

149-897D-22R-3

UNIT 16: SERPENTINIZED DUNITE

Pieces 1 to 6

COLOR: Grayish black (N2) to dark greenish gray (5GY 4/1).

LAYERING: No obvious layering.

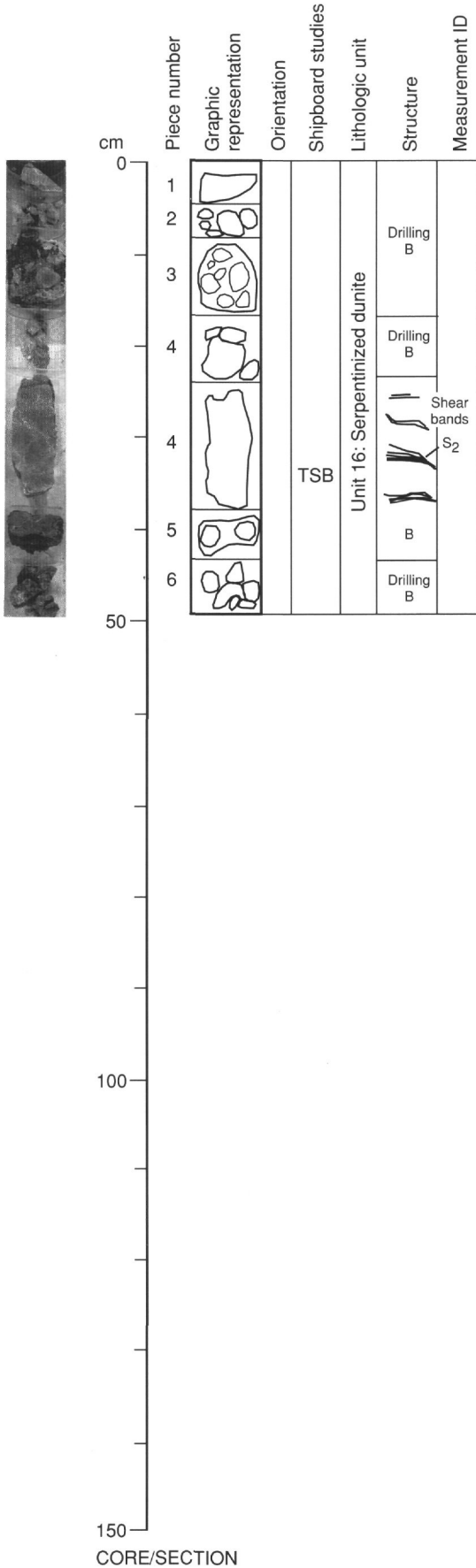
DEFORMATION: Cold shear deformation which locally brecciated the rock in limited shear zones having C-S fabric.

PRIMARY MINERALOGY:

- Olivine - Mode: 95%.
Crystal size: ?
Percent replacement: 100%.
- Pyroxene(s) - Mode: 3%.
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%.

SECONDARY MINERALOGY:

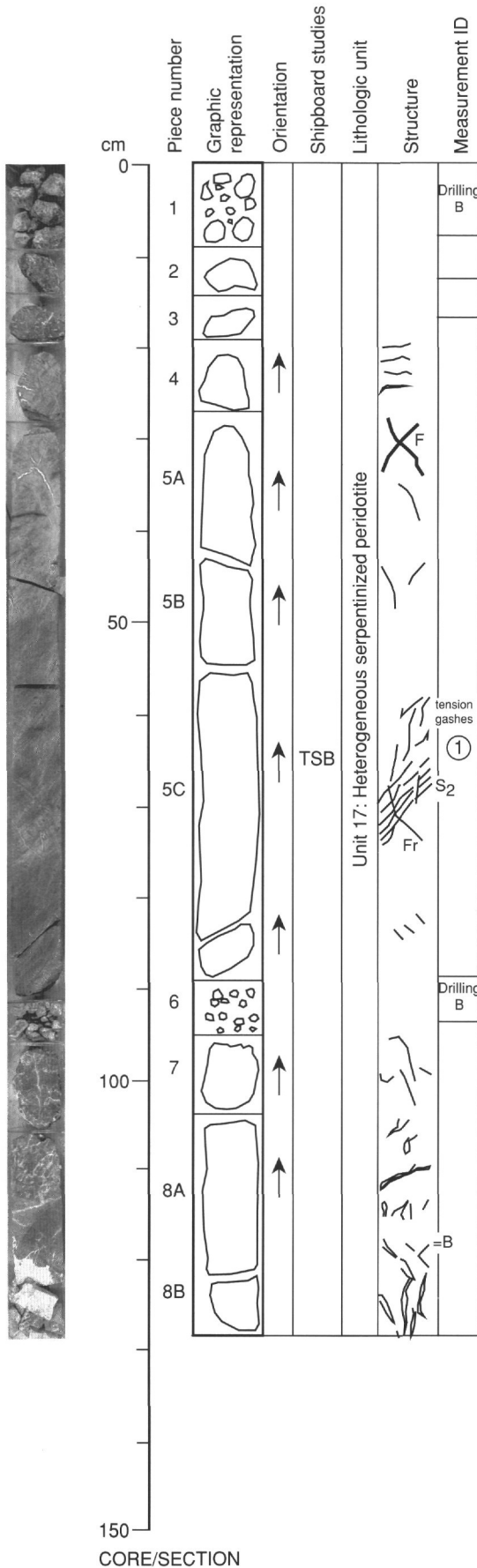
- Total percent: 99%.
- Texture: Mesh serpentinite.



UNIT 17: HETEROGENEOUS SERPENTINIZED PERIDOTITE

Pieces 1 to 8B

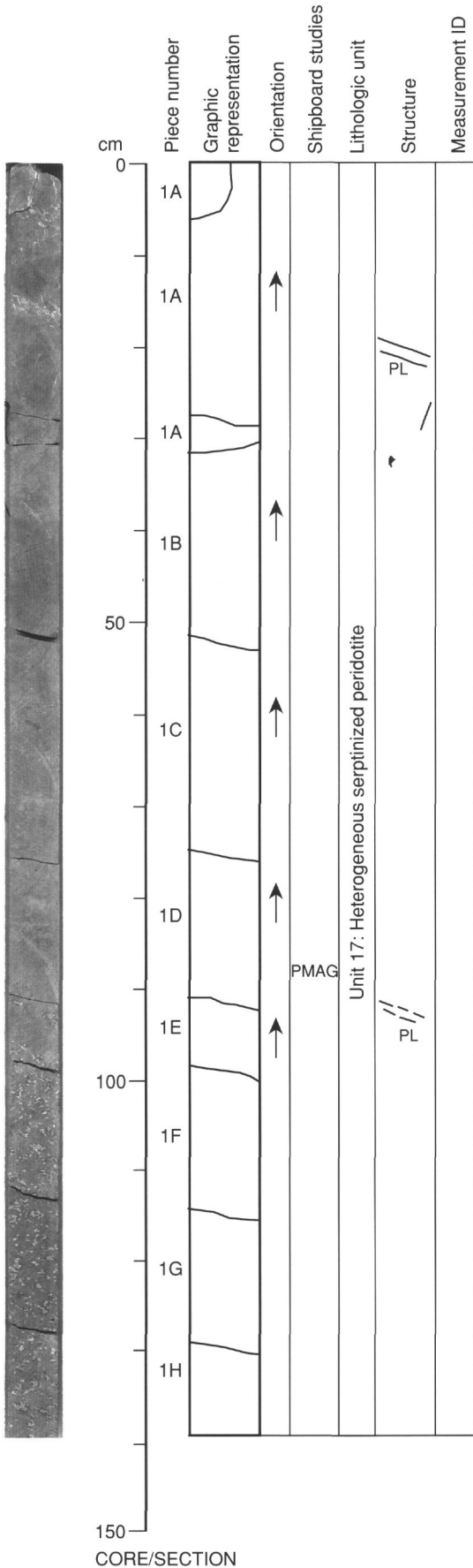
COLOR: Grayish black (N2).
LAYERING: No obvious layering.
DEFORMATION: Cold shear deformation which locally developed limited shear zones having C-S fabric. Late fractures filled with serpentine.
PRIMARY MINERALOGY: Bands of pyroxene crystals.
 Olivine - Mode: 75%.
 Crystal size: ?
 Percent replacement: 100%.
 Pyroxene(s) - Mode: 23%.
 Crystal size: ?
 Crystal shape: ?
 Crystal orientation: ?
 Percent replacement: 100%.
 Spinel - Mode: 2%.
 Crystal size: ?
 Crystal shape: Anhedral.
 Crystal orientation: None.
 Percent replacement: 0%.
SECONDARY MINERALOGY:
 Total percent: 96%.
 Texture: Mesh serpentinite.
 Vein material: Serpentine veins radiate from pyroxene crystals.
ADDITIONAL COMMENTS: Unit continues into Section 149-897D-23R-2.



149-897D-23R-2

UNIT 17: HETEROGENEOUS SERPENTINIZED PERIDOTITE

Pieces 1A to 1H



COLOR: Grayish black (N2) to greenish black (5GY 2/1)
LAYERING: Primary layering marked by bands of aligned pyroxene.
DEFORMATION: No obvious high temperature deformation.
PRIMARY MINERALOGY: Pyroxene-rich zones occur in upper few centimeters, from 16–18 cm and from 93–140 cm. Unit is dunitic from 18–90 cm, and homogeneous peridotite from 90–140 cm.
 Olivine - Mode: 60%–98%.
 Pyroxene - Mode: 0%–20%.
 Spinel - Mode: 2%–3%.
SECONDARY MINERALOGY: Primary mineralogy is almost totally destroyed by serpentinization.
 Total percent: 98%.
 Texture: Mesh serpentinite.
ADDITIONAL COMMENTS: Unit continues from Section 149-897D-23R-1 to Section 149-897D-23R-6.

UNIT 17: HETEROGENEOUS SERPENTINIZED PERIDOTITE

Pieces 1A to 8

COLOR: Greenish black (5GY 2/1).

LAYERING: Not obvious. In places pyroxene show weak preferred orientation.

DEFORMATION: No obvious ductile deformation. A thin cold shear zone between 100 and 110 cm. Late thin fractures filled with serpentine.

PRIMARY MINERALOGY: No plagioclase was observed, but it may be obscured by serpentinization.

Olivine - Mode: 80%–90%.

Pyroxene - Mode: 10%–20%.

Spinel - Mode: 2%.

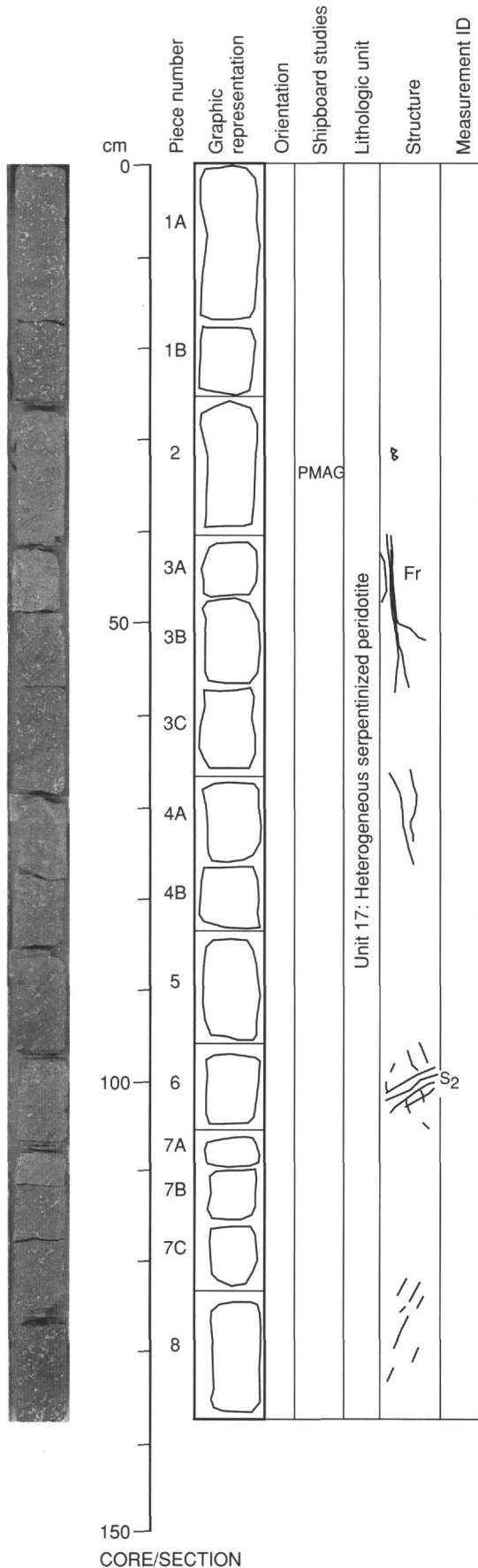
SECONDARY MINERALOGY: Secondary serpentinite has almost totally obscured primary mineralogy.

Total percent: 98%.

Texture: Mesh serpentinite.

Vein material: Some random veins of serpentine.

ADDITIONAL COMMENTS: Unit continues from Section 149-897D-23R-1 to Section 149-897D-23R-6.

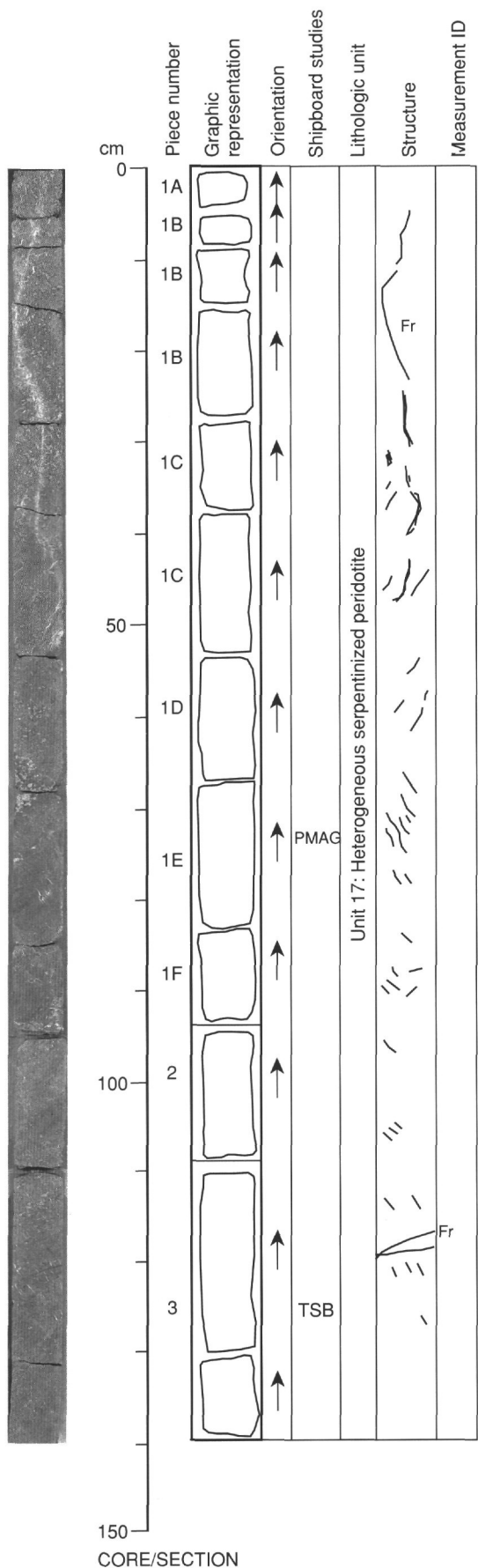


149-897D-23R-4

UNIT 17: HETEROGENEOUS SERPENTINIZED PERIDOTITE

Pieces 1A to 3

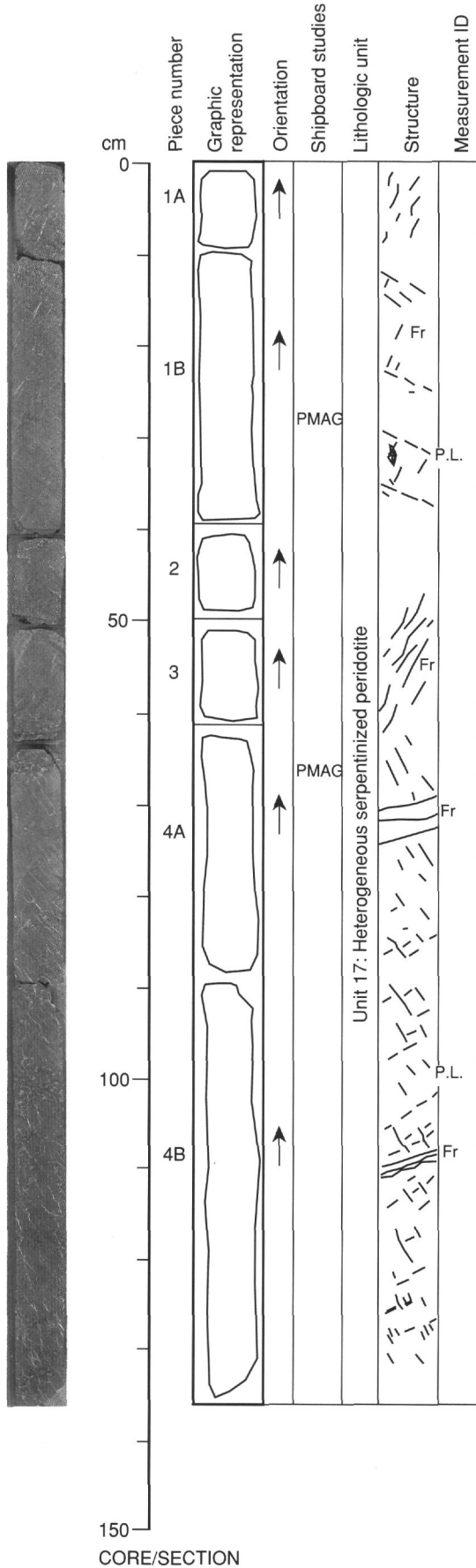
COLOR: Greenish black (5GY 2/1).
LAYERING: No obvious layering.
DEFORMATION: No obvious ductile deformation. In places pyroxene show weak preferred orientation (Piece 3). Late fractures filled with serpentine.
PRIMARY MINERALOGY: No plagioclase was observed, but it may be obscured by serpentinization. Pyroxene is not homogeneously distributed with lower abundances in Pieces 1F, 1H, 1I, and 1K.
 Olivine - Mode: 80%–90%.
 Pyroxene - Mode: 10%–20%.
 Spinel - Mode: 2%.
SECONDARY MINERALOGY: Secondary serpentine has almost totally obscured primary mineralogy.
 Total percent: 98%.
 Texture: Mesh serpentine.
 Vein material: Some random veins of serpentine.
ADDITIONAL COMMENTS: Unit continues from Section 149-897D-23R-1 to Section 149-897D-23R-6.



UNIT 17: HETEROGENEOUS SERPENTINIZED PERIDOTITE

Pieces 1A to 4B

COLOR: Greenish black (5GY 2/1).
LAYERING: Weak primary layering marked by bands of aligned pyroxenes (Pieces 1 and 4B).
DEFORMATION: No obvious ductile deformation. Late fractures filled with serpentine.
PRIMARY MINERALOGY: No plagioclase was observed, but it may be obscured by serpentinization. Pyroxene is not homogeneously distributed with lower abundance in Piece 1A.
 Olivine - Mode: 80%-98%.
 Pyroxene - Mode: 0%-20%.
 Spinel - Mode: 2%.
SECONDARY MINERALOGY: Secondary serpentine has almost totally obscured primary mineralogy.
 Total percent: 98%.
 Texture: Mesh serpentine.
 Vein material: Veins of serpentine.
ADDITIONAL COMMENTS: Unit continues from Section 149-897D-23R-1 to Section 149-897D-23R-6.



149-897D-23R-6

UNIT 17: HETEROGENEOUS SERPENTINIZED PERIDOTITE

Pieces 1 to 7

COLOR: Greenish black (5GY 2/1).

LAYERING: Weak primary layering marked by bands of aligned pyroxenes (Pieces 1 and 4).
DEFORMATION: No obvious ductile deformation. Late fractures filled with serpentine, having characteristics of sigmoid-shaped tension gashes.

PRIMARY MINERALOGY: No plagioclase was observed, but it may be obscured by serpentinization. Pyroxene is not homogeneously distributed with lower abundance in Pieces 1 (2–10 cm), 3A, and 6 (120–125 cm), which are dunitic.

Olivine - Mode: 80%–98%.
 Pyroxene - Mode: 0%–20%.
 Spinel - Mode: 2%.

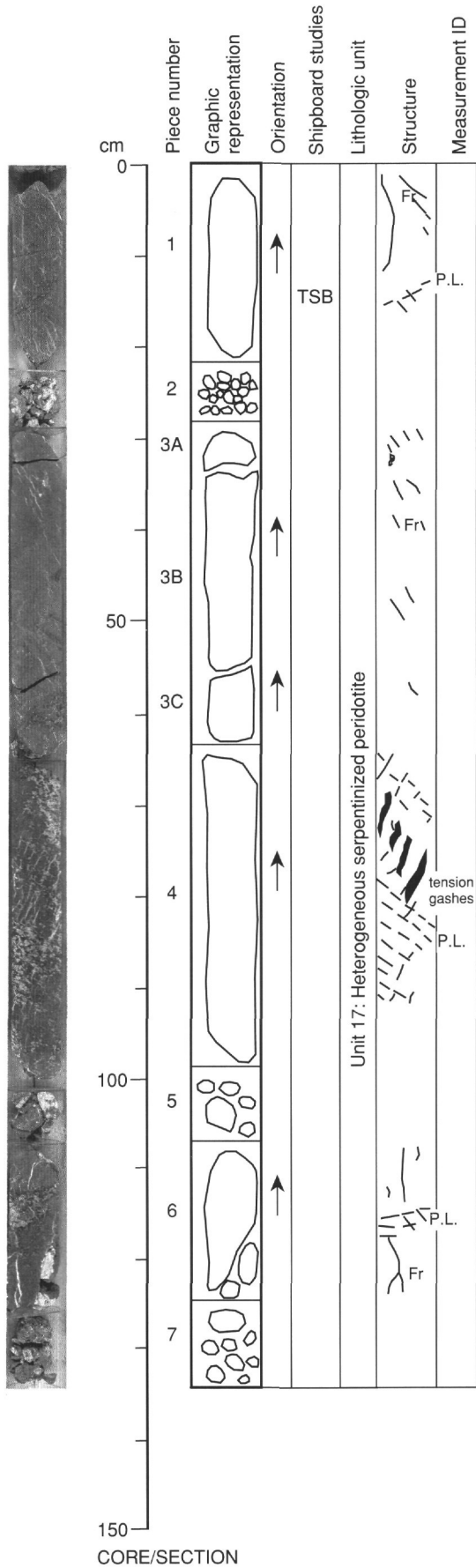
SECONDARY MINERALOGY: Secondary serpentinite has almost totally obscured primary mineralogy.

Total percent: 98%.

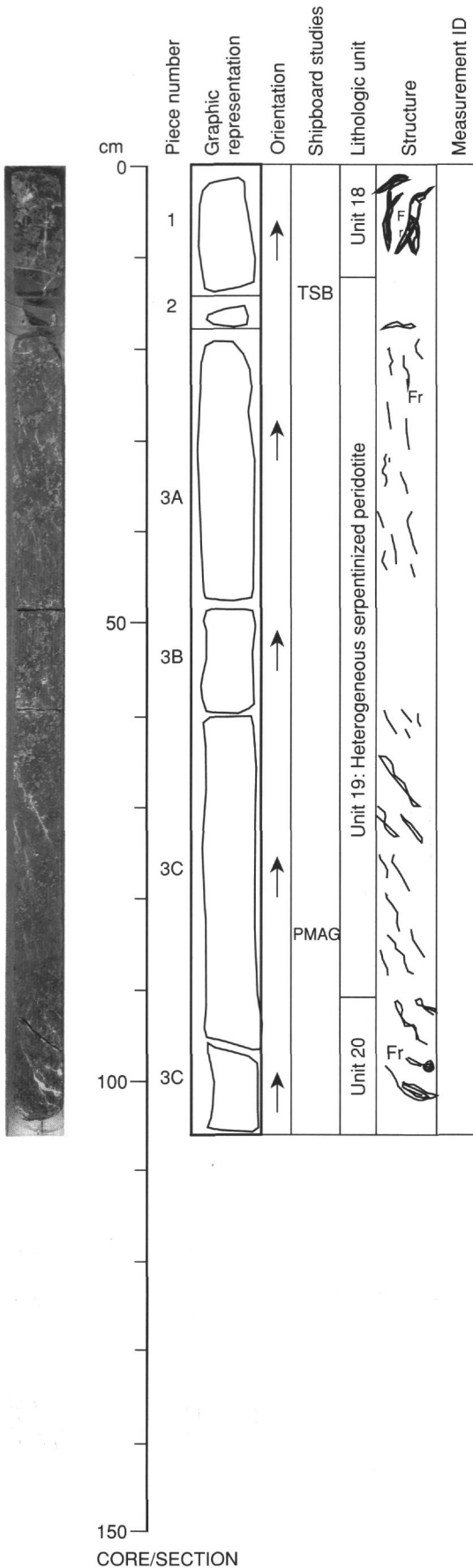
Texture: Mesh serpentinite.

Vein material: Some veins of serpentine.

ADDITIONAL COMMENTS: Unit continues from Section 149-897D-23R-1.



CORE/SECTION



UNIT 18: SERPENTINIZED PERIDOTITE

Piece 1

COLOR: Mottled blackish red (5R 2/2) to dark gray (N3).

LAYERING: No obvious layering.

DEFORMATION: No obvious ductile deformation. Late brittle deformation expressed as fractures filled with serpentine.

PRIMARY MINERALOGY:

- Olivine - Mode: 32%.
Crystal size: ?.
Crystal shape: Anhedral.
Crystal orientation: None.
Percent replacement: ?.
- Pyroxene(s) - Mode: 65%.
Crystal size: 0.2–1 cm.
Crystal shape: Anhedral.
Crystal orientation: None.
Percent replacement: 100%.
- Plagioclase - Mode 2%.
- Spinel - Mode: <1%.
Crystal size: <0.1 cm.
Crystal shape: Anhedral.
Crystal orientation: None.
Percent replacement: 0%.

SECONDARY MINERALOGY: Secondary serpentinite has almost totally obscured primary mineralogy.

- Total percent: >90%
- Texture: Mesh serpentinite.
- Vein material: Serpentine in veins 2–3 mm thick.

ADDITIONAL COMMENTS: Contact with unit 19 is sharp.

UNIT 19: HETEROGENEOUS SERPENTINIZED PERIDOTITE

Pieces 2–3C (12 to 91 cm)

COLOR: Medium dark gray (N4).

LAYERING: No obvious layering.

DEFORMATION: No obvious ductile deformation. Late brittle deformation expressed as fractures filled with serpentine.

PRIMARY MINERALOGY:

- Olivine - Mode: 80%–95%.
Crystal size: ?.
Crystal shape: Anhedral.
Crystal orientation: None.
Percent replacement: 100%.
- Pyroxene(s) - Mode: 1%–20%.
Crystal size: 0.2–1 cm.
Crystal shape: Anhedral.
Crystal orientation: None.
Percent replacement: 100%.
- Spinel - Mode: 1%.
Crystal size: 0.5 mm
Crystal shape: Anhedral.
Crystal orientation: None.
Percent replacement: 0%.

SECONDARY MINERALOGY: Secondary serpentinite has almost totally obscured primary mineralogy.

- Total percent: 98%
- Texture: Mesh serpentinite.
- Vein material: Serpentine in veins 2–3 mm thick.

ADDITIONAL COMMENTS: None.

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UNIT 20: SERPENTINIZED PLAGIOCLASE PERIDOTITE**Piece 3C (91–106 cm)**

COLOR: Dark gray (N3).

LAYERING: No obvious layering.

DEFORMATION: No obvious ductile deformation. Late brittle deformation expressed as fractures filled with serpentine.

PRIMARY MINERALOGY:

Olivine - Mode: 48%.

Crystal size: <1 cm.

Crystal shape: Anhedral.

Crystal orientation: None.

Percent replacement: ?.

Pyroxene(s) - Mode: 40%.

Crystal size: 0.2–1 cm.

Crystal shape: Anhedral.

Crystal orientation: None.

Percent replacement: 100%.

Plagioclase - Mode: 10%.

Spinel - Mode: 2%.

Crystal size: 0.5 mm.

Crystal shape: Anhedral.

Crystal orientation: None.

Percent replacement: 0%.

SECONDARY MINERALOGY: Secondary serpentinite has almost totally obscured primary mineralogy.

Total percent: >90%.

Texture: Mesh serpentinite.

Vein material: Serpentine in veins.

ADDITIONAL COMMENTS: Progressive transition from previous unit.

UNIT 21: HETEROGENEOUS SERPENTINIZED PERIDOTITE

Pieces 1A to 4

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

LAYERING: No obvious layering.

DEFORMATION: No obvious ductile deformation. Late brittle deformation defined by serpentine filled fractures.

PRIMARY MINERALOGY: No plagioclase was observed, but it may be obscured by serpentinization.

- Olivine - Mode: 85%.
 Crystal size: ?.
 Crystal shape: ?.
 Crystal orientation: ?.
 Percent replacement: 100%.
- Pyroxene(s) - Mode: 15%.
 Crystal size: 0.2–1 cm.
 Crystal shape: Anhedral.
 Crystal orientation: None.
 Percent replacement: ?.
- Spinel - Mode: <1%.
 Crystal size: <0.1 cm.
 Crystal shape: Anhedral.
 Crystal orientation: None.
 Percent replacement: ?%.

SECONDARY MINERALOGY: Secondary serpentinite has largely obscured primary mineralogy.

- Total percent: 99%.
- Texture: Mesh serpentinite
- Vein material: Large green veins with dark borders.

ADDITIONAL COMMENTS: Unit continues into Section 149-897D-23R-3.

