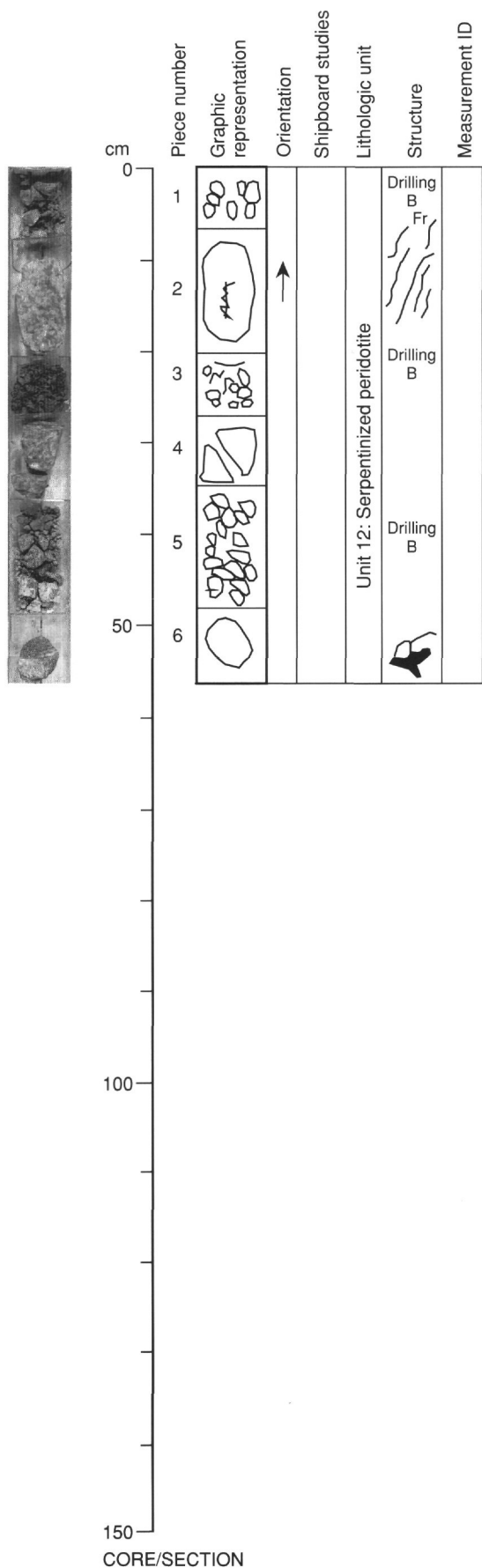


149-897D-19R-6

UNIT 12: SERPENTINIZED PERIDOTITE

Pieces 1 to 6



COLOR: Dark greenish gray (5G 4/1).

LAYERING: No obvious layering.

DEFORMATION: No obvious ductile deformation. Late brittle deformation expressed by serpentine filled fractures and brecciation.

PRIMARY MINERALOGY:

- Olivine - Mode: 84%.
Crystal size: ?
Crystal shape: ?
Crystal orientation: ?
Percent replacement: 100%.
- Pyroxene(s) - Mode: 15%.
Crystal size: ?
Crystal shape: Anhedral.
Crystal orientation: None.
Percent replacement: 100%.
- Spinel - Mode: 1%.
Crystal size: ?
Crystal shape: Anhedral.
Crystal orientation: None.
Percent replacement: 0%.

SECONDARY MINERALOGY:

- Total percent: >95%.
- Texture: Mesh serpentinite.
- Vein material: Serpentine veins with some associated magnetite.

ADDITIONAL COMMENTS: Unit continues into Section 149-897D-20R-1.

UNIT 12: SERPENTINIZED PERIDOTITE

Pieces 1 to 6D

COLOR: Dark greenish gray (5G 4/1).

LAYERING: Primary layering marked by pyroxene-rich layers.

DEFORMATION: No obvious ductile deformation. Late brittle deformation expressed by serpentine filled fractures that sometimes confine to elongated pyroxene(s). More intense in pyroxene-rich layers.

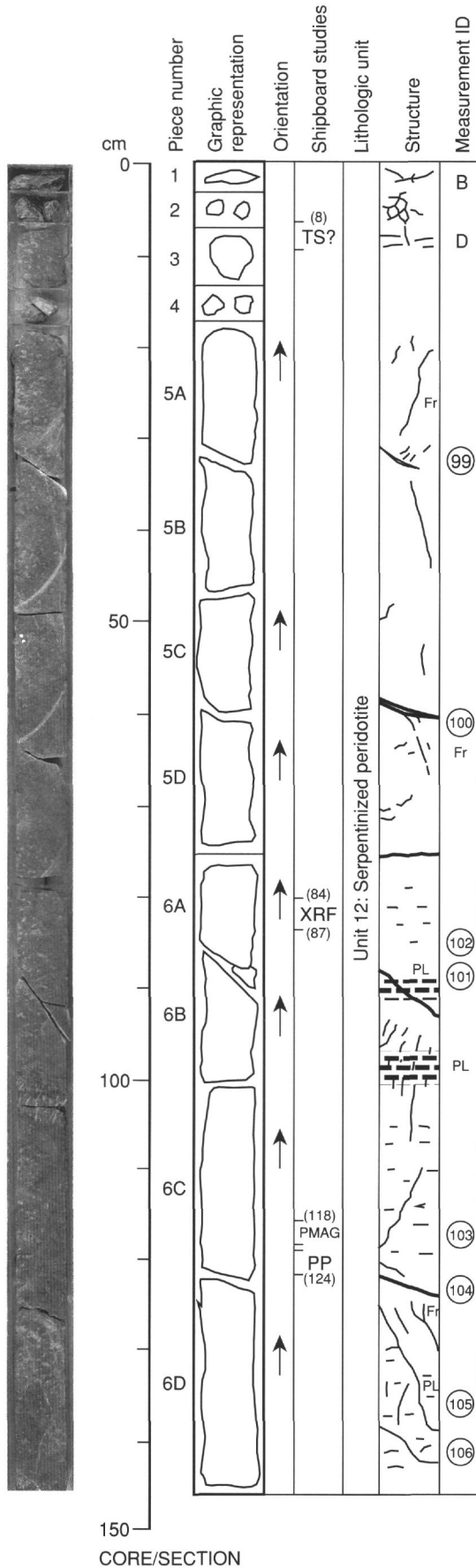
PRIMARY MINERALOGY: Enriched bands of pyroxene.

- Olivine - Mode: 60%.
Crystal size: ?
Crystal shape: ?
Crystal orientation: ?
Percent replacement: 100%.
- Pyroxene(s) - Mode: 40%.
Crystal size: ?
Crystal shape: Anhedral.
Crystal orientation: None.
Percent replacement: 100%.
- Spinel - Mode: <1%.
Crystal size: ?
Crystal shape: Anhedral.
Crystal orientation: None.
Percent replacement: 0%.
- Plagioclase: May rim spinel, but large serpentinization tends to obscure it.

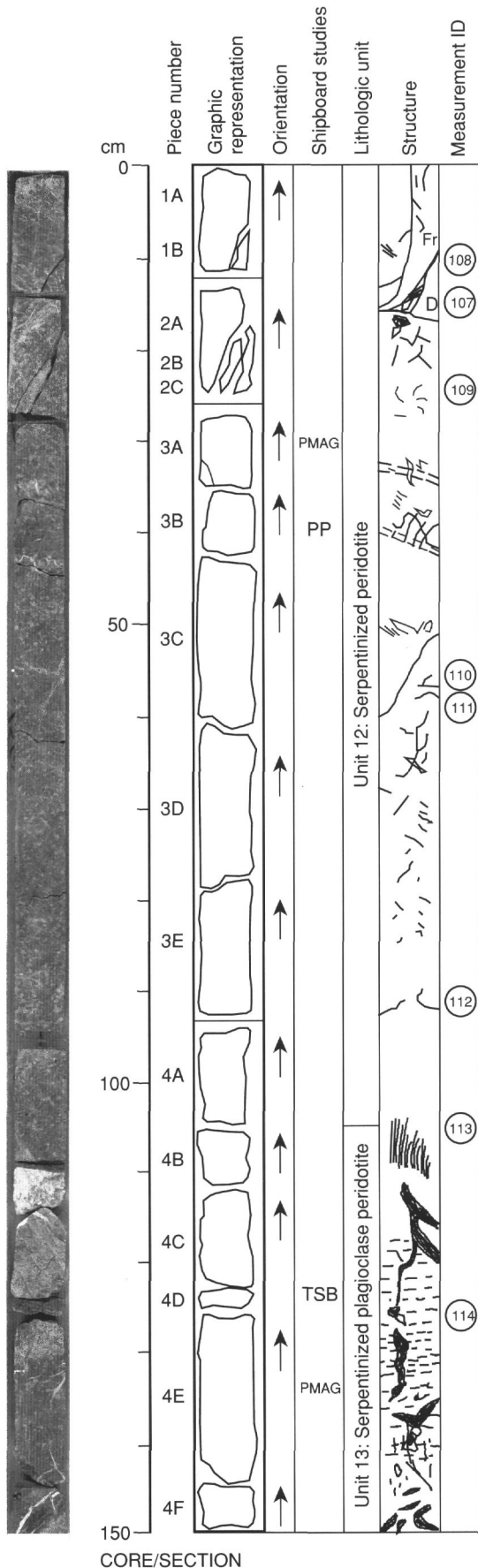
SECONDARY MINERALOGY:

- Total percent: 99%.
- Texture: Mesh serpentinite.
- Vein material: Serpentine veins with some magnetite and sulfides.

ADDITIONAL COMMENTS: Unit continues into Section 149-897D-20R-2.



149-897D-20R-2



UNIT 12: SERPENTINIZED PERIDOTITE

Pieces 1A to 4A

COLOR: Dark greenish gray (5G4/1) to dark gray (N3).

LAYERING: No obvious layering.

DEFORMATION: No obvious ductile deformation. Two sets of late deformation features: pale green diffuse serpentinite veins crosscut by thin and discontinuous veinlets of white serpentinite.

PRIMARY MINERALOGY: Pyroxene rich bands.

Olivine - Mode: 60%.

Percent replacement: 100%.

Pyroxene(s) - Mode: 40%.

Crystal size: ?

Crystal shape: Anhedral.

Crystal orientation: None.

Percent replacement: 100%.

Spinel - Mode: <1%.

Crystal size: ?

Crystal shape: Anhedral.

Crystal orientation: None.

Percent replacement: 0%.

Plagioclase: May rim spinel, but large serpentinitization tends to obscure it.

SECONDARY MINERALOGY:

Total percent: 99%.

Texture: Mesh serpentinite.

Vein material: Serpentine veins with some magnetite and sulfides.

ADDITIONAL COMMENTS: Unit continued from Section 149-897D-20R-1.

UNIT 13: SERPENTINIZED PLAGIOCLASE PERIDOTITE

Pieces 4B to 4F

COLOR: Dark greenish gray (5G 4/1) to dark gray (N3).

LAYERING: No obvious layering.

DEFORMATION: No obvious ductile deformation. Late brittle deformation expressed by elongate serpentinite-filled fractures.

PRIMARY MINERALOGY: Bands of aligned pyroxene crystals.

Olivine - Mode: 55%.

Crystal size: ?

Percent replacement: 100%.

Pyroxene(s) - Mode: 40%.

Crystal size: ?

Crystal shape: Anhedral.

Crystal orientation: None.

Percent replacement: 100%.

Spinel - Mode: 1%.

Crystal size: ?

Crystal shape: Anhedral.

Crystal orientation: None.

Percent replacement: 0%.

Plagioclase - Mode: 10%.

Crystal size: ?

Crystal shape: Anhedral.

Crystal orientation: None.

Percent replacement: ?

SECONDARY MINERALOGY:

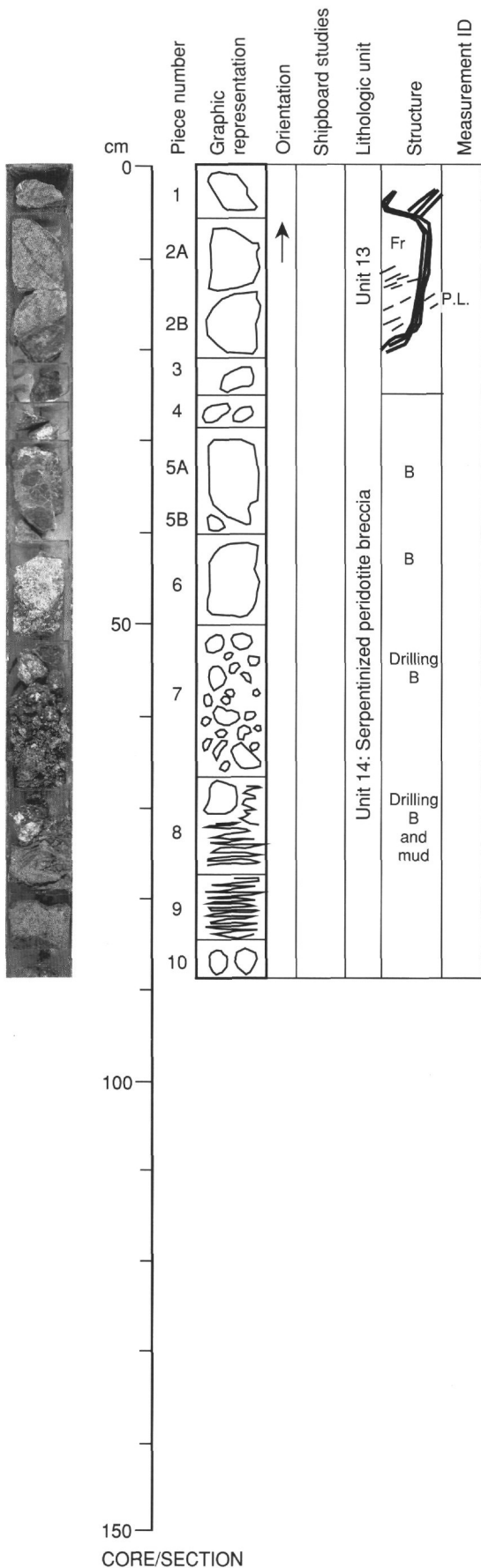
Total percent: 99%.

Texture: Mesh serpentinite.

Vein material: Serpentine veins with some magnetite and sulfides.

ADDITIONAL COMMENTS: Unit continues into Section 149-897D-20R-3.

CORE/SECTION



UNIT 13: SERPENTINIZED PLAGIOCLASE PERIDOTITE

Pieces 1 to 3

COLOR: Dark gray (N3).
LAYERING: Primary layering marked by parallel bands of aligned pyroxene.
DEFORMATION: No obvious ductile deformation. Late brittle deformation expressed by serpentine-filled fractures.

PRIMARY MINERALOGY: Bands of aligned pyroxene.

- Olivine - Mode: 55%.
Crystal size: ?
Percent replacement: 100%.
- Pyroxene(s) - Mode: 40%.
Crystal size: ?
Crystal shape: Anhedral.
Crystal orientation: None.
Percent replacement: 100%.
- Spinel - Mode: 1%.
Crystal size: ?
Crystal shape: Anhedral.
Crystal orientation: None.
Percent replacement: 0%.
- Plagioclase - Mode: 10%.
Crystal size: ?
Crystal shape: ?
Crystal orientation: None.
Percent replacement: ?

SECONDARY MINERALOGY:

Total percent: 99%.
 Texture: Mesh serpentinite.
 Vein material: Serpentine veins with some magnetite and sulfides.

ADDITIONAL COMMENTS: Unit continued from Section 149-897D-20R-2.

UNIT 14: SERPENTINIZED PERIDOTITE BRECCIA

Pieces 4 to 10

COLOR: Dark gray (N3).
LAYERING: No obvious layering.
DEFORMATION: No obvious ductile deformation. Late brittle deformation expressed by serpentine-filled fractures. This unit is largely brecciated.

PRIMARY MINERALOGY: Plagioclase sometimes surrounds spinel.

- Olivine - Mode: 50%?
Percent replacement: 100%.
- Pyroxene(s) - Mode: 25%.
Crystal size: ?
Crystal shape: Anhedral.
Crystal orientation: None.
Percent replacement: 100%.
- Spinel - Mode: 2%.
Crystal size: ?
Crystal shape: Anhedral.
Crystal orientation: None.
Percent replacement: 0%.
- Plagioclase - Mode: 25%.
Crystal size: ?
Crystal shape: Anhedral.
Crystal orientation: None.
Percent replacement: ?

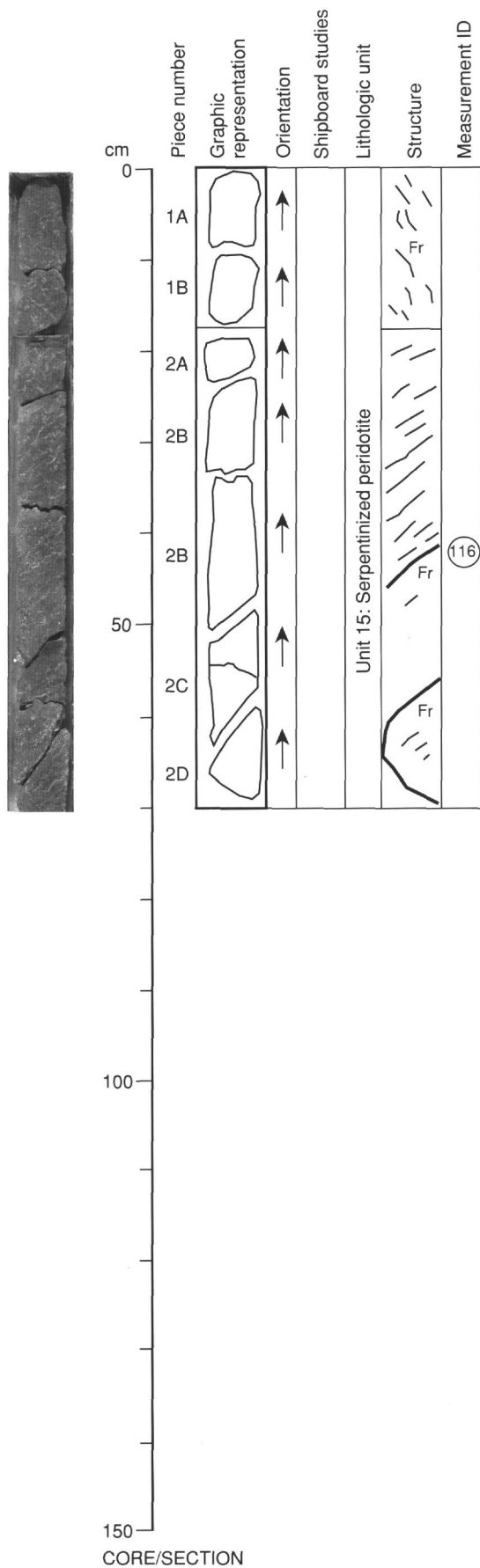
SECONDARY MINERALOGY: Serpentine forms the matrix of the breccia.

Total percent: 99%.
 Texture: Mesh serpentinite.

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UNIT 15: SERPENTINIZED PERIDOTITE

Pieces 1A to 2D



COLOR: Medium dark gray (N4) to greenish black (5GY 2/1).

LAYERING: No obvious layering.

DEFORMATION: No obvious ductile deformation. Late brittle deformation expressed as thin (1 mm) discontinuous aligned veinlets of serpentinite making up 1%–10% of the rock.

PRIMARY MINERALOGY:

- Olivine - Mode: 78%.
Crystal size: ?
Percent replacement: 100%.
- Pyroxene(s) - Mode: 20%.
Crystal size: ?
Percent replacement: 100%.
- Spinel - Mode: 2%.
Crystal size: ?
Crystal shape: Anhedral.
Crystal orientation: None.
Percent replacement: 0%.

SECONDARY MINERALOGY:

- Total percent: 98%.
- Texture: Mesh serpentinite.
- Vein material: Serpentine veins are abundant.

ADDITIONAL COMMENTS: Unit continues into Section 149-897D-21R-2.

UNIT 15: SERPENTINIZED PERIDOTITE

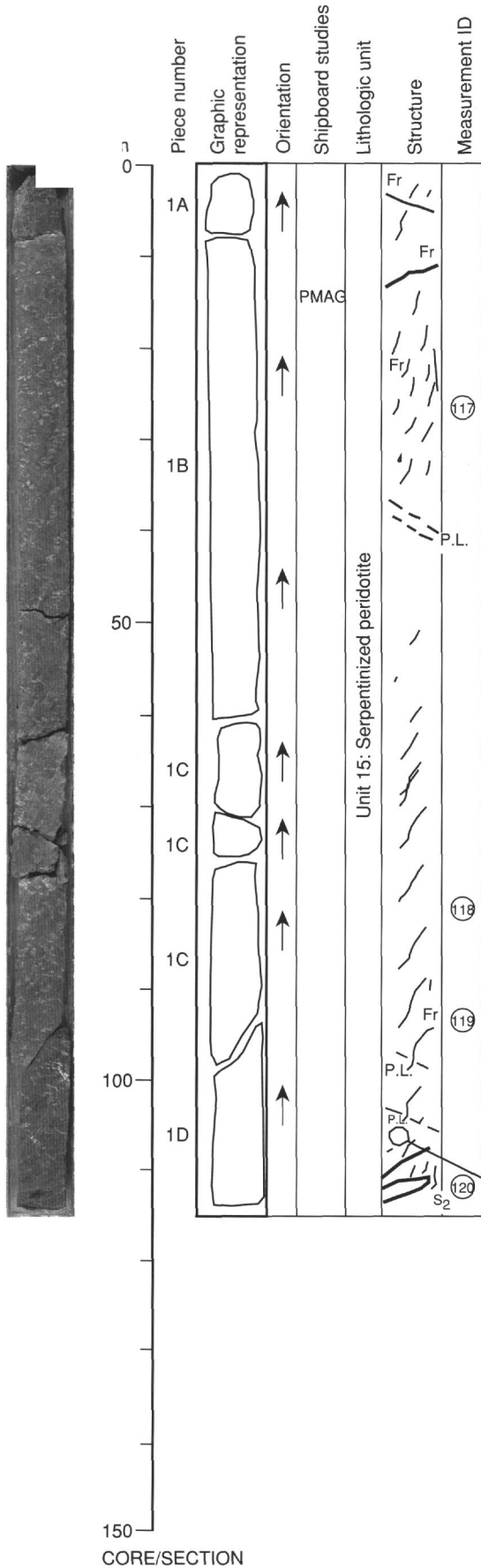
Pieces 1A to 1D

COLOR: Medium dark gray (N4) to greenish black (5GY 2/1).
LAYERING: Primary layering marked by bands of aligned pyroxene.
DEFORMATION: No obvious ductile deformation. Late brittle deformation expressed by fine-filled fractures making 1%–10% of the rock.
PRIMARY MINERALOGY: Pyroxene crystals are aligned but isolated within altered olivine.
 Olivine - Mode: 79%.
 Crystal size: ?
 Percent replacement: 100%.
 Pyroxene(s) - Mode: 20%.
 Crystal size: ?
 Crystal shape: Anhedral.
 Crystal orientation: None.
 Percent replacement: 100%.
 Spinel - Mode: 1%.
 Crystal size: ?
 Crystal shape: Anhedral.
 Crystal orientation: None.
 Percent replacement: 0%.

SECONDARY MINERALOGY:

Total percent: 99%.
 Texture: Mesh serpentinite.
 Vein material: Serpentine veins are abundant.

ADDITIONAL COMMENTS: Unit continues into Section 149-897D-21R-3.



149-897D-21R-3

UNIT 15: SERPENTINIZED PERIDOTITE

Pieces 1A to 3

COLOR: Medium dark gray (N4) to greenish black (5GY 2/1).

LAYERING: No obvious layering.

DEFORMATION: No obvious ductile deformation. Late brittle deformation expressed by serpentine-filled fractures making 1%–10% of the rock.

PRIMARY MINERALOGY: Pyroxene crystals are aligned but isolated within altered olivine.

Olivine - Mode: 79%.

Crystal size: ?

Percent replacement: 100%.

Pyroxene(s) - Mode: 20%.

Crystal size: ?

Crystal shape: Anhedral.

Crystal orientation: None.

Percent replacement: 100%.

Spinel - Mode: 1%.

Crystal size: ?

Crystal shape: Anhedral.

Crystal orientation: None.

Percent replacement: 0%.

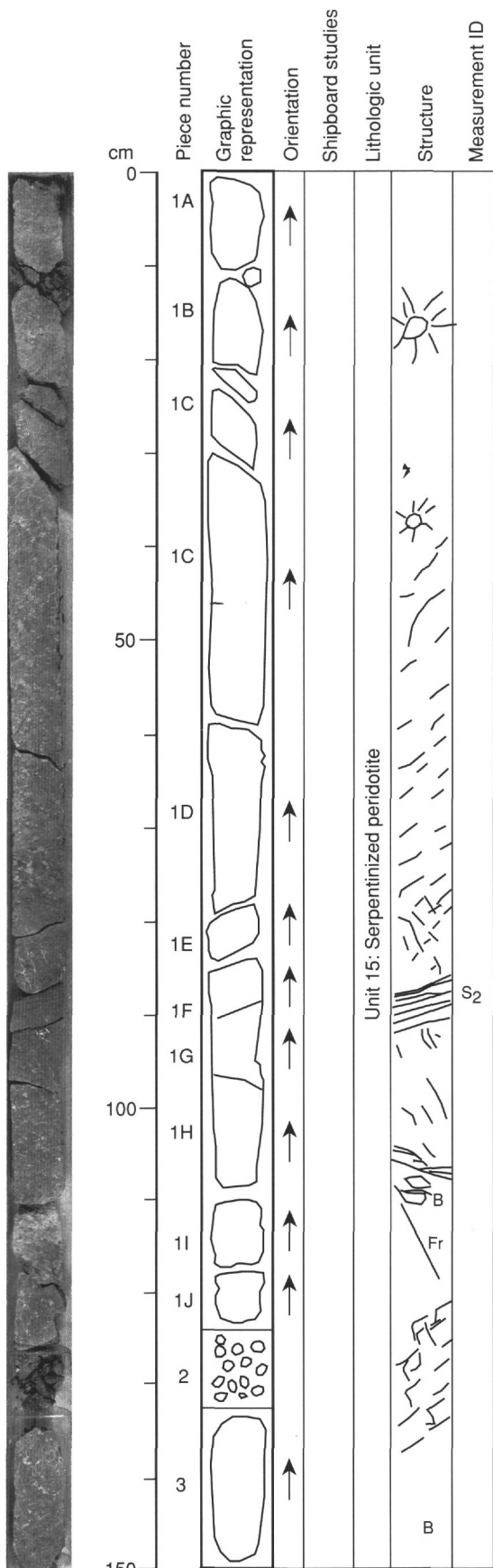
SECONDARY MINERALOGY:

Total percent: 99%.

Texture: Mesh serpentinite.

Vein material: Serpentine veins with local magnetite are abundant.

ADDITIONAL COMMENTS: Unit continues into Section 149-897D-21R-4.



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UNIT 15: SERPENTINIZED PERIDOTITE

Pieces 1 to 9

COLOR: Medium dark gray (N4) to greenish black (5GY 2/1).

LAYERING: No obvious layering.

DEFORMATION: No obvious ductile deformation. Late brittle deformation expressed by parallel serpentine-filled fractures, making 1%–3% of the rock, developing locally a fracture-cleavage in the rock.

PRIMARY MINERALOGY: Pyroxene crystals are aligned.

Olivine - Mode: 89%.

Crystal size: ?

Percent replacement: 100%.

Pyroxene(s) - Mode: 10%.

Crystal size: ?

Crystal shape: Anhedral.

Crystal orientation: None.

Percent replacement: 100%.

Spinel - Mode: 1%.

Crystal size: ?

Crystal shape: Anhedral.

Crystal orientation: None.

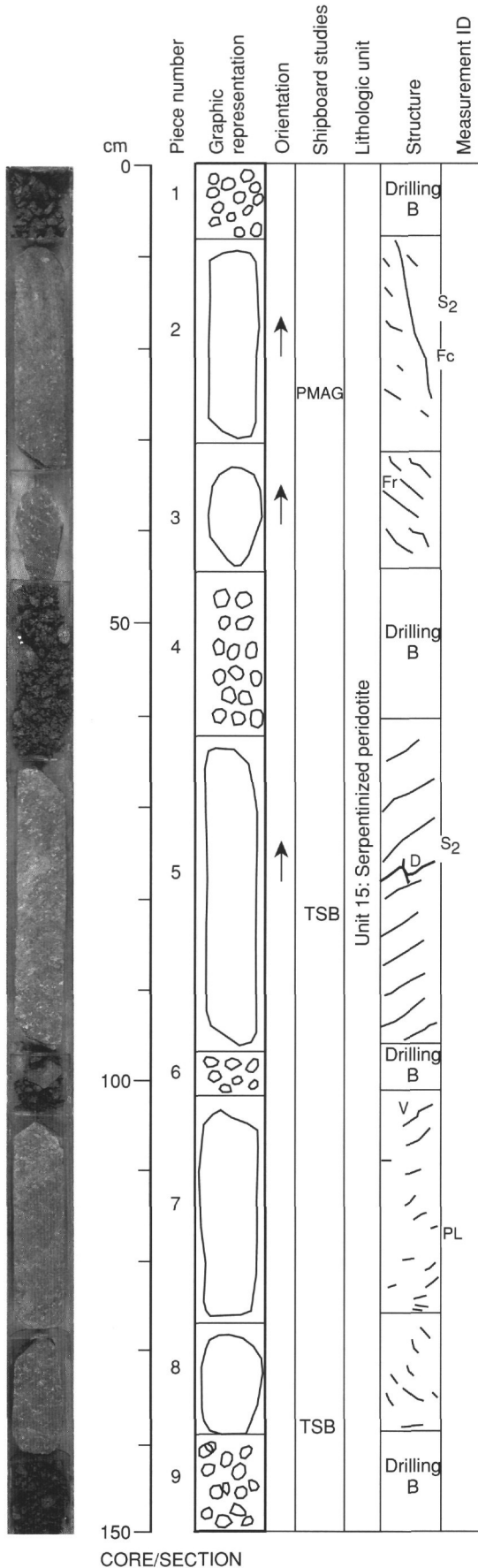
Percent replacement: 0%.

SECONDARY MINERALOGY:

Total percent: 99%.

Texture: Mesh serpentinite

Vein material: Serpentine veins with local magnetite are abundant.



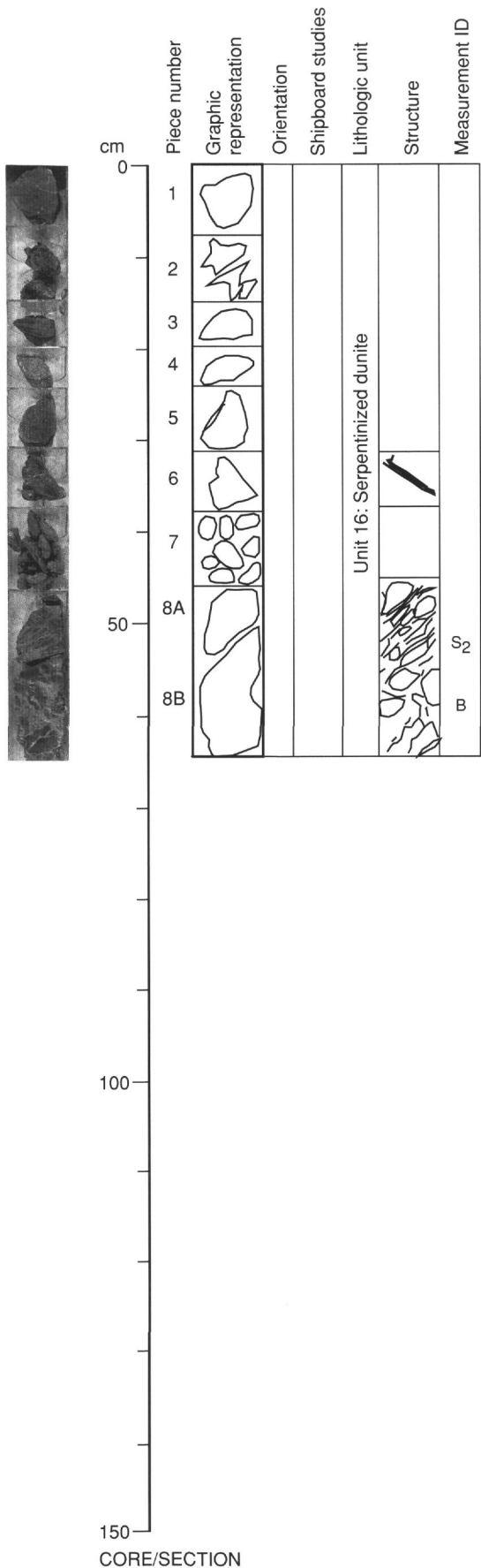
CORE/SECTION

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UNIT 16: SERPENTINIZED DUNITE

Pieces 1 to 8B

COLOR: Grayish black (N2).
LAYERING: No obvious layering.
DEFORMATION: No obvious high temperature deformation. Cold shear deformation which locally brecciated the rock in limited shear zones having C-S fabric.
PRIMARY MINERALOGY:
 Olivine - Mode: 95%.
 Crystal size: ?
 Percent replacement: 100%.
 Pyroxene(s) - Mode: 4%.
 Crystal size: ?
 Crystal shape: Anhedral.
 Crystal orientation: None.
 Percent replacement: 100%.
 Spinel - Mode: 1%.
 Crystal size: ?
 Crystal shape: Anhedral.
 Crystal orientation: None.
 Percent replacement: 0%.
SECONDARY MINERALOGY:
 Total percent: 99%.
 Texture: Mesh serpentinite
ADDITIONAL COMMENTS: Unit continues into Section 149-897D-22R-2.



UNIT 16: SERPENTINIZED DUNITE

Piece 1

COLOR: Grayish black (N2).

LAYERING: Cold shear deformation which locally brecciated the rock in shear zones having C-S fabric. Fractures filled with serpentine.

DEFORMATION: No obvious deformation.

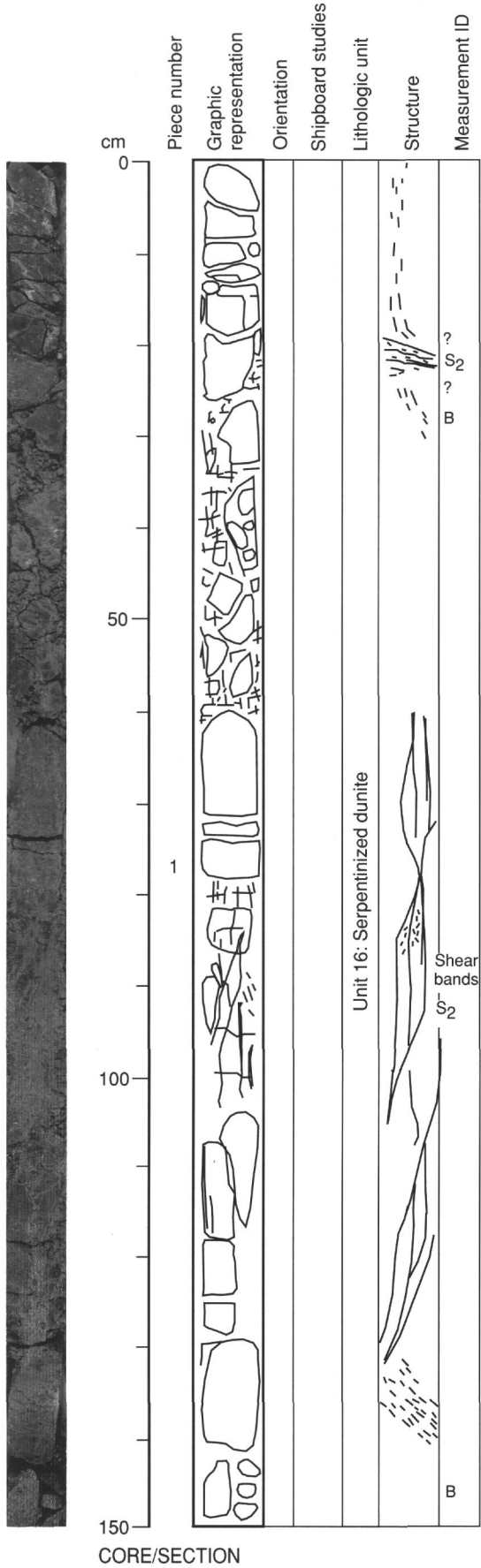
PRIMARY MINERALOGY:

- Olivine - Mode: 95%.
Crystal size: ?
Percent replacement: 100%.
- Pyroxene(s) - Mode: 4%.
Crystal size: ?
Crystal shape: Anhedral.
Crystal orientation: None.
Percent replacement: 100%.
- Spinel - Mode: 1%.
Crystal size: ?
Crystal shape: Anhedral.
Crystal orientation: None.
Percent replacement: 0%.

SECONDARY MINERALOGY:

- Total percent: 99%.
- Texture: Mesh serpentinite.

ADDITIONAL COMMENTS: Unit continues into Section 149-897D-22R-3.



CORE/SECTION