
Feox	2				Olivine, vesicles	
Ceradonite	Tr				Vesicles	

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	FILLING / MORPHOLOGY	COMMENTS
Vesicles	2	Even	0.1	0.9	0.6	Saponite, Feox, celadonite	

COMMENTS :

TS #40 U1301B-23R-2, 45-47 cm (Piece 4) | **Unit:7B** | **OBSERVER: RC, MS**

ROCK NAME: Highly olivine-clinopyroxene-plagioclase phyric basalt
WHERE SAMPLED: Pillow interior
GRAIN SIZE: Cryptocrystalline to microcrystalline
TEXTURE: Hyalo-ophitic to intersertal, glomeroporphyritic

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	APPROX. COMP.	MORPHOLOGY	COMMENTS
PHENOCRYSTS								
Plagioclase	8	8	0.7	4.4	1.5		Euhedral to subhedral	Solitary crystals or within glomeroporphyritic clots. Some glass inclusions are present.
Clinopyroxene	5	5	0.6	3	0.8		Euhedral to anhedral	Present singly and in glomeroporphyritic clots associated with plagioclase laths.
Olivine	0	2	0.6	2.8	1		Euhedral to subhedral	Completely replaced by green to pale brown saponite.
GROUNDMASS								
Plagioclase	25	25		<0.7			Euhedral	Microlaths.
Clinopyroxene	12	12		<0.6			Euhedral to anhedral	
Olivine	0	3		<0.6			Subhedral	
Mesostasis	45	46						Characterized by sheaf-spherulitic to plumose texture.

SECONDARY MINERALOGY	PERCENT	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	REPLACING / FILLING	COMMENTS
Saponite	3				Olivine, mesostasis, vesicles	Fibrous to granular brown-green saponite.
Feox + iddingsite	2				Olivine, vesicles	
Celadonite	2				Vesicles	

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	FILLING / MORPHOLOGY	COMMENTS
Vesicles	2	Even	0.3	1	0.6	Saponite, Feox, celadonite	

COMMENTS : Three veins: 1. The interior of vein is missing, selvedge is saponite (0.3 mm); 2. Feox + Hematite + saponite vein (0.07 mm); 3. Feox + saponite vein.

TS #41 U1301B-24R-1, 4-6 cm (Piece 2)							Unit:7B	OBSERVER: MS, RC
ROCK NAME:	**Highly-olivine-clinopyroxene-plagioclase phyric basalt**							
WHERE SAMPLED:	**Chilled margin**							
GRAIN SIZE:	**Cryptocrystalline**							
TEXTURE:	**Glassy, hyalo-ophitic, spherulitic, glomeroporphyritic**							
PRIMARY MINERALOGY	**PERCENT PRESENT**	**PERCENT ORIGINAL**	**SIZE (mm)**			**APPROX. COMP.**	**MORPHOLOGY**	**COMMENTS**
			min.	**max.**	**av.**			
PHENOCRYSTS								
Plagioclase	7	7	0.2	4.4	1.2		Euhedral to subhedral	Single laths isolated in mesostasis and associated with small agglomerates of granular pyroxene; present as glomerocrysts.
Clinopyroxene	2	2	0.2	0.6	0.4		Euhedral to anhedral	Present singly, in glomeroporphyritic clots associated with plagioclase lath.
Olivine	0	1	0.2	0.6	0.4		Euhedral to subhedral	Fresh olivine present in fresh glass. Completely replaced by brown saponite except for fresh glass part.
GROUNDMASS								
Plagioclase	5	5		<0.2			Euhedral	Microlaths.
Clinopyroxene	4	4		<0.2			Euhedral to anhedral	
Olivine	0	3		<0.2			Subhedral	
Mesostasis	68	69						
Glass	11	12						
SECONDARY MINERALOGY	**PERCENT**		**SIZE (mm)**				**REPLACING / FILLING**	**COMMENTS**
			min.	**max.**	**av.**			
Saponite	7						Olivine, vesicles, vein	Fibrous to granular brown-green saponite.
Pyrite	Tr						Glass	
Zeorite?	Tr						Vein	Present in veins within glass part.
VESICLES/ CAVITIES	**PERCENT**	**LOCATION**	**SIZE (mm)**				**FILLING / MORPHOLOGY**	**COMMENTS**
			min.	**max.**	**av.**			
Vesicles	2	Even	0.2	1.3	0.8		Saponite	

COMMENTS : Veins associated with radial (cooling) cracks are filled with saponite.

TS #42 U1301B-25R-1, 114-117 cm (Piece 17) **Unit:7B** **OBSERVER: RC, MS**

ROCK NAME: **Moderately olivine-clinopyroxene-plagioclase phyric basalt**
WHERE SAMPLED: **Pillow interior**
GRAIN SIZE: **Cryptocrystalline**
TEXTURE: **Intersertal, spherulitic, glomeroporphyritic, vesicular**

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	APPROX. COMP.	MORPHOLOGY	COMMENTS
PHENOCRYSTS								
Plagioclase	3	3	0.3	5	1.2		Euhedral to skeletal	Occurs singly, and in mono- and poly-mineralic glomeroporphyritic clots with olivine + clinopyroxene.
Clinopyroxene	2	2	0.3	3	0.4		Subhedral to anhedral	Present as glomeroporphyritic clots associated with plagioclase laths.
Olivine	0	Tr	0.3	1.1	0.6		Euhedral to subhedral	Completely pseudomorphed by pale brown to brown saponite.
GROUNDMASS								
Plagioclase	15	15		<0.3			Euhedral	Microlaths and needles.
Clinopyroxene	10	10		<0.3			Euhedral to anhedral	Occurs singly or attached to/intergrown with plagioclase.
Olivine	0	5		<0.3			Subhedral	
Mesostasis	67	73						
Opaque minerals	2	2						

SECONDARY MINERALOGY	PERCENT	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	REPLACING / FILLING	COMMENTS
Saponite	6				Olivine, mesostasis, vein	Brown saponite in the vesicles and olivine.
Celadonite	1					
Feox	3					
Pyrite	Tr				Vein	Present in the mesostasis.

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	FILLING / MORPHOLOGY	COMMENTS
Vesicles	Tr	Even	0.3	1.3	0.7	Saponite	

COMMENTS :

TS #43 U1301B-26R-1, 41-43 cm (Piece 17) **Unit:7C** **OBSERVER: MS, RC**

ROCK NAME: **Moderately clinopyroxene-plagioclase phyric basalt**
WHERE SAMPLED: **Chilled contact**
GRAIN SIZE: **Cryptocrystalline**
TEXTURE: **Glassy, spherulitic hyalo-ophitic, glomeroporphyritic, pilotaxitic.**

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	APPROX. COMP.	MORPHOLOGY	COMMENTS
PHENOCRYSTS								
Plagioclase	1.1	1.1	1	3.3	1.3		Euhedral to subhedral	Some has honyycomb texture, glass inclusion in some crystals.
Olivine	0	1.2	0.8	1.2	0.6		Euhedral to subhedral	Completely replaced by brown saponite + Feox.
GROUNDMASS								
Plagioclase	11.7	11.7		<0.3			Euhedral	Microlaths.
Clinopyroxene	5	5		<0.3			Euhedral to anhedral	
Olivine	0	2.4		<0.3			Subhedral	
Mesostasis + glass	72	75.8						Varies from reddish-brown to gray with a massive to sheaf-spherulitic texture.

SECONDARY MINERALOGY	PERCENT	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	REPLACING / FILLING	COMMENTS
Saponite	6				Olivine, mesostasis, vesicles	Fibrous to granular brown-green saponite.
Feox	3				Olivine, vesicles, mesostasis	
Pyrite	Tr				Olivine, mesostasis	

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	FILLING / MORPHOLOGY	COMMENTS
Vesicles	2.8	Even	0.1	0.5	0.3	Saponite, Feox	

COMMENTS :

TS #44 U1301B-27R-2, 38-40 cm (Piece 6) | **Unit:7C** | **OBSERVER: RC, MS**

ROCK NAME: **Moderately olivine-clinopyroxene-plagioclase phyric basalt**
WHERE SAMPLED: **Pillow interior**
GRAIN SIZE: **Cryptocrystalline**
TEXTURE: **Intersertal to intergranular, glomeroporphyritic.**

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	APPROX. COMP.	MORPHOLOGY	COMMENTS
PHENOCRYSTS								
Plagioclase	3	3	0.3	1.2	1.2		Euhedral to skeletal	Occurs as lath, and mono- and poly-mineralic glomeroporphyritic clots with olivine + pyroxene.
Clinopyroxene	1	1	0.3	1.5	0.4		Subhedral to anhedral	Present as glomeroporphyritic clots associated with plagioclase laths.
Olivine	0	1	0.3	1	0.6		Euhedral to subhedral	Completely pseudomorphed by brown saponite.
GROUNDMASS								
Plagioclase	35	35		<0.3			Euhedral	Microlaths and needles.
Clinopyroxene	28	28		<0.3			Euhedral to anhedral	Occurs singly or attached to/intergrown with plagioclase.
Olivine	0	3		<0.3			Subhedral	
Mesostasis	25	27						

SECONDARY MINERALOGY	PERCENT	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	REPLACING / FILLING	COMMENTS
Saponite	4				Olivine, mesostasis, vein	Brown to green colored in the vesicles.
Celadonite	2				Olivine, vesicles, vein	
Feox	2				Olivine, vesicles, vein	

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	FILLING / MORPHOLOGY	COMMENTS
Vesicles	2	Even	0.1	0.5	0.3	Saponite	

COMMENTS : Alteration halo (10 mm) across corner of thin section.

TS #45 U1301B-30R-1, 2-4 cm (Piece 1)							Unit 7C	OBSERVER: MS, RC
ROCK NAME:	**Aphyric basalt**							
WHERE SAMPLED:	**Pillow interior**							
GRAIN SIZE:	**Crypto to microcrystalline**							
TEXTURE:	**Intersetal, glomeroporphyritic**							
PRIMARY MINERALOGY	**PERCENT PRESENT**	**PERCENT ORIGINAL**	**SIZE (mm) min.**	**max.**	**av.**	**APPROX. COMP.**	**MORPHOLOGY**	**COMMENTS**
PHENOCRYSTS								
GROUNDMASS								
Plagioclase	25	25		<0.5			Euhedral	Microlaths and needles.
Clinopyroxene	10	10		<0.3			Euhedral to anhedral	Occurs singly or attached to/intergrown with plagioclase.
Olivine	0	5		<0.5			Subhedral	
Mesostasis	52	56						

SECONDARY MINERALOGY	**PERCENT**	**SIZE (mm) min.**	**max.**	**av.**	**REPLACING / FILLING**	**COMMENTS**
Saponite	7				Olivine, mesostasis, vein	
Celadonite	1				Vesicles	
Feox	4				Olivine, mesostasis, vesicles, vein	
Iddingsite	1				Olivine, mesostasis	

VESICLES/ CAVITIES	**PERCENT**	**LOCATION**	**SIZE (mm) min.**	**max.**	**av.**	**FILLING / MORPHOLOGY**	**COMMENTS**
Vesicles	4	Even	0.1	0.5	0.3	Saponite	

COMMENTS : Mixed halo (green and brown); Green halo zone contains saponite, Feox and iddingsite, non-halo zone contains pale brown saponite.

TS #46 U1301B-30R-1, 103-106 cm (Piece 21) | **Unit:7C** | **OBSERVER: RC, MS**

ROCK NAME: Aphyric basalt
WHERE SAMPLED: Vein
GRAIN SIZE: Microcrystaslline
TEXTURE: Intersertal, vesicular, vugs

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	APPROX. COMP.	MORPHOLOGY	COMMENTS
PHENOCRYSTS								
GROUNDMASS								
Plagioclase	22	22		<0.5			Euhedral	Microlaths and needles.
Clinopyroxene	10	10		<0.3			Euhedral to anhedral	Occurs singly or attached to/intergrown with plagioclase.
Olivine	0	5		<0.3			Euhedral to subhedral	
Mesostasis	46	56						

SECONDARY MINERALOGY	PERCENT	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	REPLACING / FILLING	COMMENTS
Saponite	15				Olivine, mesostasis, Vesicles	Brown to green in color
Hematite/Feox	5				Olivine, mesostasis, Vesicles	
Iddingsite	2				Olivine, mesostasis, Vesicles	

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	FILLING / MORPHOLOGY	COMMENTS
Vesicles	2	Even	0.1	0.5	0.4	Saponite	
Vugs	5	Grouped	0.5	2.5	1.5	Irregular, Feox	

COMMENTS : Green saponite in halo portion, brown saponite away from vugs.

TS #47 U1301B-30R-1, 113-115 cm | **Unit:7C** | **OBSERVER: MS, RC**

ROCK NAME: Sparsely clinopyroxene-plagioclase phyric basalt
WHERE SAMPLED: Vein
GRAIN SIZE: Crypto to microcrystalline
TEXTURE: Intersertal, glomeroporphyritic pilotaxitic

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	APPROX. COMP.	MORPHOLOGY	COMMENTS
PHENOCRYSTS								
Plagioclase	2	2	0.3	1.5	1.2		Euhedral to skeletal	Occurs as laths, and in mono- and bi-mineralic glomeroporphyritic clots with pyroxene.
Clinopyroxene	2	2	0.3	0.5	0.4		Subhedral to anhedral	Present as glomeroporphyritic clots associated with plagioclase laths.
GROUNDMASS								
Plagioclase	20	20		<0.5			Euhedral	Microlaths and needles.
Clinopyroxene	7	8		<0.3			Euhedral to anhedral	Occurs singly or attached to/intergrown with plagioclase.
Olivine	0	5		<0.5			Subhedral	
Mesostasis	57	58						

SECONDARY MINERALOGY	PERCENT	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	REPLACING / FILLING	COMMENTS
Saponite	5				Olivine, mesostasis, vein	
Celadonite	2				Vesicles	
FeO(OH)	3				Olivine, mesostasis, vesicles, vein	

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	FILLING / MORPHOLOGY	COMMENTS
Vesicles	5	Even	0.1	0.5	0.3	Saponite	

COMMENTS : 0.1– <0.05 mm, branching veins. Halos die out along these microveins, and the vein fill changes in the portion of the vein with no halo: vesicle filling/olivine replacing minerals reflect this.

TS #48 U1301B-32R-1, 78-80 cm (Piece 13)							**Unit:7C**	**OBSERVER: RC, MS**
ROCK NAME:	**Highly clinopyroxene-plagioclase phyric basalt**							
WHERE SAMPLED:	**Pillow rim**							
GRAIN SIZE:	**Cryptocrystalline**							
TEXTURE:	**Hyalo-ophytic to intersertal, glomeroporphyritic, pilotaxitic**							
PRIMARY MINERALOGY	**PERCENT PRESENT**	**PERCENT ORIGINAL**	**SIZE (mm) min.**	**max.**	**av.**	**APPROX. COMP.**	**MORPHOLOGY**	**COMMENTS**
PHENOCRYSTS								
Plagioclase	3	3	0.2	1.3	1.5		Euhedral to subhedral	Occurs singly, but is more common in monomineralic, bimineralic and polymineralic glomeroporphyritic clots with pyroxene.
Clinopyroxene	1	1	0.2	1.2	1.3		Subhedral to anhedral	Present singly and in glomeroporphyritic clots or associated with plagioclase laths.
Olivine	0	Tr	0.2	0.6	0.6		Euhedral to subhedral	Completely replaced green by brown saponite + Feox / iddingsite.
GROUNDMASS								
Plagioclase	1	1		<0.2			Euhedral	Laths and needles.
Clinopyroxene	Tr	Tr		<0.2			Subhedral to anhedral	Occurs singly or attached to/intergrown with plagioclase.
Olivine	0	Tr		<0.2			Euhedral to subhedral	Completely replaced by clay + Feox.
Mesostasis	90	95						
SECONDARY MINERALOGY	**PERCENT**		**SIZE (mm) min.**	**max.**	**av.**		**REPLACING / FILLING**	**COMMENTS**
Saponite	2						Olivine, mesostasis, vein	Brown to green in color.
Hematite / Feox	3						Vesicles	
VESICLES/ CAVITIES	**PERCENT**	**LOCATION**	**SIZE (mm) min.**	**max.**	**av.**		**FILLING / MORPHOLOGY**	**COMMENTS**
Vesicles	3	Even	0.1	0.7	0.3		Saponite, Feox	
COMMENTS :	Three veins (<0.5 to 0.1 mm) filled with saponite and Feox. An Feox-rich vein is present in the alteration halo (black to gray), the weak alteration halo contains pale brown to green saponite.							

TS #49 U1301B-32R-2, 78-81 cm (Piece 9) **Unit:7C** **OBSERVER: MS, RC**

ROCK NAME: **Sparsely clinopyroxene-plagioclase phyric basalt**
WHERE SAMPLED: **Vein**
GRAIN SIZE: **Cryptocrystalline**
TEXTURE: **Glassy, hyalo-ophitic, spherulitic, glomeroporphyritic, pilotaxitic**

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	APPROX. COMP.	MORPHOLOGY	COMMENTS
PHENOCRYSTS								
Plagioclase	2	2	0.4	1.5	1.4		Euhedral to subhedral	Solitary crystals or within glomeroporphyritic clots.
Clinopyroxene	1	1	0.4	0.8	0.7		Euhedral to anhedral	Present singly, in glomeroporphyritic clots associated with plagioclase laths.
GROUNDMASS								
Plagioclase	5	5		<0.4			Euhedral	Microlaths.
Clinopyroxene	3	3		<0.4			Euhedral to anbhedral	
Olivine	0	2		<0.4			Subhedral	
Mesostasis	79	80						Changes from dark brown subvariolitic, to a orange-brown honeycomb to a yellow-brown honeycomb and finally to a light gray-brown branching texture with increasing distance from the chilled margin.
Glass	0	5						

SECONDARY MINERALOGY	PERCENT	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	REPLACING / FILLING	COMMENTS
Saponite	4				Olivine, mesostasis, vesicles	Fibrous to granular brown-green saponite.
Feox	4				Olivine, mesostasis, vesicles	
Pyrite	Tr				Mesostasis	

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	FILLING / MORPHOLOGY	COMMENTS
Vesicles	5	Even	0.1	0.6	0.4	Saponite, Feox	

COMMENTS : Radial cracks are filled by saonite (brown) + zeolite. 1.5 mm vein is filled with saponite. Glass part is completely altered.

TS #50 U1301B-33R-1, 117-119 cm (Piece 22) | **Unit:7C** | **OBSERVER: MS, RC**

ROCK NAME: Sparsely clinopyroxene-plagioclase phyric basalt
WHERE SAMPLED: Pillow interior
GRAIN SIZE: Cryptocrystalline
TEXTURE: Intersertal, spherulitic, glomeroporphyritic

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	APPROX. COMP.	MORPHOLOGY	COMMENTS
PHENOCRYSTS								
Plagioclase	2	2	0.5	2.5	1.8		Euhedral to subhedral	Occurs singly, but is more common in monomineralic and bimineralic glomeroporphyritic clots with pyroxene.
Clinopyroxene	1	1	0.3	1.4	0.8		Subhedral to anhedral	Present singly, and in glomeroporphyritic clots associated with plagioclase laths.
GROUNDMASS								
Plagioclase	20	20		<0.5			Euhedral; lath	Microlaths and needles.
Clinopyroxene	5	5		<0.3			Euhedral to anhedral	
Olivine	0	3		<0.5			Subhedral	
Mesostasis	64	68						

SECONDARY MINERALOGY	PERCENT	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	REPLACING / FILLING	COMMENTS
Saponite	10				Olivine, mesostasis, vesicles	Fibrous to granular brown-green saponite.
Feox	1				Olivine, vesicles	
Pyrite	1				Mesostasis	
Iddingsite	1				Vein	

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	FILLING / MORPHOLOGY	COMMENTS
Vesicles	1	Even	0.1	1.2	0.6	Saponite, Feox, carbnonate	

COMMENTS : Multi-halo. 5 mm brown zone adjacent to vein, 7% Feox+2% brown green saponite. 6 mm yellow zone: 7% Feox+2% green saponite+trace brown saponite. 5 mm green zone: 1% Feox, 2% brown saponite, 3% green saponite. Dark gray background alteration-7% pale tan brown saponite. Veins: In centre of brown halo, 0.1-0.2 mm Feox+ brown saponite vein, with narrow "off-shoots." 2nd 0.2 mm saponite + Feox vein.

TS #51 U1301B-34R-1, 52-54 cm (Piece 8) **Unit:7C** **OBSERVER: MS, RC**

ROCK NAME: **Sparsely clinopyroxene-plagioclase-olivine phyric basalt**
WHERE SAMPLED: **Pillow interior**
GRAIN SIZE: **Cryptocrystalline**
TEXTURE: **Hyalo-ophytic to intersertal, glomeroporphyritic, pilotaxitic**

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	APPROX. COMP.	MORPHOLOGY	COMMENTS
PHENOCRYSTS								
Plagioclase	3	3	0.2	1.4	1.5		Euhedral to subhedral	Occurs singly, but is more common in monomineralic glomeroporphyritic clots.
Clinopyroxene	1	1	0.2	0.5	1.3		Subhedral to anhedral	Mostly in bimineralic glomeroporphyritic clots (plag + px).
Olivine	0	Tr	0.2	0.3	0.6		Euhedral to subhedral	Completely replaced by saponite + Feox.
GROUNDMASS								
Plagioclase	12	12		<0.2			Euhedral	Laths and needles.
Clinopyroxene	7	7		<0.2			Subhedral to anhedral	Occurs singly or attached to/intergrown with plagioclase.
Olivine	0	2		<0.2			Euhedral to subhedral	Completely replaced by saponite + Feox.
Mesostasis	70	75						Includes opaque minerals

SECONDARY MINERALOGY	PERCENT	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	REPLACING / FILLING	COMMENTS
Saponite	7				Olivine, mesostasis	Brown to green in color.
FeO(OH)	6				Olivine, mesostasis	
Pyrite	Tr				Mesostasis	

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	FILLING / MORPHOLOGY	COMMENTS
Vesicles	3	Even	0.1	0.3	0.2	Saponite, Feox	

COMMENTS : Brown halo contains Feox, which is predominantly filling vesicles.

TS #52 U1301B-35R-2, 107-109 cm (Piece 18) **Unit:8B** **OBSERVER: MS, RC**

ROCK NAME: **Moderately clinopyroxene-olivine-plagioclase phyric basalt**
WHERE SAMPLED: **Vein**
GRAIN SIZE: **Crypto to microcrystaslline**
TEXTURE: **Hyalo-ophytic, glomeroporphyritic**

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	APPROX. COMP.	MORPHOLOGY	COMMENTS
PHENOCRYSTS								
Plagioclase	3.5	3.5	0.8	2.2	1.2		Euhedral to skeletal	Occurs as laths, and in mono- and poly-mineralic glomeroporphyritic clots with olivine + pyroxene.
Clinopyroxene	1.7	1.7	0.8	3	1.5		Subhedral to anhedral	Present as glomeroporphyritic clots associated with plagioclase laths.
Olivine	0	Tr	0.8	1.2	0.5		Euhedral to subhedral	Completely pseudomorphed by brown saponite.
GROUNDMASS								
Plagioclase	16.8	16.8		<0.4			Euhedral	Microlaths and needles.
Clinopyroxene	5.9	5.9		<0.4			Euhedral to anhedral	Occurs singly or attached to/intergrown with plagioclase.
Olivine	0	1.8		<0.3			Subhedral	Completely pseudomorphed by brown saponite.
Mesostasis	62	68.2						Characterized by sheaf-spherulitic to plumose texture.

SECONDARY MINERALOGY	PERCENT	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	REPLACING / FILLING	COMMENTS
Saponite	5				Olivine, mesostasis, vein, vesicles	
Feox	5				Olivine, mesostasis, vein, vesicles	
Pyrite	1				Mesostasis, vesicles	

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	FILLING / MORPHOLOGY	COMMENTS
Vesicles	2.1	Even	0.1	0.9	0.5	Saponite, Feox, pyrite	

COMMENTS : 1.2 mm saponite and Feox vein.

TS #53 U1301B-36R-1, 29-32 cm (Piece 4) **Unit:8C** **OBSERVER: MS, RC**

ROCK NAME: **Moderately clinopyroxene-plagioclase phyric basalt**
WHERE SAMPLED: **Vein**
GRAIN SIZE: **Cryptocrystalline**
TEXTURE: **Spherulitic hyalo-ophitic, glomeroporphyritic, vesicular**

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	APPROX. COMP.	MORPHOLOGY	COMMENTS
PHENOCRYSTS								
Plagioclase	3	3	0.2	2	1.2		Euhedral	Laths and stubby crystals, and in mono- and bimineralic gromeloporphyritic clots.
Clinopyroxene	2	2	0.2	0.8	0.4		Euhedral to subhedral	Occurs singly, but more frequently in glomeroporphyritic clots or associated with plagioclase laths.
GROUNDMASS								
Plagioclase	10	10		<0.2			Euhedral to subhedral	Microlaths.
Clinopyroxene	5	5		<0.2			Euhedral to anhedral	Occurs singly or attached to/intergrown with plagioclase.
Olivine	0	4		<0.2			Euhedral to subhedral	Completely replaced by saponite.
Mesostasis	73	74						

SECONDARY MINERALOGY	PERCENT	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	REPLACING / FILLING	COMMENTS
Saponite	5				Olivine, vesicles, vein	Brown to green in color.
Feox	Tr				Olivine, vesicles, vein	

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	FILLING / MORPHOLOGY	COMMENTS
Vesicles	2	Even	0.1	0.5	0.4	Saponite, Feox	

COMMENTS : 0.1-2 mm-wide veins, with branching 'off-shoots'. Walls of the thicker veins are lined with pale brown granular clay (saponite?), the center of veins are not preserved in the thin section. Narrower veins are filled with granular saponite, and decrease in width across the thin section.

TS #54 U1301B-36R-2, 102-104 cm (Piece 19) | **Unit:8C** | **OBSERVER: RC, MS**

ROCK NAME: **Moderately clinopyroxene-olivine-plagioclase phyric basalt**
WHERE SAMPLED: **Vein**
GRAIN SIZE: **Cryptocrystalline**
TEXTURE: **Spherulitic, hyalo-ophitic, glomeroporphyritic, vesicular**

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	APPROX. COMP.	MORPHOLOGY	COMMENTS
PHENOCRYSTS								
Plagioclase	3.6	3.6	1.2	4	2		Euhedral; lath and stabby	Occurs singly, but is more common in monomineralic, bimineralic, and polymineralic glomeroporphyritic clots with pyroxene.
Clinopyroxene	1.8	1.8	1.2	5.5	2		Subhedral	Present as glomeroporphyritic clots associated with plagioclase.
Olivine	0	0.3	0.5	0.8	0.7		Euhedral	Completely replaced by saponite and Feox/iddingsite.
GROUNDMASS								
Plagioclase	20.6	20.6		<0.5			Euhedral	Laths and needles.
Clinopyroxene	9	9		<0.3			Anhedral	
Olivine	0	3.8		<0.3			Euhedral	
Mesostasis	55	59.1						Sheaf-spherulitic texture, includes opaque minerals.

SECONDARY MINERALOGY	PERCENT	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	REPLACING / FILLING	COMMENTS
Saponite	3				Olivine, mesostasis, vesicles	Fibrous/round.
Feox	2					
Iddingsite	1				Vesicles, olivine	
Celadonite	2					

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	FILLING / MORPHOLOGY	COMMENTS
Vesicles	0.9	Even	0.1	0.3	0.2	Saponite, Feox	

COMMENTS : Pale brown and green saponite are present in the non-halo and green halo zones, respectively.

TS #55 U1301B-36R-3, 57-60 cm (Piece 10) | **Unit:8C** | **OBSERVER: MS, RC**

ROCK NAME: **Highly clinopyroxene-olivine-plagioclase phyric basalt**
WHERE SAMPLED: **Vein**
GRAIN SIZE: **Cryptocrystalline**
TEXTURE: **Spherulitic, hyalo-ophitic, glomeroporphyritic, vesicular**

PRIMARY MINERALOGY	PERCENT PRESENT	PERCENT ORIGINAL	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	APPROX. COMP.	MORPHOLOGY	COMMENTS
PHENOCRYSTS								
Plagioclase	7	7	0.5	2.2	1.2		Euhedral to subhedral	Occurs as solitary crystals and in monomineralic and bimineralic glomeroporphyritic clots with clinopyroxene; some glass inclusions present.
Clinopyroxene	5	5	0.3	1.4	0.7		Euhedral to anhedral	Occur as solitary crystals, and in glomeroporphyritic clots associated with plagioclase laths.
Olivine	0	2	0.3	0.8	0.4		Euhedral to subhedral	Completely replaced by brown saponite, celadonite, and Feox.
GROUNDMASS								
Plagioclase	15	15		<0.2			Euhedral	Microlaths.
Clinopyroxene	5	5		<0.2			Euhedral to anhedral	
Olivine	0	2		<0.2			Subhedral	
Mesostasis	55	61						Includes opaque crystals.

SECONDARY MINERALOGY	PERCENT	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	REPLACING / FILLING	COMMENTS
Saponite	7				Olivine, vesicles	Granular brown-green saponite.
Celadonite	1				Olivine, vesicles	
FeO(OH) or iddingsite	5				Olivine, vesicles	
Pyrite	Tr				Mesostasis	

VESICLES/ CAVITIES	PERCENT	LOCATION	SIZE (mm) min.	SIZE (mm) max.	SIZE (mm) av.	FILLING / MORPHOLOGY	COMMENTS
Vesicles	2	Even	0.2	0.8	0.5	Saponite, celadonite, Feox	

COMMENTS : Green halo: opaque mineral is concentrated along halo boundary.

					Rock Color/Alteration Type						Glass		Vesicles		
Core	Section	Piece no.	Top	Base	Length (cm)	Dark gray (%)	Brown (%)	Black halo (%)	Light gray (%)	Green halo (%)	Glass (%)	Altered (%)	(%)	Minerals	Comments
Hole B															
1R	1	1	0	3	3	70		30			50	50	<1	sap	
1R	1	2	4	18	14	70		30			50	50	<1	sap	
1R	1	3	18	24	6	40		50	10		15	80			
1R	1	4	28	36	8								<1		MBNU
1R	1	5	37	39	2	30	2	68					<1		
1R	1	6	41	49	8	90		10			40	50			
1R	1	7	52	56	4										
1R	1	8	57	63	6	30		70							
1R	1	9	65	70	5	50		50					2	sap, Feox	
1R	1	10	70	74	4	60		40					3	sap, Feox	
1R	1	11	75	83	8			40							MBLIN
1R	1	12	83	85	2	60							3	sap, Feox	
1R	1	13	102	103	1										
1R	1	14	105	117	12										MBSTE
1R	1	15	117	123	6	80				20			3	sap, Feox	
1R	1	16	124	134	10	40		60			2	100	3	sap, Feox	
1R	1	17	134	138	4	100					20	95	3	sap	
1R	1	18	140	144	4	40		60					3	sap, Feox	
1R	1	19	144	147	3	40		60					3	sap, Feox	
1R	2	1	0	3	3	50		50					3	sap	
1R	2	2	4	6	2	50		50					3	sap	
1R	2	3	7	12	5	50		50					3	sap	
1R	2	4	14	18	4	40		60			5	90	3	sap	
2R	1	1	0	5	5	69		25	6				3	sap, Feox	
2R	1	2	5	9	4	69		25	6				3	sap, Feox	
2R	1	3	9	12	3	69		25	6				3	sap, Feox	
2R	1	4	12	15	3	69		25	6				3	sap, Feox	
2R	1	5	16	18	2	69		25	6				3	sap, Feox	
2R	1	6	19	23	4	69		25	6				3	sap, Feox	
2R	1	7	23	30	7	69		25	6				3	sap, Feox	
2R	1	8	31	40	9	69		25	6				3	sap, Feox	
2R	1	9	40	44	4	69		25	6				3	sap, Feox	
2R	1	10	45	55	11	100					20	50	4	sap	
2R	1	11	55	72	17	60		40			2.5	80	4	sap, Feox	
2R	1	12	73	118	45	80		20					5	sap	
2R	1	13	121	127	7	20		80					5	sap	
2R	1	14	128	132	4	20		80					5	sap	
2R	1	15	134	144	10	40		60			10	50	3	sap	
2R	2	1	0	9	9										MBNU
2R	2	2	11	13	3	95		5					2	sap	
2R	2	3	14	17	3	95		5					2	sap	
2R	2	4	17	26	9	95		5					2	sap	
2R	2	5	27	29	3										CULT
2R	2	6	30	43	13	28		70	2		2.5	80	3	sap	
2R	2	7	44	50	6	67		25	8				2	sap	
2R	2	8	50	55	5	67		25	8				2	sap	
2R	2	9	57	64	8	67		25	8				2	sap	
2R	2	10	65	68	3	67		25	8				2	sap	
2R	2	11	70	73	3										
2R	2	12	75	81	6	50		50					2	sap	
2R	2	13	82	86	5	65		25	10				1	sap	
2R	2	14	87	107	20										MBLIN
2R	2	15	109	120	11	80		20			2	80	3	sap, Feox	
2R	2	16	121	128	7										MBNU
2R	2	17	129	142	13	50		50					5	sap, Feox	
2R	2	18	144	147	4	60		40					3	sap	
2R	3	1	0	8	8	75		25					2	sap	
2R	3	2	8	12	4	75		25					2	sap	
2R	3	3	12	17	5	75		25					2	sap	
2R	3	4	19	21	3	75		25					2	sap	
2R	3	5	23	33	10										MBSTE
2R	3	6	33	42	9	40		60					2	sap	
2R	3	7	43	52	9	50		50			20	50	3	sap	
2R	3	8	52	69	17	10		90			10	50	2	sap	
2R	3	9	59	61	2	10		90			10	50	2	sap	
2R	3	10	62	79	17	50		50					4	sap, Feox	
2R	3	11	81	87	6	85		15					3	sap	
2R	3	12	88	98	10	85		15					3	sap	
2R	3	13	98	101	3	85		15					3	sap	
2R	3	14	102	107	5	85		15					3	sap	
2R	3	15	108	128	20	60		40					2	sap, Feox	
2R	3	16	129	138	9	60		40			1	80	3	sap, Feox	
2R	3	17	139	150	11	60		40			1	80	3	sap, Feox	
3R	1	1	0	9	9	40		60			5	80	2	sap	
3R	1	2	10	20	10										MBNU1
3R	1	3	20	28	8	78		15	8				3	sap	
3R	1	4	29	63	34	60		40					3	sap, Feox	

					Rock Color/Alteration Type						Glass		Vesicles		
Core	Section	Piece no.	Top	Base	Length (cm)	Dark gray (%)	Brown (%)	Black halo (%)	Light gray (%)	Green halo (%)	Glass (%)	Altered (%)	(%)	Minerals	Comments
Hole B (continued)															
3R	1	5	64	69	6										MBLIN
3R	1	6	70	75	6	90		10					4	sap	
3R	1	7	76	82	6	90		10					4	sap	
3R	1	8	83	93	11	40		60			5	80	4	sap	
3R	1	9	95	99	5	70		30					4	sap, Feox	
3R	1	10	102	119	17	65		35					3	sap, Feox	
3R	1	11	120	140	20	65		35					3	sap, Feox	
3R	1	12	141	148	7	65		35					3	sap, Feox	
3R	2	1	0	8	8	40		60			3	80	2	sap, Feox	
3R	2	2	9	18	9	80		20					3	sap, Feox	
3R	2	3	19	22	3	80		20					3	sap, Feox	
3R	2	4	22	26	4	80		20					3	sap, Feox	
3R	2	5	27	54	27	60		40			10	50	3	sap, Feox	
3R	2	6	54	61	7	80		15	5				3	sap, Feox	
3R	2	7	62	73	11	50		50			5	90	3	sap, Feox	
3R	2	8	74	92	18	50		45	5		4	50	3	sap, Feox	
3R	2	9	94	97	3	50		45	5		4	50	3	sap, Feox	
3R	2	10	99	105	6	50		45	5		4	50	3	sap, Feox	
3R	2	11	106	113	7	50		45	5		4	50	3	sap, Feox	
3R	2	12	115	117	2										CULT
4R	1	1	0	4	4										MBSTE1
4R	1	2	4	11	7	71		25	4		2	50	3	sap	
4R	1	3	12	18	7	71		25	4		2	50	3	sap	
4R	1	4	18	24	6	71		25	4		2	50	3	sap	
4R	1	5	24	35	11	71		25	4		2	50	3	sap	
4R	1	6	35	44	9	71		25	4		2	50	3	sap	
4R	1	7	44	47	3	71		25	4		2	50	3	sap	
4R	1	8	48	54	7	71		25	4		2	50	3	sap	
4R	1	9	55	67	13	71		25	4		2	50	3	sap	
4R	1	10	68	77	9										MBSTE2
4R	1	11	77	84	7	40		60			10	70	3	sap	
4R	1	12	87	94	8	85		10	5				4	sap	
4R	1	13	95	100	5	85		10	5				4	sap	
4R	1	14	100	107	7	85		10	5				4	sap	
4R	1	15	108	121	14	90		10			3	50	4	sap	
4R	1	16	124	139	15	90		10					3	sap	
4R	1	17	139	144	5	90		10					3	sap	
4R	2	1	0	5	5	85		10	5				3	sap	
4R	2	2	5	9	4	85		10	5				3	sap	
4R	2	3	10	16	6	85		10	5				3	sap	
4R	2	4	17	19	2										MBSTE3
4R	2	5	20	25	5	70		20	10				3	sap, Feox	
4R	2	6	26	31	5	70		20	10				3	sap, Feox	
4R	2	7	33	36	3										CULT
4R	2	8	36	41	5	55		35	10				3	sap, Feox	
4R	2	9	42	47	5	55		35	10				3	sap, Feox	
4R	2	10	49	52	3	55		35	10				3	sap, Feox	
4R	2	11	53	56	3	55		35	10				3	sap, Feox	
4R	2	12	58	62	4	55		35	10				3	sap, Feox	
4R	2	13	54	70	16	55		35	10				3	sap, Feox	
4R	2	14	70	75	5	50		50			2	80	3	sap, Feox	
4R	2	15	78	82	4	80		20					3	sap, Feox	
4R	2	16	83	96	13	30		70			3	70	4	sap	
4R	2	17	96	101	6	77		20	3				3	sap, Feox	
4R	2	18	102	115	13	77		20	3				3	sap, Feox	
4R	2	19	116	131	16	45		50	5		2	80	3	sap, Feox	
4R	3	1	0	33	33	71		25	4		4	80	3	sap, Feox	
4R	3	2	33	46	13	71		25	4		4	80	3	sap, Feox	
4R	3	3	47	54	7										MBNU1
4R	3	4	54	61	7	60		40			1	90	4	sap, Feox	
4R	3	5	62	71	9	60		40			1	90	4	sap, Feox	
4R	3	6	72	86	14	20		80			6	50	3	sap	
4R	3	7	87	96	9	65		35					3	sap	
4R	3	8	97	104	7	65		35					3	sap	
4R	3	9	106	110	4	65		35					3	sap	
4R	3	10	110	117	7										MBNU2
4R	3	11	117	121	4	65		30	5		2	90	4	sap	
4R	3	12	122	138	16	65		30	5		2	90	4	sap	
4R	3	13	138	142	4	65		30	5		2	90	4	sap	
4R	4	1	0	14	14	70		25	5				4	sap, Feox	
4R	4	2	14	18	4	70		25	5				4	sap, Feox	
4R	4	3	19	29	10	70		25	5				4	sap, Feox	
4R	4	4	31	34	4	70		25	5				4	sap, Feox	
4R	4	5	35	41	6	70		25	5				4	sap, Feox	
4R	4	6	42	49	7	70		25	5				4	sap, Feox	
4R	4	7	50	58	8	70		25	5				4	sap, Feox	
5R	1	1	0	6	6	60		40					4	sap	
5R	1	2	7	12	6	70		30			8	80	4	sap	

					Rock Color/Alteration Type						Glass		Vesicles		
Core	Section	Piece no.	Top	Base	Length (cm)	Dark gray (%)	Brown (%)	Black halo (%)	Light gray (%)	Green halo (%)	Glass (%)	Altered (%)	(%)	Minerals	Comments
Hole B (continued)															
5R	1	3	14	23	10	75		25					1	sap, Feox	MBLIN
5R	1	4	24	31	7	72		25	3				5	sap, Feox	
5R	1	5	32	46	14	72		25	3				5	sap, Feox	
5R	1	6	47	51	4	72		25	3				5	sap, Feox	
5R	1	7	51	60	9	72		25	3				5	sap, Feox	
5R	1	8	61	73	12	70		30			5	80	3	sap, Feox	
5R	1	9	74	83	9	85		15					4	sap, Feox	
5R	1	10	83	87	4	85		15					4	sap, Feox	
5R	1	11	88	107	19	50		50			8	80	2	sap, Feox	
5R	1	12	107	123	16	60		40			15	95	2	sap, Feox	
5R	1	13	124	134	10										MBSTE1
5R	1	14	135	141	6	60		40					3	sap, Feox	
5R	1	15	142	148	6	60		40					3	sap, Feox	
5R	2	1	0	8	8	100							2	sap	
5R	2	2	9	18	9	100							2	sap	
5R	2	3	18	32	14	70		30			5	80	3	sap	
5R	2	4	33	46	13	55		40	5		10	90	4	sap, Feox	
5R	2	5	48	53	5			10	2				4	sap, Feox	Light gray rims on phenocrysts
5R	2	6	54	58	4			10	2				4	sap, Feox	
5R	2	7	59	61	2			10	2				4	sap, Feox	
5R	2	8	62	68	7			10	2				4	sap, Feox	
5R	2	9	69	80	11			10	2				4	sap, Feox	
5R	2	10	80	85	5			10	2				4	sap, Feox	
5R	2	11	86	97	12			10	2				4	sap, Feox	
5R	2	12	99	111	12			10	2				4	sap, Feox	
5R	2	13	115	114	-1	60		40			25	80	1	sap, Feox	
5R	2	14	116	119	3	60		40			25	80	1	sap, Feox	
5R	2	15	120	123	3	65		35					2	sap, Feox	
5R	2	16	124	132	8	65		35					2	sap, Feox	
5R	2	17	132	142	10	65		35					2	sap, Feox	
5R	2	18	143	149	6	65		35					2	sap, Feox	
5R	3	1	0	8	8	60		40					2	sap, Feox	
5R	3	2	8	16	8	60		40					2	sap, Feox	
5R	3	3	16	22	6	20		80			15	90	3	sap, Feox	
5R	3	4	23	27	4	88		12					3	sap	
5R	3	5	28	30	2	88		12					3	sap	
5R	3	6	31	35	4	88		12					3	sap	
5R	3	7	36	40	4	88		12					3	sap	
5R	3	8	41	48	7	88		12					3	sap	
5R	3	9	49	58	9	88		12					3	sap	
5R	3	10	59	69	10										MBNU2
5R	3	11	71	76	5	70		30					1	sap	
5R	3	12	78	80	2										CULT
5R	3	13	82	88	6	50		50			5	100	2	sap, Feox	
5R	3	14	90	94	4	65		35					3	sap, Feox	
5R	3	15	95	98	3	65		35					3	sap, Feox	
5R	3	16	99	105	6	65		35					3	sap, Feox	
5R	3	17	106	110	4	65		35					3	sap, Feox	
5R	3	18	111	114	3	65		35					3	sap, Feox	
5R	3	19	115	120	6	65		35					3	sap, Feox	
5R	3	20	121	123	2	65		35					3	sap, Feox	
5R	3	21	124	129	5	40		60			4	80	1	sap, Feox	
5R	3	22	131	136	5	80		20					3	sap, Feox	
5R	3	23	137	139	2	80		20					3	sap, Feox	
5R	3	24	140	142	2	80		20					3	sap, Feox	
5R	3	25	143	149	6	80		20					3	sap, Feox	
5R	4	1	0	3	3	55		45					2	sap	
6R	1	1	0	7	7	60		40			2	100	2	sap	
6R	1	2	7	10	3	75		25	2				2	sap, Feox	
6R	1	3	11	13	3	75		25	2				2	sap, Feox	
6R	1	4	15	19	4	75		25	2				2	sap, Feox	
6R	1	5	21	24	3	75		25	2				2	sap, Feox	
6R	1	6	27	36	9	75		25	2				2	sap, Feox	
6R	1	7	37	44	7	67		30	3		15	60	3	sap, Feox	
6R	1	8	44	52	8	67		30	3		15	60	3	sap, Feox	
6R	1	9	54	58	4	67		30	3		15	60	3	sap, Feox	
6R	1	10	60	62	2	100					1	100	3	sap	rubble
6R	1	11	63	69	6	50		50			8	90	2	sap	
6R	1	12	70	76	6	55		35	10				3	sap, Feox	
6R	1	13	77	81	4	55		35	10				3	sap, Feox	
6R	1	14	82	90	8	55		35	10				3	sap, Feox	
6R	1	15	91	97	6	55		35	10				3	sap, Feox	
6R	1	16	97	102	5	40		60			5	100	2	sap	
6R	1	17	103	108	5	50		50					1	sap	
6R	1	18	109	116	7										MBLIN1
6R	1	19	117	123	6	75		25					2	sap, Feox	
6R	1	20	124	131	7										MBLIN2
6R	1	21	133	135	2	50		50					2	sap, Feox	

					Rock Color/Alteration Type						Glass		Vesicles		
Core	Section	Piece no.	Top	Base	Length (cm)	Dark gray (%)	Brown (%)	Black halo (%)	Light gray (%)	Green halo (%)	Glass (%)	Altered (%)	(%)	Minerals	Comments
Hole B (continued)															
6R	1	22	137	141	4	50		50					2	sap, Feox	
6R	1	23	142	143	1	50		50					2	sap, Feox	
6R	2	1	0	8	8	45		50	5		1	100	2	sap	
6R	2	2	8	15	7	50		50					3	sap, Feox	
6R	2	3	15	20	5	40		60			5	100	1	sap	
6R	2	4	21	26	5	40		60			5	100	1	sap	
6R	2	5	26	32	6	10		90			20	90	1	sap	
6R	2	6	32	40	8	40		60			8	90	2	sap	
6R	2	7	40	49	9	85		10	5				1	sap	
6R	2	8	50	57	7	45		50	5		5	90	2	sap, Feox	
6R	2	9	57	63	6	45		50	5		5	90	2	sap, Feox	
6R	2	10	63	71	8	50		50					2	sap	
6R	2	11	71	73	2	50		50					2	sap	
6R	2	12	75	80	5	50		50					2	sap	
6R	2	13	82	86	4	50		50					2	sap	
6R	2	14	86	89	3	50		50					2	sap	
6R	2	15	90	96	6	20		80			2	100	2	sap, Feox	
6R	2	16	96	103	7	20		80			2	100	2	sap, Feox	
6R	2	17	103	108	5	20		80			2	100	2	sap, Feox	
6R	2	18	110	115	5										rubble
7R	1	1	0	6	6	45		50	5				2	sap, Feox	
7R	1	2	8	11	3	30		70			1	100	4	sap, Feox	
7R	1	3	12	19	8	15		50	35				2	sap, Feox	MBSTE1
7R	1	4	21	24	3	38		60	2				2	sap, Feox, cel?	
7R	1	5	26	34	8	38		60	2				2	sap, Feox, cel?	
7R	1	6	36	41	6	10		90			3	100	2	sap	
7R	1	7	43	48	6	70		30			4	90	1	sap, Feox	
7R	1	8	50	55	6	75		25					2	sap	
7R	1	9	56	60	4	75		25					2	sap	
7R	1	10	62	65	3	75		25					2	sap	
7R	1	11	66	71	5	75		25					2	sap	
7R	1	12	72	76	4	75		25					2	sap	
7R	1	13	79	83	4	75		25					2	sap	
7R	1	14	86	95	9										MBNU1
7R	1	15	96	100	4	40		30	30		8	90	1	sap, Feox	
7R	1	16	101	104	3	75		20	5				2	sap, Feox	
7R	1	17	106	111	5	75		20	5				2	sap, Feox	
7R	1	18	112	115	3	75		20	5				2	sap, Feox	
7R	1	19	116	121	5	75		20	5				2	sap, Feox	
7R	1	20	123	128	5	75		20	5				2	sap, Feox	
7R	1	21	129	134	5	75		20	5				2	sap, Feox	
7R	1	22	136	138	2	75		20	5				2	sap, Feox	
7R	1	23	139	142	3	75		20	5				2	sap, Feox	
7R	1	24	144	147	3	75		20	5				2	sap, Feox	
7R	2	1	0	7	7	60		20	20				2	sap	
8R	1	1	0	8	8	45		50	5				1	sap, Feox	
8R	1	2	9	14	5	45		50	5				1	sap, Feox	
8R	1	3	16	22	6	30		68	2		8	90	1	sap, Feox	
8R	1	4	23	30	7	45		50		5			1	sap	
8R	1	5	31	35	4	45		50		5			1	sap	
8R	1	6	36	39	3	45		50		5			1	sap	
8R	1	7	40	47	7	20		80			8	80	2	sap, Feox	
8R	1	8	49	57	8										MBCOW
8R	1	9	58	65	7	78		20	2				1	sap	
8R	1	10	67	69	2	78		20	2				1	sap	
8R	1	11	72	77	5	78		20	2				1	sap	
8R	1	12	80	84	4	78		20	2				1	sap	
9R	1	1	0	5	5	50		35	10	5			1	sap, Feox	
9R	1	2	5	9	4	50		35	10	5			1	sap, Feox	
9R	1	3	9	12	3	50		35	10	5			1	sap, Feox	
9R	1	4	12	15	3	50		35	10	5			1	sap, Feox	
9R	1	5	16	21	5	50		35	10	5			1	sap, Feox	
9R	1	6	21	25	4	50		35	10	5			1	sap, Feox	
9R	1	7	27	35	8	70		25		5	2	100			
9R	1	8	37	50	13	90		10		5			1	sap	MBLIN
9R	1	9	51	65	14	45		50	5		2	98	1	sap, Feox	
9R	1	10	66	74	8	95		5					2	sap	
9R	1	11	75	79	4	40		30	30		75	80	1	sap	
10R	1	1	0	4	4	30		50	20		0	0	<1	sap, Feox	
10R	1	2	6	11	5	30		50	20		0	0	<1	sap, Feox	
10R	1	3	12	17	5	30		50	20		0	0	<1	sap, Feox	
10R	1	4	19	21	2	40		60			1	100	<1	sap	
10R	1	5	22	29	7	20	5	75			10	50	1	sap, Feox	
10R	1	6	31	50	19	35		60	5		0		3	sap, Feox, cel?	
10R	1	7	51	56	5	25	5	65		5	0		2	sap, Feox	Nice Halos
10R	1	8	57	64	7	25	5	65		5	0		2	sap, Feox	
10R	1	9	66	70	4	25	5	65		5	0		2	sap, Feox	
10R	1	10	71	82	11	25	5	65		5	0		2	sap, Feox	

					Rock Color/Alteration Type						Glass		Vesicles		
Core	Section	Piece no.	Top	Base	Length (cm)	Dark gray (%)	Brown (%)	Black halo (%)	Light gray (%)	Green halo (%)	Glass (%)	Altered (%)	(%)	Minerals	Comments
Hole B (continued)															
10R	1	11	85	96	11	40		50	10		0		2	sap, Feox	Nice Halos. Chill Margin?
10R	1	12	98	106	8	95		5			0		1	sap	
10R	1	13	107	114	7	20		80			8	80	1	sap	
10R	1	14	115	120	5	40		60			10	50	1	sap	
10R	1	15	122	128	6										MBSTE1
10R	1	16	128	136	8	60		30	10		2	100	3	sap, Feox	
10R	1	17	138	145	7										MBNU1
10R	2	1	0	3	3	55		40	5		0		<1	sap	
10R	2	2	5	13	8	40		60			2	50	2	sap, Feox	
10R	2	3	15	18	3	45		50	5		0		2	sap, Feox	
10R	2	4	19	24	5	45		50	5		0		2	sap, Feox	
10R	2	5	25	29	4	50		50			1	10	<1	sap	
10R	2	6	31	37	6	70		30			0		2	sap	
10R	2	7	39	44	5	55		40	5		0		3	sap, Feox	
10R	2	8	45	48	3	55		40	5		0		3	sap, Feox	
10R	2	9	50	53	3	55		40	5		0		3	sap, Feox	
10R	2	10	54	66	12	55		40	5		0		3	sap, Feox	
10R	2	11	62	70	8	60		35	5		4	90	2	sap, Feox	
10R	2	12	71	76	5	45		50	5		0		3	sap, Feox	
10R	2	13	78	80	2	45		50	5		0		3	sap, Feox	
10R	2	14	83	86	3	45		50	5		0		3	sap, Feox	
10R	2	15	87	91	4	45		50	5		0		3	sap, Feox	
10R	2	16	92	99	7	45		50	5		0		3	sap, Feox	
10R	2	17	102	109	7	45		50	5		0		3	sap, Feox	
10R	2	18	112	118	6										rubble
10R	2	19	121	124	3	70		20	10		0		<1	sap	
10R	2	20	126	132	6	30		70			1	100	1	sap, Feox	large vesicles
11R	1	1	0	7	7	80		20			0		<1	sap, Feox	(MBLIN1)
11R	1	2	8	23	15	80		20			0		<1	sap, Feox	
11R	1	3	14	28	14	100					40	50	<1	sap, Feox	(MBLIN1)
11R	1	4	28	33	5										MBLIN2
11R	1	5	34	37	3	48		50	2		0		<1	sap, Feox	
11R	1	6	39	41	2										CULT
11R	1	7	41	46	5			100			8	80	1	sap, Feox	
11R	1	8	46	49	3	80		20			0		<1	sap, Feox	
11R	1	9	49	51	2	80		20			0		<1	sap, Feox	
11R	1	10	53	57	4	80		20			0		<1	sap, Feox	
11R	1	11	57	61	4			100			15	80	1		
11R	1	12	62	72	10	50		50			8	80	2	sap, Feox	
11R	1	13	73	76	3	100					0		6	sap, Feox, py	
11R	1	14	77	132	55	100					0		6	sap, Feox, py	
12R	1	1	0	6	6	50		50			0		1	sap, Feox	
12R	1	2	7	24	17										MBCOW
12R	1	3	25	113	88	100					0		5	sap, pyr	
13R	1	1	0	4	4	70		30					<1	sap, Feox	
13R	1	2	5	7	2	70		30					<1	sap, Feox	
13R	1	3	8	18	10	100							2	sap, pyr	
13R	1	4	19	32	13	100							2	sap, pyr	
13R	1	5	33	99	62	100							2	sap, pyr	
13R	1	6	101	105	4	100							2	sap, pyr	
13R	1	7	106	129	23	100							2	sap, pyr	
13R	1	8	131	143	12										MBNU1
13R	2	1	1	10	9	55	5	40					2	sap, Feox	
13R	2	2	11	19	8	40		60			5	70	2	sap, Feox, cel	
13R	2	3	21	25	4	30		65	5				1	sap, Feox	
13R	2	4	26	29	3	30		65	5				1	sap, Feox	
13R	2	5	30	33	3	30		65	5				1	sap, Feox	
13R	2	6	34	40	6	30		65	5				1	sap, Feox	
13R	2	7	41	46	5	30		65	5				1	sap, Feox	
14R	1	1	1	5	4	20		40	40				1	sap, Feox	
14R	1	2	8	13	5										MBLIN1
14R	1	3	15	21	6										MBSTE1
14R	1	4	22	28	6	80		20					5	sap, Feox, cel?	
14R	1	5	30	34	4	80		20					5	sap, Feox, cel?	
14R	1	6	36	41	5	80		20					5	sap, Feox, cel?	
14R	1	7	42	49	7	50				50			6	sap, Feox, cel?, empty	
14R	1	8	50	56	6	50				50			6	sap, Feox, cel?, empty	
14R	1	9	57	65	8	50				50			6	sap, Feox, cel?, empty	
14R	1	10	67	78	11	95				5			5	sap, Feox, pyr, CO3	
14R	1	11	79	95	16	95				5			5	sap, Feox, pyr, CO3	
14R	1	12	96	110	14	95				5			5	sap, Feox, pyr, CO3	
14R	1	13	112	116	4	60		40					1	sap, Feox	
14R	1	14	118	121	3	60		40					1	sap, Feox	
14R	1	15	123	127	4	60		40					1	sap, Feox	
14R	1	16	130	136	6	50		50			4	90	2	sap, Feox	
14R	1	17	139	148	9	40		60					4		

					Rock Color/Alteration Type						Glass		Vesicles		
Core	Section	Piece no.	Top	Base	Length (cm)	Dark gray (%)	Brown (%)	Black halo (%)	Light gray (%)	Green halo (%)	Glass (%)	Altered (%)	(%)	Minerals	Comments
Hole B (continued)															
14R	2	1	1	6	5	70		30					<1	sap	CULT
14R	2	2	7	17	10										MBLIN2
14R	2	3	17	24	7	75		25					<1	sap	
14R	2	4	26	31	5						2	90		sap, Feox	
14R	2	5	34	37	3	60		30		10			2	sap, Feox	
14R	2	6	39	42	3	60		30		10			2	sap, Feox	
14R	2	7	44	47	3	60		30		10			2	sap, Feox	Fe = weathered pyr
15R	1	1	0	7	7	75	25				3	90	5	sap, Feox	
15R	1	2	9	18	9	45		35	20				<1	sap, Feox	
15R	1	3	19	26	7	45		35	20				<1	sap, Feox	
15R	1	4	27	33	6	45		35	20				<1	sap, Feox	
15R	1	5	35	40	5			100			15	70	1	sap, Feox	
15R	1	6	41	48	7	50		50					<1	sap, Feox	
15R	1	7	49	53	4	10		90			5	40	<1	sap, Feox	
15R	1	8	56	60	4	40		60					<1	sap, Feox	
15R	1	9	62	66	4	60		10	10	20			<1	sap, Feox	
15R	1	10	69	78	9	60		10	10	20			<1	sap, Feox	
15R	1	11	80	97	17	60		10	10	20			<1	sap, Feox	
15R	1	12	99	105	6	23		75	2		8	50	1	sap, Feox	
15R	1	13	106	117	11	50	5	40		5			7	sap, Feox	vesicles with geopetal fill.
15R	1	14	118	127	9	50	5	40		5			7	sap, Feox	vesicles with geopetal fill.
15R	1	15	129	136	7	50	5	40		5			7	sap, Feox	vesicles with geopetal fill.
15R	1	16	139	147	8	50	5	40		5			7	sap, Feox	vesicles with geopetal fill.
15R	2	1	0	12	12	95				5			5	sap, Feox, pyr	vesicles at top
15R	2	2	13	52	39	95				5			5	sap, Feox, pyr	vesicles at top
15R	2	3	54	72	18	88		10	2				3	sap, Feox, pyr	
15R	2	4	75	97	22	88		10	2				3	sap, Feox, pyr	
15R	2	5	99	105	6	88		10	2				3	sap, Feox, pyr	
15R	2	6	107	119	12	88		10	2				3	sap, Feox, pyr	
15R	2	7	120	129	9	88		10	2				3	sap, Feox, pyr	
15R	2	8	131	137	6	88		10	2				3	sap, Feox, pyr	
15R	2	9	138	144	6	88		10	2				3	sap, Feox, pyr	
15R	2	10	146	148	2	88		10	2				3	sap, Feox, pyr	
15R	3	1	0	5	5	93	1	4	2				<1	sap, Feox, pyr	
15R	3	2	8	18	10	93	1	4	2				<1	sap, Feox, pyr	
15R	3	3	19	28	9	93	1	4	2				<1	sap, Feox, pyr	
15R	3	4	29	35	6	93	1	4	2				<1	sap, Feox, pyr	
15R	3	5	36	47	11	93	1	4	2				<1	sap, Feox, pyr	
15R	3	6	49	55	6	93	1	4	2				<1	sap, Feox, pyr	
15R	3	7	58	73	15	93	1	4	2				<1	sap, Feox, pyr	
15R	3	8	75	98	23	93	1	4	2				<1	sap, Feox, pyr	
15R	3	9	100	127	27	83		15	2				1	sap, Feox	
15R	3	10	129	137	8	83		15	2				1	sap, Feox	
15R	3	11	139	146	7	83		15	2				1	sap, Feox	
15R	3	1	0	10	10	38		60	2		8	50	2	sap, Feox	
15R	3	2	12	23	11	90		10					2	sap, Feox	
15R	3	3	24	37	13	90		10					2	sap, Feox	
15R	3	4	38	46	8	78	2	20					<1	sap, Feox	
15R	3	5	48	61	13	78	2	20					<1	sap, Feox	
15R	3	6	63	72	9	60				40			1	sap, Feox	
15R	3	7	74	81	7	60				40			1	sap, Feox	
15R	3	8	83	98	15	90		10					2	sap, Feox, pyr	
15R	3	9	100	107	7	90		10					2	sap, Feox, pyr	
15R	3	10	109	119	10	90		10					2	sap, Feox, pyr	
15R	3	11	121	132	11	90		10					2	sap, Feox, pyr	
15R	3	12	133	146	13	90		10					2	sap, Feox, pyr	
15R	5	1	0	7	7	58		30	2						
15R	5	2	8	12	4	58		30	2						
15R	5	3	13	22	9	30		69	1		3	90			
15R	5	4	23	29	6	40		60					<1	sap, Feox, cel?	
16R	1	1	1	4	3	69		30	1				<1	sap, Feox	
16R	1	2	5	12	7	69		30	1				<1	sap, Feox	
16R	1	3	13	17	4	69		30	1				<1	sap, Feox	
16R	1	4	18	26	8	69		30	1				<1	sap, Feox	
16R	1	5	26	28	2	69		30	1				<1	sap, Feox	
16R	1	6	29	36	7	40		60			2	100	1	sap	
16R	1	7	37	45	8	40		60			2	100	1	sap	
16R	1	8	45	49	4	40		60			2	100	1	sap	
16R	1	9	50	62	12	50		50					<1	sap	MBNU1
16R	1	10	62	67	5	30		70			1	100	<1	sap	
16R	1	11	67	70	3	30		70					<1	sap	
16R	1	12	71	77	6	50		50			1	100	<1	sap, Feox	
16R	1	13	77	87	10	80		20					2	sap, Feox	
16R	1	14	88	91	3	80		20					2	sap, Feox	
16R	1	15	93	98	5	80		20					2	sap, Feox	
16R	1	16	97	101	4	80		20					2	sap, Feox	
16R	1	17	102	111	9	15		70	15		5	100	1	sap, Feox	
16R	1	18	112	115	3			70	30		2	100	<1	sap, Feox	

					Rock Color/Alteration Type						Glass		Vesicles		
Core	Section	Piece no.	Top	Base	Length (cm)	Dark gray (%)	Brown (%)	Black halo (%)	Light gray (%)	Green halo (%)	Glass (%)	Altered (%)	(%)	Minerals	Comments
Hole B (continued)															
16R	1	19	116	120	4	30		70			1	100	<1	sap	
16R	1	20	121	125	4	55		45					<1	sap	
16R	1	21	125	128	3	55		45					<1	sap	
16R	1	22	130	136	6	55		45					<1	sap	
16R	1	23	142	149	7	60		40			1	100	<1	sap, Feox	
17R	1	1	0	8	8	50		50					<1	sap, Feox	
17R	1	2	8	9	1	50		50					<1	sap, Feox	
17R	1	3	12	15	3										CULT
17R	1	4	15	17	2			100			5	95	1	sap, Feox	
17R	1	5	18	19	1	75		24		1			1	sap	
17R	1	6	21	24	3	75		24		1			1	sap	
17R	1	7	26	36	10	75		24		1			1	sap	
17R	1	8	37	38	1	75		24		1			1	sap	
17R	1	9	40	43	3	75		24		1			1	sap	
17R	1	10	44	51	7	75		24		1			1	sap	
17R	1	11	51	54	3	75		24		1			1	sap	
17R	1	12	56	61	5	75		24		1			1	sap	
17R	1	13	61	63	2	75		24		1			1	sap	
17R	1	14	66	72	6										MBLIN1
17R	1	15	72	80	8	70		30					1	sap, Feox	
17R	1	16	81	87	6			100					2	sap, Feox	
17R	1	17	90	97	7										MBLIN2
18R	1	1	0	5	5	20		80			1	99	<1	sap	
18R	1	2	7	9	2	60	5	35					1	sap, Feox	
18R	1	3	11	13	2	60	5	35					1	sap, Feox	
18R	1	4	15	18	3	60	5	35					1	sap, Feox	
18R	1	5	20	21	1	60	5	35					1	sap, Feox	
18R	1	6	23	28	5	60	5	35					1	sap, Feox	
18R	1	7	30	43	13	94	1	5					5	sap, Feox, pyr	
18R	1	8	44	48	4	94	1	5					5	sap, Feox, pyr	
18R	1	9	50	61	11	94	1	5					5	sap, Feox, pyr	
18R	1	10	62	73	11	94	1	5					5	sap, Feox, pyr	
18R	1	11	74	93	19	94	1	5					5	sap, Feox, pyr	
18R	1	12	95	111	16	94	1	5					5	sap, Feox, pyr	
18R	1	13	113	130	17	94	1	5					5	sap, Feox, pyr	
18R	2	1	1	50	49	100							5	sap, pyr, CO3	
18R	2	2	53	125	72	96							10	sap, pyr, CO3	
18R	3	1	0	30	30	95				5			3	sap, CO3?	
18R	3	2	31	125	94	85	1			14			2	sap	
18R	3	3	126	130	4	85	1			14			2	sap	
18R	4	1	0	62	62	100							1	sap	
18R	4	2	64	76	12	90				10			<1	sap	
18R	4	3	80	87	7										MBCOW
18R	4	4	89	98	9										MBSTE1
18R	4	5	98	103	5	75		25					<1	sap	
18R	4	6	105	125	20	20		70	10		5	50	1	sap, Feox	
18R	4	7	126	143	17	20		70	10		5	50	1	sap, Feox	
18R	5	1	0	15	15	20		75	5		1	90			
19R	1	1	0	6	6	20		75	5				<1	sap, Feox	
19R	1	2	8	10	2	20		75	5				<1	sap, Feox	
19R	1	3	13	15	2	20		75	5				<1	sap, Feox	
19R	1	4	18	25	7			100			10	50	1	sap, Feox	
19R	1	5	27	40	13	65		35			6	50	1	sap, Feox	
19R	1	6	42	55	13	70		25	5				1	sap, Feox	
19R	1	7	55	57	2	70		25	5				1	sap, Feox	
19R	1	8	60	62	2	70		25	5				1	sap, Feox	
19R	1	9	65	71	6	70		25	5				1	sap, Feox	
19R	1	10	72	75	3	70		25	5				1	sap, Feox	
19R	1	11	77	79	2	70		25	5				1	sap, Feox	
19R	1	12	82	89	7	70		25	5				1	sap, Feox	
19R	1	13	90	93	3	70		25	5				1	sap, Feox	
19R	1	14	95	100	5	70		25	5				1	sap, Feox	
19R	1	15	102	108	6	70		25	5				1	sap, Feox	
19R	1	16	110	119	9	100					10	80			
19R	1	17	118	123	5	52		45	1	2			1	sap, Feox	
19R	1	18	124	131	7	52		45	1	2			1	sap, Feox	
19R	1	19	132	136	4	52		45	1	2			1	sap, Feox	
19R	1	20	137	139	2	52		45	1	2			1	sap, Feox	
19R	1	21	140	146	6	52		45	1	2			1	sap, Feox	
19R	2	1	0	3	3	100					1	100	<1	sap, Feox	
19R	2	2	5	9	4	30		70					1	sap, Feox	
19R	2	3	11	11	0										MBNU1
19R	2	4	19	22	3	10		90			5	100	1	sap	
19R	2	4	25	31	6	50		50					<1	sap, Feox	
19R	2	5	33	38	5	50		50					<1	sap, Feox	
19R	2	7	40	44	4	20		80			1	100	2	sap, Feox	
19R	2	8	47	53	6	30		70					1	sap, Feox	
19R	2	9	55	62	7	40		60			1	100	2	sap, Feox	

					Rock Color/Alteration Type						Glass		Vesicles		
Core	Section	Piece no.	Top	Base	Length (cm)	Dark gray (%)	Brown (%)	Black halo (%)	Light gray (%)	Green halo (%)	Glass (%)	Altered (%)	(%)	Minerals	Comments
Hole B (continued)															
19R	2	10	63	68	5	45		50	5				1	sap, Feox	
19R	2	11	70	74	4	45		50	5				1	sap, Feox	
19R	2	12	76	78	2	45		50	5				1	sap, Feox	
20R	1	1	0	4	4			100					2	sap	
20R	1	2	5	8	3										MBLIN1
20R	1	3	8	13	5	15		85			2	100	1	sap, Feox	
20R	1	4	13	23	10	45		53	2						
20R	1	5	25	27	2	45		53	2						
20R	1	6	30	34	4	45		53	2						
20R	1	7	36	39	3	45		53	2						
20R	1	8	40	42	2	45		53	2						
20R	1	9	44	51	7	9		90	1		3	80	1	sap	
20R	1	10	52	60	8										MBLIN2
20R	1	11	60	65	5	40		60					2	sap, Feox	
20R	1	12	67	77	10	30		70			10	50	2	sap, Feox	
20R	1	13	78	84	6	50		50					1	sap, Feox	
20R	1	14	85	91	6	20		80			10	90	1	sap, Feox	
20R	1	15	92	96	4	85		15					1	sap, Feox	
20R	1	16	97	100	3	85		15					1	sap, Feox	
20R	1	17	101	104	3	85		15					1	sap, Feox	
20R	1	18	106	112	6	85		15					1	sap, Feox	
20R	1	19	113	120	7	85		15					1	sap, Feox	
20R	1	20	121	125	4	85		15					1	sap, Feox	
21R	1	1	0	6	6	19		80	1				1	sap, Feox	
21R	1	2	7	11	4	10		90			3	100	2	sap, Feox	
21R	1	3	13	15	2			100					1	sap	
21R	1	4	17	20	3	45		55			3	90	1	sap	
21R	1	5	22	29	7	45		55			3	90	1	sap	
21R	1	6	31	34	3			10	3				1	sap, Feox	
21R	1	7	36	40	4			10	3				1	sap, Feox	
21R	1	8	42	46	4			10	3				1	sap, Feox	
21R	1	9	48	51	3			10	3				1	sap, Feox	
21R	1	10	53	64	11			10	3				1	sap, Feox	
21R	1	11	65	69	4			10	3				1	sap, Feox	
21R	1	12	71	76	5		10	80		0			<1	sap, pyr, cel	
21R	1	13	78	128	50	100							<1	sap, pyr	vugs with clay and pyr
21R	1	14	129	133	4	100							<1	sap, pyr	vugs with clay and pyr
21R	2	1	0	18	18	50		48	2		5	90			
21R	2	2	19	23	4	40		60					<1	sap, Feox	
21R	2	3	26	32	6	40		60					<1	sap, Feox	
21R	2	4	34	39	5	40		60					<1	sap, Feox	
21R	2	5	40	47	7	50		50			5	90	<1	sap, Feox	
21R	2	6	48	53	5	50		50			5	90	<1	sap, Feox	
21R	2	7	54	57	3	30		70					1	sap, Feox	
21R	2	8	58	65	7	30		70					1	sap, Feox	
21R	2	9	66	76	10	30		70					1	sap, Feox	
21R	2	10	78	83	5	35		65					2	sap, Feox	
21R	2	11	84	86	2	35		65					2	sap, Feox	
21R	2	12	90	95	5	35		65					2	sap, Feox	
21R	2	13	97	107	10	35		65					2	sap, Feox	
21R	2	14	108	112	4	35		65					2	sap, Feox	
21R	2	14	112	114	2	35		65					2	sap, Feox	
21R	2	16	117	123	6	35		65					2	sap, Feox	
21R	2	17	124	129	5	100					2	100	1	sap	
21R	2	18	130	143	13	30		70					2	sap, Feox	
21R	3	1	0	3	3	40		60					<1	sap, Feox	
21R	3	2	7	11	4	40		60			5	90	<1	sap, Feox	
21R	3	3	12	15	3			100			10	90	1	sap	
21R	3	4	18	24	6	45		45	10					sap, Feox	
21R	3	5	26	30	4	45		45	10					sap, Feox	
21R	3	6	32	50	18	35		65			10	90	1	sap, Feox	
21R	3	7	51	60	9	60		30	10				2	sap, Feox	
21R	3	8	62	64	2	60		30	10				2	sap, Feox	
21R	3	9	66	70	4	60		30	10				2	sap, Feox	
21R	3	11	71	78	7	5		95			5	90	2	sap, Feox	
21R	3	11	80	85	5	5		95			5	90	2	sap, Feox	
21R	3	12	87	89	2	50		50					2	sap, Feox	
21R	3	13	92	95	3	50		50					2	sap, Feox	
21R	3	14	99	103	4	10		90			5	90	2	sap, Feox	
21R	3	15	104	106	2	50		50					<1	sap	
21R	3	16	109	115	6	55		40	5		4	90	1	sap, Feox	
21R	3	17	117	127	10	60		40			8	90	1	sap, Feox	
21R	3	18	128	134	6	70		30					3	sap, Feox	
21R	3	19	136	139	3	70		30					3	sap, Feox	
21R	3	20	140	146	6	10		90			10	80	1	sap, Feox	
21R	4	1	0	9	9	20		80			10	80	2	sap, Feox	
21R	4	2	10	18	8	10		90			4	90	1	sap, Feox	
21R	4	3	19	22	3	10		90					1	sap, Feox	

					Rock Color/Alteration Type						Glass		Vesicles		
Core	Section	Piece no.	Top	Base	Length (cm)	Dark gray (%)	Brown (%)	Black halo (%)	Light gray (%)	Green halo (%)	Glass (%)	Altered (%)	(%)	Minerals	Comments
Hole B (continued)															
21R	4	4	24	31	7	10		90					1	sap, Feox	
21R	4	5	32	36	4	10		90					1	sap, Feox	
21R	4	6	38	42	4	10		90					1	sap, Feox	
21R	4	7	44	51	7	10		90					1	sap, Feox	
21R	4	8	53	56	3	10		90					1	sap, Feox	
21R	4	9	60	68	8	10		90					1	sap, Feox	
21R	4	10	69	81	12	10		90					1	sap, Feox	
22R	1	1	0	5	5										MBNU1
22R	1	2	7	9	2										RUBBLE
22R	1	3	11	17	6	100							1	sap	
22R	1	4	19	30	11	5		90	5				2	sap, Feox	
22R	1	5	32	37	5			100					1	sap	
22R	1	6	39	43	4	75		25					1	sap, Feox, cel?	
22R	1	7	46	62	16	75		25					1	sap, Feox, cel?	
22R	1	8	63	72	9										MBNU2
22R	1	9	72	75	3			90	10				<1	sap, Feox	
22R	1	10	76	83	7			90	10				<1	sap, Feox	
22R	1	11	83	90	7	30		70					1	sap	
22R	1	12	92	100	8	25		75					1	sap, Feox	
22R	1	13	101	119	18	25		75					1	sap, Feox	
22R	1	14	120	135	15	45		50	5				1	sap, Feox	
22R	1	15	137	141	4	30		70					1	sap, Feox	
22R	2	1	0	11	11	88		10	2				2	sap, Feox	
22R	2	2	12	15	3	88		10	2				2	sap, Feox	
22R	2	3	17	30	13	88		10	2				2	sap, Feox	
22R	2	4	32	34	2	5		95			2	80	1	sap, Feox	
22R	2	5	37	43	6	5		95			2	80	1	sap, Feox	
22R	2	6	44	54	10	20		77	3		8	90	<1	sap, Feox	
22R	2	7	56	65	9	58		40	2				1	sap, Feox	
22R	2	8	67	72	5	58		40	2				1	sap, Feox	
22R	2	9	74	77	3	58		40	2				1	sap, Feox	
22R	2	10	80	84	4			100			15	100	<1		
23R	1	1	0	7	7	9		10					2	sap, Feox	
23R	1	2	8	14	6	9		10					2	sap, Feox	
23R	1	3	14	22	8	9		10					2	sap, Feox	
23R	1	4	22	25	3	9		10					2	sap, Feox	
23R	1	5	26	35	9	9		10					2	sap, Feox	
23R	1	6	35	40	5	9		10					2	sap, Feox	
23R	1	7	40	47	7										MBLIN1
23R	1	8	47	54	7	30		70			5	100	1	sap, Feox	
23R	1	9	55	59	4	60		40					2	sap, Feox	halo greenish
23R	1	10	62	70	8	60		40					2	sap, Feox	halo greenish
23R	1	11	70	73	3	60		40					2	sap, Feox	halo greenish
23R	1	12	73	80	7										MBNU
23R	1	13	80	83	3	75		25					1	sap, Feox, pyr	
23R	1	14	85	88	3	75		25					1	sap, Feox, pyr	
23R	1	15	88	102	14	49		49	2		10	50	1	sap, Feox	
23R	1	16	103	106	3	45		50	5				1	sap, Feox	
23R	1	17	109	114	5	45		50	5				1	sap, Feox	
23R	1	18	115	119	4	45		50	5				1	sap, Feox	
23R	1	19	120	124	4	45		50	5				1	sap, Feox	
23R	1	20	127	138	11	45		50	5				1	sap, Feox	
23R	1	21	140	145	5	45		50	5				1	sap, Feox	
23R	2	1	0	14	14	48		50	2				2	sap, Feox	
23R	2	2	15	24	9										MBLIN2
23R	2	3	25	42	17	35		60	5		2	90	2	sap, Feox	halo looks greenish
23R	2	4	43	51	8	15	2	83					2	sap, Feox	halo looks greenish
23R	2	5	52	56	4	100							2	sap	
23R	2	6	56	61	5	100							2	sap	
23R	2	7	62	66	4	50		50					1	sap, Feox, cel?	
23R	2	8	66	73	7	50		50					1	sap, Feox, cel?	
23R	2	9	74	81	7										MBCOW
23R	2	10	81	95	14	30		50	20				4	sap, Feox	
23R	2	11	96	100	4	30		50	20				4	sap, Feox	
23R	2	12	100	105	5	30		50	20				4	sap, Feox	
23R	2	13	106	111	5	100									CULT and RUBBLE
23R	2	14	112	116	4	10		85	5		3	100	2	sap, Feox	
23R	2	15	117	124	7	10		85	5		3	100	2	sap, Feox	
23R	2	16	125	130	5	10		85	5		3	100	2	sap, Feox	
23R	2	17	130	138	8	10		85	5		3	100	2	sap, Feox	
23R	2	18	138	149	11	50		40	10				2	sap, Feox	halo greenish
23R	3	1	0	11	11	20		75	5				4	sap, Feox	halo greenish
23R	3	2	12	15	3	20		75	5				4	sap, Feox	halo greenish
23R	3	3	15	19	4	20		75	5				4	sap, Feox	halo greenish
23R	3	4	19	29	10	48		50	2		2	100	1	sap, Feox	
23R	3	5	30	33	3	48		50	2		2	100	1	sap, Feox	
23R	3	6	33	37	4	60		30	10				1	sap, Feox	halo greenish
23R	3	7	38	41	3	60		30	10				1	sap, Feox	halo greenish

					Rock Color/Alteration Type						Glass		Vesicles		
Core	Section	Piece no.	Top	Base	Length (cm)	Dark gray (%)	Brown (%)	Black halo (%)	Light gray (%)	Green halo (%)	Glass (%)	Altered (%)	(%)	Minerals	Comments
Hole B (continued)															
23R	3	8	41	45	4	60		30	10				1	sap, Feox	halo greenish
23R	3	9	45	50	5	20		80					1	sap, Feox	
23R	3	10	51	57	6	10		90			10	90	1	sap, Feox	
23R	3	11	60	66	6	45		50	5				2	sap, Feox	
23R	3	12	67	72	5	45		50	5				2	sap, Feox	
23R	3	13	73	78	5	45		50	5				2	sap, Feox	
24R	1	1	0	3	3			100					<1	sap	
24R	1	2	4	6	2			100			20	90	<1	sap	
24R	1	3	7	17	10	18		80	2		10	90	2	sap, Feox	
24R	1	4	18	37	19	10		90			5	90	3	sap, Feox	
24R	1	5	38	41	3	40		60					2	sap, Feox	
24R	1	6	43	47	4	50		50					2	sap, Feox, cel?	
24R	1	7	48	53	5	50		50					2	sap, Feox, cel?	
24R	1	8	53	63	10	20		80			10	90	2	sap, Feox	
24R	1	9	64	76	12	20		80			10	90	2	sap, Feox	
24R	1	10	76	84	8	20		80			10	90	2	sap, Feox	
24R	1	11	85	93	8	55		40	5				1	sap, Feox	
24R	1	12	93	97	4	55		40	5				1	sap, Feox	
24R	1	13	98	110	12	55		40	5				1	sap, Feox	
24R	1	14	111	131	20	55		40	5				1	sap, Feox	
24R	2	1	0	19	19	100							<1	sap, pyr?	
24R	2	2	21	25	4	100							<1	sap, pyr?	
24R	2	3	26	29	3	100							<1	sap, pyr?	
24R	2	4	30	34	4	100							<1	sap, pyr?	
24R	2	5	35	44	9	100							<1	sap, pyr?	
24R	2	6	45	51	6	100							<1	sap, pyr?	
25R	1	1	0	3	3			100			25	90	<1	sap	
25R	1	2	4	6	2	58		40	2				<1	sap, Feox	
25R	1	3	7	15	8	58		40	2				<1	sap, Feox	
25R	1	4	15	23	8	58		40	2				<1	sap, Feox	
25R	1	5	24	28	4			100			2	90	<1	sap	
25R	1	6	28	34	6	60		37	3				1	sap, Feox	
25R	1	7	35	40	5	60		37	3				1	sap, Feox	
25R	1	8	41	47	6	30		70			2	100	1	sap, Feox	
25R	1	9	48	61	13	20		70	5		5	90	2	sap, Feox	
25R	1	10	62	68	6	50		48	2				1	sap, Feox	
25R	1	11	70	80	10	50		48	2				1	sap, Feox	
25R	1	12	81	84	3	50		48	2				1	sap, Feox	
25R	1	13	85	89	4	50		48	2				1	sap, Feox	
25R	1	14	90	92	2	50		48	2				1	sap, Feox	
25R	1	15	94	98	4	50		48	2				1	sap, Feox	
25R	1	16	99	102	3	50		48	2				1	sap, Feox	
25R	1	17	105	115	10	50		48	2				1	sap, Feox	
25R	1	18	117	122	5	50		48	2				1	sap, Feox	
25R	1	19	124	140	16	50		48	2				1	sap, Feox	pyrite
25R	2	1	0	9	9	56		40	4				<1	sap, Feox	
25R	2	2	10	19	9	56		40	4				<1	sap, Feox	
25R	2	3	20	25	5	56		40	4				<1	sap, Feox	
25R	2	4	26	37	11	56		40	4				<1	sap, Feox	
25R	2	5	38	42	4	100					2	100	<1	sap	
25R	2	6	44	48	4	100					3	100	<1	sap	
25R	2	7	50	60	10	45		45	10				<1	sap, Feox	
25R	2	8	61	65	4	45		45	10				<1	sap, Feox	
25R	2	9	65	72	7	45		45	10				<1	sap, Feox	
25R	2	10	73	83	10	45		45	10				<1	sap, Feox	
25R	2	11	84	94	10	15		85			2	100	<1	sap	
25R	2	12	94	105	11	30		68	2		3	100	1	sap, Feox	
25R	2	13	106	108	2										Rubble
25R	2	14	111	118	7	10		90			4	100	<1	sap	
25R	2	15	119	125	6	40		55	5				1	sap	
26R	1	1	0	3	3	60		40					1	sap	
26R	1	2	4	9	5	60		40					1	sap	
26R	1	3	12	14	2	60		40					1	sap	
26R	1	4	17	18	1	60		40					1	sap	
26R	1	5	20	23	3	100					3	80	<1	sap	
26R	1	6	25	30	5	50		50					<1	sap	
26R	1	7	31	44	13	10		90			8	80	1	sap, Feox	
26R	1	8	46	49	3						10	90	<1	sap, Feox	CULT
26R	1	9	50	53	3	30		70					<1	sap	
26R	1	10	55	57	2	80		20					<1	sap	
26R	1	11	59	59	0	30		70			15	90	1	sap, Feox	
26R	1	12	64	69	5										MBLIN
26R	1	13	70	79	9										MBLIN and Rubble
26R	1	14	80	83	3	60		40					1	sap, Feox	
26R	1	15	84	88	4	60		40					1	sap, Feox	
26R	1	16	89	93	4	60		40					1	sap, Feox	
26R	1	17	94	98	4	60		40					1	sap, Feox	
26R	1	18	99	102	3	60		40					1	sap, Feox	

					Rock Color/Alteration Type						Glass		Vesicles		
Core	Section	Piece no.	Top	Base	Length (cm)	Dark gray (%)	Brown (%)	Black halo (%)	Light gray (%)	Green halo (%)	Glass (%)	Altered (%)	(%)	Minerals	Comments
Hole B (continued)															
27R	1	1	0	2	2	80				20			1	sap, Feox	
27R	1	2	4	6	2	80				20			1	sap, Feox	
27R	1	3	9	15	6	80				20			1	sap, Feox	
27R	1	4	16	23	7	65		25	10				1	sap, Feox	
27R	1	5	25	31	6	65		25	10				1	sap, Feox	
27R	1	6	32	38	6	65		25	10				1	sap, Feox	
27R	1	7	39	45	6	65		25	10				1	sap, Feox	
27R	1	8	46	53	7	65		25	10				1	sap, Feox	
27R	1	9	55	59	4	65		25	10				1	sap, Feox	
27R	1	10	60	73	13	35		60	5				1	sap, Feox	
27R	1	11	74	77	3	80		20					1		
27R	1	12	80	86	6	35		65	5		4	100	1	sap, Feox	
27R	1	13	87	92	5	75		25					<1	sap, Feox	
27R	1	14	93	98	5	75		25					<1	sap, Feox	
27R	1	15	99	105	6	75		25					<1	sap, Feox	
27R	1	16	106	111	5	50		30		20			<1	sap, Feox	
27R	1	17	113	116	3	50		30		20			<1	sap, Feox	
27R	1	18	117	120	3	50		30		20			<1	sap, Feox	
27R	1	19	121	127	6	10		90			4	90	<1	sap, Feox	
27R	1	20	127	131	4	70		30					<1	sap, Feox	
27R	1	21	133	139	6	70		30					<1	sap, Feox	
27R	1	22	140	144	4	70		30					<1	sap, Feox	
27R	1	23	145	149	4	70		30					<1	sap, Feox	
27R	2	1	0	9	9	90		10					<1	sap, Feox	
27R	2	2	9	16	7	90		10					<1	sap, Feox	
27R	2	3	17	23	6	90		10					<1	sap, Feox	
27R	2	4	24	31	7	35		50	5	10			<1	sap, Feox	
27R	2	5	32	35	3	35		50	5	10			<1	sap, Feox	
27R	2	6	37	43	6	35		50	5	10			<1	sap, Feox	
28R	1	1	0	4	4	10		90			8	90	<1	sap, Feox	
28R	1	2	6	10	4	60		40					<1	sap, Feox	
28R	1	3	13	15	2	60		40					<1	sap, Feox	
28R	1	4	17	22	5	60		40					<1	sap, Feox	
28R	1	5	23	27	4	60		40					<1	sap, Feox	
28R	1	6	28	33	5	60		40					<1	sap, Feox	
28R	1	7	34	39	5	60		40					<1	sap, Feox	
28R	1	8	40	44	4	60		40					<1	sap, Feox	
28R	1	9	45	53	8	60		40					<1	sap, Feox	
28R	1	10	54	57	3	60		40					<1	sap, Feox	
28R	1	11	58	63	5	60		40					<1	sap, Feox	
28R	1	12	64	69	5	60		40					<1	sap, Feox	
28R	1	13	70	75	5	60		40					<1	sap, Feox	
28R	1	14	76	84	8	60		40					<1	sap, Feox	
28R	1	15	84	88	4	60		40					<1	sap, Feox	
28R	1	16	89	94	5	60		40					<1	sap, Feox	
28R	1	17	95	99	4	60		40					<1	sap, Feox	
28R	1	18	100	103	3	60		40					<1	sap, Feox	
29R	1	1	1	4	3	78		20	2				1	sap, Feox	
29R	1	2	5	10	5	78		20	2				1	sap, Feox	
29R	1	3	12	16	4	78		20	2				1	sap, Feox	
29R	1	4	17	20	3	78		20	2				1	sap, Feox	
30R	1	1	1	4	3	10		30	30	30			<1	Feox	
30R	1	2	5	9	4	75		25					1	sap, Feox	
30R	1	3	9	14	5	75		25					1	sap, Feox	
30R	1	4	14	18	4	75		25					1	sap, Feox	
30R	1	5	19	21	2										CULT
30R	1	6	22	25	3	80		20					<1	sap, Feox	
30R	1	7	26	30	4	80		20					<1	sap, Feox	
30R	1	8	32	37	5	80		20					<1	sap, Feox	
30R	1	9	38	42	4	25		40	25	10			1	sap, Feox	
30R	1	10	44	49	5	25		40	25	10			1	sap, Feox	
30R	1	11	50	55	5	25		40	25	10			1	sap, Feox	
30R	1	12	55	58	3	25		40	25	10			1	sap, Feox	
30R	1	13	59	67	8	25		40	25	10			1	sap, Feox	
30R	1	14	70	74	4	25		40	25	10			1	sap, Feox	
30R	1	15	76	80	4										MBSTE1
30R	1	16	81	83	2	50		50			2	100	<1	sap, Feox	
30R	1	17	84	87	3	50		50					<1	sap, Feox	
30R	1	18	87	90	3	60		40					<1	sap	
30R	1	19	91	94	3	60		40					<1	sap	
30R	1	20	96	102	6	60		40					<1	sap	
30R	1	21	104	112	8	8		90	2		5	80	<1	sap, Feox	
30R	1	22	112	119	7	50		30	20				<1	sap, Feox	
30R	1	23	121	125	4	45		55					1	sap, Feox	
30R	1	24	126	132	6										MBLIN2
30R	1	25	134	137	3	90		10					<1	sap	
31R	1	1	0	3	3	95		5					<1	sap, Feox	
31R	1	2	4	8	4	95		5					<1	sap, Feox	

					Rock Color/Alteration Type						Glass		Vesicles		
Core	Section	Piece no.	Top	Base	Length (cm)	Dark gray (%)	Brown (%)	Black halo (%)	Light gray (%)	Green halo (%)	Glass (%)	Altered (%)	(%)	Minerals	Comments
Hole B (continued)															
31R	1	3	8	12	4	95		5					<1	sap, Feox	
31R	1	4	13	16	3	95		5					<1	sap, Feox	
31R	1	5	17	19	2	95		5					<1	sap, Feox	
31R	1	6	20	24	4	95		5					<1	sap, Feox	
31R	1	7	25	28	3	95		5					<1	sap, Feox	
31R	1	8	29	33	4	80		20			2	100	<1	sap	
31R	1	9	34	37	3	60		40					<1	sap, Feox	
31R	1	10	38	40	2	60		40					<1	sap, Feox	
31R	1	11	41	44	3	60		40					<1	sap, Feox	
31R	1	12	45	54	9	65		35			3	100	1	sap, Feox	
32R	1	1	0	3	3	75		25					<1	sap, Feox	
32R	1	2	4	6	2	75		25					<1	sap, Feox	
32R	1	3	7	11	4	75		25					<1	sap, Feox	
32R	1	4	13	23	10	85		15			5	90	<1	sap	
32R	1	5	24	28	4	60		40					1	sap, Feox	
32R	1	6	31	32	1	60		40					1	sap, Feox	
32R	1	7	34	52	18	60		40					1	sap, Feox	
32R	1	8	53	55	2	60		40					1	sap, Feox	
32R	1	9	56	62	6	60		40					1	sap, Feox	
32R	1	10	63	65	2	60		40					1	sap, Feox	
32R	1	11	66	68	2	60		40					1	sap, Feox	
32R	1	12	70	74	4	60		40					1	sap, Feox	
32R	1	13	75	82	7	55		40	5		4	90	4		
32R	1	14	83	87	4	40		40	5				2	sap, Feox	
32R	1	15	88	98	10	40		40	5				2	sap, Feox	
32R	1	16	98	104	6	50		50			20	90	<1	sap	
32R	1	17	105	110	5	10		90			10	90	<1	sap, Feox	
32R	1	18	112	120	8	80		20					1	sap, Feox	
32R	1	19	121	134	13	15		85					3	sap, Feox	
32R	1	20	136	142	6										
32R	2	1	0	14	14	30		60	10				3	sap, Feox	
32R	2	2	14	25	11	30		60	10				3	sap, Feox	
32R	2	3	26	30	4	90		10					<1	sap, py	
32R	2	4	30	34	4	90		10					<1	sap, py	
32R	2	5	34	40	6	70		30					1	Feox	
32R	2	6	41	55	14	60		25	15				1	sap, Feox	
32R	2	7	56	65	9	30		68	2				<1	sap, Feox	
32R	2	8	67	78	11	30		68	2				<1	sap, Feox	
32R	2	9	79	85	6	50		50			6	100	<1	sap, Feox	
32R	2	10	86	90	4										Rubble
32R	2	11	91	98	7										MBNU2
32R	2	12	99	108	9	50		50					1	sap, Feox	
32R	2	13	109	115	6	100					8	90			
32R	2	14	116	120	4										MBNU3
32R	2	15	121	126	5	80		20					1	sap, Feox	
32R	2	16	127	132	5	55		45					<1	sap	
32R	2	17	133	138	5	70		30			1	100	<1	sap	
32R	2	18	138	142	4	40		55	5				<1	sap, Feox	
32R	2	19	143	147	4	40		55	5				<1	sap, Feox	
32R	3	1	0	9	9	50		40		10			2	sap, Feox	
32R	3	2	10	15	5	75		25			6	90	<1	sap, Feox	
32R	3	3	16	22	6	75		25			6	90	<1	sap, Feox	
32R	3	4	22	40	18	48		50	2				1	sap, Feox	
32R	3	5	41	46	5	48		50	2				1	sap, Feox	
32R	3	6	46	50	4	40		60					1	sap, Feox	
32R	3	7	50	55	5	100					1	100	<1	sap, Feox	
32R	3	8	55	62	7	85			10	5			1	sap, Feox	
33R	1	1	0	3	3	60			40				<1	sap, Feox	
33R	1	2	4	7	3	60			40				<1	sap, Feox	
33R	1	3	7	10	3	60			40				<1	sap, Feox	
33R	1	4	11	13	2	40			60		2	100	<1	sap, Feox	
33R	1	5	14	23	9	48		50	2		3	100	<1	sap	
33R	1	6	24	27	3	70		30					<1	sap, Feox	
33R	1	7	29	34	5	70		30					<1	sap, Feox	
33R	1	8	35	39	4	70		30					<1	sap, Feox	
33R	1	9	40	45	5	70		30					<1	sap, Feox	
33R	1	10	46	51	5	70		30					<1	sap, Feox	
33R	1	11	52	55	3	30		60	5	5			<1	sap, Feox	
33R	1	12	56	60	4	30		60	5	5			<1	sap, Feox	
33R	1	13	61	64	3	30		60	5	5			<1	sap, Feox	
33R	1	14	66	72	6	30		60	5	5			<1	sap, Feox	
33R	1	15	73	76	3	30		60	5	5			<1	sap, Feox	
33R	1	16	77	79	2	30		60	5	5			<1	sap, Feox	
33R	1	17	80	85	5	30		60	5	5			<1	sap, Feox	
33R	1	18	87	93	6	30		60	5	5			<1	sap, Feox	
33R	1	19	93	98	5	30		60	5	5			<1	sap, Feox	
33R	1	20	100	102	2	30		60	5	5			<1	sap, Feox	
33R	1	21	103	104	1	100					50	90			

					Rock Color/Alteration Type						Glass		Vesicles		
Core	Section	Piece no.	Top	Base	Length (cm)	Dark gray (%)	Brown (%)	Black halo (%)	Light gray (%)	Green halo (%)	Glass (%)	Altered (%)	(%)	Minerals	Comments
Hole B (continued)															
33R	1	22	105	121	16	40	5	55	5	5	8	90	1	sap, Feox	
33R	1	23	122	126	4	10		90					2	sap, Feox	
33R	1	24	127	139	12	45		50	5				2	sap, Feox	
33R	1	25	141	146	5	45		50	5				2	sap, Feox	
33R	2	1	1	3	2	60		40					<1	sap	
33R	2	2	4	12	8	60		40					<1	sap	
33R	2	3	13	23	10	35	5	60					1	sap, Feox	
33R	2	4	24	27	3	25		70	5				<1	sap	
33R	2	5	29	33	4	25		70	5				<1	sap	
33R	2	6	34	47	13	30		70			4	90	1	sap, Feox	
33R	2	7	48	51	3	70		30					2	sap, Feox	
33R	2	8	52	56	4	70		30					2	sap, Feox	
33R	2	9	57	61	4	70		30					2	sap, Feox	
33R	2	10	63	77	14										
33R	2	11	81	83	2	45		55					<1	sap, Feox	
33R	2	12	84	94	10	45		55					<1	sap, Feox	
33R	2	13	95	108	13	45		50	5		10	90	1	sap	
33R	2	14	110	118	8	20		75	5				3	sap, Feox	
33R	2	15	120	141	21	50		45	5				3	sap, Feox	
34R	1	1	0	19	19	45		54	1				1	sap, Feox	
34R	1	2	20	25	5										MBSTE1
34R	1	3	25	31	6	50		45		5			<1	sap, Feox	
34R	1	4	32	35	3	90		10					<1	sap	
34R	1	5	36	39	3	90		10					<1	sap	
34R	1	6	40	43	3	90		10			5	100	<1	sap	
34R	1	7	44	48	4	60		40					1	sap, Feox	
34R	1	8	49	55	6	60		40					1	sap, Feox	
34R	1	9	56	59	3	60		40					1	sap, Feox	
34R	1	10	60	62	2	60		40					1	sap, Feox	
34R	1	11	63	73	10	100					8	90	1	sap, Feox	
34R	1	12	74	86	12	70		30			3	100	<1	sap, Feox	
34R	1	13	87	93	6										MBCOW1
34R	1	14	94	101	7	68		30		2			2	sap, Feox	
34R	1	15	102	106	4	68		30		2			2	sap, Feox	
34R	1	16	107	111	4	68		30		2			2	sap, Feox	
34R	1	17	113	117	4	68		30		2			2	sap, Feox	
34R	1	18	119	123	4	68		30		2			2	sap, Feox	
34R	1	19	125	134	9	68		30		2			2	sap, Feox	
34R	1	20	134	140	6	68		30		2			2	sap, Feox	
34R	1	21	141	143	2	68		30		2			2	sap, Feox	
34R	1	22	144	149	5	68		30		2			2	sap, Feox	
34R	2	1	0	4	4	53		45	2				2	sap, Feox	
34R	2	2	5	11	6	53		45	2				2	sap, Feox	
34R	2	3	11	17	6	53		45	2				2	sap, Feox	
34R	2	4	18	21	3	53		45	2				2	sap, Feox	
34R	2	5	22	30	8	53		45	2				2	sap, Feox	
34R	2	6	30	40	10	53		45	2				2	sap, Feox	
34R	2	7	41	47	6	53		45	2				2	sap, Feox	
34R	2	8	48	52	4	53		45	2				2	sap, Feox	
34R	2	9	53	60	7	53		45	2		10	100	<1	sap, Feox	
34R	2	10	60	70	10	70		30					1	sap, Feox	
34R	2	11	71	81	10	40	15	20	5	20			1	sap, Feox	
34R	2	12	81	93	12	40	15	20	5	20			1	sap, Feox	
34R	2	13	95	101	6	80		10		10			3	sap, Feox	
34R	2	14	102	106	4	40		60					3	sap, Feox	
34R	2	15	106	109	3	40		60					3	sap, Feox	
34R	2	16	111	113	2	40		60					3	sap, Feox	
34R	2	17	113	116	3	40		60					3	sap, Feox	
34R	2	18	117	125	8	40		60					3	sap, Feox	
34R	2	19	126	132	6	40		60					3	sap, Feox	
34R	2	20	133	135	2	40		60					3	sap, Feox	
34R	2	21	137	145	8	40		60					3	sap, Feox	
35R	1	1	0	2	2	40		58	2				3	sap, Feox	
35R	1	2	3	8	5	40		58	2				3	sap, Feox	
35R	1	3	8	25	17	40		58	2				3	sap, Feox	
35R	1	4	25	33	8	40		58	2				3	sap, Feox	
35R	1	5	34	46	12	40		58	2				3	sap, Feox	
35R	1	6	46	60	14	50		50			1	100	<1	sap	
35R	1	7	60	66	6	40		60					1	sap	
35R	1	8	67	73	6	40		60					1	sap	
35R	1	9	73	81	8	40		60					1	sap	
35R	1	10	81	87	6	50		50			4	100	<1	sap	
35R	1	11	88	92	4	80		20					<1		
35R	1	12	93	97	4	20		80			20	100			Breccia
35R	1	13	98	105	7	20		80			20	100			Breccia
35R	1	14	106	112	6										MBNU1
35R	1	15	112	118	6						20	100		sap, Feox	Breccia
35R	1	16	118	122	4	20		80			2	100	4		

					Rock Color/Alteration Type						Glass		Vesicles		
Core	Section	Piece no.	Top	Base	Length (cm)	Dark gray (%)	Brown (%)	Black halo (%)	Light gray (%)	Green halo (%)	Glass (%)	Altered (%)	(%)	Minerals	Comments
Hole B (continued)															
35R	1	17	123	128	5	70		30			5	100			Rubble
35R	1	18	128	130	2	100							<1	sap	
35R	1	19	133	140	7	70		30			15	100	<1	sap, Feox	
35R	1	20	140	146	6	70		30			15	100	<1	sap, Feox	
35R	2	1	0	6	6										
35R	2	2	6	12	6										
35R	2	3	12	16	4	25		75					<1	sap	
35R	2	4	16	24	8	45		55					<1	sap, Feox	
35R	2	5	25	34	9	45		55					<1	sap, Feox	
35R	2	6	35	44	9	45		55					<1	sap, Feox	
35R	2	7	45	52	7	70		30			20	100	<1	sap, Feox	
35R	2	8	53	58	5	70		30			20	100	<1	sap, Feox	
35R	2	9	59	70	11	70		30			20	100	<1	sap, Feox	
35R	2	10	70	73	3	80		20					<1	sap	
35R	2	11	74	77	3	80		20					<1	sap	
35R	2	12	77	80	3	80		20					<1	sap	
35R	2	13	81	84	3	80		20					<1	sap	
35R	2	14	84	88	4	80		20					<1	sap	
35R	2	15	89	93	4	95		5					3	sap, py	
35R	2	16	94	99	5	95		5					3	sap, py	
35R	2	17	100	106	6	95		5					3	sap, py	
35R	2	18	107	122	15	95		5					3	sap, py	
35R	2	19	123	132	9	95		5					3	sap, py	
35R	2	20	133	141	8	95		5					3	sap, py	
35R	3	1	0	5	5	20		80					2	sap, feox	
35R	3	2	5	8	3	20		80					2	sap, feox	
35R	3	3	10	15	5	20		80					2	sap, feox	
36R	1	1	0	5	5	35		60	5				3	sap, feox	
36R	1	2	5	8	3	35		60	5				3	sap, feox	
36R	1	3	9	24	15	35		60	5				3	sap, feox	
36R	1	4	25	34	9	50		50			1	100	3	sap, feox	
36R	1	5	35	45	10	25		75			10	90	2	sap, feox	
36R	1	6	46	55	9	50		50					2	sap, feox	
36R	1	7	56	66	10	50		50					2	sap, feox	
36R	1	8	67	72	5			100			50	90	2	sap, feox	
36R	1	9	73	79	6										MBLIN1
36R	1	10	79	85	6	70		30			3	100	2	sap, feox, cel	
36R	1	11	86	88	2	70		30			3	100	2	sap, feox, cel	
36R	1	12	89	98	9	70		30			3	100	2	sap, feox, cel	
36R	1	13	100	102	2	70		30			3	100	2	sap, feox, cel	
36R	1	14	103	105	2	40		40	20		12	90	2	sap, feox	
36R	1	15	106	108	2	40		40	20		12	90	2	sap, feox	
36R	1	16	109	114	5	40		40	20		12	90	2	sap, feox	
36R	1	17	115	119	4	40		60			3	100	2	sap, feox, cel	
36R	1	18	119	132	13	40		60			3	100	2	sap, feox, cel	
36R	1	19	134	139	5	40		60			3	100	2	sap, feox, cel	
36R	1	20	140	149	9	70		30					2	sap, feox	
36R	2	1	0	2	2	50		50					3	sap, feox	
36R	2	2	3	13	10	50		50					3	sap, feox	
36R	2	3	14	23	9	20		60	20				2	sap, feox	
36R	2	4	24	32	8			30							
36R	2	5	32	36	4	70							1	sap, feox	
36R	2	6	37	39	2	20		40	40				<1	sap	
36R	2	7	41	43	2	50		50					1	sap, Feox	
36R	2	8	44	46	2										
36R	2	9	49	52	3										
36R	2	10	53	58	5										MBLIN 2
36R	2	11	59	61	2	100					5	100	<1	sap	
36R	2	12	63	66	3	60		40					1	sap, Feox, cel	
36R	2	13	67	69	2	60		40					1	sap, Feox, cel	
36R	2	14	70	73	3	60		40					1	sap, Feox, cel	
36R	2	15	74	79	5	40		60			2	100	2	sap, Feox	
36R	2	16	80	89	9	50		50			5	90	3	sap, Feox	
36R	2	17	91	94	3	50		40	10				3	sap, Feox	
36R	2	18	95	97	2										CULT
36R	2	19	98	106	8	20		80					4	sap, Feox	
36R	2	20	107	111	4	60		40					2	sap, Feox	
36R	2	21	113	119	6	60		40					2	sap, Feox	
36R	2	22	120	127	7	60		40					2	sap, Feox	
36R	2	23	128	134	6	60		40					2	sap, Feox	
36R	2	24	135	138	3	60		40					2	sap, Feox	
36R	2	25	139	146	7	15		80	5				3	sap, Feox	
36R	3	1	1	5	4	55		40	5				2	sap, Feox	
36R	3	2	6	10	4	55		40	5				2	sap, Feox	
36R	3	3	11	17	6	55		40	5				2	sap, Feox	
36R	3	4	18	30	12	30		70			3	100	3	sap, Feox	
36R	3	5	31	34	3	70		30					<1	sap, Feox	
36R	3	6	35	40	5	50		48	2		2	100	2	sap, Feox	

					Rock Color/Alteration Type						Glass		Vesicles		
Core	Section	Piece no.	Top	Base	Length (cm)	Dark gray (%)	Brown (%)	Black halo (%)	Light gray (%)	Green halo (%)	Glass (%)	Altered (%)	(%)	Minerals	Comments
Hole B (continued)															
36R	3	7	41	46	5	60		40					3	sap, Feox, cel	
36R	3	8	47	52	5	60		30	10				2	sap, Feox, cel	
36R	3	9	53	57	4	60		30	10				2	sap, Feox, cel	
36R	3	10	58	61	3	60		30	10				2	sap, Feox, cel	
36R	3	11	62	65	3	80		20					1	sap, Feox	
36R	3	12	67	71	4	80		20					1	sap, Feox	
36R	3	13	72	76	4	80		20					1	sap, Feox	
36R	3	14	77	80	3	80		20					1	sap, Feox	
36R	3	15	80	83	3	80		20					1	sap, Feox	
36R	3	16	83	90	7	80		20					1	sap, Feox	

						Vein		Breccia, Vein net, etc.		Secondary minerals in vein						Halo		2nd, Outer, Halo		
Core	Section	Piece no.	Top	Base	Width (mm)	Vertical?	On side of piece?	Type	Secondary (%)	Black clay (sap) (%)	Green/blue clay (cel)(%)	CC (%)	Py (%)	Feox (%)	Zeo (%)	Width (mm)	Type	Width (mm)	Type	Comments
Hole B																				
1R	1	1	0	3				br	60	97		3								altered glass
1R	1	2	4	17				br	60	97		3								altered glass
1R	1	2	17	25	0.2					100						5	blk			
1R	1	2	18	22	0.1	v				100						2				
1R	1	2	18	19	0.1	v				100						2	brn			
1R	1	2	18	22	0.2	v				100										
1R	1	2	23	24	0.8	v				100						5	blk			
1R	1	3	23	27				br	30	97		3								altered glass
1R	1	5	36	39				ru	5	98				2						
1R	1	6	41	49				br	30	80		20								
1R	1	8	60	60	0.1					100						10	mix			
1R	1	8	57	61	0.3					100						6	mix			
1R	1	8	60	61	0.3	v				100										
1R	1	9	65	65	0.1		s			100										
1R	1	9	65	69	0.3	v				100						3	blk			
1R	1	9	65	69	0.3					50				50		5	blk			
1R	1	10	70	74	0.2	v				50				50		4	blk			
1R	1	12	83	83	0.1					100										
1R	1	12	83	98	0.2	v	s			40				60		3	mix			
1R	1	12	82	97	1		s			90				10		6	mix			
1R	1	12	82	86	0.2					90				10		4	mix			
1R	1	12	82	84	0.1	v				100										
1R	1	12	86	90	0.1	v				95				5		2	mix			
1R	1	12	92	92	0.2					50				50						
1R	1	12	97	97	0.1		s			50				50						
1R	1	13	102	103				ru	2	50				50						
1R	1	15	121	122	0.2		s			50				50						
1R	1	15	117	122	1.5	v				10				90		5	grn			
1R	1	15	117	122	0.2	v				90				10						
1R	1	15	117	122	0.2	v				90				10						
1R	1	15	121	122	0.2					50				50						
1R	1	15	120	120	0.2					100										
1R	1	16	127	131	0.2					50				50		10	mix			
1R	1	16	125	129	0.2					50				50		8	mix			
1R	1	16	129	130	0.2					50				50						
1R	1	16	130	134	0.2	v	s			100						5	blk			
1R	1	17	134	137	0.2	v				100										
1R	1	17	134	137	0.2	v	s			100										
1R	1	18	142	143	0.1	v				100										
1R	1	19	144	147	0.1	v				100						8	blk			
1R	1	19	147	147	0.5		s			100						5	blk			possibly celadonite?
1R	2	1	3	3	0.1	v	s			50				50		10	blk			
1R	2	2	6	6	0.1	v				100										
1R	2	3	8	12	0.1					100						4	blk			
1R	2	3	10	11	0.1	v	s			100						5	blk			
1R	2	4	14	18				vn	1	100										
2R	1	1	0	0	0.1		s			100						10	blk	5	lt	
2R	1	2	5	6	0.1	v	s			100						10	blk	5	lt	
2R	1	3	9	12	0.2	v	s			80				20		5	blk			
2R	1	4	12	14	0.2	v	s			80				20		5	blk			
2R	1	5	16	17				ru	1	90				10						
2R	1	6	19	23	0.2	v	s			90				10		5	blk	2	lt	

						Vein		Breccia, Vein net, etc.		Secondary minerals in vein						Halo		2nd, Outer, Halo		
Core	Section	Piece no.	Top	Base	Width (mm)	Vertical?	On side of piece?	Type	Secondary (%)	Black clay (sap) (%)	Green/blue clay (cel)(%)	CC (%)	Py (%)	Feox (%)	Zeo (%)	Width (mm)	Type	Width (mm)	Type	Comments
Hole B (continued)																				
2R	1	6	21	22	0.2	v				100										
2R	1	7	23	28	0.2	v				90				10		5	bl	2	lt	
2R	1	7	26	29	0.2					90				10		10	bl	4	lt	
2R	1	8	32	37	0.2		s			50				50		5	bl			
2R	1	8	34	40	0.3	v				50				50		8	bl			
2R	1	8	35	36	0.3	v				50				50						
2R	1	8	38	39	0.2	v				90				10						
2R	1	9	41	44	0.2	v				100										
2R	1	9	41	42	0.2	v				100										
2R	1	10	44	47	0.1	v				100										
2R	1	10	49	54	0.2	v				100										
2R	1	10	53	55	0.1	v				100										
2R	1	10	49	52	0.2					100										
2R	1	10	47	49	0.2					100										
2R	1	10	47	52	0.1	v				100										
2R	1	10	45	53	1	v				100						5	blk			
2R	1	11	55	58	0.1	v	s			100						5	blk			
2R	1	11	56	67	0.2	v				90				10		10	blk			
2R	1	11	60	65	0.3	v				80				20		10	blk			
2R	1	11	64	69	0.3	v				60				40		8	blk			
2R	1	11	67	69	0.2					50				50		6	blk			
2R	1	12	78	79	0.2					90				10						
2R	1	12	79	81	0.2	v				90				10						
2R	1	12	86	91	0.2					90				10		5	blk			
2R	1	12	94	96	0.3					40				60						
2R	1	12	95	98	0.2					40				60		5	blk			
2R	1	12	96	106	0.2					90				10		5	blk			
2R	1	12	104	107	0.2					90				10						
2R	1	12	106	109	0.1	v				100										
2R	1	12	106	118	0.8					80				20		8	blk			
2R	1	13	121	125	0.1		s			90				10		4	blk			
2R	1	13	121	126	0.2					80				20		4	blk			
2R	1	13	122	123	0.2	v				80				20		4	blk			
2R	1	13	123	124	0.2					100						4	blk			
2R	1	14	131	133	0.2	v	s			100						5	blk			
2R	1	14	128	132	0.2	v				100						4	blk			
2R	1	14	129	133	0.1	v				100										
2R	1	15	143	144	0.2					90				10		5	blk			
2R	1	15	136	141	1					100						10	blk			
2R	1	15	137	139	0.1	v				100										
2R	1	15	135	138	0.2	v				100										
2R	1	15	136	137	0.1	v				100										
2R	2	2	12	13	0.2	v	s			100						3	blk			
2R	2	4	18	25	0.2					90				10		3	blk			
2R	2	6	31	36	0.5	v				100						10	blk			
2R	2	6	31	44	0.5	v				100						10	blk			
2R	2	6	36	43	0.8	v				100						10	blk			
2R	2	6	37	39	0.1	v				100						10	blk			
2R	2	6	38	39	0.5					100						10	blk			
2R	2	6	41	43	0.2		s			100										
2R	2	7	45	49	0.1		s			100						5	blk			
2R	2	7	49	50	0.1		s			40				60		5	blk	2	lt	
2R	2	8	50	50	1		s			100						12	blk	10	lt	

						Vein		Breccia, Vein net, etc.		Secondary minerals in vein						Halo		2nd, Outer, Halo		
Core	Section	Piece no.	Top	Base	Width (mm)	Vertical?	On side of piece?	Type	Secondary (%)	Black clay (sap) (%)	Green/blue clay (cel)(%)	CC (%)	Py (%)	Feox (%)	Zeo (%)	Width (mm)	Type	Width (mm)	Type	Comments
Hole B (continued)																				
2R	2	8	51	53	0.2		s			100						10	blk	10	lt	
2R	2	11	71	71	0.1					100						8	blk	3	lt	
2R	2	12	75	81	0.2		s			100						3	blk			
2R	2	12	78	81	0.2					90				10		2	blk			
2R	2	12	76	78	0.2	v				90				10		10	blk			
2R	2	13	82	86	0.1	v				100						8	blk	3	lt	
2R	2	15	110	114	0.2	v				100						10	blk			
2R	2	15	110	112	0.2	v				100										
2R	2	15	110	112	0.2	v				100										
2R	2	15	110	113	0.2	v				100						10	blk			
2R	2	15	112	118	0.2					100						6	blk			
2R	2	15	115	118	0.3					100						15	blk			
2R	2	15	114	121	0.5	v				100						5	blk			
2R	2	17	130	142	0.3	v				80				20		10	blk			
2R	2	17	130	142	0.2	v	s			100						12	blk			
2R	2	17	137	137	0.1					100										
2R	2	18	144	144	0.2		s			60				40		8	blk			
2R	3	1	1	8	0.1					100										
2R	3	1	6	7	0.1	v				100										
2R	3	2	9	11	0.1	v	s			90				10		4	blk			
2R	3	2	9	9	0.1					90				10						
2R	3	2	10	10	0.2					60				40						
2R	3	3	14	17	0.1	v				60				40		7	blk			
2R	3	3	12	17	0.2	v	s			95				5		2	blk			
2R	3	3	15	17	0.1	v				100						2	blk			
2R	3	6	33	35	0.1					100										
2R	3	6	32	42	0.3	v	s			100						10	blk			
2R	3	6	37	41	0.2					100						4	blk			
2R	3	6	38	40	0.2	v				100						10	blk			
2R	3	6	41	42	0.2	v				100						10	blk			
2R	3	7	46	48	0.2					80				20						
2R	3	7	47	50	0.2					80				20						
2R	3	7	48	49	0.1	v				60				40						
2R	3	8	54	54	0.3					100										
2R	3	8	56	56	0.1					100										
2R	3	9	59	60				ru	1	100										
2R	3	10	63	69	0.1	v				100										
2R	3	10	64	70	0.1	v				100										
2R	3	10	64	74	0.5					100						10	mix			
2R	3	10	70	70	0.3					80				20		8	blk			
2R	3	10	68	76	0.2					60				40		8	blk			
2R	3	10	74	80	0.1	v				100										
2R	3	10	76	80	0.3	v	s			60				40		8	blk			
2R	3	11	81	87	0.2	v	s			90				10		8	blk			
2R	3	12	88	92	0.3	v				70				30		10	blk			
2R	3	12	89	91	0.2					70				30						
2R	3	13	98	100				ru	1	100										
2R	3	14	102	102	0.1		s			100										
2R	3	14	102	104	0.1	v				100										
2R	3	15	108	120	0.5	v				70				30		8	blk			
2R	3	15	117	128	0.5	v				70				30		10	blk			
2R	3	15	119	122	0.2	v				70				30						
2R	3	15	124	125	0.2	v				100										

						Vein		Breccia, Vein net, etc.		Secondary minerals in vein						Halo		2nd, Outer, Halo		
Core	Section	Piece no.	Top	Base	Width (mm)	Vertical?	On side of piece?	Type	Secondary (%)	Black clay (sap) (%)	Green/blue clay (cel)(%)	CC (%)	Py (%)	Feox (%)	Zeo (%)	Width (mm)	Type	Width (mm)	Type	Comments
Hole B (continued)																				
2R	3	15	120	121	0.1					100										
2R	3	15	109	110	0.2					70				30						
2R	3	16	130	138	0.1	v				100						5	blk			
2R	3	16	136	139	0.1	v				100						5	blk			
2R	3	16	129	135	0.1	v				100						5	blk			
2R	3	17	140	145	0.2	v				100										
2R	3	17	143	144	0.2	v				100										
2R	3	17	145	146	0.2	v				100										
3R	1	1	1	3	0.2	v	s			100						8	mix			
3R	1	1	6	10	0.2	v	s			90				10		5	blk			
3R	1	1	1	8	0.2					90				10		8	blk			
3R	1	1	8	9	0.2	v				100						8	blk			
3R	1	3	20	24	0.2	v				100						8	blk			
3R	1	3	21	28	0.2	v				90				10		5	blk			
3R	1	4	29	32	0.2	v	s			100						8	blk			
3R	1	4	40	43	0.2		s			98				2		2	blk			
3R	1	4	40	43	0.2	v	s			90				10		3	mix			
3R	1	4	36	36	0.3					100						8	mix			
3R	1	4	36	40	0.4	v				100						4	blk			
3R	1	4	39	40	0.1					100						8	blk			
3R	1	4	41	42	0.1	v				100										
3R	1	4	32	37	0.1	v				100										
3R	1	4	44	44	0.2		s			100						10	blk			
3R	1	4	45	48	0.5	v				100						10	blk			
3R	1	4	43	47	0.3	v				100						5	blk			
3R	1	4	44	47	0.2	v				100						5	blk			
3R	1	4	47	48	0.1					100						5	mix			
3R	1	4	48	50	0.2					90				10		8	mix			
3R	1	4	49	50	0.1	v				100										
3R	1	4	49	53	0.1					80				20		4	mix			
3R	1	4	50	53	0.1	v				100										
3R	1	4	52	59						90				10		8	mix			
3R	1	4	56	60	0.2					90				10		5	blk			
3R	1	4	57	60	0.3					90				10		8	blk			
3R	1	4	56	58	0.2	v				100										
3R	1	5	64	69	0.1					100										
3R	1	6	74	75	0.1		s			100						4	blk			
3R	1	6	71	72	0.2					100										
3R	1	6	72	73	0.1	v				100										
3R	1	7	78	82	0.2					100						3	blk			
3R	1	7	82	82	0.2		s			100						2	blk			
3R	1	8	83	93	0.1	v				100						6	blk			
3R	1	8	83	91	0.2	v				90				10		10	blk			
3R	1	8	83	84	0.2	v				100										
3R	1	8	85	86	0.3	v				100						7	blk			
3R	1	8	88	90	0.3					90				10		7	blk			
3R	1	8	91	94	0.1	v				90				10		5	blk			
3R	1	9	95	99	0.2	v				50				50		9	blk			
3R	1	9	95	97	0.1	v				70				30						
3R	1	9	99	100	0.1	v				100										
3R	1	10	103	106	0.5		s			100						10	mix			green = celadonite?
3R	1	10	105	110	0.3					100										
3R	1	10	107	109	0.1	v				100										

						Vein		Breccia, Vein net, etc.		Secondary minerals in vein						Halo		2nd, Outer, Halo		
Core	Section	Piece no.	Top	Base	Width (mm)	Vertical?	On side of piece?	Type	Secondary (%)	Black clay (sap) (%)	Green/blue clay (cel)(%)	CC (%)	Py (%)	Feox (%)	Zeo (%)	Width (mm)	Type	Width (mm)	Type	Comments
Hole B (continued)																				
3R	1	10	110	114	0.2	v				100										
3R	1	10	114	116	0.2					70				30		5	blk			
3R	1	10	114	118	0.2					70				30		12	blk			
3R	1	10	117	118	0.1	v				100										
3R	1	10	117	119	0.2	v				100										
3R	1	10	118	119	0.2	v	s			100										
3R	1	11	120	125	0.3	v	s			100						10	blk			
3R	1	11	128	128	0.1					100						3	blk			
3R	1	11	120	122	0.3	v				100										quite green - celadonite?
3R	1	11	122	125	0.2					100						3	blk			
3R	1	11	124	128	0.2					100						3	blk			
3R	1	11	121	124	0.1	v				100										
3R	1	11	121	123	0.2	v				100										
3R	1	11	124	128	0.1					100										
3R	1	11	133	133	0.2					100						8	blk	2	lt	
3R	1	11	128	133	0.2					80				20						
3R	1	11	130	131	0.1	v				100										
3R	1	11	132	134	0.1	v				100										
3R	1	11	135	140	0.2	v				90				10		8	blk			
3R	1	12	141	144	0.2	v	s			100						12	mix			
3R	1	12	141	144	0.1	v				100						2	blk			
3R	2	1	0	7	0.2	v	s			100						6	mix			
3R	2	1	0	7	0.2	v	s			100						10	blk			
3R	2	1	5	7	0.1	v				100										
3R	2	1	2	7	0.2	v				100						5	blk			
3R	2	2	9	15	0.5	v				100						5	blk			
3R	2	2	9	14	0.2	v				100						8	mix			
3R	2	2	12	17	0.2	v				100										
3R	2	3	19	20	0.1	v				100										
3R	2	3	18	22	0.1	v				100						3	mix			
3R	2	4	22	26	0.3	v				100						5	mix			
3R	2	4	22	26	0.1	v				90				10						
3R	2	4	22	25	0.2	v				100										
3R	2	5	34	46	0.3	v	s			100						6	blk			
3R	2	5	37	40	0.1	v				90				10						
3R	2	5	32	32	0.2					100				10						
3R	2	5	28	41	0.5	v				100						6	blk			
3R	2	5	33	38	0.5	v				100						5	mix			
3R	2	5	40	45	0.1	v				100										
3R	2	5	42	46	0.2	v				100										
3R	2	5	47	49	0.3	v				100										
3R	2	5	47	52	0.2					100						6	blk			
3R	2	5	47	50	0.1	v				100										
3R	2	5	50	50	0.1					100						10	blk			
3R	2	6	54	61	0.2	v	s			100						6	blk	3	lt	
3R	2	7	62	72	0.5	v				90	5			5		6	blk			
3R	2	7	67	70	0.2					100						4	blk			
3R	2	7	70	72	0.2					100										
3R	2	7	62	73	0.2	v				90				10		8	blk			
3R	2	7	70	71	0.2	v				100										
3R	2	7	63	63	0.2					90				10						
3R	2	7	64	64	0.1					100						5	blk			
3R	2	8	75	91	1					100						8	blk	3	lt	

						Vein		Breccia, Vein net, etc.		Secondary minerals in vein						Halo		2nd, Outer, Halo		
Core	Section	Piece no.	Top	Base	Width (mm)	Vertical?	On side of piece?	Type	Secondary (%)	Black clay (sap) (%)	Green/blue clay (cel)(%)	CC (%)	Py (%)	Feox (%)	Zeo (%)	Width (mm)	Type	Width (mm)	Type	Comments
Hole B (continued)																				
3R	2	8	80	85	0.3					100						3	blk			
3R	2	8	84	85	0.1	v				100						5	blk			
3R	2	8	75	77	0.1	v				100										
3R	2	8	87	90	0.1	v				100										
3R	2	8	87	90	0.2	v				100										
3R	2	9	97	97	0.1		s			100						4	blk			
3R	2	10	99	100	0.1					90				10		5	blk	3	lt	
3R	2	10	90	105	0.2	v	s			100						5	blk	3	lt	
3R	2	11	106	110	0.2					100						5	blk			
3R	2	11	108	110	0.1	v				100						5	mix			
3R	2	11	110	113	0.2	v				100										
3R	2	11	110	113	0.2	v				100										
4R	1	2	4	10	0.1	v	s			100						4	blk			
4R	1	2	9	12	0.1	v	s			100						3	blk			
4R	1	3	12	15	0.1					100						10	blk			
4R	1	3	15	18	0.1					100						5	blk			
4R	1	3	15	16	0.1	v				100										
4R	1	3	17	18	0.1	v				100										
4R	1	4	18	23	0.1	v	s			90				10		4	blk			
4R	1	4	21	22	0.2					90				10		4	blk			
4R	1	5	23	25	0.1	v	s			90				10		4	blk			
4R	1	5	30	35	0.1	v	s			80				20		4	blk			
4R	1	5	26	34	0.1	v				90				10						
4R	1	6	35	40	0.2	v	s			70	10			20		6	blk	3	lt	green = cel?
4R	1	6	41	42						70	10			20		5	blk	3	lt	green = cel?
4R	1	6	42	44	0.1	v	s			70	10			20		4	blk			green = cel?
4R	1	7	46	47	0.1		s			80				20						
4R	1	8	53	54	0.1	v	s			100						5	blk			
4R	1	8	48	50	0.2					80				20		12	blk			
4R	1	8	50	52	0.1					100										
4R	1	9	55	57	0.1	v				90				10		5	blk			
4R	1	9	61	66	0.2	v	s			50				50						
4R	1	9	65	67	0.1	v	s			100										
4R	1	9	55	60	0.5					45	5			50		8	blk	5	lt	green = cel?
4R	1	9	61	61	0.2					60	5			35		4	blk	3	lt	green = cel?
4R	1	9	61	67	0.5	v				45	5			50		8	blk			green = cel?
4R	1	9	64	67	0.3	v				50				50		15	blk			
4R	1	9	65	67	0.3	v				90				10		15	blk			
4R	1	11	79	79	1.5					100						10	blk			
4R	1	11	78	84	0.3	v				100						6	blk			
4R	1	11	80	82	0.2	v				100						6	blk			
4R	1	11	80	82	0.2	v				100						6	blk			
4R	1	11	78	80	0.1	v				100										
4R	1	12	92	94	0.1	v	s			80				20		5	blk			
4R	1	12	86	94	0.1	v	s			80				20		5	blk			
4R	1	12	100	106	0.2	v	s			100						3	blk			
4R	1	12	105	107	0.2	v	s			80				20		2	blk			
4R	1	12	101	103	0.1	v				100						2	blk			
4R	1	13	109	121	0.8	v				70	5			25		8	blk	3	lt	
4R	1	13	116	118	0.3	v				70	5			25		5	blk			
4R	1	13	110	112	0.5	v				70				30						
4R	1	13	111	112	0.2					100						2	lt			
4R	1	14	124	134	0.2					70	5			25						

						Vein		Breccia, Vein net, etc.		Secondary minerals in vein						Halo		2nd, Outer, Halo		
Core	Section	Piece no.	Top	Base	Width (mm)	Vertical?	On side of piece?	Type	Secondary (%)	Black clay (sap) (%)	Green/blue clay (cel)(%)	CC (%)	Py (%)	Feox (%)	Zeo (%)	Width (mm)	Type	Width (mm)	Type	Comments
Hole B (continued)																				
4R	1	14	126	131	0.2	v				100										
4R	1	14	125	128	0.1	v				100										
4R	1	15	142	144	0.1	v	s			70				30		2	blk			
4R	1	15	143	143	0.1					100										
4R	2	1	5	5	0.1		s			70	5			25		2	blk			
4R	2	2	8	8	0.1		s			70				30		8	blk	3	lt	
4R	2	3	11	13	0.1		s			100						4	blk	2	lt	
4R	2	5	24	26	0.1		s			70				30		5	mix			
4R	2	5	21	26	0.3					90				10		5	mix			
4R	2	5	20	26	0.1	v				90				10		6	mix			
4R	2	8	37	41	0.2	v				90				10		10	mix	3	lt	
4R	2	8	37	40	0.1	v				100										
4R	2	9	47	47	0.2		s			80				20		12	mix	3	lt	
4R	2	9	42	47	0.1	v	s			80				20		8	blk	3	lt	
4R	2	9	42	48	0.1	v				100										
4R	2	10	51	51	0.1		s			90				10		4	blk			
4R	2	10	50	52	0.1					100						2	blk			
4R	2	13	63	66	0.2	v	s			75	5			20		3	blk			
4R	2	13	66	68	0.1	v				100										
4R	2	14	71	72	0.1	v				100										
4R	2	15	77	82	0.2	v				100										
4R	2	15	78	81	0.1	v				100										
4R	2	16	84	87	0.1	v				100						10	blk			
4R	2	16	87	91	0.1	v				100						12	blk			
4R	2	16	87	93	0.2	v				100						5	blk			
4R	2	18	107	114	0.2	v	s			100										
4R	2	18	102	108	0.3	v				80				20		5	mix			
4R	2	18	105	107	0.2	v				80				20						
4R	2	18	106	110	0.3	v				100										
4R	2	18	107	111	0.2					60	10			30		5	blk			
4R	2	18	108	113	0.5	v				90				10		3	mix			
4R	2	18	109	112	0.2	v				65	5			30						
4R	2	18	110	114	0.2					60	10			30		15	blk	3	lt	
4R	2	18	112	113	0.2	v				100										
4R	2	19	117	132	0.5	v				55	5			40		10	blk	3	lt	
4R	2	19	125	128	0.2					100										
4R	2	19	129	132	0.2	v				100										
4R	3	1	2	4	0.5	v				100						15	blk			
4R	3	1	2	5	0.2	v				90				10						
4R	3	1	1	8	0.2	v				80				20		10	mix			
4R	3	1	8	14	0.1	v				100										
4R	3	1	7	12	0.2	v				100						2	blk			
4R	3	1	13	13	0.1					90				10		3	blk			
4R	3	1	12	14	0.2	v				100										
4R	3	1	18	27	0.2					70	5			25						
4R	3	1	18	21	0.2					100										
4R	3	1	29	32	0.2					80				20		10	mix			
4R	3	2	43	47	0.2	v	s			100										
4R	3	2	43	42	0.2	v				80				20		10	mix	4	lt	
4R	3	2	41	44	0.2					80				20		10	mix	2	lt	
4R	3	2	41	42		v				90				10						
4R	3	4	55	62	0.2					100						10	mix			
4R	3	4	57	57	0.2					100						10	mix			

						Vein		Breccia, Vein net, etc.		Secondary minerals in vein						Halo		2nd, Outer, Halo		
Core	Section	Piece no.	Top	Base	Width (mm)	Vertical?	On side of piece?	Type	Secondary (%)	Black clay (sap) (%)	Green/blue clay (cel)(%)	CC (%)	Py (%)	Feox (%)	Zeo (%)	Width (mm)	Type	Width (mm)	Type	Comments
Hole B (continued)																				
4R	3	4	55	58	0.2	v				100										
4R	3	4	55	58	0.2	v				100										
4R	3	4	57	61	0.2					90				10		10	mix			
4R	3	5	62	65	0.2		s			75	5			20						
4R	3	5	67	71	0.3	v				75	4	1		20						
4R	3	5	62	67	0.3					90				10						
4R	3	5	64	67	0.2					100										
4R	3	6	72	74	0.2	v	s			90				10						
4R	3	6	72	84	0.2	v				100						4	blk			
4R	3	6	75	80	0.2	v				90				10		8	blk			
4R	3	6	80	82	0.2					100						5	blk			
4R	3	6	84	87	0.2					100										
4R	3	7	87	87	0.1		s			100										
4R	3	7	91	92	0.1					100						5	blk			
4R	3	7	91	95	0.1	v				100						2	mix			
4R	3	7	93	96	0.5					100						10	blk			
4R	3	8	100	104	0.3	v	s			100										
4R	3	8	98	104	0.2	v	s			90				10		3	blk			
4R	3	8	100	102	0.3					100						8	mix			
4R	3	8	102	105	0.1					100						6	mix			
4R	3	8	98	101	0.1	v				100						10	mix			
4R	3	9	109	110	0.1	v				90				10		5	mix			
4R	3	12	125	130	0.1	v				100										
4R	3	12	130	130	0.2					90				10		5	blk			
4R	3	12	133	138	0.2					90				10						
4R	3	12	133	136	0.1	v				90				10						
4R	3	13	138	140	0.1	v				100										
4R	4	1	1	12	0.2	v				80				20		5	blk			
4R	4	1	5	5	0.2					100						7	mix			
4R	4	2	14	18				ru	1	100										
4R	4	3	18	18	0.3		s			80				20		5	blk			
4R	4	3	18	28	0.1		s			95				5		12	blk			
4R	4	4	33	32	0.1					90				10						
4R	4	4	33	33	0.1					90				10						
4R	4	4	33	33	0.1					90				10						
4R	4	5	34	37	0.1	v	s			80				20		5	blk			
4R	4	5	37	40	0.1		s			90				10		10	blk			
4R	4	6	41	46	0.1	v				100						5	blk			
4R	4	6	46	58	0.2	v	s			80				20		8	blk			
4R	4	7	50	58				ru	1	100										
5R	1	1	0	5	0.1	v	s			100						5	blk			
5R	1	2	9	10	0.1	v				90				10						
5R	1	2	8	11	0.1	v				100										
5R	1	3	14	23				ru	2	75	5			20						
5R	1	4	23	27	0.1	v				80				20		5	blk			
5R	1	4	28	30	0.2	v				100						10	mix			
5R	1	4	27	31	0.1					100										
5R	1	4	30	30	0.2					80				20						
5R	1	5	32	34	0.1	v	s			100						5	blk			
5R	1	5	32	45	0.2	v				80				20		6	blk			
5R	1	5	37	39	0.1	v				100										
5R	1	5	40	44	0.1					80				20		3	mix			
5R	1	5	43	46	0.1	v				100										

						Vein		Breccia, Vein net, etc.		Secondary minerals in vein						Halo		2nd, Outer, Halo		
Core	Section	Piece no.	Top	Base	Width (mm)	Vertical?	On side of piece?	Type	Secondary (%)	Black clay (sap) (%)	Green/blue clay (cel)(%)	CC (%)	Py (%)	Feox (%)	Zeo (%)	Width (mm)	Type	Width (mm)	Type	Comments
Hole B (continued)																				
5R	1	6	47	51	0.2		s			75	5			20		5	blk			
5R	1	6	42	49	0.1	v				100						3	mix			
5R	1	7	51	56	0.2	v	s			100						4	blk			
5R	1	7	52	56	0.1					80				20		5	mix			
5R	1	7	54	57	0.1	v	s			95				5		5	blk			
5R	1	7	58	58	0.1					100						5	mix			
5R	1	7	57	60	0.1	v				100										
5R	1	8	61	63	0.2		s			80				20		5	mix			
5R	1	8	64	66	0.1	v				100										
5R	1	8	65	73	0.1	v				80				20		5	mix			
5R	1	8	71	73	0.2	v				100										
5R	1	10	83	87						75	5			20						
5R	1	11	88	91	0.1		s			80				20						
5R	1	11	92	99	0.1					80				20						
5R	1	11	90	98	0.3	v				60				40		10	mix			
5R	1	11	96	96	0.2					90				10						
5R	1	11	98	104	0.2					80				20		5	blk			
5R	1	11	101	107	0.1	v				100										
5R	1	12	108	121	0.4	v				70	10			20		8	blk			
5R	1	12	117	121	0.2	v				100										
5R	1	12	117	121	0.2	v				100										
5R	1	12	120	121	0.2	v				100										
5R	1	12	110	110	0.1					90				10						
5R	1	12	113	114	0.1	v				55	5			40		3	mix			
5R	1	12	114	117	0.1	v				50				50		4	mix			
5R	1	12	117	118	0.1	v				80				20						
5R	1	13	128	134	0.2					100										
5R	1	13	128	135	0.2					100										
5R	1	14	143	146	0.2	v	s			100										
5R	1	14	132	148	0.2	v				100										
5R	2	1	0	7	0.2	v	s			80				20		3	blk			
5R	2	2	10	17	0.1	v	s			90				10						
5R	2	2	18	18	0.1					90				10						
5R	2	2	11	16	0.4	v				90				10						
5R	2	2	11	14	0.2	v				100										
5R	2	3	20	26	0.2	v				100						10	blk			
5R	2	3	24	33	0.2	v				100										
5R	2	3	27	34	0.2	v				100										
5R	2	3	30	33	0.2	v				100										
5R	2	4	38	44	0.1	v	s			80				20		8	mix			
5R	2	4	35	45	0.1	v				100						4	blk	3	lt	
5R	2	4	37	39	0.2	v				100						4	mix			
5R	2	5	49	49	0.1		s			80				20		3	blk			
5R	2	6	58	58	0.1		s			85	5			10						
5R	2	8	64	68	0.1	v				100										
5R	2	9	74	80	0.2	v				97			3							
5R	2	9	71	74	0.2	v				97			3							
5R	2	10	82	84	0.1		s			85	5			10		3	blk			
5R	2	11	86	97	0.2	v	s			70	20			10		6	blk			pyrite front
5R	2	12	100	111	0.2	v				83	5		2	10		1	blk			
5R	2	13	113	115	0.1	v				100										
5R	2	14	117	119	0.1	v				100										
5R	2	15	121	121	0.1					80				20		4	mix			

						Vein		Breccia, Vein net, etc.		Secondary minerals in vein						Halo		2nd, Outer, Halo		
Core	Section	Piece no.	Top	Base	Width (mm)	Vertical?	On side of piece?	Type	Secondary (%)	Black clay (sap) (%)	Green/blue clay (cel)(%)	CC (%)	Py (%)	Feox (%)	Zeo (%)	Width (mm)	Type	Width (mm)	Type	Comments
Hole B (continued)																				
5R	2	15	121	123	0.1	v				70				30		2	blk			
5R	2	16	130	132	0.1	v	s			100						10	blk			
5R	2	16	130	132	0.1	v	s			80				20		10	blk			
5R	2	16	126	130	0.2					65	5			30		3	blk			
5R	2	17	142	142	0.1		s			80				20		6	mix			
5R	2	17	134	138	0.3		s			70	10			20						
5R	2	17	137	143	0.2	v				50				50		10	mix			
5R	2	17	137	141	0.2					70				30		2	blk			
5R	2	18	144	148	0.1	v				90	10					6	mix			
5R	2	18	148	149	0.2					85	5			10						
5R	2	18	143	147	0.2	v				100						6	mix			
5R	2	18	143	148	0.2	v				80				20		8	mix			
5R	3	1	2	7	0.2	v				50				50		5	blk			
5R	3	1	3	6	0.2	v				50				50		5	blk			
5R	3	1	6	8	0.2	v	s			50				50		5	blk			
5R	3	2	12	12	0.2					70	10			20		5	mix			
5R	3	2	7	12	0.2	v				70	10			20		3	blk			
5R	3	2	9	12	0.2		s			80				20		5	blk			
5R	3	3	19	23	0.2	v				90				10		8	mix			
5R	3	4	25	27	0.1	v	s			100						4	blk			
5R	3	4	24	27	0.1	v				100						2	blk			
5R	3	4	24	27	0.1	v				100										
5R	3	5	28	30				ru	1	100										
5R	3	6	32	35	0.1	v	s			80				20		6	mix			
5R	3	6	31	35	0.1	v				100										
5R	3	6	35	36	0.1		s			90				10		4	mix			
5R	3	6	35	35	0.1					90				10		6	mix			
5R	3	9	47	47	0.1		s			90			10							
5R	3	9	47	53	0.3	v				40		50	10							
5R	3	13	84	87	0.2	v	s			90				10		17	mix			
5R	3	13	81	85	0.2	v	s			80				20		10	mix			
5R	3	14	90	93	0.3	v				70	10			20		12	mix			
5R	3	14	93	95	0.3	v				70	10			20		12	mix			
5R	3	15	96	96	0.1		s			90				10		12	mix			
5R	3	16	99	105	0.1	v	s			90				10						
5R	3	16	99	105	0.2	v				70				30		17	mix			
5R	3	17	108	110	0.1	v				100										
5R	3	19	117	119	0.5					100						3	blk			
5R	3	19	116	119	0.2	v				90				10		3	blk			
5R	3	20	121	123				ru	1	100										
5R	3	21	125	130	0.2	v				100						4	blk			
5R	3	22	132	133	0.2					80				20						
5R	3	22	135	135	0.2					99			1							
5R	3	23	137	139				ru	2	90				10						
5R	3	24	141	142	0.1	v				100										
5R	3	24	142	142	0.1					100										
5R	3	25	143	148	0.2	v				100						5	blk			
5R	3	25	144	146	0.2	v				100						5	blk			
5R	3	25	145	148	0.2	v				90				10		5	blk			
5R	4	1	0	0	0.1		s			90				10		3	blk			
6R	1	1	0	6	0.1	v	s			100										
6R	1	1	4	7	0.1	v				100										
6R	1	1	0	5	0.1	v	s			100										

						Vein		Breccia, Vein net, etc.		Secondary minerals in vein						Halo		2nd, Outer, Halo		
Core	Section	Piece no.	Top	Base	Width (mm)	Vertical?	On side of piece?	Type	Secondary (%)	Black clay (sap) (%)	Green/blue clay (cel)(%)	CC (%)	Py (%)	Feox (%)	Zeo (%)	Width (mm)	Type	Width (mm)	Type	Comments
Hole B (continued)																				
6R	1	3	10	13	0.1	v	s			100										
6R	1	4	14	17	0.2	v				100										
6R	1	4	17	18	0.1					100						3	blk			
6R	1	4	16	17	0.2	v				100						4	blk			
6R	1	5	20	20	0.1		s			90				10		10	mix			
6R	1	6	27	35	0.2	v				50				50		12	mix			
6R	1	6	27	31	0.1	v				100										
6R	1	6	34	36	0.1		s			50				50		12	mix			
6R	1	7	37	38	0.1		s			80				20		76	blk			
6R	1	7	41	43	0.2	v	s			50				50		8	mix			
6R	1	8	48	50	0.2	v				100										
6R	1	8	44	46	0.2	v				100										
6R	1	8	47	53	0.2	v				100										
6R	1	8	46	47	0.2	v				100										
6R	1	9	54	58	0.2					100						12	mix			
6R	1	10	60	62				ru	2	75	5			20						
6R	1	11	64	68	0.2	v				100										
6R	1	11	64	66	0.2	v				100										
6R	1	11	67	68	0.2	v				100										
6R	1	12	70	72	0.5	v	s			50				50		5	mix			
6R	1	12	71	76	0.1	v	s			50				50		10	mix			
6R	1	13	77	77	0.2		s			50	5			45		5	blk			
6R	1	14	82	87	0.2					90				10						
6R	1	15	91	91	0.1		s			50				50						
6R	1	15	91	93	0.2	v				50				50						
6R	1	15	91	93	0.2	v				80				50						
6R	1	15	91	96	0.3					50				50		12	mix			
6R	1	16	100	102	0.2	v				80				20		8	blk	3	lt	
6R	1	17	103	103	0.1		s			80				20		5	blk			
6R	1	18	109	116				ru	1	100										
6R	1	19	122	122	0.2					80				20		12	mix			
6R	1	19	117	122	0.2	v				90				10						
6R	1	22	137	139	0.1	v	s			80				20		5	mix			
6R	1	22	140	140	0.1					80				20		12	mix			
6R	2	1	6	6	1					80				20		12	mix			
6R	2	1	2	6	0.1	v				100										
6R	2	1	4	8	0.1	v				100										
6R	2	3	14	19	0.1	v				100						6	mix	1	lt	
6R	2	3	10	17	0.1	v				100										
6R	2	5	27	29	0.1	v				100										
6R	2	7	43	43	0.2		s			100						5	mix			
6R	2	7	40	47	0.2	v				80				20						
6R	2	7	43	48	0.1	v				100										
6R	2	7	47	48	0.2	v				50				50						
6R	2	7	47	48	0.2	v				50				50						
6R	2	8	50	50	0.1		s			80				20		7	mix	2	lt	
6R	2	9	57	62	0.1	v				80				20		8	mix			
6R	2	10	64	70	0.1	v				80				20		12	mix			
6R	2	12	74	79	0.2	v				65	5			30		12	mix			
6R	2	12	74	77	0.2	v				80				20		2	blk			
6R	2	12	74	77	0.2	v				100										
6R	2	14	96	97	0.2	v	s			50				50		10	blk			
6R	2	15	90	94	0.1	v	s			100						3	blk			

						Vein		Breccia, Vein net, etc.		Secondary minerals in vein						Halo		2nd, Outer, Halo		
Core	Section	Piece no.	Top	Base	Width (mm)	Vertical?	On side of piece?	Type	Secondary (%)	Black clay (sap) (%)	Green/blue clay (cel)(%)	CC (%)	Py (%)	Feox (%)	Zeo (%)	Width (mm)	Type	Width (mm)	Type	Comments
Hole B (continued)																				
6R	2	15	90	90	0.1	v	s			100						3	blk			
6R	2	16	97	99	0.2	v				100										
6R	2	16	96	101	0.2	v				100										
6R	2	16	98	99	0.2	v	s			100										
6R	2	17	103	105	0.2		s			100						3	blk			
6R	2	18	110	115				ru	1	100										
7R	1	1	6	6	0.2		s			80				20		12	mix			
7R	1	1	3	6	0.1	v				100										
7R	1	2	8	8	0.2		s			80				20		8	mix			
7R	1	3	11	15	0.2	v	s			75	5			20		12	mix			
7R	1	3	12	14	0.2	v	s			75	5			20		2	mix			
7R	1	4	21	21	0.3		s			50				50		3	blk			
7R	1	4	20	24	0.2	v	s			50				50		12	blk			
7R	1	4	24	24	0.2		s			50				50		12	blk			
7R	1	5	26	34	0.2	v				30	40			30		12	blk			
7R	1	5	27	33	0.2					50				50		10	mix			
7R	1	6	35	39	0.1	v				100										
7R	1	6	42	39	0.1	v				100										
7R	1	7	42	47	0.5	v	s			100						5	mix			
7R	1	7	42	47	0.1	v				100						3	mix			
7R	1	7	48	48	0.2		s			100						4	mix			
7R	1	7	47	55	0.2	v				100						3	mix			
7R	1	7	47	50	0.2	v	s			100						4	mix			
7R	1	9	46	60	0.2	v				50				50		4	mix			
7R	1	10	62	63	0.2	v	s			50				50						
7R	1	10	62	63	0.2	v	s			50				50						
7R	1	12	72	75	0.2	v	s			100										
7R	1	13	77	83	0.2	v				50				50		7	mix			
7R	1	15	97	99	0.2	v				100										
7R	1	15	97	99	0.2	v				100										
7R	1	15	97	99	0.2	v				100										
7R	1	17	106	110	0.1	v				90				10		6	blk			
7R	1	17	106	107	0.1	v				90				10		6	blk			
7R	1	19	116	117	0.1	v				90				10		6	mix			
7R	1	19	117	119	0.1	v				90				10		6	mix			
7R	1	20	122	124	0.1	v				100										
7R	1	21	130	130	0.1		s			80				20		6	grn			
7R	1	21	130	134	0.3	v	s			100						6	grn			
7R	1	21	134	134	0.2		s			80				20		6	grn			
7R	1	22	136	138				ru	1	80				20						
7R	1	24	144	146	0.1	v				80				20		5	mix			
7R	2	1	3	7	0.1	v				80				20		5	grn			
7R	2	1	0	6	0.1	v				100						8	grn			
8R	1	1	0	8	0.1	v	s			100						7	blk			
8R	1	1	8	8	0.1		s			100										
8R	1	1	7	8	0.5					100						15	mix			
8R	1	1	7	8	0.2	v				100										
8R	1	2	11	14	0.1	v				100						6	mix			
8R	1	3	16	22	0.1	v				90				10		8	blk			
8R	1	4	23	26	0.1	v				100						5	blk			
8R	1	4	23	27	0.1	v	s			50				50		7	grn			
8R	1	4	29	30	0.1		s			70				30		10	grn			
8R	1	6	37	39	0.1	v				50				50		3	blk			

						Vein		Breccia, Vein net, etc.		Secondary minerals in vein						Halo		2nd, Outer, Halo		
Core	Section	Piece no.	Top	Base	Width (mm)	Vertical?	On side of piece?	Type	Secondary (%)	Black clay (sap) (%)	Green/blue clay (cel)(%)	CC (%)	Py (%)	Feox (%)	Zeo (%)	Width (mm)	Type	Width (mm)	Type	Comments
Hole B (continued)																				
8R	1	7	40	47	0.1	v	s			80				20						
8R	1	7	41	47	0.1	v				80				20		6	mix			
8R	1	7	42	45	0.1	v				100										
8R	1	7	41	43	0.8	v				100										
8R	1	7	44	48	1	v				100						10	mix			
8R	1	7	45	47	0.1	v	s			80				20						
8R	1	9	59	63	0.1	v	s			100						6	blk			
8R	1	10	67	69	0.2	v				50				50		4	grn			
8R	1	11	72	72	0.3		s			100						3	blk			
8R	1	11	72	76	0.5	v	s			100						5	blk			
8R	1	11	73	77	0.5	v				100										
8R	1	11	76	77	0.3	v				100										
8R	1	11	74	74	0.2					100										
9R	1	2	5	5	0.1		s			100										
9R	1	2	7	8	0.2					100										
9R	1	2	7	8	0.1	v				100										
9R	1	3	9	10	0.2	v				100						6	blk			
9R	1	5	16	19	0.1	v				100										
9R	1	6	21	21	0.2		s			100						4	mix			
9R	1	6	23	24	0.2	v	s			100						4	mix			
9R	1	6	22	26	0.2	v	s			100						4	mix			
9R	1	6	23	24	0.1					100						4	blk			
9R	1	6	22	23	0.1	v				100						4	mix			
9R	1	7	33	35	0.2					100						12	mix			
9R	1	8	38	40	0.1	v	s			100						2	blk			
9R	1	9	51	62	0.2	v				50				50		15	mix			
9R	1	9	54	62	0.2	v				50				50		10	mix			
9R	1	9	51	57	0.1	v				100						4	mix			
9R	1	9	52	55	0.2	v				100										
9R	1	9	63	65	0.2	v	s			50				50		4	mix			
9R	1	10	66	74	0.1	v	s			90				10		3	blk			
9R	1	11	75	79				ru	60	100										
10R	1	1	2	4	0.1	v	s			70				30		12	blk			
10R	1	1	0	4	0.2	v				70				30		8	mix			
10R	1	2	6	8	0.1	v	s			50				50		10	blk			
10R	1	2	8	10	0.2	v	s			50				50		5	mix			
10R	1	3	17	17	0.1		s			50				50		5	mix			
10R	1	3	12	17	0.2	v				30				70		12	mix			
10R	1	3	13	15	0.1	v				50				50						
10R	1	3	13	15	0.1	v				50				50						
10R	1	4	21	21	0.1		s			70				30		6	blk			
10R	1	5	24	29	0.2	v				70				30		8	mix			
10R	1	5	23	26	0.2	v				100										
10R	1	5	23	29	0.1	v				90				10		4	mix			
10R	1	5	27	29	0.2	v				70				30		6	mix			
10R	1	5	28	29	0.3	v				70				30		6	mix			
10R	1	6	32	34	0.2					50				50		4	mix			
10R	1	6	37	38	0.2					50				50		4	mix			
10R	1	6	39	39	0.2					50				50		4	mix			
10R	1	6	40	44	0.2					50				50		4	mix			
10R	1	6	42	44	0.2	v				50				50		4	mix			
10R	1	6	31	46	0.3	v				50				50		10	mix			
10R	1	6	39	50	0.2	v				70				30		12	mix			

						Vein		Breccia, Vein net, etc.		Secondary minerals in vein						Halo		2nd, Outer, Halo		
Core	Section	Piece no.	Top	Base	Width (mm)	Vertical?	On side of piece?	Type	Secondary (%)	Black clay (sap) (%)	Green/blue clay (cel)(%)	CC (%)	Py (%)	Feox (%)	Zeo (%)	Width (mm)	Type	Width (mm)	Type	Comments
Hole B (continued)																				
10R	1	6	45	50	0.2	v				100										
10R	1	7	51	52	0.1	v	s			50				50		6	mix			
10R	1	7	51	56	0.2	v				50				50		8	mix			
10R	1	8	58	64	0.5	v				20				80		5	mix			
10R	1	8	58	63	0.3	v				25	5			70		10	mix			
10R	1	8	58	63	0.2	v				50				50						
10R	1	8	57	64	0.2	v				50				50		10	mix			
10R	1	9	66	69	0.2	v	s			50				50		10	blk			
10R	1	10	70	78	0.1					20				80		15	mix			
10R	1	10	79	82	0.1	v				20				80		10	mix			
10R	1	10	75	79	0.2					100										
10R	1	10	73	80	0.1	v				100										
10R	1	11	84	96	0.1	v	s			80				20		10	mix			
10R	1	11	84	96	0.1	v				80				20		10	mix			
10R	1	11	86	96	0.1	v				100										
10R	1	12	103	106	0.2		s			100										
10R	1	12	99	101	0.2		s			100										
10R	1	12	101	103	0.2	v				100										
10R	1	13	107	112	0.3	v	s			100						5	blk			
10R	1	13	108	113	0.3					100						3	mix			
10R	1	13	111	114	0.1	v	s			100						3	blk			
10R	1	14	116	117	0.1	v				100										
10R	1	16	128	134	0.2					80				20		6	mix			
10R	1	16	130	132	0.1	v				100										
10R	2	1	0	3	0.1	v	s			80				20		6	blk			
10R	2	1	0	3	0.1	v	s			80				20		6	blk			
10R	2	2	6	11	0.2					70				30		6	mix			
10R	2	3	15	17	0.1	v	s			100						4	blk			
10R	2	3	15	15	0.1					50				50		3	mix			
10R	2	4	19	19	0.1		s			100						3	blk			
10R	2	4	19	23	0.2	v	s			100										
10R	2	4	20	23	0.1					80				20		5	mix			
10R	2	5	26	28	0.2	v				100										
10R	2	7	38	41	0.2	v	s			50				50						
10R	2	7	38	44	0.2	v				50				50		8	mix			
10R	2	7	39	42	0.1	v				50				50		8	mix			
10R	2	8	45	45	0.2		s			100										
10R	2	9	49	52	0.1	v	s			70				30		8	blk			
10R	2	9	49	52	0.1	v				100						4	blk			
10R	2	9	50	51	0.1	v				70				30						
10R	2	10	57	60	0.1	v	s			50				50		6	blk			
10R	2	10	56	60	0.2					50				50		15	mix			
10R	2	10	54	57	0.2	v				50				50		8	mix			
10R	2	10	58	59	0.1	v				70				30		4	mix			
10R	2	11	65	71	0.2					100						5	mix			
10R	2	11	62	64	0.1	v				100										
10R	2	11	62	64	0.1	v				100										
10R	2	11	67	69	0.2	v				70				30		4	mix			
10R	2	12	71	74	0.2	v	s			50				50						
10R	2	12	71	74	0.1					70				30		4	mix			
10R	2	13	77	79	0.1	v				70				30		3	mix			
10R	2	14	82	82	0.1		s			70				30		15	mix			
10R	2	14	84	85	0.1					70				30		10	mix			

						Vein		Breccia, Vein net, etc.		Secondary minerals in vein						Halo		2nd, Outer, Halo		
Core	Section	Piece no.	Top	Base	Width (mm)	Vertical?	On side of piece?	Type	Secondary (%)	Black clay (sap) (%)	Green/blue clay (cel)(%)	CC (%)	Py (%)	Feox (%)	Zeo (%)	Width (mm)	Type	Width (mm)	Type	Comments
Hole B (continued)																				
10R	2	15	88	91	0.1	v				50				50		6	blk			
10R	2	16	92	99	0.2	v				70				30		7	mix			
10R	2	17	100	108	0.2	v				50				50		8	mix			
10R	2	17	100	108	0.1	v				50				50		8	mix			
10R	2	17	106	107	0.1					100										
10R	2	18	112	115				ru	2	70				30						
10R	2	19	120	120	0.2		s			90				10		6	blk			
10R	2	20	127	131	0.2					90				10		8	mix			
10R	2	20	128	132	0.1	v	s			100						10	mix			
11R	1	1	1	3	0.1	v				90				10		4	blk			
11R	1	1	4	7	0.2					50				50						
11R	1	2	8	10	0.1	v	s			90				10		3	blk			
11R	1	3	24	27				br	30	100										
11R	1	5	34	37	0.1	v	s			70				30		6	blk			
11R	1	7	41	43	0.1	v	s			70				30						
11R	1	7	41	45	0.1	v				100										
11R	1	7	43	43	0.1					100										
11R	1	8	46	48	0.2	v	s			50				50		6	blk			
11R	1	9	50	52	0.1		s			50				50		10	mix			
11R	1	10	52	56	0.1	v				90				10		2	lt			
11R	1	11	57	58	0.2	v				100										
11R	1	11	57	58	0.2	v				90				10						
11R	1	11	57	58	0.1	v				100										
11R	1	12	61	69	0.3	v				75	5			20		6	mix			
11R	1	12	61	71	0.2	v	s			90				10		7	mix			
11R	1	14	91	94	0.2					90			10							
11R	1	14	100	104	0.5					75			5	20						
11R	1	14	108	113	0.2					95			5							
11R	1	14	124	131	0.2		s			75		20	5							
11R	1	14	120	124	0.1					100										
12R	1	1	1	3	0.1	v	s			50				50		10	mix			
12R	1	3	29	36	0.2	v				95			5							
12R	1	3	36	37	0.2					95			5							
12R	1	3	47	60	0.2					90			10							
12R	1	3	57	60	0.1	v				100										
12R	1	3	58	62	0.1	v				100										
12R	1	3	63	63	0.2					95			5							
12R	1	3	63	66	0.5	v				100										
12R	1	3	66	68	0.2					95			5							
12R	1	3	66	67	0.1					98			2							
12R	1	3	80	84	0.1	v				100										
13R	1	2	4	6	0.1	v				90			10			3	mix			
13R	1	3	14	17	0.1	v	s			100										
13R	1	3	12	17	0.2	v	s			100										
13R	1	4	27	31	0.1					100										
13R	1	4	20	27	0.1					100										
13R	1	5	33	35	0.1	v				100										
13R	1	5	40	43						95			5							
13R	1	5	59	60	0.2					80		20								
13R	1	5	66	67	0.2					98			2							
13R	1	5	66	63	0.1	v				100										
13R	1	5	74	77	0.2					100										
13R	1	5	80	100	0.2					80				20		10	grn			

						Vein		Breccia, Vein net, etc.		Secondary minerals in vein						Halo		2nd, Outer, Halo		
Core	Section	Piece no.	Top	Base	Width (mm)	Vertical?	On side of piece?	Type	Secondary (%)	Black clay (sap) (%)	Green/blue clay (cel)(%)	CC (%)	Py (%)	Feox (%)	Zeo (%)	Width (mm)	Type	Width (mm)	Type	Comments
Hole B (continued)																				
13R	1	5	93	95	0.2	v				100										
13R	1	5	83	87	0.2					98			2							
13R	1	6	103	103	0.1		s			100						3	blk			
13R	1	7	106	117	0.1	v	s			100										
13R	1	7	127	129	0.2		s			80	10			10						
13R	2	1	0	1	0.1		s			60	20			20		4	mix			
13R	2	1	1	2	0.1					50				50		8	mix			
13R	2	1	1	9	0.3	v				40	20			40		12	blk			
13R	2	1	9	9	0.1					50				50		15	blk			
13R	2	2	11	17	0.1	v	s			60	20			20		12	blk			
13R	2	2	11	17	0.1	v				70				30						
13R	2	2	15	17	0.1	v				70				30		4	mix			
13R	2	3	21	21	0.1		s			50				50		8	mix			
13R	2	4	26	26	0.1		s			50				50		4	blk			
13R	2	5	30	32	0.1	v				60				40		2	blk			
13R	2	5	30	32	0.1	v	s			50				50		10	mix			
13R	2	6	33	38	0.1	v	s			60				40		10	mix			
13R	2	6	34	39	0.1	v	s			100										
13R	2	7	40	46	0.1	v	s			100						5	mix			
14R	1	1	0	4	0.5	v	s			100						5	blk			
14R	1	1	4	5	0.1	v				100						2	mix			
14R	1	4	22	28	0.1	v	s			90				10		8	mix			
14R	1	6	35	39	0.1	v	s			80				20						
14R	1	7	42	42	0.1	v	s			80				20		14	grn			
14R	1	7	44	47	0.1					90				10						
14R	1	8	49	65	0.1	v	s			50				50		12	grn			
14R	1	9	56	63	0.1	v	s			95				5		10	mix			
14R	1	9	59	61	0.5					20				80		4	mix			
14R	1	10	65	66	0.1		s			100										
14R	1	11	86	95	0.1	v	s			80				20		12	blk			
14R	1	12	96	107	0.1	v	s			100										
14R	1	12	104	110	0.1	v	s			100										
14R	1	13	110	113				ru	1	100										
14R	1	15	123	125	0.1	v				100						10	blk			
14R	1	16	129	135	0.1	v	s			50				50		10	blk			
14R	1	16	129	132	0.1	v				100										
14R	1	16	129	132	0.2	v				100						5	mix			
14R	1	16	129	132	0.1	v				100										
14R	1	17	137	147	0.2	v				45	5			50		8	mix			
14R	1	17	141	143	0.1					100										
14R	1	17	144	149	2	v				10				90		5	mix			
14R	2	3	17	24	0.1	v	s			80				20						
14R	2	3	18	20	0.1	v	s			70				30		10	blk			
14R	2	4	25	27	0.2	v	s			80				20		10	blk			
14R	2	4	25	27	0.2	v				100										
14R	2	4	25	27	0.2	v				100										
14R	2	5	34	37						100										
14R	2	6	38	38	0.2		s			50				50		10	mix			
14R	2	7	43	43	0.1		s			100										
14R	2	7	46	46	0.1		s			100						6	mix			
15R	1	1	1	3	0.1	v	s			100						8	mix			
15R	1	1	1	3	0.1	v				100										
15R	1	1	1	3	0.1	v				100										

						Vein		Breccia, Vein net, etc.		Secondary minerals in vein						Halo		2nd, Outer, Halo		
Core	Section	Piece no.	Top	Base	Width (mm)	Vertical?	On side of piece?	Type	Secondary (%)	Black clay (sap) (%)	Green/blue clay (cel)(%)	CC (%)	Py (%)	Feox (%)	Zeo (%)	Width (mm)	Type	Width (mm)	Type	Comments
Hole B (continued)																				
15R	1	2	8	18	0.3	v	s			10				90		8	blk	2	lt	
15R	1	3	19	26	0.2	v	s			10				90		12	blk	1	lt	
15R	1	5	35	40	0.1	v				100										
15R	1	5	36	40	0.2	v				80				20						
15R	1	6	41	47	0.2	v	s			10	40			50		15	blk	2	lt	
15R	1	7	49	54	0.1	v				80				20		12	mix			
15R	1	7	52	53	0.1	v				100										
15R	1	8	56	58	0.1	v				50				50		8	mix			
15R	1	9	64	64	0.1					20				80		6	grn			
15R	1	10	70	73	0.1	v				100										
15R	1	10	70	79	6	v				10				90		8	grn	2	lt	
15R	1	10	74	79	4	v				10				90		4	grn			
15R	1	11	80	96	6	v				10				90		8	grn	6	lt	
15R	1	11	92	97	0.2					100										
15R	1	12	100	104	0.1	v	s			90				10						
15R	1	12	100	104	0.5	v				50				50		10	blk			
15R	1	12	100	104	0.2	v				100										
15R	1	12	100	104	0.1	v				100										
15R	1	13	106	117	0.2	v	s			70				30		10	mix			
15R	1	14	123	127	1.2	v				30				70		20	grn			
15R	1	14	125	127	1	v				30				70						
15R	1	14	123	127	0.2	v				50				50						
15R	1	14	120	127	0.2	v				50				50						
15R	1	15	129	134	1.2	v				50				50		12	grn			
15R	1	15	133	134	0.2	v				100										
15R	1	15	132	134	0.2	v				50				50		12	mix			
15R	1	16	139	147	1.5					50				50						
15R	1	16	141	142	0.3	v				50				50						
15R	2	1	0	4	1.2	v				20				80		15	grn			
15R	2	2	43	43	0.1								100							
15R	2	2	52	53	0.1		s			100										
15R	2	3	54	62	0.2		s			100						10	blk			
15R	2	3	71	73	0.1	v	s			50				50						
15R	2	3	71	73	0.1	v	s			100										
15R	2	4	74	76	0.1		s			100										
15R	2	4	96	97	0.1		s			100										
15R	2	5	99	103	0.1	v	s			100										
15R	2	5	103	103	0.1		s			98			2							
15R	2	6	109	118	0.1	v	s			59			1	40						
15R	2	7	120	120	0.1		s			99			1							
15R	2	7	120	130	0.2	v				80				20		6	blk			
15R	2	7	123	126	0.1	v							100							
15R	2	8	131	134	0.1	v				100										
15R	2	9	138	144	0.1	v				20				80		25	blk			
15R	2	10	145	149	0.1	v				50				50		3	mix			
15R	3	1	0	4	0.1	v							100							
15R	3	1	4	4	0.1		s			90				10						
15R	3	2	9	13	0.1	v	s			70				30		3	blk			
15R	3	2	8	11	0.2					95			5			2	blk			
15R	3	3	19	27	0.2		s			40	20			40		8	mix			
15R	3	3	28	28	0.1		s			100										
15R	3	3	20	22	0.1	v	s			100										
15R	3	5	36	46	0.2	v	s			90				10		6	blk			dissem. Py front

						Vein		Breccia, Vein net, etc.		Secondary minerals in vein						Halo		2nd, Outer, Halo		
Core	Section	Piece no.	Top	Base	Width (mm)	Vertical?	On side of piece?	Type	Secondary (%)	Black clay (sap) (%)	Green/blue clay (cel)(%)	CC (%)	Py (%)	Feox (%)	Zeo (%)	Width (mm)	Type	Width (mm)	Type	Comments
Hole B (continued)																				
15R	3	5	44	46	0.4	v				50				50						
15R	3	5	46	48	0.1	v	s			100										
15R	3	6	49	54	0.1	v	s			100										
15R	3	6	54	55	0.1		s			90				10		4	blk			
15R	3	7	72	74	0.1		s			78			2	20						
15R	3	8	75	76	0.1					50				50						
15R	3	8	94	97	0.2	v				90			10							
15R	3	9	100	115	0.5					50			50			8	blk			dissem. Py front
15R	3	9	102	104	0.1	v				50			50							
15R	3	9	11	113	0.2	v				50			50							
15R	3	10	129	129	0.1		s			100										
15R	3	10	134	137	0.1	v				100						12	grn			
15R	3	11	139	148	0.2	v	s			90				10		20	grn	3	lt	
15R	4	1	6	10	0.1	v	s			80				20		6	mix			
15R	4	1	3	10	0.1	v	s			100						3	mix			
15R	4	1	4	7	0.3					90				10		12	mix			
15R	4	1	3	6	0.1	v				100										
15R	4	1	2	4	0.1	v				100										
15R	4	2	11	13	0.2					80				20		10	mix			
15R	4	2	16	23	0.1	v				100										
15R	4	3	32	36	0.2					100						15	grn			
15R	4	4	39	43	0.1	v	s			100										
15R	4	4	42	44	0.2					50				50		8	mix			
15R	4	4	46	48	0.2		s			80				20		10	mix			
15R	4	4	45	47	0.1					100										
15R	4	5	48	59	0.2	v				80				20		6	mix			
15R	4	6	64	66	0.3	v				100										
15R	4	6	66	70	0.2	v				20				80		12	brn	3	grn	
15R	4	8	83	84	0.1	v				100										
15R	4	8	87	88	0.1	v							100							
15R	4	9	105	108	0.1		s			60			40							
15R	4	10	110	112	0.1		s			60			40							
15R	4	11	127	129	0.1								100							
15R	4	12	135	147	0.1	v	s			50				50		10	mix			
15R	5	1	1	3	0.1	v	s			100						10	mix			
15R	5	1	5	7	0.1	v				80				20		5	mix			
15R	5	2	8	12	0.1	v	s			80				20		3	blk			
15R	5	3	13	15	0.1					100						8	blk			
15R	5		17	19	0.1					60				40		6	mix			
16R	1	1	1	3	0.1	v	s			100						10	blk			
16R	1	2	5	11	0.1	v	s			100						3	mix			
16R	1	2	7	12	0.1	v	s			100						4	mix			
16R	1	2	6	9	0.1	v				100						6	mix			
16R	1	2	10	11	0.1	v				100						10	blk			
16R	1	4	18	20	0.1	v				90				10		5	mix			
16R	1	5	26	28				ru	2	100										
16R	1	6	35	36	0.2	v	s			100						15	blk			
16R	1	6	32	35	0.1					80				20		8	mix			
16R	1	6	29	33	0.1	v				80				20						
16R	1	7	40	44	0.1	v	s			100						10	blk			
16R	1	8	45	49	0.1	v	s			100						6	blk			
16R	1	8	45	49	0.1	v	s			100						6	blk			
16R	1	10	63	67	0.1	v				100						6	mix			

						Vein		Breccia, Vein net, etc.		Secondary minerals in vein						Halo		2nd, Outer, Halo		
Core	Section	Piece no.	Top	Base	Width (mm)	Vertical?	On side of piece?	Type	Secondary (%)	Black clay (sap) (%)	Green/blue clay (cel)(%)	CC (%)	Py (%)	Feox (%)	Zeo (%)	Width (mm)	Type	Width (mm)	Type	Comments
Hole B (continued)																				
16R	1	10	65	66	0.1		s			100						4	blk			
16R	1	11	69	70	0.1	v	s			100										
16R	1	12	70	74	0.1	v	s			100						8	blk			
16R	1	13	77	80	0.1	v	s			100						12	mix			
16R	1	14	88	89	0.1	v	s			100						8	mix			
16R	1	15	96	98	0.2	v	s			100						12	blk			
16R	1	16	99	100				ru	1	100										
16R	1	17	102	111	0.1	v	s			90				10		8	mix			
16R	1	17	107	109	0.2	v				80				20						
16R	1	18	112	113	0.1	v				100										
16R	1	19	120	121	0.2		s			100						10	blk			
16R	1	19	117	119	0.1	v				100						15	mix			
16R	1	20	121	124	0.2	v				100						7	mix			
16R	1	21	127	129	0.2					100						12	blk			
16R	1	22	130	136				ru	2	100										
16R	1	23	142	143	0.2					100						18	mix			
16R	1	23	142	144	0.3	v				80				20						
16R	1	23	145	149	0.3	v				100						10	mix			
17R	1	1	0	8	0.2	v				100						6	blk			
17R	1	1	0	4	0.2	v				100						5	mix			
17R	1	1	3	8	0.2	v				80				20		5	blk			
17R	1	2	11	11	0.1					100										
17R	1	5	18	19	0.1	v				90				10		4	blk			
17R	1	6	24	25	0.2	v				100										
17R	1	6	25	25	0.1					90				10		3	blk			
17R	1	8	37	38	0.1	v				100										
17R	1	9	40	40	0.1					100										
17R	1	9	42	43	0.1	v				90				10						
17R	1	10	45	47	0.3	v				100						8	mix			
17R	1	10	44	46	0.1	v				90				10						
17R	1	10	49	49	0.2					80				20		10	mix			
17R	1	11	51	53	0.1	v				100										
17R	1	11	54	54	0.1					100						3	mix			
17R	1	11	52	54	0.1	v				100						3	blk			
17R	1	12	60	61	0.1	v				80				20		5	blk			
17R	1	13	64	65	0.1	v				100						12	multi			
17R	1	15	83	84	0.1	v	s			100						8	mix			
18R	1	1	1	5	0.2	v	s			100						4	blk			
18R	1	1	0	2	0.1	v				100										
18R	1	1	0	2	0.1	v				100										
18R	1	6	20	21	0.1	v				100						2	blk			
18R	1	7	32	32	0.1					50			50							
18R	1	7	40	42	0.1	v	s			100						20	mix			
18R	1	7	38	43	0.1	v	s			100						15	mix			
18R	1	9	49	57	0.2	v	s			80	20					20	mix			
18R	1	9	51	53	0.1	v				90				10						
18R	1	10	61	71	0.1	v				60				40						
18R	1	10	62	65	0.1					100										
18R	1	10	64	72	0.1	v				80			20							
18R	1	10	64	72	0.1	v				80			20							
18R	1	11	73	74	0.1		s			97			3							
18R	1	11	74	75	0.2					60				40						py vein oxidised at ends of piece
18R	1	11	78	83	0.1					90			10							

						Vein		Breccia, Vein net, etc.		Secondary minerals in vein						Halo		2nd, Outer, Halo		
Core	Section	Piece no.	Top	Base	Width (mm)	Vertical?	On side of piece?	Type	Secondary (%)	Black clay (sap) (%)	Green/blue clay (cel)(%)	CC (%)	Py (%)	Feox (%)	Zeo (%)	Width (mm)	Type	Width (mm)	Type	Comments
Hole B (continued)																				
18R	1	11	87	92	0.2	v				100										
18R	1	12	108	111	0.1	v	s			100										
18R	1	13	115	120	0.1	v				100										
18R	1	13	123	123	0.1					100										
18R	1	13	123	127	0.3					100										
18R	1	13	126	129	0.2	v				100										
18R	2	1	1	6	0.1	v				100										
18R	2	1	5	8	0.8					50		50								
18R	2	1	9	15	0.1					100										
18R	2	1	24	30	0.2					80		20								
18R	2	1	32	37	0.1					80		20								
18R	2	1	42	50	0.1	v				95		5								
18R	2	1	44	45	0.2					80		20								
18R	2	1	47	50	0.1	v				80		20								
18R	2	2	54	75	0.5					20		80								
18R	2	2	63	64	0.1					50		50								
18R	2	2	53	57	0.1	v				90		10								
18R	2	2	67	74	0.2	v				100										
18R	2	2	73	77	0.1					97			3							
18R	2	2	83	84	0.1					100										large vesicles, sap +py filled, adjacent to vein
18R	2	2	80	102	0.2					98			2			2	blk			py front
18R	3	1	1	5	0.1	v				100										
18R	3	1	1	10	0.1	v				100										
18R	3	1	7	11	0.1	v				100										
18R	3	1	15	25	0.3	v				50		50								
18R	3	1	26	26	0.3					50		50								
18R	3	1	27	30	0.3	v				50		50								
18R	3	2	30	40	0.8					30		70								
18R	3	2	35	46	0.2	v				50		50								
18R	3	2	45	45	0.3					10		90								
18R	3	2	51	56	0.2					90				10						
18R	3	2	60	60	0.2					100										
18R	3	2	59	75	0.1	v				100										
18R	3	2	66	68	0.1					100										
18R	3	2	67	69	1	v				100										
18R	3	2	75	79	1	v				100										
18R	3	2	79	80	1.5					95				5		2	grn			py front (disseminated)
18R	3	2	86	88	0.3					80				20		1	grn			
18R	3	2	89	93	0.2					80				20		1	grn			
18R	3	2	73	102	2					13	5	80	2							
18R	3	2	103	106	0.2					20		80								
18R	3	2	104	110	0.2	v				20		80								
18R	3	2	111	122	0.5					10		90								
18R	3	2	114	116	0.1					95			5							
18R	3	2	121	123	0.1					100										
18R	3	2	125	130	0.5	v				50		50								
18R	3	2	128	128	0.1					100										
18R	4	1	2	6	0.2	v				10		90								
18R	4	1	3	5	0.5	v				10		90								
18R	4	1	4	9	0.2	v				10		90								
18R	4	1	6	8	0.2					10		90								
18R	4	1	9	13	0.2	v				10		90								
18R	4	1	9	16	0.2	v				20		80								

						Vein		Breccia, Vein net, etc.		Secondary minerals in vein						Halo		2nd, Outer, Halo		
Core	Section	Piece no.	Top	Base	Width (mm)	Vertical?	On side of piece?	Type	Secondary (%)	Black clay (sap) (%)	Green/blue clay (cel)(%)	CC (%)	Py (%)	Feox (%)	Zeo (%)	Width (mm)	Type	Width (mm)	Type	Comments
Hole B (continued)																				
18R	4	1	15	25	0.2					60		40								
18R	4	1	17	24	0.2	v				80		20								
18R	4	1	24	25	0.1					98			2							
18R	4	1	37	37	0.1					100										
18R	4	1	30	31	0.1					99			1							
18R	4	1	43	45	0.5					99			1							
18R	4	1	48	54	0.2					20		80								
18R	4	1	59	62	0.1					100										
18R	4	2	64	70	0.1	v				95			5							
18R	4	2	67	69	0.1	v				95			5							
18R	4	2	71	75	0.3	v				100										
18R	4	6	107	120	0.2	v	s			60	20			20		10	mix	2	lt	
18R	4	6	109	112	0.2					100										
18R	4	6	112	120	0.2	v				50				50		12	mix			
18R	4	7	127	130	0.2					50				50						
18R	4	7	126	142	0.2					40	30			30		10	blk			
18R	4	7	127	142	0.2					50				50		3	blk			
18R	5	1	0	12	0.2	v				80				20		15	mix			
18R	5	1	0	8	0.2	v				80				20		10	mix			
18R	5	1	0	5	0.5	v				80				20		10	mix			
18R	5	1	12	14	0.2		s			80				20		9	mix			
19R	1	1	0	6	0.1	v	s			100										
19R	1	1	0	3	0.2	v				80				20						
19R	1	1	3	5	0.2	v				80				20						
19R	1	1	5	6	0.1	v				100										
19R	1	1	5	6	0.1	v				100										
19R	1	1	8	10	0.1	v	s			100						6	blk			
19R	1	1	13	15				ru	1	100										
19R	1	1	18	20	0.5	v				100										
19R	1	1	20	25	0.3	v				90				10						
19R	1	4	22	24	0.1	v				100										
19R	1	4	18	20	0.1	v				90				10		5	mix			
19R	1	5	28	39	0.1	v				50				50		8	blk			
19R	1	5	35	40	0.1		s			50	40			10		8	blk			
19R	1	5	28	29	0.1	v				100										
19R	1	5	29	31	0.1	v				100										
19R	1	6	41	48	0.3		s			50	20			30		12	mix			
19R	1	7	56	56	0.2					50				50						
19R	1	9	65	71	0.1	v	s			100						3	mix			
19R	1	9	65	71	0.1	v	s			80				20		2	mix			
19R	1	11	78	78	0.2		s			100						6	blk			
19R	1	12	83	87	0.1	v	s			70				30		6	blk			
19R	1	12	82	88	0.2	v				80				20		8	mix			
19R	1	12	85	86	0.1	v				100										
19R	1	13	90	92	0.1	v	s			50				50		8	mix			
19R	1	14	96	96	0.1					100						4	mix			
19R	1	14	97	100	0.2	v	s			100						6	mix			
19R	1	15	105	109	0.1	v	s			100						6	blk			
19R	1	15	104	106	0.2					90				10		6	blk			
19R	1	15	105	108	0.2	v				90				10		8	mix			
19R	1	16	112	116	0.1	v				100										
19R	1	16	111	114	0.1	v				100										
19R	1	17	118	122	0.2	v	s			100						6	blk			

						Vein		Breccia, Vein net, etc.		Secondary minerals in vein						Halo		2nd, Outer, Halo		
Core	Section	Piece no.	Top	Base	Width (mm)	Vertical?	On side of piece?	Type	Secondary (%)	Black clay (sap) (%)	Green/blue clay (cel)(%)	CC (%)	Py (%)	Feox (%)	Zeo (%)	Width (mm)	Type	Width (mm)	Type	Comments
Hole B (continued)																				
19R	1	18	124	125	0.1	v	s			80				20		12	mix			
19R	1	19	133	133	0.3					50				50		5	blk			
19R	1	19	134	135	0.2					50				50		10	mix			
19R	1	21	140	140	0.1		s			50				50		7	blk			
19R	2	1	0	0	0.1		s			90				10						
19R	2	1	1	3	0.2					90				10						
19R	2	2	10	10	0.1		s			100						8	mix			
19R	2	5	26	30	0.1	v				100										
19R	2	5	31	31	0.1		s			90				10		8	blk			
19R	2	6	37	38	0.2		s			78	2			20		12	mix			
19R	2	8	51	53	0.2	v				80				20						
19R	2	8	56	52	0.2	v				100										
19R	2	8	47	54	0.2	v	s			100						15	mix			
19R	2	9	59	61	0.1	v				100										
19R	2	10	67	67	0.1		s			80				20		5	mix			
19R	2	10	63	67	0.1	v	s			100						6	blk			
19R	2	10	63	68	0.1					100						4	mix			
20R	1	1	0	3	0.1	v	s			100										
20R	1	3	11	11	0.1					100						8	mix	6	blk	
20R	1	3	10	11	0.1	v				100										
20R	1	3	12	13	0.1	v				100										
20R	1	3	13	13	0.1		s			100										
20R	1	4	17	18	0.2					50	5			45		2	blk			
20R	1	4	16	18	0.2	v	s			50	5			45		10	blk			
20R	1	4	17	21	0.1	v				100										
20R	1	5	25	25	0.2		s			90				10		3	blk			
20R	1	6	33	33	0.1					89	1			10		3	blk			
20R	1	6	35	35	0.1		s			100						3	blk			
20R	1	7	36	39	0.1	v				100										
20R	1	7	38	38	0.1					100										
20R	1	8	40	42				ru	1	95				5						
20R	1	9	45	51	0.2	v				100										
20R	1	9	46	50	0.2	v				100										
20R	1	9	45	46	0.1	v				100										
20R	1	9	48	50	0.5	v				100										
20R	1	11	61	61	0.2		s			100						12	mix			
20R	1	11	60	65	0.1	v	s			50				50		6	blk			
20R	1	12	67	69	0.1	v	s			100						5	mix			
20R	1	12	73	77	0.1	v	s			100						5	mix			
20R	1	12	67	76	0.2	v				100						10	mix			
20R	1	12	70	73	0.2	v				100						10	mix			
20R	1	14	85	90	1.5	v				100						8	mix			
20R	1	14	86	88	0.1	v				100										
20R	1	14	86	88	0.1	v				100										
20R	1	15	92	96	0.1	v				100										
20R	1	16	98	100	0.1	v	s			90				10		4	mix			
20R	1	17	104	108	0.1	v	s			70				30		2	blk			
20R	1	18	106	113				ru	1	100										
20R	1	19	113	119	0.1					90				10		1	blk			
20R	1	20	122	125	0.2	v				100						7	blk	2	lt	
21R	1	1	4	6	0.2	v				100						2	mix			
21R	1	2	8	11	0.2	v				80				20		12	blk			
21R	1	2	11	11	0.1		s			100										

						Vein		Breccia, Vein net, etc.		Secondary minerals in vein						Halo		2nd, Outer, Halo		
Core	Section	Piece no.	Top	Base	Width (mm)	Vertical?	On side of piece?	Type	Secondary (%)	Black clay (sap) (%)	Green/blue clay (cel)(%)	CC (%)	Py (%)	Feox (%)	Zeo (%)	Width (mm)	Type	Width (mm)	Type	Comments
Hole B (continued)																				
21R	1	3	13	15	0.2	v	s			100										
21R	1	3	17	17	0.2		s			100						3	blk			
21R	1	3	17	20	0.2	v				90				10						
21R	1	3	19	20	0.1	v				100						6	mix			
21R	1	5	22	30	0.2	v				90				10		4	mix			
21R	1	5	22	30	0.2	v				90				10		4	mix			
21R	1	5	27	28	0.2					90				10		4	mix			
21R	1	6	32	33	0.2					80				20		4	mix			
21R	1	9	49	50	0.1	v				90			10							
21R	1	10	54	54	0.2		s			70				30		20	blk			
21R	1	10	53	65	0.1	v				60				40		4	blk			
21R	1	10	56	59	0.1	v				60				40		4	blk			
21R	1	12	72	73	0.2	v				50				50		2	brn			
21R	1	12	73	74	0.2	v				50				50		2	brn			
21R	1	13	77	89	0.1					90			10							
21R	1	13	84	90	0.1					100										
21R	1	13	93	97	0.1					100										
21R	1	13	104	105	0.2					95			5							
21R	1	13	120	120	0.1					100										
21R	1	13	110	121	0.1	v				100										
21R	1	13	121	127	0.1	v				70			30							
21R	1	13	123	123	0.1					50			50							
21R	1	14	129	134	0.1	v	s			98			2							
21R	1	14	132	133	0.1	v				100										
21R	2	1	0	5	0.1	v	s			90				10						
21R	2	1	1	6	0.5					80				20		8	blk			
21R	2	1	3	12	0.2					80				20		8	blk			
21R	2	1	2	5	0.1	v				80				20						
21R	2	1	8	10	0.1	v				100										
21R	2	1	12	15	0.2					50				50		8	blk			
21R	2	1	15	18	0.2	v				45	5			50		8	mix			
21R	2	1	17	18	0.2					45	5			50						
21R	2	2	19	19	0.1		s			50				50		6	blk			
21R	2	2	18	24	0.1	v	s			50				50		6	blk			
21R	2	2	23	23	0.1		s			45	5			50		6	blk			
21R	2	3	26	27	0.1	v	s			45	5			50		6	blk			
21R	2	3	28	32	0.1	v	s			45	5			50		6	blk			
21R	2	3	32	32	0.1		s			45	5			50		6	blk			
21R	2	4	34	38	0.1	v				100						4	mix			
21R	2	5	40	40	0.1		s			100										
21R	2	5	43	47	0.1		s			100										
21R	2	5	40	46	0.1	v				100						4	mix			
21R	2	5	43	44	0.1					100						4	mix			
21R	2	5	45	45	0.1					100										
21R	2	7	55	57	0.1	v	s			50				50		6	blk			
21R	2	7	58	64	0.1		s			80				20		10	blk			
21R	2	7	60	63	0.1	v				80				20						
21R	2	9	66	75	0.3	v	s			50				50		10	mix			
21R	2	9	70	73	0.1	v				50				50						
21R	2	11	84	86	0.1	v				100						12	mix			
21R	2	12	90	96	0.1					100										
21R	2	12	91	95	0.1	v				80				20		10	mix			
21R	2	13	102	103	0.2					80				20		10	blk			

						Vein		Breccia, Vein net, etc.		Secondary minerals in vein						Halo		2nd, Outer, Halo		
Core	Section	Piece no.	Top	Base	Width (mm)	Vertical?	On side of piece?	Type	Secondary (%)	Black clay (sap) (%)	Green/blue clay (cel)(%)	CC (%)	Py (%)	Feox (%)	Zeo (%)	Width (mm)	Type	Width (mm)	Type	Comments
Hole B (continued)																				
21R	2	13	101	107	0.2	v				90				10		6	blk			
21R	2	13	102	106	0.2	v				100										
21R	2	13	103	107	0.2	v				100										
21R	2	14	108	108	0.1		s			100										
21R	2	16	117	120	0.1	v				100										
21R	2	17	124	127	2	v				100										
21R	2	17	124	127	2	v				100										
21R	2	17	124	128	0.2	v				100										
21R	2	17	124	127	0.2	v				100										
21R	2	17	124	125	0.2	v				100										
21R	2	17	124	125	0.2	v				100										
21R	2	18	130	133	0.1	v	s			100										
21R	2	18	130	141	0.2	v				100						12	mix			
21R	2	18	130	133	0.1	v				100										
21R	2	18	133	135	0.1	v				100										
21R	2	18	137	139	0.1	v				100										
21R	2	18	139	141	0.1	v				100						12	mix			
21R	3	1	0	3	0.1	v				90				10		10	mix			
21R	3	3	12	16	0.2	v				100										
21R	3	3	14	15	0.1	v				100										
21R	3	3	12	15	0.1	v	s			100										
21R	3	3	12	15	0.1	v	s			100										
21R	3	4	17	18	0.1	v				90				10		12	mix			
21R	3	4	18	24	0.2	v	s			20				80		10	mix	2	lt	
21R	3	6	33	37	0.1	v				100										
21R	3	6	35	37	0.1	v				100										
21R	3	6	34	37	0.1	v				100										
21R	3	6	34	35	0.1	v				100										
21R	3	6	35	39	0.2					50				50		10	blk			
21R	3	6	36	42	0.2					50				50		10	blk			
21R	3	6	41	42	0.2					50				50		12	mix			
21R	3	6	38	40	0.1	v				100										
21R	3	6	42	44	0.2	v				50				50		5	mix			
21R	3	7	50	51	0.1		s			100						15	mix			
21R	3	7	51	60	0.2	v				50				50		8	mix			
21R	3	7	51	54	0.1	v				100										
21R	3	8	62	64	0.1	v	s			50				50		8	mix			
21R	3	9	67	70	0.1	v	s			50				50		6	blk			
21R	3	10	73	78	0.2	v				100						8	blk			
21R	3	10	72	78	0.1	v				100										
21R	3	10	74	76	0.2	v				100										
21R	3	10	76	78	0.1	v				100										
21R	3	10	71	76	0.1	v	s			100										
21R	3	11	80	82	0.2	v				100										
21R	3	13	92	95	0.1	v				100										
21R	3	14	98	100	0.1	v				100										
21R	3	14	99	100	0.1	v				100										
21R	3	14	99	100	0.1	v				100										
21R	3	16	109	116	0.2	v				50				50		8	mix			
21R	3	16	113	115	0.1	v				100										
21R	3	16	113	115	0.1	v				100										
21R	3	17	117	119	0.1	v				100										
21R	3	17	117	119	0.1	v				100										

						Vein		Breccia, Vein net, etc.		Secondary minerals in vein						Halo		2nd, Outer, Halo		
Core	Section	Piece no.	Top	Base	Width (mm)	Vertical?	On side of piece?	Type	Secondary (%)	Black clay (sap) (%)	Green/blue clay (cel)(%)	CC (%)	Py (%)	Feox (%)	Zeo (%)	Width (mm)	Type	Width (mm)	Type	Comments
Hole B (continued)																				
21R	3	17	125	127	0.1	v	s			70				30		8	mix			
21R	3	20	143	147	0.2	v	s			100										
21R	3	20	141	147	0.1	v				100						8	blk			
21R	3	20	141	142	0.2	v	s			70				30		10	blk			
21R	3	20	141	146	0.1					100										
21R	4	1	0	6	0.1	v				80				20		8	mix			
21R	4	1	3	4	0.1	v				100										
21R	4	1	5	6	0.1	v				100										
21R	4	1	6	8	0.1	v				100										
21R	4	2	10	12	0.2		s			100										
21R	4	2	11	12	0.2	v				100										
21R	4	2	13	14	0.2	v				100										
21R	4	2	13	14	0.2	v				100										
21R	4	2	15	16	0.2	v				100										
21R	4	2	13	17	0.3	v				80				20		12	mix			
21R	4	3	22	29						100										
21R	4	4	26	31	0.1	v	s			100						5	mix			
21R	4	4	27	32	0.1	v				100						4	mix			
21R	4	4	25	27	0.1	v				100						4	mix			
21R	4	4	25	30	0.1	v				100						4	mix			
21R	4	5	33	35						100										
21R	4	6	39	40	0.1	v				100										
21R	4	7	45	47	0.1	v				100										
21R	4	9	60	61	0.2	v				100										
21R	4	10	76	81	0.2	v	s			100										
21R	4	10	77	81	0.1	v				100										
22R	1	2	7	9	0.1	v	s			100										
22R	1	3	10	15	0.1	v				100						4	blk			
22R	1	4	18	29	0.3					50				50						
22R	1	4	21	25	0.2					70				30		8	blk			
22R	1	4	27	31	0.2	v				100						8	blk			
22R	1	4	27	31	0.2	v				100						6	blk			
22R	1	5	33	38	0.1	v				100						6	blk			
22R	1	5	33	35	0.1	v				100						10	blk			
22R	1	5	33	36	0.1	v				100										
22R	1	5	33	35	0.1	v	s			100										
22R	1	6	39	44	0.1	v				50				50		5	mix			
22R	1	7	46	50	0.2	v				70				30		20	mix			
22R	1	7	52	54	0.1					70				30		3	mix			
22R	1	7	57	61	0.1					70				30		3	mix			
22R	1	7	58	60	0.1	v				70				30		3	mix			
22R	1	10	77	77	0.2					100										
22R	1	10	76	81	0.2	v				100										
22R	1	10	76	81	0.2	v				100										
22R	1	11	84	87	0.1	v				100										
22R	1	11	86	90	0.1	v				100										
22R	1	11	88	90	0.1	v				100										
22R	1	11	87	90	0.1	v				100										
22R	1	12	93	94	0.1					100						3	mix			
22R	1	12	92	96	0.1					100						3	mix			
22R	1	12	97	100	0.1	v				100						3	mix			
22R	1	12	97	100	0.1	v				100						3	mix			
22R	1	13	103	107	0.1					90				10		8	blk			

						Vein		Breccia, Vein net, etc.		Secondary minerals in vein						Halo		2nd, Outer, Halo		
Core	Section	Piece no.	Top	Base	Width (mm)	Vertical?	On side of piece?	Type	Secondary (%)	Black clay (sap) (%)	Green/blue clay (cel)(%)	CC (%)	Py (%)	Feox (%)	Zeo (%)	Width (mm)	Type	Width (mm)	Type	Comments
Hole B (continued)																				
22R	1	13	102	110	0.1					100						6	blk			
22R	1	13	105	108	0.1	v				100										
22R	1	13	107	108	0.1	v				100										
22R	1	13	109	110	0.3					100						3	blk			
22R	1	13	109	110	0.3					100						3	blk			
22R	1	13	110	111	0.3	v				100						3	blk			
22R	1	13	111	112	0.3	v				100						3	blk			
22R	1	13	111	112	0.3	v				100						3	blk			
22R	1	13	121	135	0.3	v				90				10		8	mix	2	lt	
22R	1	13	122	124	0.1	v				100										
22R	1	13	121	125	0.1	v				100										
22R	1	13	123	125	0.5	v				100						20	mix	4	lt	
22R	1	13	130	135	0.1	v	s			100						15	mix			
22R	1	15	137	141						100										
22R	2	1	1	7	0.1	v				100										
22R	2	3	18	20	0.1	v	s			60	10			30						
22R	2	3	24	29	0.1	v				100										dissem. Py
22R	2	4	32	34	0.1	v				100										
22R	2	5	37	41	0.1	v				100						8	mix			
22R	2	5	37	41	0.1	v				100						8	mix			
22R	2	6	45	50	0.1	v	s			100										
22R	2	6	50	53	0.1					80				20		10	blk			
22R	2	6	46	48	0.1	v				100										
22R	2	6	46	47	0.1	v				100										
22R	2	7	58	58	0.2					30				70		8	blk			
22R	2	8	66	70	0.1	v	s			100						20	mix			
22R	2	9	74	78	0.2	v	s			100						20	mix			
22R	2	10	80	84	0.2	v	s			100										
22R	2	10	80	84	0.2	v				100										
23R	1	1	1	7	0.1	v	s			100						8	blk			
23R	1	2	8	13	0.5	v	s			50				50		12	blk			
23R	1	2	9	11	0.5					50				50		3	blk			
23R	1	4	23	24	1	v				50				50		4	blk			
23R	1	5	27	35	0.1	v				100										
23R	1	5	27	30	0.1	v	s			100										
23R	1	8	49	50	0.1	v				100										
23R	1	8	49	50	0.1	v				100										
23R	1	8	49	50	0.1	v				100										
23R	1	8	49	50	0.1	v				100										
23R	1	8	49	55	0.2	v				80				20		8	mix			
23R	1	10	63	64	0.1	v	s			90			10							
23R	1	10	64	65	0.1	v				100										
23R	1	10	64	68	0.1	v				80				20		4	blk			
23R	1	10	66	69	0.1	v				100										
23R	1	11	72	73	0.1	v				100										
23R	1	11	70	73	0.1	v				100										
23R	1	13	80	80	0.1		s			90			10							
23R	1	15	88	89	0.1		s			100						4	blk			
23R	1	15	89	92	0.1					90				10		8	blk			
23R	1	15	94	96	0.1	v				90				10						
23R	1	15	96	101	0.3	v				100						10	blk			
23R	1	15	96	100	0.1	v				100										
23R	1	16	104	105	0.1	v	s			100						4	mix			

						Vein		Breccia, Vein net, etc.		Secondary minerals in vein						Halo		2nd, Outer, Halo		
Core	Section	Piece no.	Top	Base	Width (mm)	Vertical?	On side of piece?	Type	Secondary (%)	Black clay (sap) (%)	Green/blue clay (cel)(%)	CC (%)	Py (%)	Feox (%)	Zeo (%)	Width (mm)	Type	Width (mm)	Type	Comments
Hole B (continued)																				
23R	1	17	109	113	0.2					50				50		8	blk			
23R	1	17	109	112	0.2	v				50				50						
23R	1	17	112	113	0.2	v				100										
23R	1	19	120	122	0.1		s			50				50		12	mix			
23R	1	19	123	126	0.1	v	s			100						6	mix			
23R	1	19	125	125	0.1		s			70				30		10	blk			
23R	1	20	127	131	0.1		s			20				80		8	mix			
23R	1	20	127	133	0.2					20				80		8	mix			
23R	1	20	133	137	0.2					20				80		8	mix			
23R	1	21	141	143	0.2					50				50		20	blk			
23R	1	21	142	145	0.5	v				80				20						
23R	1	21	142	145	0.1	v				100										
23R	2	1	12	14	0.1		s			50				50		8	blk			
23R	2	1	1	10	0.2	v				100						10	mix			
23R	2	1	7	10	0.1	v				100						5	mix			
23R	2	1	1	3	0.2	v				100										
23R	2	1	1	7	0.2	v				90				10		5	blk			
23R	2	1	1	3	0.2	v				100										
23R	2	3	32	42	0.2	v				50				50		12	blk			
23R	2	3	37	41	0.2	v				50				50		8	grn			
23R	2	3	28	30	0.2	v				100						8	mix			
23R	2	3	25	27	0.2	v				100										
23R	2	3	25	26	0.1	v				100										
23R	2	3	29	32	0.1	v				100						8	mix			
23R	2	3	34	36	0.1	v				50				50						
23R	2	4	42	51	0.1	v				70				30		2	brn	15	mix	
23R	2	4	46	51	0.1	v				70				30		2	brn	5	mix	
23R	2	4	46	51	0.5					50				50		15	mix			
23R	2	4	47	49	0.2	v				50				50		10	mix			
23R	2	7	65	65	0.1		s			70				30		22	mix			
23R	2	8	66	68	0.8					50				50		25	mix			
23R	2	8	69	73	0.1	v				100										
23R	2	10	88	88	0.1					70	5			25		8	mix	3	lt	
23R	2	10	84	85	0.1	v				100										
23R	2	10	88	94	0.1					70				30		10	blk			
23R	2	10	91	92	0.1					70				30		6	blk			
23R	2	10	92	95	0.2	v				70				30		6	blk			
23R	2	10	92	93	0.1	v				100										
23R	2	11	100	100	0.1		s			90				10		4	blk			
23R	2	12	100	100	0.2		s			100						3	blk			
23R	2	12	100	103	0.2	v	s			100						3	blk			
23R	2	12	100	103	0.2	v	s			100						3	blk			
23R	2	12	103	103	0.2		s			100						3	blk			
23R	2	13	108	110				ru	1	100										
23R	2	14	112	115	0.2	v	s			100										
23R	2	15	120	121	0.2					100						10	blk			
23R	2	16	124	129	0.2	v				100						10	blk			
23R	2	17	130	132	0.2	v				100										
23R	2	17	130	131	0.1	v				100										
23R	2	17	132	132	0.1	v				100										
23R	2	17	130	137	0.2	v				100						20	blk			
23R	2	17	133	136	0.1	v				100										
23R	2	18	140	145	0.1					100										

						Vein		Breccia, Vein net, etc.		Secondary minerals in vein						Halo		2nd, Outer, Halo		
Core	Section	Piece no.	Top	Base	Width (mm)	Vertical?	On side of piece?	Type	Secondary (%)	Black clay (sap) (%)	Green/blue clay (cel)(%)	CC (%)	Py (%)	Feox (%)	Zeo (%)	Width (mm)	Type	Width (mm)	Type	Comments
Hole B (continued)																				
23R	2	18	145	149	0.1		s			80				20		30	grn	5	lt	
23R	3	1	0	7	0.1		s			100						12	mix			
23R	3	1	2	4	0.2	v				80				20		12	mix			
23R	3	1	4	6	0.1					80				20						
23R	3	1	5	6	0.1					100										
23R	3	2	11	13	0.1	v	s			100										
23R	3	3	14	14	0.2					100						4	blk			
23R	3	3	15	18	0.1	v	s			90				10		3	mix			
23R	3	4	19	29	0.1	v				50				50		2	blk			
23R	3	5	32	33				ru	3	90				10						
23R	3	6	34	35	0.1	v	s			50				50		6	grn	2	lt	
23R	3	7	38	39	0.1	v	s			50				50		6	grn	2	lt	
23R	3	8	41	41	0.1		s			50				50		6	blk	2	lt	
23R	3	9	46	50	0.2	v				50				50		8	mix			
23R	3	9	47	50	0.1	v				100										
23R	3	9	46	47	0.1	v				100										
23R	3	10	52	55	0.1		s			100										
23R	3	10	52	57	0.1		s			100										
23R	3	11	60	61	0.1	v	s			50				50						
23R	3	11	63	63	0.1		s			50				50		8	mix			
23R	3	12	69	72	0.1	v	s			100						12	blk			
23R	3	13	73	78				ru	2	100										
24R	1	1	2	3	0.1	v				100										
24R	1	2	4	6	0.1	v	s			100										
24R	1	2	4	6	0.1	v				100										
24R	1	2	5	6	0.1	v				100										
24R	1	3	7	13	0.1	v				100						8	mix			
24R	1	3	9	12	0.1					100						8	mix			
24R	1	3	12	15	0.1	v				100										
24R	1	3	12	13	0.1	v				100										
24R	1	3	13	14	0.1	v				100										
24R	1	3	13	14	0.1	v				100										
24R	1	4	19	37	0.5	v				100						20	mix			
24R	1	4	24	24	0.2					100										
24R	1	4	24	28	0.2	v				100										
24R	1	4	21	23	0.1	v				100										
24R	1	4	25	32	0.3	v				100										
24R	1	4	26	30	0.1	v				100										
24R	1	4	31	36	0.1	v				100										
24R	1	4	33	33	0.1					70				30		10	blk			
24R	1	5	41	41	0.1		s			70				30		10	mix			
24R	1	6	42	42	0.1		s			70				30						
24R	1	6	42	47	0.2	v	s			100						8	blk			
24R	1	7	49	51	0.1	v				100										
24R	1	7	48	53	0.2	v				70				30		6	blk			
24R	1	8	54	60	0.2	v				80				20		8	mix			
24R	1	8	57	61	0.2					100						8	mix			
24R	1	8	57	63	0.2					100						8	mix			
24R	1	8	58	59	0.1	v				100						2	blk			
24R	1	8	59	62	0.1	v				100										
24R	1	9	64	67	0.2	v				100						5	blk			
24R	1	9	64	67	0.2	v				100						5	blk			
24R	1	9	70	71	0.5					100						5	blk			

						Vein		Breccia, Vein net, etc.		Secondary minerals in vein						Halo		2nd, Outer, Halo		
Core	Section	Piece no.	Top	Base	Width (mm)	Vertical?	On side of piece?	Type	Secondary (%)	Black clay (sap) (%)	Green/blue clay (cel)(%)	CC (%)	Py (%)	Feox (%)	Zeo (%)	Width (mm)	Type	Width (mm)	Type	Comments
Hole B (continued)																				
24R	1	9	66	68	0.1					100						5	blk			
24R	1	9	67	70	0.1	v				100						5	blk			
24R	1	9	73	73	0.1					100						5	blk			
24R	1	10	78	81	0.1					100										
24R	1	10	80	83	0.5	v				100										
24R	1	10	80	82	0.1	v				100										
24R	1	10	81	83	0.1	v				100										
24R	1	10	77	78	0.1	v				100										
24R	1	10	80	82	0.1	v				100										
24R	1	11	84	87	0.3	v	s			100						8	mix			
24R	1	11	85	92	0.5					90				10		6	mix			
24R	1	11	88	90	0.1	v				100						6	blk			
24R	1	13	98	100	0.1		s			90				10		10	blk			
24R	1	13	105	110	0.1		s			90				10		10	blk			
24R	1	14	111	115	0.1		s			90				10		10	blk			
24R	1	14	116	125	0.2					95			5							
24R	1	14	126	130	0.1		s			98			2							
24R	2	1	0	8	0.2		s			95			5							
24R	2	1	9	18	0.2					95			5							
24R	2	1	11	14	0.1	v				95			5							
24R	2	1	12	17	0.1	v				95			5							
24R	2	1	2	4	0.1	v				100										
24R	2	1	3	10	0.1	v				100										
24R	2	5	40	44	0.1	v				100										
24R	2	6	48	51	0.1	v				100										
25R	1	1	0	1	0.1	v				100										
25R	1	1	0	2	0.2	v				100										
25R	1	3	7	14	0.2	v	s			50				50		12	blk	1	lt	
25R	1	4	19	23	0.1	v	s			90				10		8	blk	1	lt	
25R	1	4	16	18	0.1	v	s			20				80		10	blk	2	lt	
25R	1	5	26	27	0.1	v				100										
25R	1	5	27	28	0.1	v				100										
25R	1	6	33	35	0.1	v	s			100						8	blk			
25R	1	7	36	36	0.1		s			100						8	blk	2	lt	
25R	1	8	44	46	0.1	v	s			50				50		6	mix			
25R	1	9	46	51	0.1	v				100										
25R	1	9	46	50	0.1	v				100										
25R	1	9	49	60	0.3	v				60				40		12	mix			
25R	1	9	61	61	0.2		s			50				50		18	mix			greenish halo
25R	1	11	75	80	0.8	v				100						25	mix			
25R	1	14	90	90	0.1		s			100										
25R	1	14	91	92	0.1	v				100										
25R	1	16	101	103	0.1	v	s			50				50		5	blk			
25R	1	16	101	104	0.1		s			50				50		8	mix			
25R	1	16	98	102	0.1	v	s			45	5			50		5	mix			
25R	1	17	106	106	0.2		s			50				50		33	multi			(halo = 4mix, 25blk, 4lt)
25R	1	17	115	115	0.1		s			50				50		10	blk	2	lt	
25R	1	18	118	118	0.2					20				80						
25R	1	18	119	119	0.5					20				80		12	mix			
25R	1	19	124	139	0.8					50	5			45		10	mix	3	lt	
25R	1	19	126	128	0.1					100										
25R	2	1	1	7	0.5					50				50		8	mix			
25R	2	1	2	7	0.1	v				100										

						Vein		Breccia, Vein net, etc.		Secondary minerals in vein						Halo		2nd, Outer, Halo		
Core	Section	Piece no.	Top	Base	Width (mm)	Vertical?	On side of piece?	Type	Secondary (%)	Black clay (sap) (%)	Green/blue clay (cel)(%)	CC (%)	Py (%)	Feox (%)	Zeo (%)	Width (mm)	Type	Width (mm)	Type	Comments
Hole B (continued)																				
25R	2	1	2	8	0.2	v				50				50		12	mix			
25R	2	2	15	16	0.5	v				50				50		3	blk			
25R	2	3	24	24	0.2		s			80				20		2	blk			
25R	2	4	28	32	0.2	v				50				50		8	blk	3	lt	
25R	2	4	27	29	0.5					50				50		6	blk	2	lt	
25R	2	4	28	34	0.2	v				50				50		5	mix	2	lt	
25R	2	4	28	30	0.1	v				80				20		4	blk			
25R	2	4	33	35	0.1	v				100						2	blk			
25R	2	4	31	33	0.1	v				80				20		3	mix			
25R	2	4	36	37	0.1	v	s			100										
25R	2	5	38	42	0.2	v				100										
25R	2	5	37	42	0.5	v				100										
25R	2	5	41	42	0.1	v				100										
25R	2	5	41	42	0.1	v				100										
25R	2	5	41	43	0.1	v				100										
25R	2	6	44	47	0.2	v				100										
25R	2	6	46	48	0.1	v				100										
25R	2	7	51	54	0.1					100										
25R	2	7	51	58	0.2	v				50				50		8	mix			
25R	2	7	52	55	0.1					100										
25R	2	7	53	57	0.1	v				50				50		4	blk			
25R	2	7	57	60	0.2					50				50		12	mix	4	lt	
25R	2	8	62	64	0.2	v	s			80				20		6	blk			
25R	2	8	61	65	0.1	v				100						4	mix			
25R	2	9	67	68	0.5					100						12	mix			
25R	2	9	65	66	0.1					100										
25R	2	9	67	72	0.1					100										
25R	2	9	71	72	0.1					100										
25R	2	9	68	72	0.2					50				50		6	mix			
25R	2	10	80	83	0.2					50				50		12	mix	3	lt	
25R	2	10	81	83	0.2					100						3	blk			
25R	2	11	84	86	0.1					100						3	blk			
25R	2	11	85	90	0.2					100						3	blk			
25R	2	11	85	86	0.1					100						3	blk			
25R	2	11	85	87	0.2					100						3	blk			
25R	2	11	88	89	0.1					100						3	blk			
25R	2	11	87	93	0.2					100						3	blk			
25R	2	11	87	91	0.1					100						3	blk			
25R	2	11	91	94	0.1					100						3	blk			
25R	2	11	93	93	0.1					100						3	blk			
25R	2	12	99	101	0.1					50				50		8	blk			
25R	2	12	97	99	0.2					100										
25R	2	12	97	98	0.2					100										
25R	2	12	103	105	0.1					100										
25R	2	13	107	108				ru	1	90				10						
25R	2	14	111	116	0.2					100						4	blk			
25R	2	14	114	115	0.2					100						4	blk			
25R	2	14	112	117	0.2					100						1	blk			
25R	2	14	114	118	0.1					100						12	blk			
25R	2	14	119	123	0.2					100						6	blk			
25R	2	14	123	125	0.1					100						4	blk			
26R	1	1	2	3	0.1	v	s			100										
26R	1	2	5	11	0.1	v	s			100						6	blk			

						Vein		Breccia, Vein net, etc.		Secondary minerals in vein						Halo		2nd, Outer, Halo		
Core	Section	Piece no.	Top	Base	Width (mm)	Vertical?	On side of piece?	Type	Secondary (%)	Black clay (sap) (%)	Green/blue clay (cel)(%)	CC (%)	Py (%)	Feox (%)	Zeo (%)	Width (mm)	Type	Width (mm)	Type	Comments
Hole B (continued)																				
26R	1	3	14	15	0.1	v	s			70				30		10	blk			
26R	1	5	21	23	0.1	v				100										
26R	1	6	25	25	0.1		s			70				30		8	mix			
26R	1	6	29	31	0.1	v	s			70				30		12	mix			
26R	1	7	32	35	0.2					70				30		12	mix			
26R	1	7	32	35	0.2	v				100						10	blk			
26R	1	7	35	37	0.2					100						6	blk			
26R	1	7	37	40	0.2	v				70				30		12	mix			
26R	1	7	41	42	0.1	v				100										
26R	1	7	41	42	0.1	v				100										
26R	1	7	42	44	0.1	v				100										
26R	1	7	40	45	0.1	v				100										
26R	1	7	42	44	0.1	v				100										
26R	1	9	53	53	0.1		s			100						4	blk			
26R	1	9	51	52	0.1	v				100						6	blk			
26R	1	10	56	56	0.1		s			100						2	blk			
26R	1	10	56	57	0.1	v	s			100						2	blk			
26R	1	10	58	58	0.1		s			100						3	blk			
26R	1	11	59	62	0.2	v				100										
26R	1	13	71	75				ru	1	100										
26R	1	14	80	82	0.2	v				100										
26R	1	15	85	88	0.1	v	s			100						4	blk			
26R	1	18	100	104	0.1	v	s			90				10		4	blk			
26R	1	18	100	102	0.1	v	s			90				10		4	blk			
27R	1	1	0	1	0.1	v	s			100										
27R	1	3	9	15	0.1	v	s			100						8	grn			
27R	1	4	17	19	0.1	v	s			50				50		6	blk	2	lt	
27R	1	4	16	24	0.2	v				90				10						
27R	1	5	29	31	0.1	v	s			100						4	blk			
27R	1	7	39	42	0.1	v				50				50		4	mix			
27R	1	10	60	65	0.3	v				100										
27R	1	10	60	62	0.2	v				100										
27R	1	10	60	62	0.2	v				100										
27R	1	10	60	61	0.1	v				100										
27R	1	10	60	61	0.1	v				100										
27R	1	10	60	61	0.1	v				100										
27R	1	10	60	73	0.2	v				70				30		8	mix			
27R	1	10	63	73	0.1					90				10		10	mix			
27R	1	10	66	71	0.2	v				50				50		5	mix			
27R	1	10	65	68	0.1	v				100						3	mix			
27R	1	11	74	70	0.1	v	s			100						3	blk			
27R	1	11	70	79	0.1	v				80				20		4	blk			
27R	1	12	80	81	0.1	v				100										
27R	1	12	80	81	0.1	v				100										
27R	1	12	82	86	0.2	v				50				50		4	mix			
27R	1	12	58	87	0.2	v				50				50		4	mix			
27R	1	12	82	86	0.1	v	s			90				10		4	blk			
27R	1	13	88	92	0.1	v				100										
27R	1	16	106	112	0.1	v				100										
27R	1	16	106	112	0.1	v	s			80				20		12	grn	2	lt	
27R	1	17	113	115				ru	2	80				20						
27R	1	19	134	139	0.2	v				100										
27R	1	19	137	138	0.1	v				100										

						Vein		Breccia, Vein net, etc.		Secondary minerals in vein						Halo		2nd, Outer, Halo		
Core	Section	Piece no.	Top	Base	Width (mm)	Vertical?	On side of piece?	Type	Secondary (%)	Black clay (sap) (%)	Green/blue clay (cel)(%)	CC (%)	Py (%)	Feox (%)	Zeo (%)	Width (mm)	Type	Width (mm)	Type	Comments
Hole B (continued)																				
27R	1	23	146	147	0.1	v	s			80				20		6	blk			
27R	2	1	0	5	0.1	v				70	10			20						
27R	2	1	3	8	0.5	v				50				50		5	mix			
27R	2	3	19	20	0.1	v				100										
27R	2	4	29	32	0.2	v	s			40	10			50		10	grn	3	lt	
27R	2	4	29	31	0.1					40	10			50		10	grn			
27R	2	4	26	28	0.1	v				100										
27R	2	6	37	42	0.1	v	s			30				70		2	mix			
27R	2	6	37	42	0.2					30				70		8	mix			
27R	2	6	39	41	0.1	v				100										
28R	1	1	3	5	0.2		s			30				70		8	blk			
28R	1	1	0	4	0.1	v				100						6	blk			
28R	1	2	6	8	0.1		s			50				50		4	blk			
28R	1	3	13	14				ru	1	100										
28R	1	4	17	22	0.2	v	s			100						8	blk			
28R	1	4	17	20	0.1					70				30		4	blk			
28R	1	5	23	23	0.1		s			50						4	blk			
28R	1	5	26	27	0.2	v	s			100						6	blk			
28R	1	7	28	28	0.1		s			40				40		4	blk			
28R	1	8	30	33	0.1					70				30		4	blk			
28R	1	8	36	39	0.2	v				50				50		6	blk			
28R	1	8	40	44	0.1		s			50				50		6	mix			
28R	1	8	40	44	0.1	v				70				30		12	mix	2	lt	
28R	1	8	41	44	0.1					100										
28R	1	9	46	52	0.1					40	10			50		4	blk	2	lt	
28R	1	9	45	46	0.1		s			50				50		8	blk			
28R	1	9	45	48	0.1	v				40	20			40						
28R	1	9	46	52	0.1	v				100						1	lt			
28R	1	9	51	53	0.1		s			30				70		3	blk	2	lt	
28R	1	11	59	63	0.1	v	s			30	40			30		35	grn			
28R	1	11	59	62	0.1	v				100										
28R	1	13	71	71	0.1		s			50				50		15	mix			
28R	1	13	71	74	0.1	v	s			20				80		12	blk			
28R	1	14	78	80	0.1	v	s			100										
28R	1	14	77	82	0.1	v				100										
28R	1	14	77	83	0.2	v				100						8	mix	1	lt	
28R	1	14	78	81	0.2		s			90				10		4	blk	1	lt	
28R	1	14	81	84	0.2	v	s			70				30		4	blk	1	lt	
28R	1	15	85	88	0.1	v				80				20						
28R	1	15	84	88	0.1		s			70				30		8	mix			
28R	1	16	94	95	0.2		s			30				70		4	blk			
28R	1	17	95	95	0.1		s			100						4	blk			
28R	1	18	100	101	0.1	v	s			100						3	blk			
28R	1	18	100	102	0.2	v	s			100						4	blk			
29R	1	1	0	1	0.1	v	s			100										
29R	1	2	5	8	0.2	v	s			50					50	3	mix			
29R	1	2	5	8	0.2	v	s			50					50	3	mix			
29R	1	3	11	15	0.1	v	s			30				70		8	blk			
29R	1	4	17	18	0.1	v				100										
30R	1	1	1	1	0.2		s			50				50		20	grn			
30R	1	2	5	5	0.1		s			100						5	mix			
30R	1	2	5	8	0.2	v	s			100						6	blk			
30R	1	4	16	18	0.1	v	s			50				50						

						Vein		Breccia, Vein net, etc.		Secondary minerals in vein						Halo		2nd, Outer, Halo		
Core	Section	Piece no.	Top	Base	Width (mm)	Vertical?	On side of piece?	Type	Secondary (%)	Black clay (sap) (%)	Green/blue clay (cel)(%)	CC (%)	Py (%)	Feox (%)	Zeo (%)	Width (mm)	Type	Width (mm)	Type	Comments
Hole B (continued)																				
30R	1	9	37	37	0.2		s			50				50		4	mix			
30R	1	9	42	42	0.2		s			50				50		4	mix			
30R	1	10	48	48	0.1	v	s			30				70		8	mix			
30R	1	12	56	56	0.2		s			80				20		4	mix			
30R	1	13	60	66	0.1	v					50			50		10	mix			
30R	1	13	60	66	0.2	v					50			50		10	mix			
30R	1	13	61	63	0.2	v					50			50		10	mix			
30R	1	13	60	61	0.1	v				100										
30R	1	13	64	65	0.1	v				50				50						
30R	1	14	68	70	0.1					30				70		3	blk			
30R	1	14	72	73	0.1					30				70		3	blk			
30R	1	16	81	81	0.1		s			100						3	blk			
30R	1	17	84	84	0.3		s				100					3	blk			
30R	1	18	88	88	0.3		s				100					3	blk			
30R	1	18	90	90	0.3		s				100					3	blk			
30R	1	19	91	91	0.1		s			100						4	blk			
30R	1	20	95	97	0.2		s			30				70		4	blk			
30R	1	20	95	98	0.1	v				80				20		5	blk	2	lt	
30R	1	20	99	102	0.1	v				80				20		5	blk	2	lt	
30R	1	21	105	111	0.3					30				70		10	mix			
30R	1	21	107	110	0.3					30				70		20	mix			
30R	1	22	114	114	0.2					50				50		3	blk			
30R	1	23	120	123	0.2	v				80				20						
30R	1	23	120	123	0.2	v				100										
30R	1	23	120	125	0.1	v	s			80				20		5	mix			
30R	1	25	133	135	0.1	v				100						3	blk			
31R	1	1	0	0	0.1		s			100										
31R	1	2	4	7	0.2	v	s			100										
31R	1	2	7	7	0.2		s			100										
31R	1	5	17	17	0.1		s			100						3	blk			
31R	1	6	23	23	0.2		s			100						8	blk			
31R	1	6	21	23	0.1	v				20				80		5	mix			
31R	1	8	29	33				Ru	3	90				10						
31R	1	9	33	37	0.2	v				100						12	blk			
31R	1	10	37	40	0.1	v				50				50		6	blk			
31R	1	11	41	41	0.1		s			100										
31R	1	11	43	44	0.1	v				100										
31R	1	12	47	55	0.2	v				95				5		5	mix			
31R	1	12	47	50	0.1					80				20		4	mix			
31R	1	12	52	54	0.1	v				80				20		1	blk			
32R	1	1	0	2	0.1	v	s			20				80		6	blk			
32R	1	3	7	10	0.1	v				50				50		4	blk			
32R	1	4	15	16	0.1	v				100										
32R	1	4	15	16	0.2	v				100										
32R	1	4	15	16	0.1	v				100										
32R	1	4	15	17	0.1	v				100										
32R	1	4	15	17	0.1	v				100										
32R	1	4	14	18	0.1	v				100										
32R	1	4	13	20	0.5	v				100						6	mix			
32R	1	4	14	24	0.2	v	s			100						2	blk			
32R	1	5	24	26	0.1	v	s			100										
32R	1	5	24	28	0.1	v				100										
32R	1	5	28	28	0.2	v				100										

						Vein		Breccia, Vein net, etc.		Secondary minerals in vein						Halo		2nd, Outer, Halo		
Core	Section	Piece no.	Top	Base	Width (mm)	Vertical?	On side of piece?	Type	Secondary (%)	Black clay (sap) (%)	Green/blue clay (cel)(%)	CC (%)	Py (%)	Feox (%)	Zeo (%)	Width (mm)	Type	Width (mm)	Type	Comments
Hole B (continued)																				
32R	1	5	24	28	0.2	v				100						10	mix			
32R	1	6	31	32	0.1	v				100										
32R	1	6	32	33	0.1	v	s			100										
32R	1	7	36	42	0.2	v				50				50		6	mix			
32R	1	7	42	45	0.2	v	s			50				50		8	mix			
32R	1	7	39	53	0.1	v				80				20						
32R	1	7	44	45	0.2	v				50				50		5	mix			
32R	1	7	41	41	0.2					50				50		2	blk			
32R	1	7	44	44	0.2					50				50		5	mix			
32R	1	7	47	51	0.1	v				50				50		3	mix			
32R	1	7	46	52	0.2	v	s			80				20		5	mix			
32R	1	7	49	51	0.1					80				20		8	blk			
32R	1	7	51	52	0.1	v				50				50						
32R	1	8	53	54	0.1	v	s			50				50		4	blk			
32R	1	8	55	55	0.5		s			100						4	blk			
32R	1	8	53	54	0.1	v	s			100						4	blk			
32R	1	9	57	63	0.3	v				80				20						
32R	1	11	68	69	0.1	v				100										
32R	1	11	68	69	0.1	v	s			100						8	mix			
32R	1	12	70	71	0.2	v	s			100						5	blk			
32R	1	13	76	83	0.1	v				80				20		3	blk			
32R	1	14	83	87	0.2	v				10				90		12	grn	2	lt	
32R	1	14	86	88	0.1	v				10				90						
32R	1	14	84	85	0.1	v				10				90						
32R	1	15	89	97	0.5	v				100						5	mix			
32R	1	15	89	97	0.3	v				100						5	mix			
32R	1	15	88	96	0.8	v				100						4	mix			
32R	1	15	88	89	0.1	v				100						2	mix			
32R	1	15	92	92	0.5					100						8	mix			
32R	1	15	93	95	0.1	v				100						2	mix			
32R	1	15	93	96	0.1	v				100						3	blk			
32R	1	16	99	103	0.2					100						3	blk			
32R	1	16	99	102	0.1					100						3	blk			
32R	1	16	99	102	0.2					100						3	blk			
32R	1	16	191	104	0.3					100						3	blk			
32R	1	16	192	103	0.1					100						3	blk			
32R	1	17	199	110	0.2	v	s			100										
32R	1	17	197	111	0.2	v				100						8	mix			
32R	1	18	112	120	0.2	v	s			50				50		6	mix			
32R	1	19	123	123	0.1					100										
32R	1	19	123	126	0.1	v	s			100						5	mix			
32R	1	19	123	134	0.2	v				50				50		10	mix			
32R	1	19	126	135	0.1	v				60				40		4	blk			
32R	1	19	127	128	0.1					50				50						
32R	1	19	129	128	0.1					50				50						
32R	2	1	0	135	0.1	v				100						4	blk			
32R	2	1	2	3	0.2	v				100						3	blk			
32R	2	1	2	3	0.1	v				100										
32R	2	1	2	3	0.1	v				100										
32R	2	1	2	3	0.1	v				100										
32R	2	1	3	3	0.1	v				100										
32R	2	1	3	3	0.1					100						5	mix			
32R	2	1	8	9	0.2					100						5	blk			

						Vein		Breccia, Vein net, etc.		Secondary minerals in vein						Halo		2nd, Outer, Halo		
Core	Section	Piece no.	Top	Base	Width (mm)	Vertical?	On side of piece?	Type	Secondary (%)	Black clay (sap) (%)	Green/blue clay (cel)(%)	CC (%)	Py (%)	Feox (%)	Zeo (%)	Width (mm)	Type	Width (mm)	Type	Comments
Hole B (continued)																				
32R	2	1	9	8	0.2					80				20		3	blk			
32R	2	1	8	14	0.2	v				50				50		10	mix			
32R	2	1	11	14	0.1	v				100						6	blk			
32R	2	1	9	13	0.1					50				50		3	blk			
32R	2	2	17	9	0.3					50				50		6	blk			
32R	2	2	20	25	0.2	v				30				70		8	blk	4	lt	
32R	2	4	30	23	0.1	v	s			30				70		8	blk	4	lt	
32R	2	6	34	33	0.1	v				100										
32R	2	6	34	37	0.1	v				80			20							
32R	2	6	34	38	0.1	v				80			20							
32R	2	6	44	48	0.1	v				90				10						
32R	2	6	45	52	0.1	v				80				20						
32R	2	6	50	54	0.2	v				70				30						
32R	2	6	50	56	0.1	v				100										
32R	2	7	55	57	0.1	v	s			70				30		10	mix			
32R	2	7	61	61	0.1					70				30						
32R	2	7	59	62	0.2					50				50		12	mix			
32R	2	7	58	66	0.1	v				70				30		4	blk			
32R	2	8	67	78	0.1	v	s			50				50		8	mix			
32R	2	8	73	78	0.1	v				100										
32R	2	8	73	73	0.1					70				30						
32R	2	8	72	72	0.2					70				30		10	blk			
32R	2	8	75	76	0.1	v				70				30						
32R	2	8	69	76	0.2	v	s			30				70		8	blk			
32R	2	9	79	83	0.2	v				100										
32R	2	9	79	80	0.1	v				100										
32R	2	9	80	82	0.5	v				100										
32R	2	9	83	85	0.2	v				100										
32R	2	9	79	85	0.2	v	s			100						6	blk			
32R	2	10	87	90				Ru	2	100										
32R	2	12	99	100	0.2	v	s			100										
32R	2	12	99	108	0.2	v				80				20		2	mix			
32R	2	12	99	103	0.1	v				100						5	blk			
32R	2	12	104	107	0.1	v				100						1	blk			
32R	2	12	104	105	0.1					100										
32R	2	13	109	114	0.5	v				100										
32R	2	13	109	110	0.2	v				100										
32R	2	13	109	114	0.3	v	s			100										
32R	2	13	109	115	0.3	v				100										
32R	2	13	112	115	0.5					100										
32R	2	13	110	114	0.1	v				100										
32R	2	15	123	123	0.2					30				70		3	blk			
32R	2	15	123	126	0.2	v				30				70		3	blk			
32R	2	15	121	123	0.1	v				100										
32R	2	15	123	126	0.1	v				100						2	b			
32R	2	16	126	132	0.1	v	s			100										
32R	2	16	127	131	0.1					100						2	blk			
32R	2	17	134	137	0.3	v				100						5	blk			
32R	2	17	134	135	0.1	v				100										
32R	2	18	139	142	0.1	v				100						5	mix			
32R	2	18	138	140	0.2	v				50				50		5	blk			
32R	2	18	138	139	0.2	v				100						2	blk			
32R	2	19	143	147	0.2	v	s			80				20		5	mix			

						Vein		Breccia, Vein net, etc.		Secondary minerals in vein						Halo		2nd, Outer, Halo		
Core	Section	Piece no.	Top	Base	Width (mm)	Vertical?	On side of piece?	Type	Secondary (%)	Black clay (sap) (%)	Green/blue clay (cel)(%)	CC (%)	Py (%)	Feox (%)	Zeo (%)	Width (mm)	Type	Width (mm)	Type	Comments
Hole B (continued)																				
32R	2	19	144	145	0.1	v				90				10		5	mix			
32R	3	1	0	4	0.2	v	s			10				90						
32R	3	1	0	7	0.3	v				90				10		12	mix			
32R	3	2	11	14	0.1					70				30		12	mix			
32R	3	2	13	16	0.1	v				80				20						
32R	3	2	11	13	0.1	v				100										
32R	3	3	16	22	0.2	v				90				10		10	mix			
32R	3	3	18	20	0.1	v				100						3	mix			
32R	3	3	18	21	0.1	v				100										
32R	3	3	18	19	0.1					100										
32R	3	4	23	28	0.5	v				30				70		13	mix			
32R	3	4	28	37	0.2	v				50				50		8	mix			
32R	3	4	30	32	0.1	v				50				50		8	mix			
32R	3	4	31	31	0.1					100										
32R	3	4	32	32	0.1					50				50		5	mix			
32R	3	4	36	39	0.1	v				100						2	blk			
32R	3	4	37	39	0.2	v				100										
32R	3	5	40	42	0.1	v				100						4	mix			
32R	3	6	46	48	0.1	v	s			50				50						
32R	3	6	45	47	0.2					50				50						
32R	3	6	46	50	0.1	v	s			80				20						
32R	3	6	49	50	0.1	v				100										
32R	3	6	49	50	0.1	v				100										
32R	3	7	52	54	0.1	v				70				30		10	mix			
32R	3	7	50	53	0.2	v				50				50		6	mix			
32R	3	7	52	53	0.1					100										
32R	3	7	56	59	0.2	v				90				10						
32R	3	7	56	60	0.1	v	s			90				10						
33R	1	1	0	0	0.1		s			100						3	blk			
33R	1	1	1	2	0.2		s			100						3	blk			
33R	1	2	4	6	0.1	v				50				50		5	mix			
33R	1	2	5	6	0.1	v	s			50				50		6	mix			
33R	1	4	11	13	0.1	v	s			100						6	blk			
33R	1	5	14	22	0.2	v	s			100						6	blk			
33R	1	5	20	22	0.2		s			100						6	blk			
33R	1	5	14	21	0.1	v				80				20		4	blk			
33R	1	5	14	15	0.1	v				100										
33R	1	6	24	25	0.1	v				100										
33R	1	7	29	32	0.1	v				90				10		4	blk			
33R	1	7	32	34	0.2	v				50				50		3	blk			
33R	1	8	34	39	0.5	v	s			100						3	mix			
33R	1	8	39	39	0.2		s			100						2	mix			
33R	1	8	37	37	0.1					100										
33R	1	8	36	39	0.1	v				50				50		7	mix			
33R	1	9	40	40	0.1		s			50				50		10	blk			
33R	1	10	46	48	0.3	v	s			100						5	mix			
33R	1	10	46	49	0.2	v				50				50		10	mix			
33R	1	10	48	49	0.1					70				30						
33R	1	11	51	54	0.2					30				70						
33R	1	12	56	58	0.2					70				30		7	blk			
33R	1	12	57	60	0.1	v	s			70				30						
33R	1	13	60	60	0.1		s			50				50		12	mix			
33R	1	13	63	63	0.1					50				50						

						Vein		Breccia, Vein net, etc.		Secondary minerals in vein						Halo		2nd, Outer, Halo		
Core	Section	Piece no.	Top	Base	Width (mm)	Vertical?	On side of piece?	Type	Secondary (%)	Black clay (sap) (%)	Green/blue clay (cel)(%)	CC (%)	Py (%)	Feox (%)	Zeo (%)	Width (mm)	Type	Width (mm)	Type	Comments
Hole B (continued)																				
33R	1	13	60	63	0.2	v	s			30				70		2	blk			
33R	1	15	72	73	0.2	v				70				30		10	mix			
33R	1	16	76	78	0.3	v				100						5	mix			
33R	1	17	80	86	0.2	v				50				50		6	grn	2	lt	
33R	1	17	81	83	0.1	v				100										
33R	1	17	84	86	0.1	v	s			50				50						
33R	1	17	86	86	0.2		s			30				70						
33R	1	18	86	87	0.2	v				100										
33R	1	18	86	90	0.2	v				50				50		4	mix			
33R	1	18	86	90	0.2	v				20				80		4	mix			
33R	1	18	86	90	0.2	v				20				80		4	mix			
33R	1	19	92	98	0.2	v				20				80		4	mix			
33R	1	22	106	112	0.3					70				30						
33R	1	22	112	114	0.3					30				70		4	mix			
33R	1	22	112	113	0.1	v				100										
33R	1	22	110	121	0.3	v				100						5	blk			
33R	1	22	112	117	0.1	v				100						2	lt			
33R	1	22	118	119	0.5					20				80		20	multi			(5 blk, 10 brn, 5 grn, 5 lt)
33R	1	22	120	121	0.2	v				100										
33R	1	22	120	121	0.1	v				100										
33R	1	23	121	125	0.2	v				20				80						
33R	1	24	127	131	0.2	v				90				10		2	lt			
33R	1	24	127	129	0.1					100										
33R	1	24	127	138	0.2	v				20				80		8	mix			
33R	1	24	132	134	0.1					100										
33R	1	24	128	137	0.2	v				20				80		10	mix			
33R	1	24	127	130	0.1	v				100						1	lt			
33R	1	25	140	140	0.2		s			50				50						
33R	1	25	139	144	0.1	v	s			40				50						
33R	1	25	141	146	0.1	v	s			40				50						
33R	1	25	144	144	0.1		s			40				50						
33R	2	1	0	0	0.1		s			30				70						
33R	2	2	3	12	0.1	v	s			40				60		3	blk			
33R	2	2	7	9	0.1					40				60		4	blk			
33R	2	2	4	12	0.2					90				10		2	blk			
33R	2	2	9	11	0.3	v				100										
33R	2	3	12	22	0.3	v				30				70		8	mix			
33R	2	3	15	20	0.3					20				80		8	mix			
33R	2	3	19	22	0.2	v				30				70		5	mix			
33R	2	3	16	19	0.2	v				90				10						
33R	2	4	23	23	0.1		s			90				10		11	mix			
33R	2	5	29	30	0.1	v				100										
33R	2	6	36	45	0.2	v				90				10		4	blk			
33R	2	6	39	44	0.2	v				100						3	blk			
33R	2	6	37	45	0.1					100						3	blk			
33R	2	6	38	45	0.2	v				100										
33R	2	6	36	39	0.5					100						3	blk			
33R	2	6	36	37	0.5					60				40		4	blk			
33R	2	6	35	37	0.5	v				90				10		8	mix			
33R	2	6	43	47	0.1					100						4	blk			
33R	2	7	47	51	0.2	v				100						3	blk			
33R	2	8	52	55	0.3	v	s			100						11	mix	1	lt	
33R	2	9	58	58	0.2					100						5	blk			

						Vein		Breccia, Vein net, etc.		Secondary minerals in vein						Halo		2nd, Outer, Halo		
Core	Section	Piece no.	Top	Base	Width (mm)	Vertical?	On side of piece?	Type	Secondary (%)	Black clay (sap) (%)	Green/blue clay (cel)(%)	CC (%)	Py (%)	Feox (%)	Zeo (%)	Width (mm)	Type	Width (mm)	Type	Comments
Hole B (continued)																				
33R	2	9	56	61	0.2	v				70				30		5	blk			
33R	2	11	79	81	0.2					100										
33R	2	12	83	92	0.2	v	s			100						12	mix			
33R	2	12	84	93	0.2	v				100						7	mix			
33R	2	12	87	89	0.1	v				80				20						
33R	2	12	91	93	0.1	v				100						4	mix			
33R	2	13	97	99	0.2	v				100										
33R	2	13	98	99	0.2	v				100										
33R	2	13	98	99	0.2	v				100										
33R	2	13	105	106	0.1					30				70		5				
33R	2	13	103	105	0.1	v				100						1				
33R	2	14	121	122	0.2	v				100										
33R	2	14	123	124	0.2	v				100										
33R	2	14	120	139	0.3					10	10			80		15	mix			
33R	2	14	125	128	0.1					100						1	lt			
33R	2	14	131	136	0.1	v				50				50						
33R	2	14	137	139	0.2									100		16	mix			
34R	1	1	3	6	0.2	v				90				10		3	mix			
34R	1	1	6	7	0.1					90				10		3	mix			
34R	1	1	7	8	0.1					90				10		3	mix			
34R	1	1	1	5	0.5	v				90				10		6	mix			
34R	1	1	5	14	0.2					90				10		4	mix			
34R	1	1	9	12	0.2	v				90				10		3	mix			
34R	1	1	8	16	0.5	v				20				80		8	mix			
34R	1	1	12	18	0.2	v				20				80		6	blk			
34R	1	1	10	18	0.1	v	s			80				20		8	blk			
34R	1	3	24	27	0.2	v	s			100										
34R	1	3	28	32	0.1	v				20				80		3	mix			
34R	1	3	30	32	0.1	v				20				80		3	mix			
34R	1	3	24	31	0.3	v				80				20		3	mix			
34R	1	3	28	29	0.3	v				100						3	mix			
34R	1	3	26	30	0.1	v				80				20		2	mix			
34R	1	3	28	31	0.1	v				50				50		2	mix			
34R	1	5	36	38	0.1	v	s			100										
34R	1	6	40	40	0.1		s			100										
34R	1	7	44	45	0.1	v				90				10		5	blk			
34R	1	8	52	55	0.1	v	s			80				20		12	mix			
34R	1	8	54	54	0.1		s			80				20		12	mix			
34R	1	9	55	56	0.1		s			70				30						
34R	1	10	59	61				ru	1	70				30						
34R	1	11	65	73	0.5	v				100										
34R	1	11	64	71	0.2	v				100										
34R	1	11	63	67	0.2	v				100										
34R	1	11	65	66	0.2	v				100										
34R	1	11	62	69	0.5	v				100										
34R	1	11	62	67	0.2	v	s			100										
34R	1	11	67	69	0.1	v				100										
34R	1	11	69	71	0.5	v				100										
34R	1	12	73	79	0.2	v				100										
34R	1	12	73	79	0.2	v				100										
34R	1	12	73	79	0.2	v				100										
34R	1	12	73	79	0.2	v				100										
34R	1	12	73	79	0.1	v				100										

						Vein		Breccia, Vein net, etc.		Secondary minerals in vein						Halo		2nd, Outer, Halo		
Core	Section	Piece no.	Top	Base	Width (mm)	Vertical?	On side of piece?	Type	Secondary (%)	Black clay (sap) (%)	Green/blue clay (cel)(%)	CC (%)	Py (%)	Feox (%)	Zeo (%)	Width (mm)	Type	Width (mm)	Type	Comments
Hole B (continued)																				
34R	1	12	73	79	0.1	v				100										
34R	1	12	73	79	0.1	v				100										
34R	1	12	74	80	0.2					60				40		2	blk			
34R	1	12	76	83	0.2					60				40		2	blk			
34R	1	12	80	85	0.5	v				60				40		2	blk			
34R	1	12	82	86	0.1	v				60				40		2	blk			
34R	1	12	82	85	0.1	v				60				40		2	blk			
34R	1	12	82	84	0.1	v				60				40		2	blk			
34R	1	14	95	99	0.2					70				30		6	blk			
34R	1	14	96	100	0.3					90				10		6	mix			
34R	1	16	106	110				ru	2	100										
34R	1	17	112	116	0.2	v				70				30		12	grn			
34R	1	17	117	117	0.1		s			100						14	grn			
34R	1	18	118	123	0.2	v				30				70		4	blk			
34R	1	18	123	123	0.1		s			30				70		4	blk			
34R	1	19	126	128	0.1	v				50				50		4	blk			
34R	1	19	129	129	0.2					50				50		4	blk			
34R	1	19	129	134	0.2	v				50				50		4	blk			
34R	1	19	131	134	0.2	v				50				50		4	blk			
34R	1	19	131	133	0.2					50				50		4	blk			
34R	1	19	127	134	0.2	v	s			90				10		7	blk			
34R	1	20	135	137	0.2	v	s			50				50		4	blk			
34R	1	20	136	138	0.2					50				50		3	blk			
34R	1	20	138	140	0.2	v				50				50		3	blk			
34R	1	21	142	143	0.1	v	s			50				50		3	blk			
34R	1	22	145	148	0.1	v	s			100										
34R	1	22	146	146	0.1					70				30		4	blk			
34R	1	22	143	148	0.1					70				30		4	blk			
34R	2	2	4	10	0.2	v				90				10		3	blk			
34R	2	2	4	10	0.2	v				90				10		3	blk			
34R	2	2	6	7	0.2	v				90				10		3	blk			
34R	2	3	12	14	0.2	v	s			90				10		4	blk			
34R	2	3	11	16	0.1	v				50				50		2	blk			
34R	2	4	20	21	0.2		s			100						5	mix			
34R	2	5	23	29	0.2	v	s			50				50		3	blk			
34R	2	5	23	24	1					100						2	blk			
34R	2	5	23	24	0.5	v				100										
34R	2	5	22	27	0.1					70				30		3	mix			
34R	2	5	27	28	0.1					70				30		6	mix			
34R	2	6	31	35	0.1	v				70				30		3	mix			
34R	2	6	34	36	0.1					70				30		3	mix			
34R	2	6	34	36	0.1	v				70				30		3	mix			
34R	2	6	30	41	0.2	v				70				30		10	mix			
34R	2	6	39	41	0.2	v				70				30		3	mix			
34R	2	6	37	39	0.2	v				70				30		3	mix			
34R	2	6	30	32	0.2	v				100						3	mix			
34R	2	6	32	34	0.1	v				100						3	mix			
34R	2	7	41	45	0.1	v				50				50		7	mix			
34R	2	7	43	47	0.1					50				50		5	blk			
34R	2	8	48	51	0.1	v	s			50				50		7	blk			
34R	2	8	48	51	0.1	v	s			50				50		4	blk			
34R	2	8	50	51	0.2					50				50		3	blk			
34R	2	10	61	63	0.2	v				100										

						Vein		Breccia, Vein net, etc.		Secondary minerals in vein						Halo		2nd, Outer, Halo		
Core	Section	Piece no.	Top	Base	Width (mm)	Vertical?	On side of piece?	Type	Secondary (%)	Black clay (sap) (%)	Green/blue clay (cel)(%)	CC (%)	Py (%)	Feox (%)	Zeo (%)	Width (mm)	Type	Width (mm)	Type	Comments
Hole B (continued)																				
34R	2	10	62	67	0.5	v				100						3	blk			
34R	2	10	63	67	0.5	v				100						3	blk			
34R	2	10	66	68	0.5	v				100						3	blk			
34R	2	10	66	69	0.2	v				100						4	blk			
34R	2	10	66	69	0.2					100						4	mix			
34R	2	10	64	70	1.5					100						7	mix			
34R	2	11	75	81	0.1	v								100		3	multi			(3 brn, 5 grn, 2 blk, 3 lt)
34R	2	11	71	77	0.2	v								100		6	blk			
34R	2	11	76	81	0.1	v								100		8	multi			(8 brn, 3 grn, 2 blk, 2 lt)
34R	2	12	82	92	0.1	v				50				50		15	multi			(2 brn, 13 blk)
34R	2	12	81	90	0.1	v								100						
34R	2	12	90	94	0.2		s			50				50		6	blk			
34R	2	13	95	97	0.2	v	s			90				10		8	mix			
34R	2	13	95	101	0.2	v	s			50				50		6	mix			
34R	2	14	102	106	0.2	v				30				70		12	mix			
34R	2	14	104	105	0.1	v				100										
34R	2	15	107	109	0.1	v				50				50						
34R	2	15	108	109	0.1	v				50				50						
34R	2	16	112	112	0.5					10				90						
34R	2	17	115	115	0.5					10				90		6	mix			
34R	2	18	120	125	0.2	v	s			30				70		4	mix			
34R	2	18	118	126	0.2	v				90				10		4	multi			(1 brn, 3 blk)
34R	2	18	121	125	0.2	v				90				10		4	multi			(1 brn, 3 blk)
34R	2	19	127	132	0.2	v				50				50		4	mix			
34R	2	20	133	135				ru	1	90				10						
34R	2	21	137	145	0.2	v				90				10		8	mix			
35R	1	2	3	9	0.2	v	s			30				70		2	mix			
35R	1	2	3	7	0.2	v				50				50		4	grn			
35R	1	3	9	24	0.3	v				100						15	mix			
35R	1	3	9	13	0.2	v								100		5	mix			
35R	1	3	9	14	0.2	v				50				50						
35R	1	3	18	19	0.2	v				100										
35R	1	3	21	22	0.2					30				70		8	mix			
35R	1	4	25	32	0.3	v	s			100						20	mix			
35R	1	4	29	33	0.5	v				100										
35R	1	4	33	33	0.2	v				100										
35R	1	5	36	45	2	v				80				20		5	mix			
35R	1	5	35	38	0.3	v				20				80		5	mix			
35R	1	5	37	40	0.2					100						5	mix			
35R	1	5	37	45	0.1	v				100										
35R	1	5	37	45	0.1	v				100										
35R	1	5	42	45	0.5	v				100						5	blk			
35R	1	6	49	56	0.5	v				80				20		4	blk			
35R	1	6	47	51	0.2	v				80				20		4	blk			
35R	1	6	48	50	0.1	v				80				20		4	blk			
35R	1	6	47	48	0.2	v				80				20		4	blk			
35R	1	6	49	51	0.1	v				80				20		4	blk			
35R	1	6	53	60	0.2	v				80				20		4	blk			
35R	1	6	56	59	0.2	v				80				20		4	blk			
35R	1	6	54	55	0.2					80				20		4	blk			
35R	1	7	62	66	0.5					100						5	blk			
35R	1	7	63	65	0.5	v				100						5	blk			
35R	1	7	65	67	0.2	v				100						5	blk			

						Vein		Breccia, Vein net, etc.		Secondary minerals in vein						Halo		2nd, Outer, Halo		
Core	Section	Piece no.	Top	Base	Width (mm)	Vertical?	On side of piece?	Type	Secondary (%)	Black clay (sap) (%)	Green/blue clay (cel)(%)	CC (%)	Py (%)	Feox (%)	Zeo (%)	Width (mm)	Type	Width (mm)	Type	Comments
Hole B (continued)																				
35R	1	7	64	66	0.1					100						3	blk			
35R	1	8	67	69	0.2	v				90				10		8	mix			
35R	1	8	70	73	0.2		s			70				30		6	mix			
35R	1	8	67	72	0.1	v				70				30		3	blk			
35R	1	9	75	80	0.2					10				90		4	blk			
35R	1	9	81	81	0.5		s			100						6	mix			
35R	1	9	75	82	0.5	v	s			50				50		6	mix			
35R	1	9	74	76	0.5	v				100										
35R	1	10	82	87	1	v				100						3	blk			
35R	1	10	82	84	1	v				100						3	blk			
35R	1	11	88	90	0.2	v	s			100						3	blk			
35R	1	12	93	97				br	5	100										
35R	1	13	98	105				br	10	95		5								
35R	1	15	112	118				br	45	100										
35R	1	16	120	121	0.1	v				100										
35R	1	17	123	128				ru	2	100										
35R	1	19	133	139				br	10	100										
35R	1	20	140	146				br	15	100										
35R	2	2	6	11				ru	3	100										
35R	2	3	13	14	0.2	v	s			100										
35R	2	3	14	15	0.2	v	s			100										
35R	2	3	13	16	0.5	v				100						2	blk			
35R	2	3	13	15	0.1	v				100										
35R	2	4	18	24	0.2	v	s			100						5	blk			
35R	2	4	17	21	0.2					80				20		5	blk			
35R	2	4	19	22	0.1	v				80				20		6	blk			
35R	2	4	20	24	0.1	v				50				50		3	blk			
35R	2	4	17	21	0.1	v				100										
35R	2	5	24	34	0.5	v				100						6	mix			
35R	2	5	24	27	0.2	v				100										
35R	2	5	27	29	0.1					50				50		4	mix			
35R	2	5	27	29	0.1	v				50				50		4	mix			
35R	2	5	27	32	0.5	v				100						6	blk			
35R	2	5	27	29	0.1	v				100						6	blk			
35R	2	5	31	34	0.2					100						8	mix			
35R	2	5	32	34	0.2					50				50		4	blk			
35R	2	6	36	45	0.2	v				40				60		6	mix			
35R	2	6	42	44	0.2	v				100										
35R	2	6	38	38	0.2					50				50		2	blk			
35R	2	6	42	42	0.2					100						2	blk			
35R	2	6	42	44	0.2	v				80				20		4	mix			
35R	2	7	47	51	0.1	v				50				50		3	mix			
35R	2	7	47	51	0.1	v				100						1	blk			
35R	2	7	50	52	0.2	v				100										
35R	2	8	53	58				ru	5	100										
35R	2	9	58	70				ru	5	100										
35R	2	10	70	70	0.2					100						2	blk			
35R	2	10	70	72	0.2					50				50						
35R	2	11	74	74	0.2					100										
35R	2	14	84	87	0.2	v	s			100										
35R	2	14	84	84	0.2		s			100										
35R	2	14	84	85	0.2					100										
35R	2	14	84	88	0.2					100						3	blk			

						Vein		Breccia, Vein net, etc.		Secondary minerals in vein						Halo		2nd, Outer, Halo		
Core	Section	Piece no.	Top	Base	Width (mm)	Vertical?	On side of piece?	Type	Secondary (%)	Black clay (sap) (%)	Green/blue clay (cel)(%)	CC (%)	Py (%)	Feox (%)	Zeo (%)	Width (mm)	Type	Width (mm)	Type	Comments
Hole B (continued)																				
35R	2	16	94	98	0.2	v	s			50	50									
35R	2	16	94	94	0.1		s			90				10						
35R	2	17	100	101	0.1	v				100										
35R	2	17	101	105	0.1	v				100										
35R	2	18	107	113	0.2	v				50				50						
35R	2	18	107	108	1	v				50				50						
35R	2	18	111	112	0.1					100										
35R	2	18	117	122	0.1	v				100										
35R	2	19	123	124	0.1	v				100										
35R	3	1	2	2	0.2					100						2	mix			
35R	3	1	2	4	0.1	v				100										
35R	3	3	9	14	0.2	v				50				50		20	blk			
35R	3	3	11	15	0.1	v				100										
35R	3	3	12	13	0.1	v				50				50						
36R	1	1	1	5	0.1	v	s			100						6	mix			
36R	1	2	5	6	0.1	v	s			100						5	blk			
36R	1	2	6	7	0.1	v				100						10	mix			
36R	1	3	8	14	0.3	v				100						4	mix			
36R	1	3	9	11	0.2	v				50				50						
36R	1	3	8	14	0.1	v	s			100						12	mix			
36R	1	3	11	16	0.2	v				100						4	mix			
36R	1	3	11	13	0.1	v				100										
36R	1	3	12	22	0.1					50				50		5	mix			
36R	1	3	15	19	0.1					70				30						
36R	1	3	20	21	0.1					50				50						
36R	1	3	22	24	0.1	v	s			50				50		5	mix			
36R	1	4	25	32	0.5					100						3	blk			
36R	1	4	26	32	1					100						3	blk			
36R	1	4	27	33	0.8	v				100						3	blk			
36R	1	4	27	30	0.1	v				100										
36R	1	4	28	29	0.2	v				100										
36R	1	4	27	30	0.1	v				100										
36R	1	4	28	30	0.2	v				100										
36R	1	4	31	33	0.1	v				100										
36R	1	4	31	34	0.1	v				100										
36R	1	5	40	45	0.1	v				90				10		5	mix			
36R	1	5	36	42	0.2	v				90				10		5	mix			
36R	1	5	42	45	0.1	v				100										
36R	1	5	36	40	0.2	v				100						5	mix			
36R	1	5	36	38	0.1	v				100										
36R	1	5	37	39	0.2	v				100										
36R	1	6	49	54	0.1	v	s			100						5	blk			
36R	1	6	46	54	0.2	v				80				20		7	mix			
36R	1	6	52	53	0.2	v				80				20						
36R	1	7	57	66	0.2	v	s			30				70		5	mix			
36R	1	7	55	57	0.2	v	s			100						5	mix			
36R	1	7	57	60	0.1					30				70		5	blk			
36R	1	8	67	72				br	50	98				2						
36R	1	10	79	84	0.1		s			20	10			70		8	blk			
36R	1	12	89	90	0.1		s			50				50		10	blk	2	lt	
36R	1	12	93	98	0.2	v	s							100		15	mix			
36R	1	12	94	94	0.1					70				30		4	mix			
36R	1	14	104	105	0.1	v	s			50				50		7	mix			

						Vein		Breccia, Vein net, etc.		Secondary minerals in vein						Halo		2nd, Outer, Halo		
Core	Section	Piece no.	Top	Base	Width (mm)	Vertical?	On side of piece?	Type	Secondary (%)	Black clay (sap) (%)	Green/blue clay (cel)(%)	CC (%)	Py (%)	Feox (%)	Zeo (%)	Width (mm)	Type	Width (mm)	Type	Comments
Hole B (continued)																				
36R	1	15	107	108	0.1		s			50				50		6	mix			
36R	1	16	109	110	0.1					80				20		1	lt			
36R	1	16	109	113	0.2	v				50				50		5	mix			
36R	1	17	116	119	0.1	v	s			30	10			60		12	mix			
36R	1	18	122	122	0.2					20	40			40		2	blk			
36R	1	18	119	133	0.2	v				10	50			40		15	mix			
36R	1	18	130	133	0.3	v	s			50	10			40						
36R	1	19	133	139	0.1	v	s			70				30						
36R	1	20	139	146	0.2	v	s			20	40			40		10	mix			
36R	1	20	145	149	0.1	v				100										
36R	2	1	0	2				ru	10	100										
36R	2	2	4	5	0.5					100										
36R	2	2	4	5	1	v				100										
36R	2	2	5	13	0.2	v				70				30		4	mix			
36R	2	2	9	12	0.1	v				100										
36R	2	2	11	12	0.1	v				100						1	mix			
36R	2	2	7	10	0.2	v				100						5	blk			
36R	2	3	13	19	0.2	v	s			50				50		11	blk			
36R	2	3	15	18	0.1	v				50				50						
36R	2	3	18	22	0.2					50				50		10	mix			
36R	2	3	20	23	0.5					100										
36R	2	5	32	36	0.2	v	s			50				50		3	blk			
36R	2	5	32	32	0.1		s			100						3	blk			
36R	2	5	36	36	0.1		s			50				50		2	blk			
36R	2	6	37	39	0.1	v	s			50				50		4	blk			
36R	2	8	43	45	0.1	v	s			50				50		2	blk			
36R	2	9	48	51	0.2	v	s			100						3	mix			
36R	2	9	48	51	0.2	v	s			100						3	mix			
36R	2	12	62	65	0.2	v	s							100		10	blk			
36R	2	13	67	69				ru	2	100										
36R	2	15	74	74	0.1		s			100										
36R	2	15	77	77	0.1		s			100										
36R	2	16	80	89	0.2	v				50	20			30		7	mix			
36R	2	16	80	82	0.1	v				100										
36R	2	16	81	83	0.1	v				100						8	blk			
36R	2	16	86	88	0.2	v				100										
36R	2	16	87	89	0.1	v				90				10						
36R	2	16	90	92	0.1	v	s			10				90						
36R	2	19	97	102	0.2					50				50		3	mix			
36R	2	19	97	105	0.2	v				50				50		6	mix			
36R	2	19	97	106	0.5	v				50				50		20	mix			
36R	2	20	106	111	0.2	v	s			100						6	blk			
36R	2	20	108	109	0.2	v	s			50				50		6	blk			
36R	2	20	109	109	0.1		s			90				10		5	mix			
36R	2	21	112	118	0.2	v	s			10				90		6	mix			
36R	2	21	113	116	0.1	v	s			80				20		6	blk			
36R	2	22	120	125	0.2	v	s			50				50		3	mix			
36R	2	22	125	127	0.2	v	s			20				80		6	blk			
36R	2	22	119	126	0.2	v				50				50		8	mix			
36R	2	23	128	134	0.2	v				80				20						
36R	2	23	129	132	0.1	v				100										
36R	2	25	140	142	0.1	v				80				20						
36R	2	25	142	144	0.1					80				20		4	blk			

						Vein		Breccia, Vein net, etc.		Secondary minerals in vein						Halo		2nd, Outer, Halo		
Core	Section	Piece no.	Top	Base	Width (mm)	Vertical?	On side of piece?	Type	Secondary (%)	Black clay (sap) (%)	Green/blue clay (cel)(%)	CC (%)	Py (%)	Feox (%)	Zeo (%)	Width (mm)	Type	Width (mm)	Type	Comments
Hole B (continued)																				
36R	2	25	140	147	0.2	v				100						4	mix			
36R	2	25	141	144	0.2	v				100						4	mix			
36R	3	1	0	2	0.1	v				100										
36R	3	3	11	15	0.1	v	s			50				50		6	blk			
36R	3	4	17	24	0.2					100						6	mix			
36R	3	4	17	19	0.1	v				100										
36R	3	4	20	24	0.2					100						6	mix			
36R	3	4	19	24	0.1	v	s			50				50		3	mix			
36R	3	4	20	21	0.2	v				100										
36R	3	5	32	33	0.1	v	s			50				50		3	mix			
36R	3	6	34	35	0.1	v	s			100						3	blk			
36R	3	6	36	39	0.1	v	s			60				40		10	blk			
36R	3	7	41	43	0.1					50				50		10	mix			
36R	3	8	46	51	0.2	v				70	30					4	mix			
36R	3	8	47	53	0.1	v				100										
36R	3	9	52	53	0.1		s			70	10			20		5	mix			
36R	3	10	57	57	0.1		s			50				50		3	mix			
36R	3	13	71	71	0.1		s			50				50						
36R	3	13	73	74	0.1	v				100										
36R	3	15	80	81				ru	2	50				50						
36R	3	16	87	90	0.2	v	s			50	20			30		3	blk			
36R	3	16	82	90	0.1	v				100						1	lt			
36R	3	16	82	87	0.1	v				50				50		2	blk	1	lt	