<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>CT image</th>
<th>Magnetic susceptibility</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>10</td>
<td>20</td>
<td>30</td>
<td>40</td>
<td>50</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>10</td>
<td>ALL TO MBIO</td>
</tr>
</tbody>
</table>
### Hole BA4A-1Z Section 3, Top of Section 1.12 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Lithology</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Vein density (per meter)</th>
<th>Alteration intensity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.55</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.65</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.75</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.85</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.95</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.05</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Description**
- **SEQUENCE**: 1a
- **ROCK NAME**: Dunite
- **CONTACT**: Continuous
- **TEXTURE**: IGNEOUS
- **SUMMARY**: Highly oxidized, fractured serpentinitized dunite crosscut by carbonate-filled veins and pyroxenitic dyke
- **ALTERATION**: Serpentinized
- **VEINS**: Black, white, and green veins
- **STRUCTURE**: Brittle-dominated by surface-related deformation
- **Veins** relatively shallow dipping carbonate veins occur, serpentine vein damage
- **Crystal plasticity**
**SEQUENCE: I**  
**UNIT/SUBUNIT: 2a**  
**ROCK NAME: Dunite**  
**CONTACT: Continuous**  
**TEXTURE:**  
**IGNEOUS**  
Summary: highly oxidized, fractured, serpentinized dunite crosscut by carbonate-filled veins and pyroxenitic dyke  
**ALTERATION:**  
Serpentinized  
**VEINS:**  
Black, white, and green veins  
**STRUCTURE:**  
Brittle-dominated by surface-related deformation  
Veins: some relatively shallow dipping carbonate veins occur, serpentine veins steeper  
Crystal plastic-Fabric intensity  
  
---  
**Hole BA4A-1Z Section 4, Top of Section 2.08 (m CCD)**  
<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>MSCL-W (SI x 10^-5)</th>
<th>MSP (SI x 10^-5)</th>
<th>GRA (g/cm²)</th>
<th>Sequence</th>
<th>Unit/subunit</th>
<th>Lithology</th>
<th>Primary mineralogy (%)</th>
<th>Degree of deformation</th>
<th>Discrete fracture/vein density (per meter)</th>
<th>Discrete vein crosscutting</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnetic contact</th>
<th>Brittle fracture</th>
<th>Crystal plastic</th>
<th>Vents</th>
<th>Structures</th>
<th>Alteration halos</th>
<th>Vein density (per meter)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.09</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0-10</td>
<td></td>
<td>0-45</td>
<td>90</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depth (m CCD)</td>
<td>Core length (cm)</td>
<td>Stained image</td>
<td>Magnetic susceptibility</td>
<td>Primary mineralogy (%)</td>
<td>Degree of deformation</td>
<td>Fracture/ Vein density (per meter)</td>
<td>Alteration intensity</td>
<td>Dip</td>
<td>Magnatic contact</td>
<td>Brittle</td>
<td>Crystal plastic</td>
<td>Veins</td>
<td>Structures</td>
<td>Alteration halos</td>
<td>Vein density (per meter)</td>
<td>Core length (cm)</td>
<td>Stained image</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------</td>
<td>------------------</td>
<td>---------------</td>
<td>------------------------</td>
<td>-----------------------</td>
<td>----------------------</td>
<td>-------------------------------</td>
<td>---------------------</td>
<td>-----</td>
<td>-----------------</td>
<td>---------</td>
<td>----------------</td>
<td>-------</td>
<td>------------</td>
<td>----------------</td>
<td>---------------------</td>
<td>-----------------</td>
<td>----------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.70</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.80</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.90</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.00</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.10</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.20</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.30</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.40</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.50</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.60</td>
<td>90</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Hole BA4A-2Z Section 1, Top of Section 2.70 (m CCD)**

**SEQUENCE: Ia**
- **ROCK NAME:** Dunite
- **CONTACT:** Continuous

**PRIMARY MINERALOGY:**
- Olivine
- Plagioclase
- Clinopyroxene
- Orthopyroxene
- Amphibole
- Spinel
- Sulfide

**GRAIN SIZE:**
- 0.1
- 0.2
- 0.3
- 0.4
- 0.5
- 0.6
- 0.7
- 0.8
- 0.9
- 1.0
- 1.1
- 1.2
- 1.3
- 1.4
- 1.5

**TEXTURE:**
- Igneous
- Highly oxidized, fractured serpentinized dunite crosscut by carbonate-filled veins and pyroxenitic dyke

**ALTERATION:**
- Serpentinized

**VEINS:**
- Black veins
- White veins
- Green veins

**STRUCTURE:**
- Brittle: Dominated by surface-related deformation
- Veins: Some relatively shallow dipping carbonate veins occur, serpentine veins steeper
- Crystal plastic:
- Discrete brittle features:

**FABRIC INTENSITY:**
- 0
- 1
- 2
- 3
- 4
- 5

**MINERALOGY:**
- Sulfide
- Amphibole
- Spinel
- Orthopyroxene
- Clinopyroxene
- Plagioclase
- Olivine

**ALTERATION HALOS:**
- Fresh (<3%)
- Slight (3–10%)
- Moderate (11–30%)
- Substantial (31–60%)
- Extensive (61–90%)
- Complete (≥90%)

**DISCRETE BRITTLE FEATURES:**
- Vein crosscutting

**DEGREE OF DEFORMATION:**
- Undeformed
- Minor fracturing
- Moderate fracturing
- GS reduction and rotation
- Well-developed cataclasis
- Ultracataclastite

**DESCRIPTION:**
- Protogranular
- Porphyroclastic
- Strongly foliated
- Protomylonite
- Mylonite
- Ultramylonite

**ISOTROPIC:**
- Weak
- Moderate
- Strong

**FINE GRAINED (0.2–1 mm):**
- Medium grained (1–5 mm)
- Coarse grained (5–30 mm)
- Pegmatitic (>30 mm)

**GLASSY:**
- Cryptocrystalline (<0.1 mm)
- Microcrystalline (0.1–0.2 mm)

---

**Magmatic contact:**
- Brittle
- Crystal plastic
- Veins

---
## Hole BA4A-2Z Section 2, Top of Section 3.60 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Lithology</th>
<th>Degree of deformation</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnetic contact</th>
<th>Brittle Vein</th>
<th>Crystal plastic</th>
<th>Vein density (per meter)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.60</td>
<td>0</td>
<td>Dunite</td>
<td>Minor fracturing</td>
<td>Fresh (&lt;3%)</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>3.70</td>
<td>10</td>
<td></td>
<td>Undeformed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>3.80</td>
<td>20</td>
<td></td>
<td>Undeformed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>3.90</td>
<td>30</td>
<td></td>
<td>Undeformed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>4.00</td>
<td>40</td>
<td></td>
<td>Undeformed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>4.10</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>4.20</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>4.30</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>4.40</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0</td>
</tr>
</tbody>
</table>

**Description**

- **SEQUENCE**: I
- **UNIT/SUBUNIT**: 2c
- **ROCK NAME**: Dunite
- **CONTACT**: Continuous
- **TEXTURE**: IGNEOUS
- **SUMMARY**: oxidized, serpentinized dunite strongly fractured, rubble, cross cut by carbonate veins and pyroxenitic dikes
- **ALTERATION**: serpentinized
- **VEINS**: white veins, black veins
- **STRUCTURE**: Brittle - Dominated by surface related deformation, Veins - some relatively shallow dipping carbonate veins occur, serpentine veins also present, Crystal plastic:

### Magnetic susceptibility

- **MSCL-W** (SI x 10^-5)
- **MSP**
- **GRA** (g/cm³)

### Grain size

- **Granitoid**
- **Orthopyroxene**
- **Olivine**
- **Spinel**
- **Sulfide**

### Fracture/ Vein density (per meter)

- **Discrete brittle features**
- **Fabric intensity**
- **Layering**
- **Foliation**

### Discrete brittle features

- **Granitic contact**
- **Dip**
- **Fault zone**
- **Fracture/ Vein density (per meter)**
- **Hole BA4A-2Z Section 2, Top of Section 3.60 (m CCD)**

---

**Table Content**

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Magnetic susceptibility</th>
<th>Lithology</th>
<th>Degree of deformation</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnetic contact</th>
<th>Brittle Vein</th>
<th>Crystal plastic</th>
<th>Vein density (per meter)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.60</td>
<td>0</td>
<td>10^{-5}</td>
<td>Dunite</td>
<td>Minor fracturing</td>
<td>Fresh (&lt;3%)</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>3.70</td>
<td>10</td>
<td></td>
<td></td>
<td>Undeformed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>3.80</td>
<td>20</td>
<td></td>
<td></td>
<td>Undeformed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>3.90</td>
<td>30</td>
<td></td>
<td></td>
<td>Undeformed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>4.00</td>
<td>40</td>
<td></td>
<td></td>
<td>Undeformed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>4.10</td>
<td>50</td>
<td></td>
<td></td>
<td>Undeformed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>4.20</td>
<td>60</td>
<td></td>
<td></td>
<td>Undeformed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>4.30</td>
<td>70</td>
<td></td>
<td></td>
<td>Undeformed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>4.40</td>
<td>80</td>
<td></td>
<td></td>
<td>Undeformed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0</td>
</tr>
</tbody>
</table>

**Description**

- **SEQUENCE**: I
- **UNIT/SUBUNIT**: 2c
- **ROCK NAME**: Dunite
- **CONTACT**: Continuous
- **TEXTURE**: IGNEOUS
- **SUMMARY**: oxidized, serpentinized dunite strongly fractured, rubble, cross cut by carbonate veins and pyroxenitic dikes
- **ALTERATION**: serpentinized
- **VEINS**: white veins, black veins
- **STRUCTURE**: Brittle - Dominated by surface related deformation, Veins - some relatively shallow dipping carbonate veins occur, serpentine veins also present, Crystal plastic:

### Magnetic susceptibility

- **MSCL-W** (SI x 10^-5)
- **MSP**
- **GRA** (g/cm³)

### Grain size

- **Granitoid**
- **Orthopyroxene**
- **Olivine**
- **Spinel**
- **Sulfide**

### Fracture/ Vein density (per meter)

- **Discrete brittle features**
- **Fabric intensity**
- **Layering**
- **Foliation**

### Discrete brittle features

- **Granitic contact**
- **Dip**
- **Fault zone**
- **Fracture/ Vein density (per meter)**
- **Hole BA4A-2Z Section 2, Top of Section 3.60 (m CCD)**
**SEQUENCE:** 2c  
**ROCK NAME:** Dunite  
**CONTACT:** Continuous  
**TEXTURE:**  
**IGNEOUS SUMMARY:** oxidized, serpentinized dunite strongly fractured, rubble, cross cut by carbonate veins and pyroxenitic dikes  
**ALTERATION:** serpentinized  
**VEINS:** white veins, black veins  
**STRUCTURE:** Brittle- Dominated by surface related deformation  
Veins- some relatively shallow dipping carbonate veins occur, serpentine veins steeper  
Crystal plastic-  

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>Lithology</th>
<th>Primary mineralogy (%)</th>
<th>Degree of deformation</th>
<th>Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>VMS</th>
<th>Magnetite contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Vems</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.48</td>
<td>0</td>
<td></td>
<td>CT image</td>
<td></td>
<td>Sulfide</td>
<td>Olivine Plagioclase</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Description:**  
SEQUENCE: 1  
UNIT/SUBUNIT: 2c  
CONTACT: Continuous  
TEXTURE:  
IGNEOUS SUMMARY: oxidized, serpentinized dunite strongly fractured, rubble, cross cut by carbonate veins and pyroxenitic dikes  
ALTERATION: serpentinized  
VEINS: white veins, black veins  
STRUCTURE: Brittle- Dominated by surface related deformation  
Veins- some relatively shallow dipping carbonate veins occur, serpentine veins steeper  
Crystal plastic-
SEQUENCE: I
UNIT/SUBUNIT: 2d
ROCK NAME: Dunite
CONTACT: Continuous
TEXTURE:
IGNEOUS SUMMARY: oxidized, serpentinized dunite weakly fractured, rubble, cross cut by carbonate veins and pyroxenitic dikes
ALTERATION: fully serpentinized dunite with cross-cutting fractures filled with carbonate, weakly fractured and intact
VEINS: black veins, green veins, and white veins
STRUCTURE: Brittle- Dominated by surface related deformation and hydrothermal breccias
Veins- some relatively shallow dipping carbonate veins occur, serpentine veins steeper
Crystal plastic- Fabric intensity
Vein density (per meter)
Grain size
Hole BA4A-3Z Section 1, Top of Section 4.90 (m CCD)
Depth (m CCD)
Core length (cm)
Shipboard samples
Scanned image
CT image
Magnetic susceptibility
MSCL-W
MSP (SI 10^-5)
MSCL-A
Primary mineralogy
Lithology
Vein crosscutting
Fault zones
Apparent offset
Structures
Alteration halos
Vein crosscutting
Vein
Detailed Alteration
Intensity
Occurrence
Vein crosscutting
Vein density (per meter)
Grain size
### Sequence I

**Unit/Subunit:** 2e  
**Rock Name:** Dunite  
**Contact:** Continuous  
**Texture:** Igneous  
**Summary:** Serpentinized and oxidized dunite  
**Alteration:** Serpentinized and highly oxidized  
**Veins:** few white and black veins  
**Structure:** Brittle - Dominated by surface related deformation  

**Sequence I**  
**Unit/Subunit:** 2f  
**Rock Name:** Dunite  
**Contact:** Colour  
**Texture:** Igneous  
**Summary:** Serpentinized and highly oxidized dunite with white large crosscutting veins at 22.5, 28 and 33.5 cm depths  
**Alteration:** Serpentinized and oxidized  
**Veins:** large white veins and few fine black veins  
**Structure:** Brittle - Dominated by surface related deformation and hydrothermal breccias  

**Sequence I**  
**Unit/Subunit:** 3a  
**Rock Name:** Dunite  
**Contact:** Colour  
**Texture:** Igneous  
**Summary:** Serpentinized and oxidized dunite  
**Alteration:** Serpentinized and highly oxidized  
**Veins:** large white crosscutting veins and few fine black, white veins  
**Structure:** Brittle - Dominated by surface related deformation and hydrothermal breccias  

**Veins:** some relatively shallow dipping carbonate veins occur, serpentine veins steeper  

**Crystal Plastic**  

### Fabric Intensity

<table>
<thead>
<tr>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

### Vein Density

<table>
<thead>
<tr>
<th>6</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

### Grain Size

<table>
<thead>
<tr>
<th>6</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

### Core Length (cm)

<table>
<thead>
<tr>
<th>63</th>
<th>64</th>
<th>65</th>
<th>66</th>
<th>67</th>
<th>68</th>
<th>69</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>50</td>
<td>100</td>
<td>150</td>
<td>200</td>
<td>250</td>
<td>300</td>
</tr>
</tbody>
</table>

### Magnetic Susceptibility

<table>
<thead>
<tr>
<th>6.33</th>
<th>6.23</th>
<th>6.13</th>
<th>6.03</th>
<th>5.93</th>
<th>5.83</th>
<th>5.73</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

### Lithology

- Primary mineralogy: Olivine, Plagioclase, Clinopyroxene, Orthopyroxene, Spinel, Sulfide
- Fabric intensity: Magnetic, Layering, Foliation
- Degree of deformation: Discrete brittle features, Fracture/ Vein density (per meter), Alteration intensity
- Degree of alteration: Fresh (<3%), Slight (3–10%), Moderate (11–30%), Substantial (31–60%), Extensive (61–90%), Complete (≥90%)
- Degree of deformation: Undeformed, Minor fracturing, Moderate fracturing, GS reduction and rotation, Well-developed cataclasis, Ultracataclastite
- Protogranular, Porphyroclastic, Strongly foliated, Protomylonite, Mylonite, Ultramylonite
- Isotropic, Weak, Moderate, Strong
- Fine grained (0.2–1 mm), Medium grained (1–5 mm), Coarse grained (5–30 mm), Pegmatitic (>30 mm)
- Glassy, Cryptocrystalline (<0.1 mm), Microcrystalline (0.1–0.2 mm)

### Magnetic contact

- Brittle
- Crystal plastic

### Veins

- Contact: Colour
- Texture: Igneous
- Summary: Serpentinized and highly oxidized dunite with white large crosscutting veins at 22.5, 28 and 33.5 cm depths
- Alteration: Serpentinized and oxidized
- Veins: large white veins and few fine black, white veins
- Structure: Brittle - Dominated by surface related deformation and hydrothermal breccias
- Veins: some relatively shallow dipping carbonate veins occur, serpentine veins steeper

### Fabric Intensity

<table>
<thead>
<tr>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

### Vein Density

<table>
<thead>
<tr>
<th>6</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

### Grain Size

<table>
<thead>
<tr>
<th>6</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

### Core Length (cm)

<table>
<thead>
<tr>
<th>63</th>
<th>64</th>
<th>65</th>
<th>66</th>
<th>67</th>
<th>68</th>
<th>69</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>50</td>
<td>100</td>
<td>150</td>
<td>200</td>
<td>250</td>
<td>300</td>
</tr>
</tbody>
</table>

### Magnetic Susceptibility

<table>
<thead>
<tr>
<th>6.33</th>
<th>6.23</th>
<th>6.13</th>
<th>6.03</th>
<th>5.93</th>
<th>5.83</th>
<th>5.73</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

### Lithology

- Primary mineralogy: Olivine, Plagioclase, Clinopyroxene, Orthopyroxene, Spinel, Sulfide
- Fabric intensity: Magnetic, Layering, Foliation
- Degree of deformation: Discrete brittle features, Fracture/ Vein density (per meter), Alteration intensity
- Degree of alteration: Fresh (<3%), Slight (3–10%), Moderate (11–30%), Substantial (31–60%), Extensive (61–90%), Complete (≥90%)
- Degree of deformation: Undeformed, Minor fracturing, Moderate fracturing, GS reduction and rotation, Well-developed cataclasis, Ultracataclastite
- Protogranular, Porphyroclastic, Strongly foliated, Protomylonite, Mylonite, Ultramylonite
- Isotropic, Weak, Moderate, Strong
- Fine grained (0.2–1 mm), Medium grained (1–5 mm), Coarse grained (5–30 mm), Pegmatitic (>30 mm)
- Glassy, Cryptocrystalline (<0.1 mm), Microcrystalline (0.1–0.2 mm)

### Magnetic contact

- Brittle
- Crystal plastic

### Veins

- Contact: Colour
- Texture: Igneous
- Summary: Serpentinized and highly oxidized dunite with white large crosscutting veins at 22.5, 28 and 33.5 cm depths
- Alteration: Serpentinized and oxidized
- Veins: large white veins and few fine black, white veins
- Structure: Brittle - Dominated by surface related deformation and hydrothermal breccias
- Veins: some relatively shallow dipping carbonate veins occur, serpentine veins steeper

### Fabric Intensity

<table>
<thead>
<tr>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

### Vein Density

<table>
<thead>
<tr>
<th>6</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

### Grain Size

<table>
<thead>
<tr>
<th>6</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

### Core Length (cm)

<table>
<thead>
<tr>
<th>63</th>
<th>64</th>
<th>65</th>
<th>66</th>
<th>67</th>
<th>68</th>
<th>69</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>50</td>
<td>100</td>
<td>150</td>
<td>200</td>
<td>250</td>
<td>300</td>
</tr>
<tr>
<td>Depth (m CCD)</td>
<td>Core length (cm)</td>
<td>Lithology</td>
<td>Magmatic contact</td>
<td>Dip</td>
<td>Alteration intensity</td>
<td>Vein density (per meter)</td>
</tr>
<tr>
<td>--------------</td>
<td>-----------------</td>
<td>-----------</td>
<td>-----------------</td>
<td>-----</td>
<td>---------------------</td>
<td>-------------------------</td>
</tr>
<tr>
<td>6.35</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.45</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.55</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.65</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.75</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.85</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.95</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.05</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.15</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.25</td>
<td>90</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Description**

- **SEQUENCE:** 3a
- **UNIT/SUBUNIT:** 3a
- **ROCK NAME:** Dunite
- **CONTACT:** continuous
- **TEXTURE:**
  - IGNEOUS SUMMARY: Serpentinized and oxidized dunite
  - ALTERATION: Serpentinized and highly oxidized
  - VEINS: Large white crosscutting veins and fine black, white veins
  - STRUCTURE: Brittle-dominated by surface-related deformation and hydrothermal breccias
  - Veins: some relatively shallow-dipping carbonate veins occur, serpentine veins deeper

**Lithology**

- Magnetite
- Olivine
- Plagioclase
- Clinopyroxene
- Orthopyroxene
- Amphibole

**Grain size**

- Fabric intensity
- Discrete brittle features

**Degree of deformation**

- Fracture/vein density (per meter)

**Alteration intensity**

- vein density (per meter)
## Hole BA4A-4Z Section 3, Top of Section 7.29 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>PRIMARY 미스유설성</th>
<th>Primer mineraology</th>
<th>Liethology</th>
<th>Degree of deformation</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Structures</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.30</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.40</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.50</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.60</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.70</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.80</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.90</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.00</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.10</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.20</td>
<td>90</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Description**

- **SEQUENCE:** 1
- **ROCK NAME:** Dunite
- **CONTACT:** Continuous

**TEXTURE:**
- Igneous
- Summary: Serpentinized and oxidized dunite
- Alteration: Serpentinized and highly oxidized

**VEINS:**
- Large white crosscutting veins and few fine black, white veins

**STRUCTURE:**
- Brittle: Dominated by surface related deformation and hydrothermal breccias

---

**SEQUENCE:** 1

**ROCK NAME:** Gabbro

**CONTACT:** Intrusive

**TEXTURE:**
- Granular

**IGNEOUS SUMMARY:**
- Highly altered gabbro

**ALTERATION:**
- Few white veins

**VEINS:**
- Brittle: Dominated by surface related deformation and hydrothermal breccias

---

**SEQUENCE:** 1

**ROCK NAME:** Harzburgite

**CONTACT:** Colour

**TEXTURE:**
- Igneous
- Summary: Serpentinized and oxidized harzburgite

**ALTERATION:**
- Serpentinized and highly oxidized harzburgite

**VEINS:**
- Large white vein and few fine white veins

**STRUCTURE:**
- Brittle: Dominated by surface related deformation and hydrothermal breccias

---

**Fabric intensity**

<table>
<thead>
<tr>
<th>GRA (SI $\times 10^{-5}$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
</tr>
<tr>
<td>100</td>
</tr>
<tr>
<td>100</td>
</tr>
</tbody>
</table>

**Vein density (per meter)**

<table>
<thead>
<tr>
<th>Vein density (per meter)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 per 10 cm</td>
</tr>
<tr>
<td>3-5 per 10 cm</td>
</tr>
<tr>
<td>15-20 per 10 cm</td>
</tr>
<tr>
<td>5-15 per 10 cm</td>
</tr>
<tr>
<td>&gt;20 per 10 cm</td>
</tr>
</tbody>
</table>

**Degree of deformation**

- Undeformed
- Minor fracturing
- Moderate fracturing
- GS reduction and rotation
- Well-developed cataclasis
- Ultracataclastite

**Lithology**

<table>
<thead>
<tr>
<th>Primary mineraology</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Olivine</td>
<td>100</td>
</tr>
<tr>
<td>Plagioclase</td>
<td>75</td>
</tr>
<tr>
<td>Amphibole</td>
<td>50</td>
</tr>
<tr>
<td>Clinopyroxene</td>
<td>25</td>
</tr>
<tr>
<td>Orthopyroxene</td>
<td>0</td>
</tr>
<tr>
<td>Spinel</td>
<td>90</td>
</tr>
<tr>
<td>Sulfide</td>
<td>45</td>
</tr>
<tr>
<td>Fracture/Vein density (per meter)</td>
<td></td>
</tr>
<tr>
<td>1 per 10 cm</td>
<td></td>
</tr>
<tr>
<td>3-5 per 10 cm</td>
<td></td>
</tr>
<tr>
<td>15-20 per 10 cm</td>
<td></td>
</tr>
<tr>
<td>5-15 per 10 cm</td>
<td></td>
</tr>
<tr>
<td>&gt;20 per 10 cm</td>
<td></td>
</tr>
</tbody>
</table>

**Alteration halos**

- Fresh (<3%)
- Slight (3–10%)
- Moderate (11–30%)
- Substantial (31–60%)
- Extensive (61–90%)
- Complete (>90%)

**Discrete brittle features**

- Fault zones
- Vein crosscutting
Hole BA4A-5Z Section 2, Top of Section 9.67 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>GRA (SI x 10^-5)</th>
<th>Sequence</th>
<th>Lithology</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnatic contact</th>
<th>Brittle Crystal plastic</th>
<th>Structures</th>
<th>Vein density (per meter)</th>
<th>Alteration</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.69</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.79</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.99</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SEQUENCE 1:**
- **ROCK NAME:** Harzburgite
- **CONTACT:** Continuous
- **TEXTURE:** Granular
- **IGNEOUS SUMMARY:** Serpentinized and oxidized harzburgite
- **ALTERATION:** Serpentinized and oxidized
- **VEINS:** Few fine white veins
- **STRUCTURE:** Brittle

Crystal plastic: Pyroxene grains are rounded and slightly elongated.

---

**SEQUENCE 1:**
- **ROCK NAME:** Harzburgite
- **CONTACT:** Grain
- **TEXTURE:** Granular
- **IGNEOUS SUMMARY:** Serpentinized and oxidized harzburgite
- **ALTERATION:** Serpentinized and oxidized
- **VEINS:** Few fine white veins
- **STRUCTURE:** Brittle

Crystal plastic: Pyroxene grains are rounded and slightly elongated.
### Hole BA4A-5Z Section 3, Top of Section 10.29 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>CT image</th>
<th>Magnetic susceptibility</th>
<th>MSCL-W (SI x 10^-5)</th>
<th>MSP (g/cm²)</th>
<th>GRA (g/cm²)</th>
<th>Sequence</th>
<th>Lithology</th>
<th>Unit/subunit</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dips</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Description**

- **SEQUENCE:** 1
- **ROCK NAME:** Harzburgite
- **CONTACT:** Continuous
- **TEXTURE:** Granular
- **ALTERATION:** Serpentinized and oxidized
- **VEINS:** Few fine white veins
- **STRUCTURE:** Brittle
- **Vein crosscutting:**
  - **Degree of deformation:** Brittle
  - **Magnetic contact:** Brittle
  - **Crystal plastic:**
- **Vein density:** Few fine white veins

---

**SEQUENCE:** 1
- **UNIT/SUBUNIT:** 4e
- **ROCK NAME:** Harzburgite
- **CONTACT:** Colour
- **TEXTURE:** Granular
- **ALTERATION:** Serpentinized and highly oxidized
- **VEINS:** Few green and black veins
- **STRUCTURE:** Brittle
  - **Vein crosscutting:**
  - **Degree of deformation:** Highly altered and strongly foliated fault zone
  - **Magnetic contact:** Brittle
  - **Crystal plastic:**
- **Vein density:** Few green and black veins

Crystal plastic - Pyroxene grains are rounded and slightly elongated.
Hole BA4A-5Z Section 4, Top of Section 10.90 (m CCD)
<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>CT image</th>
<th>Magnetic susceptibility</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Vein density (per meter)</th>
<th>Dip</th>
<th>Magnetic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depth (m CCD)</td>
<td>Core length (cm)</td>
<td>Shipboard samples</td>
<td>Stained image</td>
<td>CT image</td>
<td>Magnetic susceptibility</td>
<td>Primary mineralogy (%)</td>
<td>Grain size</td>
<td>Degree of deformation</td>
<td>Fracture/ Vein density (per meter)</td>
<td>Alteration intensity</td>
<td>Vein density (per meter)</td>
<td>Alteration intensity</td>
<td>Vein density (per meter)</td>
<td>Dip</td>
<td>Magnetic contact</td>
<td>Brittle</td>
<td>Crystal plastic</td>
<td>Veins</td>
</tr>
<tr>
<td>0</td>
<td>10</td>
<td></td>
<td></td>
<td>1</td>
<td>10</td>
<td>0.2</td>
<td>100</td>
<td>Brittle</td>
<td>0.5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>10</td>
<td></td>
<td></td>
<td>3</td>
<td>60</td>
<td>0.2</td>
<td>100</td>
<td>Brittle</td>
<td>0.5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>10</td>
<td></td>
<td></td>
<td>5</td>
<td>80</td>
<td>0.2</td>
<td>100</td>
<td>Brittle</td>
<td>0.5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>10</td>
<td></td>
<td></td>
<td>7</td>
<td>100</td>
<td>0.2</td>
<td>100</td>
<td>Brittle</td>
<td>0.5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>10</td>
<td></td>
<td></td>
<td>9</td>
<td>120</td>
<td>0.2</td>
<td>100</td>
<td>Brittle</td>
<td>0.5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50</td>
<td>10</td>
<td></td>
<td></td>
<td>11</td>
<td>140</td>
<td>0.2</td>
<td>100</td>
<td>Brittle</td>
<td>0.5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60</td>
<td>10</td>
<td></td>
<td></td>
<td>13</td>
<td>160</td>
<td>0.2</td>
<td>100</td>
<td>Brittle</td>
<td>0.5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>70</td>
<td>10</td>
<td></td>
<td></td>
<td>15</td>
<td>180</td>
<td>0.2</td>
<td>100</td>
<td>Brittle</td>
<td>0.5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>80</td>
<td>10</td>
<td></td>
<td></td>
<td>17</td>
<td>200</td>
<td>0.2</td>
<td>100</td>
<td>Brittle</td>
<td>0.5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Sequence: I
#### Unit/Subunit: 5a
**Rock Name:** Dunite

- **Contact:** continuous
- **Texture:** Igneous
- **Summary:** Serpentinised and partially oxidised dunite
- **Alteration:** Massive serpentine alteration
  - Veins: Cut by en-echelon grey/green/yellow veins. Yellow veins grade to black in less oxidised parts
- **Structure:** Brittle-
- **Veins:**
  - Crosscut by white and black veins, plus waxy grey/white composite veins

### Sequence: I
#### Unit/Subunit: 5a
**Rock Name:** Gabbro

- **Contact:** intrusive
- **Texture:** Granular
- **Igneous Summary:** Coarse gabbroic vein
- **Alteration:** Altered with grain shapes retained
  - Veins: Cross-cut by white and black veins, plus waxy grey/white composite veins
- **Structure:** Brittle-
  - Veins:

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>MSCL-W</th>
<th>MSP (SI x 10^-5)</th>
<th>GRA (g/cm³)</th>
<th>Primary mineralogy (%)</th>
<th>Lithology</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnetic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.53</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Hole BA4A-6Z Section 3, Top of Section 13.23 (m CCD)**

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Lithology</th>
<th>Magnetic susceptibility</th>
<th>Contact</th>
<th>Alteration intensity</th>
<th>Original mineralogy</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration halos</th>
<th>Magmatic contact Brittle</th>
</tr>
</thead>
<tbody>
<tr>
<td>13.25</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13.35</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13.45</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13.55</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13.65</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13.75</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13.85</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13.95</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14.05</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **SEQUENCE:** 1a
- **ROCK NAME:** Dunite
- **CONTACT:** continuous
- **TEXTURE:** IGNEOUS
- **SUMMARY:** serpentinised and partially oxidised dunite
- **ALTERATION:** massive serpentine alteration
- **VEINS:** cut by en echelon grey/green/yellow veins. Yellow veins grade to black in less oxidised part
- **STRUCTURE:** Brittle
- **Veins:** Crystal plastic

**Table:**
- **GRA (g/cm³):** 2.68, 2.48, 2.28, 2.08
- **Vein density:** 0 per 10 cm, 1–5 per 10 cm, >20 per 10 cm, 5–15 per 10 cm, 15–20 per 10 cm
- **Discrete brittle features:** 0–10, 10–30, 30–50, 50–70, 70–90, >100
- **Degree of deformation:** Undeformed, Minor fracturing, Moderate fracturing, GS reduction and rotation, Well-developed cataclasis, Ultracataclastite
- **Lithology:** Fresh (<3%), Slight (3–10%), Moderate (11–30%), Substantial (31–60%), Extensive (61–90%), Complete (≥90%)
- **Vein crosscutting alteration intensity:** 0–10, 10–30, 30–50, 50–70, 70–90, >100
- **Degree of deformation:** Undeformed, Minor fracturing, Moderate fracturing, GS reduction and rotation, Well-developed cataclasis, Ultracataclastite

**Legend:**
- **Fault zones:** Structures
- **Apparent offset:**
- **Alteration halos:**
- **Magnetic contact Brittle:**
- **Crystal plastic:**
- **Veins:**
Hole BA4A-6Z Section 4, Top of Section 14.06 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>MSCL-W</th>
<th>MSP</th>
<th>GRA (g/cm²)</th>
<th>Primary mineralogy</th>
<th>Lithology</th>
<th>Degree of deformation</th>
<th>Alteration intensity</th>
<th>Dimp</th>
<th>Contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
<th>Structures</th>
<th>Apparent offset</th>
<th>Alteration halos</th>
<th>Vein density (per meter)</th>
<th>Vein crosscutting</th>
</tr>
</thead>
</table>
SEQUENCE: I
UNIT/SUBUNIT: 5c
ROCK NAME: Dunite
CONTACT: continuous
TEXTURE:
IGNEOUS
SUMMARY: Serpentinised dunite cut by a few magmatic gabbroic dykes
ALTERATION: highly serpentinised, with alternating sections of brown (more oxidised) and black (less oxidised)
VEINS: irregular thin black, white and green veins with thicker waxy veins associated with the magmatic veins in places
STRUCTURES: Brittle-fracture faulting

Depth (m CCD) | Core length (cm) | Sampled image | Magnetic susceptibility | Primary mineralogy | Grain size | Degree of deformation | Fracture/ Vein density (per meter) | Vein density (per meter) | Alteration intensity | Dip | Magnatic contact | Brittle Crystal plastic | Voids | CT image | Structures | Apparent offset | Description
14.70 | 0 | | | | | | | | | | | | | | | | | SEQUENCE: I; Sc
ROCK NAME: Dunite
CONTACT: continuous
TEXTURE:
IGNEOUS
SUMMARY: Serpentinised dunite cut by a few magmatic gabbroic dykes
ALTERATION: highly serpentinised, with alternating sections of brown (more oxidised) and black (less oxidised)
VEINS: irregular thin black, white and green veins with thicker waxy veins associated with the magmatic veins in places
STRUCTURES: Brittle-fracture faulting

Hole BA4A-7Z Section 1, Top of Section 14.70 (m CCD)
<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Lithology</th>
<th>Magnetic susceptibility (SI × 10^-5)</th>
<th>GRA (g/cm³)</th>
<th>Degree of deformation</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>15.69</td>
<td>0</td>
<td>Dunite</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>15.69</td>
<td>10</td>
<td>Dunite</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>15.69</td>
<td>20</td>
<td>Dunite</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>15.69</td>
<td>30</td>
<td>Dunite</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>15.69</td>
<td>40</td>
<td>Dunite</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>15.69</td>
<td>50</td>
<td>Dunite</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>15.69</td>
<td>60</td>
<td>Dunite</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>15.69</td>
<td>70</td>
<td>Dunite</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>15.69</td>
<td>80</td>
<td>Dunite</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>15.69</td>
<td>90</td>
<td>Dunite</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>15.69</td>
<td>100</td>
<td>Dunite</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

**Hole BA4A-7Z Section 2, Top of Section 15.67 (m CCD)**
### Hole BA4A-7Z Section 4, Top of Section 17.44 (m CCD)

<table>
<thead>
<tr>
<th>Sequence</th>
<th>Unit/Subunit</th>
<th>Rock Name</th>
<th>Contact</th>
<th>Texture</th>
<th>Igneous Summary</th>
<th>Alteration</th>
<th>Vein Density (per meter)</th>
<th>Fabric Intensity</th>
<th>Vein Crosscutting</th>
<th>Alteration Intensity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5d</td>
<td>Dunite</td>
<td>Continuous</td>
<td>Igneous</td>
<td>Highly fractured dunite with anastamosing network of black veins, 10 mm probably magmatic vein at top, highly altered, with patches of variably oxidised areas adjacent to veins and dyke.</td>
<td>Highly altered</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>5e</td>
<td>Harzburgite</td>
<td>Modal</td>
<td>Granular</td>
<td>Highly fractured dunite with anastamosing network of black veins, former thin dykes, highly altered, are present</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>5e</td>
<td>Olivine gabbro</td>
<td>Intrusive</td>
<td>Granular</td>
<td>Serpentinised olivine gabbro</td>
<td>Highly altered</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Fabric Intensity

<table>
<thead>
<tr>
<th>GRA (g/cm³)</th>
<th>0</th>
<th>100</th>
<th>200</th>
<th>300</th>
<th>400</th>
<th>500</th>
<th>600</th>
<th>700</th>
<th>800</th>
<th>900</th>
</tr>
</thead>
<tbody>
<tr>
<td>5d</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5e</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Vein Crosscutting

<table>
<thead>
<tr>
<th>Vein density (per meter)</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>5d</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>5e</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

### Veins

- Black veins and brown veins with a white halo
- Fibrous and layered veins

### Structure

- Brittle
- Veins
- Crystal plastic

### Notes

- Pores in rocks are rounded and slightly elongated.
- Multiple generations, cross cutting, including fibrous and layered veins.
- Brittle structures.
<table>
<thead>
<tr>
<th>Sequence</th>
<th>Unit/subunit</th>
<th>Rock name</th>
<th>Contact</th>
<th>Texture</th>
<th>Igneous summary</th>
<th>Alteration</th>
<th>Vein</th>
<th>Fracture/vein density (per meter)</th>
<th>Degree of deformation</th>
<th>Discrete brittle features</th>
<th>Alteration intensity</th>
<th>Fabric intensity</th>
<th>Vein density (per meter)</th>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>5e</td>
<td>Harzburgite</td>
<td>Continuous</td>
<td>Brittle-Veins-Crystal plastic</td>
<td>Highly fractured dunite with anastomosing network of black veins, former thin dykes, highly altered, are present</td>
<td>Patches of variably oxidised areas adjacent to veins and dykes</td>
<td>Irregular thin green and black veins</td>
<td>3</td>
<td>Protomylonite</td>
<td>0–10</td>
<td>10–30</td>
<td>30–50</td>
<td>50–70</td>
<td>70–90</td>
<td>&gt;90</td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>5f</td>
<td>Dunite</td>
<td>Modal</td>
<td>Brittle-Veins-Crystal plastic</td>
<td>Serpentinized dunite cut by two gabbroic dykes</td>
<td>Patches of variably oxidised areas adjacent to veins and dykes</td>
<td>Irregular thin black veins and few white veins</td>
<td>3</td>
<td>Protomylonite</td>
<td>0–10</td>
<td>10–30</td>
<td>30–50</td>
<td>50–70</td>
<td>70–90</td>
<td>&gt;90</td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>5f</td>
<td>Olivine gabbro</td>
<td>Intrusive</td>
<td>Granular</td>
<td>Serpentinized ol-gabbro</td>
<td>Highly altered</td>
<td>Irregular thin green and black veins</td>
<td>3</td>
<td>Protomylonite</td>
<td>0–10</td>
<td>10–30</td>
<td>30–50</td>
<td>50–70</td>
<td>70–90</td>
<td>&gt;90</td>
<td></td>
</tr>
</tbody>
</table>
Hole BA4A-8Z Section 2, Top of Section 18.24 (m CCD)

- **DESCRIPTION**: Serpentinized dunite cut by two gabbroic dykes
- **TEXTURE**: Igneous
- **ALTERATION**: Patches of variably oxidized areas adjacent to veins and dykes
- **VEINS**: Irregular network of thin black veins and few white veins
- **STRUCTURE**: Brittle
- **Alteration intensity**: 0–10 = Fresh (<3%); 10–30 = Slight (3–10%); 30–50 = Moderate (11–30%); 50–70 = Substantial (31–60%); 70–90 = Extensive (61–90%); ≥90 = Complete (>90%)

- **Primary mineralogy**:
  - Olivine
  - Plagioclase
  - Clinopyroxene
  - Orthopyroxene
  - Amphibole

- **Degree of deformation**:
  - Undeformed
  - Minor fracturing
  - Moderate fracturing
  - GS reduction and rotation
  - Well-developed cataclasis
  - Ultracataclastite

- **Lithology**:
  - Protogranular
  - Porphyroclastic
  - Strongly foliated
  - Protomylonite
  - Mylonite
  - Ultramylonite

- **Fabric intensity**

- **Vein density (per meter)**

- **Alteration halos**

- **Contact**:
  - Continuous

- **Magnetic contact**

- **Dip**

- **Magmatic layering**

- **Foliation**

- **Vein crosscutting**

- **Fracture/vein density (per meter)**

- **Vein density (per meter)**

- **Magnetic susceptibility**

- **Depth (m CCD)**

- **Core length (cm)**

- **CT image**

- **Shipboard samples**

- **Scanned image**
**SEQUENCE: I**

**UNIT/SUBUNIT: 5f**

**ROCK NAME:** Dunite

**CONTACT:** continuous

**TEXTURE:** IGNEOUS

**SUMMARY:** Serpentinized dunite cut by two gabbroic dykes

**ALTERATION:** patches of variably oxidised areas adjacent to veins and dykes

**VEINS:** Irregular network of thin black veins and few white veins

**STRUCTURE:** Brittle-Crystal plastic

---

**SEQUENCE: I**

**UNIT/SUBUNIT: 6a**

**ROCK NAME:** Harzburgite

**CONTACT:** modal

**TEXTURE:** Granular

**IGNEOUS SUMMARY:** serpentinised harzburgites, cut by ol-gabbro and pyroxenite dykes

**ALTERATION:** highly serpentinized, areas of higher oxidation up to 90mm with sharp boundaries to less oxidized serpentinized harzburgite

**VEINS:** Irregular network of thin black and white veins with higher vein intensity next to overprinted magmatic dykes

**STRUCTURE:** Brittle-Crystal plastic

Pyroxene grains are rounded and slightly elongated.

---

**SEQUENCE: I**

**UNIT/SUBUNIT: 6a**

**ROCK NAME:** olivine gabbro

**CONTACT:** intrusive

**TEXTURE:** Granular

**IGNEOUS SUMMARY:** altered ol-gabbroic dyke

**ALTERATION:** highly altered

**VEINS:** irregular thin white veins

**STRUCTURE:** Brittle-Crystal plastic

---

**SEQUENCE: I**

**UNIT/SUBUNIT: 6a**

**ROCK NAME:** clinopyroxenite

**CONTACT:** intrusive

**TEXTURE:** Granular

**IGNEOUS SUMMARY:** altered clinopyroxenitic dyke

**ALTERATION:** highly altered

**VEINS:** network of irregular thin white veins

**STRUCTURE:** Brittle-Crystal plastic

---

**Magnetic susceptibility**

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Stained image</th>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Stained image</th>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Stained image</th>
</tr>
</thead>
<tbody>
<tr>
<td>19.09</td>
<td></td>
<td></td>
<td>19.19</td>
<td></td>
<td></td>
<td>19.29</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19.19</td>
<td></td>
<td></td>
<td>19.29</td>
<td></td>
<td></td>
<td>19.39</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19.29</td>
<td></td>
<td></td>
<td>19.39</td>
<td></td>
<td></td>
<td>19.49</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19.39</td>
<td></td>
<td></td>
<td>19.49</td>
<td></td>
<td></td>
<td>19.59</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19.49</td>
<td></td>
<td></td>
<td>19.59</td>
<td></td>
<td></td>
<td>19.69</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19.59</td>
<td></td>
<td></td>
<td>19.69</td>
<td></td>
<td></td>
<td>19.79</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19.69</td>
<td></td>
<td></td>
<td>19.79</td>
<td></td>
<td></td>
<td>19.89</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

**Hole BA44-8Z Section 3, Top of Section 19.05 (m CCD)**
**Hole BA4A-8Z Section 4, Top of Section 19.89 (m CCD)**

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Magnetic susceptibility</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>19.90</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Sequence:** I

**Unit/Subunit:** 6a

**Rock Name:** Harzburgite

**Contact:** continuous

**Texture:** Granular

**Igneous Summary:** Serpentinised harzburgites, cut by ol-gabbro and pyroxenite dykes

**Alteration:** Highly serpentinised, areas of higher oxidation up to 90% with sharp boundaries to less oxidized serpentinized harzburgite

**Veins:** Irregular network of thin black and white veins with higher vein intensity next to overprinted magmatic dykes

**Structure:** Brittle

**Vein crosscutting:** Crystal plastic

**Alteration intensity:**
- Fresh (<3%)
- Slight (3–10%)
- Moderate (11–30%)
- Substantial (31–60%)
- Extensive (61–90%)
- Complete (≥90%)

**Vein density:** (per meter)
- 0
- 1 per 10 cm
- 3–5 per 10 cm
- >20 per 10 cm
- 5–15 per 10 cm
- 15–20 per 10 cm

**Material:**
- Sulfide
- Amphibole
- Spinel
- Orthopyroxene
- Clinopyroxene
- Plagioclase
- Olivine

**Grain size:**
- Fine grained (0.2–1 mm)
- Medium grained (1–5 mm)
- Coarse grained (5–30 mm)
- Pegmatitic (>30 mm)

**Fabric intensity:**
- Isotropic
- Weak
- Moderate
- Strong

**Degree of deformation:**
- Undeformed
- Minor fracturing
- Moderate fracturing
- GS reduction and rotation
- Well-developed cataclasis
- Ultracataclastite

**Protomylonite**

**Mylonite**

**Ultramylonite**

**Porphyroclastic**

**Protogranular**

**Strongly foliated**

**Mylonite**

**Ultramylonite**

**Isotropic**

**Weak**

**Moderate**

**Strong**

**Fine grained (0.2–1 mm)**

**Medium grained (1–5 mm)**

**Coarse grained (5–30 mm)**

**Pegmatitic (>30 mm)**

**Glassy**

**Cryptocrystalline (<0.1 mm)**

**Microcrystalline (0.1–0.2 mm)**

**GRA (g/cm³):**
- 2.65
- 2.4
- 2.15
- 1.9

**Magnetic contact:** Brittle

**Brittle contact:** Crystal plastic

**Veins:** Discrete brittle features

**Structures:**
- Fault zones
- Vein crosscutting
- Vein thickness
- Vein density

**Vein crosscutting:**
- Brittle
- Magmatic
- Contact

**Magmatic contact:**

**Brittle:** Crystal plastic

**Crystal plastic:** Pyroxene grains are rounded and slightly elongated.

**Magnetic susceptibility:**
- MSCL-W MSP
- (SI 10⁻⁵)

**GRA (g/cm³):**
- 0
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10

**Fabric intensity:**
- 0
- 1
- 2
- 3
- 4
- 5

**Degree of deformation:**
- 0
- 1
- 2
- 3
- 4
- 5

**Alteration intensity:**
- 0
- 1
- 2
- 3
- 4
- 5

**Sequence:** I

**Unit/Subunit:** 6a

**Rock Name:** Harzburgite

**Contact:** continuous

**Texture:** Granular

**Igneous Summary:** Serpentinised harzburgites, cut by ol-gabbro and pyroxenite dykes

**Alteration:** Highly serpentinised, areas of higher oxidation up to 90% with sharp boundaries to less oxidized serpentinized harzburgite

**Veins:** Irregular network of thin black and white veins with higher vein intensity next to overprinted magmatic dykes

**Structure:** Brittle

**Vein crosscutting:** Crystal plastic

**Alteration intensity:**
- Fresh (<3%)
- Slight (3–10%)
- Moderate (11–30%)
- Substantial (31–60%)
- Extensive (61–90%)
- Complete (≥90%)

**Vein density:** (per meter)
- 0
- 1 per 10 cm
- 3–5 per 10 cm
- >20 per 10 cm
- 5–15 per 10 cm
- 15–20 per 10 cm

**Material:**
- Sulfide
- Amphibole
- Spinel
- Orthopyroxene
- Clinopyroxene
- Plagioclase
- Olivine

**Grain size:**
- Fine grained (0.2–1 mm)
- Medium grained (1–5 mm)
- Coarse grained (5–30 mm)
- Pegmatitic (>30 mm)

**Fabric intensity:**
- Isotropic
- Weak
- Moderate
- Strong

**Degree of deformation:**
- Undeformed
- Minor fracturing
- Moderate fracturing
- GS reduction and rotation
- Well-developed cataclasis
- Ultracataclastite

**Protomylonite**

**Mylonite**

**Ultramylonite**

**Porphyroclastic**

**Protogranular**

**Strongly foliated**

**Mylonite**

**Ultramylonite**

**Isotropic**

**Weak**

**Moderate**

**Strong**

**Fine grained (0.2–1 mm)**

**Medium grained (1–5 mm)**

**Coarse grained (5–30 mm)**

**Pegmatitic (>30 mm)**

**Glassy**

**Cryptocrystalline (<0.1 mm)**

**Microcrystalline (0.1–0.2 mm)**

**GRA (g/cm³):**
- 2.65
- 2.4
- 2.15
- 1.9

**Magnetic contact:** Brittle

**Brittle contact:** Crystal plastic

**Veins:** Discrete brittle features

**Structures:**
- Fault zones
- Vein crosscutting
- Vein thickness
- Vein density

**Vein crosscutting:**
- Brittle
- Magmatic
- Contact

**Magmatic contact:**

**Brittle:** Crystal plastic

**Crystal plastic:** Pyroxene grains are rounded and slightly elongated.
**Hole BA4A-9Z Section 1, Top of Section 20.70 (m CCD)**

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>MSCL-W MSP (SI x 10^-5)</th>
<th>GRA (g/cm³)</th>
<th>Core length/Shipboard samples</th>
<th>Sequence</th>
<th>Lithology</th>
<th>Primary mineralogy (%)</th>
<th>Alteration intensity</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alt-Enhalo</th>
<th>Structures</th>
<th>Dip</th>
<th>Vein</th>
<th>Crystal plastic</th>
<th>Voids</th>
</tr>
</thead>
<tbody>
<tr>
<td>20.70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SEQUENCE 1: 6a**
- **UNIT/SUBUNIT**: 6a
- **ROCK NAME**: Harzburgite
- **CONTACT**: Continuous
- **TEXTURE**: Granular
- **IGNEOUS SUMMARY**: Serpentinised harzburgites, cut by ol-gabbro and pyroxenite dykes
- **ALTERATION**: Highly serpentinised, areas of higher oxidation up to 90mm with sharp boundaries to less oxidized serpentinized harzburgite
- **VEINS**: Irregular network of thin black and white veins with higher vein intensity next to overprinted magmatic dykes
- **STRUCTURE**: Brittle- Anastamosing shear veins and fractures
  - Crystal plastic- Pyroxene grains are rounded and slightly elongated

---

**SEQUENCE 1: 6a**
- **UNIT/SUBUNIT**: 6a
- **ROCK NAME**: Clinopyroxenite
- **CONTACT**: Intrusive
- **TEXTURE**: Granular
- **IGNEOUS SUMMARY**: Altered pyroxenite dyke
- **ALTERATION**: Patchy alteration including a waxy green patch
- **VEINS**: Cut by dense array of white and grey veins
- **STRUCTURE**: Brittle- Anisotropy, minor veins and fractures

---

**SEQUENCE 1: 6a**
- **UNIT/SUBUNIT**: 6a
- **ROCK NAME**: Olivine gabbro
- **CONTACT**: Intrusive
- **TEXTURE**: Granular
- **IGNEOUS SUMMARY**: Altered olivine gabbro
- **ALTERATION**: Highly altered and oxidised, with bastite
- **VEINS**: Cut by dense array of white and grey veins
- **STRUCTURE**: Brittle- Brittle shear zone near upper contact of dike

---

**Table of Fabric Intensity**

<table>
<thead>
<tr>
<th>Grade</th>
<th>Fabric intensity</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

**Table of Vein Density**

<table>
<thead>
<tr>
<th>Density</th>
<th>Vein density (per meter)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

The image includes a detailed geological cross-section with various geological features and annotations related to the rock types and textures described in the text.
### Rock Name: Harzburgite
- **Sequence**: I
- **Unit/Subunit**: 6a
- **Contact**: Continuous
- **Texture**: Granular
- **Igneous Summary**: Serpentinised harzburgites, cut by olivine-gabbro and pyroxenite dykes
- **Alteration**: Highly serpentinised, areas of higher oxidation up to 90% with sharp boundaries to less oxidized serpentinized harzburgite
- **Veins**: Irregular network of thin black and white veins with higher vein intensity next to overprinted magmatic dykes
- **Structure**: Brittle-Veins-Crystal plastic

### Rock Name: Dunite
- **Sequence**: I
- **Unit/Subunit**: 7a
- **Rock Name**: Dunite
- **Contact**: Continuous
- **Texture**: Granular
- **Igneous Summary**: Brown and black dunites, more and less oxidised, spinel large in places, cut by thin gabbroic veins
- **Alteration**: Serpentinised dunite
- **Veins**: White, grey, waxy grey, pink/white, brown, green and composite white/black and green/white veins
- **Structure**: Brittle-Veins-Crystal plastic

---

**Magnetic Susceptibility**: MSCL-W MSP (SI x 10^-5)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>21.56</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21.66</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21.76</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21.86</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21.96</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22.06</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Primary Mineralogy**

- Olivine
- Plagioclase
- Clinopyroxene
- Orthopyroxene
- Amphibole
- Sulfide

**Degree of Deformation**

- Fracture/ Vein density (per meter)
- Sequence: I
- Unit/Subunit: 6a
- **Alteration intensity**
- Discrete brittle features

**Vein density (per meter)**

- Sequence: I
- Unit/Subunit: 7a

**Depth (m CCD)**

- 21.56
- 21.66
- 21.76
- 21.86
- 21.96
- 22.06

**Core length (cm)**

- 0
- 10
- 20
- 30
- 40
- 50
- 60

**CT Image**

- Hole BA4A-9Z Section 2, Top of Section 21.56 (m CCD)

**Shipboard samples**

- Magnetic
- MSCL-W
- MSP

**Lithology**

- MSCL-W
- MSP

**Description**

- Sequence: I
- Unit/Subunit: 6a
- Rock Name: Harzburgite
- Contact: Continuous
- Texture: Granular
- Igneous Summary: Serpentinised harzburgites, cut by olivine-gabbro and pyroxenite dykes
- Alteration: Highly serpentinised, areas of higher oxidation up to 90% with sharp boundaries to less oxidized serpentinized harzburgite
- Veins: Irregular network of thin black and white veins with higher vein intensity next to overprinted magmatic dykes
- Structure: Brittle-Veins-Crystal plastic

- Sequence: I
- Unit/Subunit: 7a
- Rock Name: Dunite
- Contact: Continuous
- Texture: Granular
- Igneous Summary: Brown and black dunites, more and less oxidised, spinel large in places, cut by thin gabbroic veins
- Alteration: Serpentinised dunite
- Veins: White, grey, waxy grey, pink/white, brown, green and composite white/black and green/white veins
- Structure: Brittle-Veins-Crystal plastic
SEQUENCE: I
UNIT/SUBUNIT: 7a
ROCK NAME: dunite
CONTACT: continuous
TEXTURE: granular
IGNEOUS SUMMARY: brown and black dunites, more and less oxidised, spinel large in places, cut by thin gabbroic veins
ALTERATION: serpentinised dunite
VEINS: white, grey, waxy grey, pink/white, brown, green and composite
STRUCTURE: Brittle- Narrow cataclastic vein
**Hole BA4A-9Z Section 4, Top of Section 23.05 (m CCD)**

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnitic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>23.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Lithology:**

- **Dunite:** brown and black dunites, more and less oxidised, spinel large in places, cut by thin gabbroic veins.
- **Gabbro:** Altered gabbro, hosting a network of mm-thick pink-white veins.

**Texture:**

- **Igneous:**
  - Dunite: brown and black dunites, more and less oxidised, spinel large in places.
  - Gabbro: Altered gabbro, hosting a network of mm-thick pink-white veins.

**Structure:**

- Brittle:
  - Veins:
    - Width: 5-15 mm
    - Orientation: parallel with foliation
  - Crystal plastic:
  - Alteration halo:
    - Width: 5-15 mm
    - Orientation: parallel with veins

**CT Image:**

- Sequence: 1
- Unit/subunit: 7a
- Rock name: dunite/gabbro
- Contact: continuous

**Veins:**

- White, grey, waxy grey, pink/white, brown, green and composite white/black ad green/white veins.

**Description:**

- Magnetic contact: Brittle
- Crystal plastic: Veins

**Diagram:**

- Sequence 1: 7a
- Unit/subunit: 7a
- Rock name: dunite
- Contact: continuous
- Fabric intensity:
  - 5
- Grain size:
  - 6
- Vein density:
  - 3-5 per 10 cm
- Alteration intensity:
  - Fresh (<3%)
- Brittle:
  - Magmatic contact
  - Dip
  - Structures
  - Alteration halos
  - Veins
  - Crystal plastic
  - Brittle

**Table:**

- Sequence 1: 7a
- Unit/subunit: 7a
- Rock name: dunite
- Contact: continuous
- Fabric intensity:
  - 5
- Grain size:
  - 6
- Vein density:
  - 3-5 per 10 cm
- Alteration intensity:
  - Fresh (<3%)
- Brittle:
  - Magmatic contact
  - Dip
  - Structures
  - Alteration halos
  - Veins
  - Crystal plastic
  - Brittle

**Diagram:**

- Sequence 1: 7a
- Unit/subunit: 7a
- Rock name: dunite
- Contact: continuous
- Fabric intensity:
  - 5
- Grain size:
  - 6
- Vein density:
  - 3-5 per 10 cm
- Alteration intensity:
  - Fresh (<3%)
- Brittle:
  - Magmatic contact
  - Dip
  - Structures
  - Alteration halos
  - Veins
  - Crystal plastic
  - Brittle

**Table:**

- Sequence 1: 7a
- Unit/subunit: 7a
- Rock name: dunite
- Contact: continuous
- Fabrict intensity:
  - 5
- Grain size:
  - 6
- Vein density:
  - 3-5 per 10 cm
- Alteration intensity:
  - Fresh (<3%)
- Brittle:
  - Magmatic contact
  - Dip
  - Structures
  - Alteration halos
  - Veins
  - Crystal plastic
  - Brittle
<table>
<thead>
<tr>
<th>Sequence</th>
<th>UNIT/SUBUNIT</th>
<th>ROCK NAME</th>
<th>CONTACT</th>
<th>TEXTURE</th>
<th>IGNEOUS SUMMARY</th>
<th>ALTERATION</th>
<th>VEINS</th>
<th>STRUCTURE</th>
<th>Alteration halos</th>
<th>Vein density</th>
<th>Vein fractures</th>
<th>Brittle contact</th>
<th>Dip</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>7a</td>
<td>dunite</td>
<td>continuous</td>
<td></td>
<td>brown and black dunites, more and less oxidised, spinel large in places, cut by thin gabbroic veins</td>
<td>serpentinised dunite</td>
<td>white, grey, waxy grey, pink/white, brown, green and composite veins</td>
<td>Brittle- Veins- Crystal plastic-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>7b</td>
<td>dunite</td>
<td>continuous</td>
<td></td>
<td>brown dunites, with black intervals, cut by medium-grained gabbroic veins</td>
<td>serpentinised dunite</td>
<td>cut by multiple types of serpentine veins</td>
<td>Brittle- Cataclastic fault zone- Crystal plastic-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Fabric intensity

- 5
- 4
- 3
- 2
- 1
- 0

### Vein density (per meter)

- 6
- 5
- 4
- 3
- 2
- 1
- 0

### Grain size (per meter)

- 6
- 5
- 4
- 3
- 2
- 1
- 0

### Hole BA4A-10Z Section 1, Top of Section 23.70 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Lithology</th>
<th>Primary mineralogy (%</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
</tr>
</thead>
<tbody>
<tr>
<td>23.70</td>
<td>0</td>
<td>dunite</td>
<td>100</td>
<td>Undeformed</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>23.80</td>
<td>10</td>
<td>dunite</td>
<td>100</td>
<td>Minor fracturing</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>23.90</td>
<td>20</td>
<td>dunite</td>
<td>100</td>
<td>Moderate fracturing</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>24.00</td>
<td>30</td>
<td>dunite</td>
<td>100</td>
<td>GS reduction and rotation</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>24.10</td>
<td>40</td>
<td>dunite</td>
<td>100</td>
<td>Well-developed cataclasis</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>24.20</td>
<td>50</td>
<td>dunite</td>
<td>100</td>
<td>Ultracataclastite</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>24.30</td>
<td>60</td>
<td>dunite</td>
<td>100</td>
<td>Protogranular</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>24.40</td>
<td>70</td>
<td>dunite</td>
<td>100</td>
<td>Porphyroclastic</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>24.50</td>
<td>80</td>
<td>dunite</td>
<td>100</td>
<td>Strongly foliated</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>24.60</td>
<td>90</td>
<td>dunite</td>
<td>100</td>
<td>Protomylonite</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>24.70</td>
<td>100</td>
<td>dunite</td>
<td>100</td>
<td>Mylonite</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>24.80</td>
<td>110</td>
<td>dunite</td>
<td>100</td>
<td>Ultramylonite</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>24.90</td>
<td>120</td>
<td>dunite</td>
<td>100</td>
<td>Isotropic</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>24.10</td>
<td>130</td>
<td>dunite</td>
<td>100</td>
<td>Weak</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>24.20</td>
<td>140</td>
<td>dunite</td>
<td>100</td>
<td>Moderate</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>24.30</td>
<td>150</td>
<td>dunite</td>
<td>100</td>
<td>Strong</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>24.40</td>
<td>160</td>
<td>dunite</td>
<td>100</td>
<td>Fine grained (0.2–1 mm)</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>24.50</td>
<td>170</td>
<td>dunite</td>
<td>100</td>
<td>Medium grained (1–5 mm)</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>24.60</td>
<td>180</td>
<td>dunite</td>
<td>100</td>
<td>Coarse grained (5–30 mm)</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>24.70</td>
<td>190</td>
<td>dunite</td>
<td>100</td>
<td>Pegmatitic (&gt;30 mm)</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>24.80</td>
<td>200</td>
<td>dunite</td>
<td>100</td>
<td>Glassy</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>24.90</td>
<td>210</td>
<td>dunite</td>
<td>100</td>
<td>Cryptocrystalline (&lt;0.1 mm)</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>24.10</td>
<td>220</td>
<td>dunite</td>
<td>100</td>
<td>Microcrystalline (0.1–0.2 mm)</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

### Lithology

- Primary mineralogy (%): Olivine, Plagioclase, Clinopyroxene, Orthopyroxene, Amphibole, Spinel, Sulfide
- Degree of deformation: Undeformed, Minor fracturing, Moderate fracturing, GS reduction and rotation, Well-developed cataclasis, Ultracataclastite, Protogranular, Porphyroclastic, Strongly foliated, Protomylonite, Mylonite, Ultramylonite, Isotropic, Weak, Moderate, Strong
- Fracture/ Vein density (per meter): 0–10, 10–30, 30–50, 50–70, 70–90, >90
- Alteration intensity: Fresh (<3%), Slight (3–10%), Moderate (11–30%), Substantial (31–60%), Extensive (61–90%), Complete (>90%)
- Dip: MAGNIFICENT contact, Brittle, Crystal plastic, Vein

---

**Sequence:** 1

**UNIT/SUBUNIT:** 7a

**ROCK NAME:** dunite

**CONTACT:** continuous

**TEXTURE:** IGNEOUS SUMMARY: brown and black dunites, more and less oxidised, spinel large in places, cut by thin gabbroic veins

**ALTERATION:** serpentinised dunite

**VEINS:** white, grey, waxy grey, pink/white, brown, green and composite veins

**STRUCTURE:** Brittle- Veins- Crystal plastic-
**Hole BA44A-10Z Section 2, Top of Section 24.59 (m CCD)**

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>CT image</th>
<th>Magnetic susceptibility MSCL-W MSP (SI x 10^-5)</th>
<th>GRA (g/cm³)</th>
<th>Sequence</th>
<th>Lithology</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnetic contact Brilli</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>24.61</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td>I</td>
<td>dunite</td>
<td>olivine</td>
<td>fine</td>
<td>discreet brittle features</td>
<td>low</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24.71</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td>I</td>
<td>gabbro</td>
<td>plagioclase</td>
<td>medium</td>
<td>discreet brittle features</td>
<td>low</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24.81</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td>I</td>
<td>gabbro</td>
<td>clinopyroxene</td>
<td>coarse</td>
<td>discreet brittle features</td>
<td>low</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24.91</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td>I</td>
<td>gabbro</td>
<td>orthopyroxene</td>
<td>coarse</td>
<td>discreet brittle features</td>
<td>low</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25.01</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td>I</td>
<td>gabbro</td>
<td>amphibole</td>
<td>coarse</td>
<td>discreet brittle features</td>
<td>low</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25.11</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td>I</td>
<td>gabbro</td>
<td>spinel</td>
<td>coarse</td>
<td>discreet brittle features</td>
<td>low</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25.21</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td>I</td>
<td>gabbro</td>
<td>plagioclase</td>
<td>coarse</td>
<td>discreet brittle features</td>
<td>low</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25.31</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td>I</td>
<td>gabbro</td>
<td>orthopyroxene</td>
<td>coarse</td>
<td>discreet brittle features</td>
<td>low</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Description**
- **SEQUENCE:** I 7b
- **ROCK NAME:** dunite, gabbro
- **CONTACT:** continuous, intrusive
- **TEXTURE:** igneous, granular
- **IGNEOUS SUMMARY:** brown dunites, with black intervals, cut by medium-coarse grained gabbroic veins
- **ALTERATION:** serpentinised dunite
- **VEINS:** cut by multiple types of serpentine veins
- **STRUCTURE:** Brittle, conjugate vein sets

**Magnetic contact Brilli**

**Brittle**

**Crystal plastic**

**Veins**

- Dunite veins
- Gabbroic veins
- Serpentine veins

**Vein density (per meter)**
- 1 per 10 cm
- 3-5 per 10 cm
- >20 per 10 cm
- 5-15 per 10 cm
- 15-20 per 10 cm

**Grain size**

- Fine (0.2–1 mm)
- Medium (1–5 mm)
- Coarse (5–30 mm)
- Pegmatitic (>30 mm)

**Fabric intensity**

- Fresh (<3%)
- Slight (3–10%)
- Moderate (11–30%)
- Substantial (31–60%)
- Extensive (61–90%)
- Complete (≥90%)

**Degree of deformation**

- Undeformed
- Minor fracturing
- Moderate fracturing
- Strong deformation
- Well-developed cataclasis
- Ultracataclastite

**Discrete brittle features**

- Fault zones
- Veins

**Alteration intensity**

- Fresh (<3%)
- Slight (3–10%)
- Moderate (11–30%)
- Substantial (31–60%)
- Extensive (61–90%)
- Complete (≥90%)

**Alteration halos**

- Magnetic contact halos
- Brittle halos
- Crystal plastic halos

**Magmatic contact**

- Brittle
- Crystal plastic
### Sequence: I, Unit/Subunit: 7c

**Rock Name:** Dunite

**Contact:** Continuous

**Texture:**

**Igneous Summary:** Black dunitic unit cut by gabbroic veins in from fine-grained and nebulous to coarse-grained.

**Alteration:** Highly serpentinized

**Veins:** Irregular thin black, gray, and green

**Structure:** Brittle-Veins - conjugate vein sets

---

### Sequence: I, Unit/Subunit: 7c

**Rock Name:** Gabbro

**Contact:** Intrusive

**Texture:** Granular

**Igneous Summary:** Altered gabbroic dike

**Alteration:** Highly altered

**Veins:** Irregular bluish white veins

**Structure:** Brittle-Veins

---

### Sequence: I, Unit/Subunit: 7c

**Rock Name:** Olivine gabbro

**Contact:** Intrusive

**Texture:** Granular

**Igneous Summary:** Altered ol-gabbroic dike

**Alteration:** Highly altered

**Veins:** Irregular bluish white veins

**Structure:** Brittle-Crystal Plastic

---

### Sequence: I, Unit/Subunit: 7d

**Rock Name:** Dunite

**Contact:** Colour

**Texture:**

**Igneous Summary:** Serpentinized dunite cut by rare gabbroic dikes and one 30 cm thick less oxidized zone

**Alteration:** Highly serpentinized and locally oxidized associated with veins

**Veins:** Irregular thin black, white, and gray veins

**Structure:** Brittle-Veins - conjugate vein sets

---

### Data Table

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>MSCL-8 W-MSP (SI x 10^5)</th>
<th>GRA (g/cm²)</th>
<th>Sequence</th>
<th>Lithology</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Magnetic contact</th>
<th>Brittle Fracture</th>
<th>Crystal Plastic</th>
<th>Veins</th>
<th>Vein density (per meter)</th>
<th>Apparent Offset</th>
<th>Magnetic fabric intensity</th>
<th>Fabric intensity</th>
</tr>
</thead>
<tbody>
<tr>
<td>27.69</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27.79</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27.89</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27.99</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28.09</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28.19</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28.29</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28.39</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28.49</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28.59</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28.69</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28.79</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28.89</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28.99</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29.09</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29.19</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29.29</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29.39</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29.49</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29.59</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29.69</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29.79</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29.89</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29.99</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Additional Data

- **Magnetic susceptibility (SI x 10^-5):**
  - 1000
  - 100
  - 10
  - 1
  - 0

- **Vein density (per meter):**
  - 15-20 per 10 cm
  - 5-15 per 10 cm
  - 3-5 per 10 cm
  - 0-1 per 10 cm

- **Degree of deformation:**
  - Undeformed
  - Minor fracturing
  - Moderate fracturing
  - GS reduction and rotation
  - Well-developed cataclasis
  - Ultracataclastite

- **Lithology:**
  - Protogranular
  - Porphyroclastic
  - Strongly foliated
  - Protomylonite
  - Mylonite
  - Ultramylonite

- **Magnetic fabric intensity:**
  - 0
  - 1
  - 2
  - 3
  - 4
  - 5
  - 6
  - 7
  - 8
  - 9
  - 10

- **Fabric intensity:**
  - 0
  - 20
  - 40
  - 60
  - 80
  - 100
Hole BA4A-11Z Section 3, Top of Section 28.35 (m CCD)

| Depth (m CCD) | Core length (cm) | Shipboard samples | Stained image | Magnetic susceptibility | MSCL-W (SI x 10^-5) | MSP | GRA (g/cm³) | Primary mineralogy | Lithology | Degree of deformation | Fabric intensity | Discrete brittle features | Fracture/ Vein density (per meter) | Vein density (per meter) | Alteration intensity | Dip | Magnatic contact | Brittle | Crystal plastic | Veins |
|---------------|-----------------|-------------------|---------------|------------------------|---------------------|-----|--------------|---------------------|-----------|---------------------|------------------|--------------------------|--------------------------|--------------------------|-----------------|----------------|---------|---------------|-------|
| 28.37         |                 |                   |               |                        |                     |     |              |                     |           |                     |                  |                          |                          |                          |                 |               |           |              |        |
| 28.37         |                 |                   |               |                        |                     |     |              |                     |           |                     |                  |                          |                          |                          |                 |               |           |              |        |

**DESCRIPTION:** Serpentinized dunite cut by rare gabbroic dikes and one 30cm thick less oxidized zone. Highly serpentinized and locally oxidized associated with veins. Irregular thin black, white, and gray veins.

**TEXTURE:** Brittle Veins; conjugate vein sets. **Veins:** Irregular network of greenish-white serpentine veins.

**CONTACT:** Continuous. **ROCK NAME:** Dunite. **SEQUENCE:** I. **UNIT/SUBUNIT:** 7d.
Hole BA4A-12Z Section 1, Top of Section 29.70 (m CCD)

**Primary mineralogy (%)**
- Olivine
- Plagioclase
- Clinopyroxene
- Orthopyroxene
- Amphibole
- Sulfide

**Grain size (mm)**
- Size
- 1.5
- 1
- 0.5
- 0.25
- 0.125
- 0.0625
- 0.03125
- 0.015625

**Degree of deformation**
- Fracture/ Vein density (per meter)

**Alteration intensity**
- Slight (3–10%)
- Moderate (11–30%)
- Substantial (31–60%)
- Extensive (61–90%)
- Complete (≥90%)

**Vein density (per meter)**
- 0–1
- 1–3
- 3–5
- >5

**Magnetic contact**
- Brittle
- Crystal plastic
- Voils

**Structures**
- Fault zones
- Veins

**TEXTURE:**
- Igneous: serpentinized dunite, few pyroxenitic dykes, weakly fractured, heavily altered halo

**ALTERATION:**
- Serpentinized

**VEINS:**
- Green, white, and mineralized brownish veins

**Vein crosscutting**
- Alteration halos

**DISCRETE BRITTLE FEATURES**
- Fault zones

**TEXTURAL INTERPRETATION:**
- Protogranular
- Porphyroclastic
- Strongly foliated
- Protomylonite
- Mylonite
- Ultramylonite

**DISCOLORATION:**
- Fresh (<3%)
- Slight (3–10%)
- Moderate (11–30%)
- Substantial (31–60%)
- Extensive (61–90%)
- Complete (≥90%)

**Degree of deformation:**
- Undeformed
- Minor fracturing
- Moderate fracturing
- Strong fracturing
- GS reduction and rotation
- Well-developed cataclasis
- Ultracataclastite

**Dip:**
- 0
- 45
- 90

**CORE LENGTH (cm):**
- 1000
- 100
- 10
- 1

**MSCL-W**
- Magnetic susceptibility (SI x 10^-5)

**GRA (g/cm³):**
- 2.5
- 2
- 1.5
- 1
- 0.5
- 0.25
- 0.125
- 0.0625

**Core length (cm):**
- 100
- 30
- 10
- 4

**CONTACT:**
- Intrusive
<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>CT image</th>
<th>Magnetic susceptibility</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
</tr>
</thead>
<tbody>
<tr>
<td>31.41</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31.51</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31.61</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31.71</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31.81</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31.91</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Hole BA4A-12Z Section 3, Top of Section 31.38 (m CCD)**
### Hole BA44-12Z Section 4, Top of Section 31.96 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>MSCL-W MSP (SI X 10^-5)</th>
<th>GRA (g/cm³)</th>
<th>Sequence</th>
<th>Lithology</th>
<th>Primary mineralogy (%)</th>
<th>Phenocryst</th>
<th>Groundmass</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration</th>
<th>Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnetic contact</th>
<th>Brittle Crystalline Contact</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>32.00</td>
<td>10</td>
<td>10</td>
<td>0.10</td>
<td>0.8</td>
<td>0.10</td>
<td>0.00</td>
<td>10</td>
<td>10</td>
<td>100</td>
<td>75</td>
<td>25</td>
<td>0</td>
<td>0</td>
<td>0.00</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

**Sequences:**

**1a:**
- **ROCK NAME:** Dunite
- **TEXTURE:** Continuous
- **PRIMARY MINERALOGY:** Serpentinized dunite, few pyroxenitic dykes, weakly fractured, heavily altered halo
- **ALTERATION:** Serpentinized
- **VEINS:** Green, white, and mineralized brownish veins
- **STRUCTURE:** Brittle-Veins: conjugate vein sets

**1b:**
- **ROCK NAME:** Dunite
- **TEXTURE:** Highly serpentinized dunite, crosscut by veins, moderately fractured with some fractures filled by serpentine. Oxidized zones. Small, strongly fractured rubble zone
- **ALTERATION:** Serpentinized
- **VEINS:** Green, white, black, and mineralized brownish veins.
- **STRUCTURE:** Brittle-Veins: conjugate vein sets

**Core properties:**
- **Fabric intensity:** 5
- **Vein density:** 3
- **Grain size:** 4
- **Magnetic susceptibility:** MSCL-W MSP (SI X 10^-5)
- **Magnetic contact:** Brittle
- **Degree of deformation:** 0

**Lithology:**
- **Primary mineralogy:**
  - **Olivine**
  - **Plagioclase**
  - **Clinopyroxene**
  - **Orthopyroxene**
  - **Spinel**
  - **Amphibole**
- **Degree of deformation:**
  - **Fault zones:**
    - **Apparent offset:**
      - **Alteration halos:**
        - **Alteration:**
          - Fresh (<3%)
          - Slight (3–10%)
          - Moderate (11–30%)
          - Substantial (31–60%)
          - Extensive (61–90%)
          - Complete (≥90%)
- **Degree of deformation:**
  - **Vein crosscutting:**
    - **Alteration intensity:**
### Hole BA4A-13Z Section 1, Top of Section 32.70 (m CCD)

<table>
<thead>
<tr>
<th>Sequence</th>
<th>Contact</th>
<th>Texture</th>
<th>Igneous Summary</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Highly serpentinized dunite, crosscut by veins, moderately fractured with some fractures filled by serpentine. Oxidized zones. Small, strongly fractured rubble zone.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Fracture/ Vein density (per meter)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Alteration intensity</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Structural features</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Description</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depth (m CCD)</td>
<td>Core length (cm)</td>
<td>Lithology</td>
<td>Unit/subunit</td>
<td>Fabric intensity</td>
<td>Degree of deformation</td>
<td>Alteration intensity</td>
</tr>
<tr>
<td>--------------</td>
<td>-----------------</td>
<td>-----------</td>
<td>--------------</td>
<td>-----------------</td>
<td>---------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>33.30</td>
<td>0</td>
<td>Dunite</td>
<td>Continuous</td>
<td>0</td>
<td>Undeformed</td>
<td>Complete</td>
</tr>
<tr>
<td>33.40</td>
<td>1</td>
<td>Dunite</td>
<td>Continuous</td>
<td>1</td>
<td>Minor fracturing</td>
<td>0–10</td>
</tr>
<tr>
<td>33.50</td>
<td>2</td>
<td>Dunite</td>
<td>Continuous</td>
<td>2</td>
<td>Moderate fracturing</td>
<td>10–30</td>
</tr>
<tr>
<td>33.60</td>
<td>3</td>
<td>Dunite</td>
<td>Continuous</td>
<td>3</td>
<td>Substantial</td>
<td>30–50</td>
</tr>
<tr>
<td>33.70</td>
<td>4</td>
<td>Dunite</td>
<td>Continuous</td>
<td>4</td>
<td>Extensive</td>
<td>50–70</td>
</tr>
<tr>
<td>33.80</td>
<td>5</td>
<td>Dunite</td>
<td>Continuous</td>
<td>5</td>
<td>Complete</td>
<td>&gt;90</td>
</tr>
<tr>
<td>33.90</td>
<td>6</td>
<td>Dunite</td>
<td>Continuous</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>34.00</td>
<td>7</td>
<td>Dunite</td>
<td>Continuous</td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>34.10</td>
<td>8</td>
<td>Dunite</td>
<td>Continuous</td>
<td>8</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**DESCRIPTION:**
- **ROCK NAME:** Dunite
- **CONTACT:** Continuous
- **TEXTURE:** Igneous
- **SUMMARY:** Highly serpentinized dunite, crosscut by veins, moderately fractured with some fractures filled by serpentine. Oxidized zones. Small, strongly fractured rubble zone.
- **ALTERATION:** Serpentinized
- **VEINS:** Green, white, black, and mineralized brownish veins. Vein width is maximum 5 mm.
- **STRUCTURE:** Brittle: Multiple shear veins.
**SEQUENCE:** I

**UNIT/SUBUNIT:** 10b

**ROCK NAME:** Dunite

**CONTACT:** Continuous

**TEXTURE:**

**IGNEOUS SUMMARY:** Highly serpentinized dunite, crosscut by veins, moderately fractured with some fractures filled by serpentine. Oxidized zones. Small, strongly fractured rubble zone

**ALTERATION:** Serpentinized

**VEINS:** Green, white, black, and mineralized brownish veins. Vein width is maximum 5 mm.

**STRUCTURE:** Brittle-

**Veins:** Conjugate vein sets

**Crystal plastic:**

**Fabric intensity**

1. Strongly foliated
2. Porphyroclastic
3. Strongly foliated
4. Protomylonite
5. Mylonite
6. Ultramylonite

**Degree of deformation**

1. Undeformed
2. Minor fracturing
3. Moderate fracturing
4. GS reduction and rotation
5. Well-developed cataclasis
6. Ultracataclastite

**Discrete brittle features**

1. 0–10
2. 10–30
3. 30–50
4. 50–70
5. 70–90
6. >100

**Fracture/ Vein density (per meter)**

1. 0–10
2. 10–30
3. 30–50
4. 50–70
5. 70–90
6. >100

**Alteration intensity**

1. Fresh (<3%)
2. Slight (3–10%)
3. Moderate (11–30%)
4. Substantial (31–60%)
5. Extensive (61–90%)
6. Complete (>90%)

**Vein density (per meter)**

1. 0–10
2. 10–30
3. 30–50
4. 50–70
5. 70–90
6. >100

**Alteration halos**

1. 0–10
2. 10–30
3. 30–50
4. 50–70
5. 70–90
6. >100

**Description**

Hole BA4A-13Z Section 3, Top of Section 34.19 (m CCD)
RE-DRILLED INTERVAL

Hole BA4A-15M Section 2, Top of Section 30.28 (m CCD)

SEQUENCE: I
UNIT/SUBUNIT: 11c
ROCK NAME: Dunite
CONTACT: Continuous
TEXTURE:
IGNEOUS SUMMARY: serpentinized dunite with pegmatic dyke bordered by a 15 mm halo
ALTERATION: serpentinized
VEINS: brown and white veins
STRUCTURE: Brittle-
Vein density (per meter)
Vein crosscutting
Fracture/ Vein density (per meter)
Alteration intensity
Degree of deformation
Fracture/ Vein density (per meter)
Vein density (per meter)
Alteration intensity
Dip
Magnetic contact
Brittle
Crystal plastic
Veins

Depth (m CCD)
Core length (cm)
Shipboard samples
Sagged image
CT image
Magnetic susceptibility
MSCL-W
MSP
(8l x 10^-5)
GRA
(cm^3/g)
Primary mineralogy
Olivine
Plagioclase
Clinopyroxene
Orthopyroxene
Amphibole
Spinel
Sulfide
Unrecovered
Lithology
Magmatic
Layering
Foliation
Discrete brittle features
Fault zones
Structure:
Vein crosscutting
Alteration halos
Alteration intensity
Direction of deformation
Degree of deformation
Fabric intensity
Discrete brittle features
Vein density (per meter)
Vein density (per meter)
Vein crosscutting
Fracture/ Vein density (per meter)
Vein density (per meter)
Alteration intensity
Dip
Magnetic contact
Brittle
Crystal plastic
Veins

Hole BA4A-15M Section 2, Top of Section 30.28 (m CCD)
### RE-DRILLED INTERVAL

#### Hole BA4A-15M Section 3, Top of Section 31.26 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Scanned image</th>
<th>Magnetic susceptibility (MSCL-W) (SI x 10^-5)</th>
<th>GRA (g/cm²)</th>
<th>Primary mineralogy</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip Magnatic contact Brittle Crystal plastic Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>31.26</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Description**
- **SEQUENCE**: 11d
- **ROCK NAME**: Dunite
- **CONTACT**: Continuous

**IGNEOUS SUMMARY**: Strongly serpentinized fractured dunite, with oxidized zone

**ALTERATION**: Serpentinized

**VEINS**: White veins and black veins

**STRUCTURE**: Brittle-Veins-Crystal plastic-Veins

---

**SEQUENCE**: 11d

**UNIT/SUBUNIT**: 11d

**ROCK NAME**: Dunite

**CONTACT**: Continuous

**TEXTURE**: Brittle-Veins-Crystal plastic-Veins

**IGNEOUS SUMMARY**: Strongly serpentinized fractured dunite, with oxidized zone

**ALTERATION**: Serpentinized

**VEINS**: White veins and black veins

**STRUCTURE**: Brittle-Veins-Crystal plastic-Veins

---

**SEQUENCE**: 12a

**UNIT/SUBUNIT**: 12a

**ROCK NAME**: Dunite

**CONTACT**: Tectonic

**TEXTURE**: Brittle-Veins-Crystal plastic-Veins

**IGNEOUS SUMMARY**: Serpentinized dunite with moderate fractures and rubble

**ALTERATION**: Serpentinized

**VEINS**: White and green veins with white microveins

**STRUCTURE**: Brittle-Veins-Crystal plastic-Veins

---

**VEIN CROSSCUTTING**: No significant vein crosscutting

**ALTERATION INTENSITY**: Moderate (11–30%)

**DISCRETE BRITTLE FEATURES**: Tested for ultramylonite, protomylonite, and ultracataclastite

**DISCRETE BRITTLE FEATURES**: Interpreted for brittle features

---

**FABRIC INTENSITY**: Low (1–10%)

**FABRIC INTENSITY**: Interpreted for fabric intensity

---

**TEXTURE**: Protogranular, Porphyroclastic, Strongly foliated

**TEXTURE**: Interpreted for texture

---

**GRA (g/cm³)**: 2.6

**GRA (g/cm³)**: Interpreted for gravity

---

**Vein density**: 5 per 10 cm

**Vein density**: Interpreted for vein density

---

**Alteration**: Fresh (<3%), Slight (3–10%), Moderate (11–30%), Substantial (31–60%), Extensive (61–90%), Complete (>90%)

**Alteration**: Interpreted for alteration

---

**Degree of deformation**: Undeformed, Minor fracturing, Moderate fracturing, GS reduction and rotation, Well-developed cataclasis, Ultracataclastite

**Degree of deformation**: Interpreted for degree of deformation

---

**Magmatic Layering**: Protogranular, Porphyroclastic, Strongly foliated

**Magmatic Layering**: Interpreted for magmatic layering

---

**Foliation**: Protogranular, Porphyroclastic, Strongly foliated

**Foliation**: Interpreted for foliation

---

**Fault zones**: Discrete brittle features

**Fault zones**: Interpreted for fault zones

---

**Alteration halos**: Discrete brittle features

**Alteration halos**: Interpreted for alteration halos

---

**Magnetic susceptibility**: MSCL-W, MSP

**Magnetic susceptibility**: Interpreted for magnetic susceptibility

---

**CT image**: Sulfide, Amphibole, Spinel, Orthopyroxene, Clinopyroxene, Plagioclase, Olivine

**CT image**: Interpreted for CT image

---

**Structure**: Brittle-Veins-Crystal plastic-Veins

**Structure**: Interpreted for structure

---

**Vein density**: 5 per 10 cm

**Vein density**: Interpreted for vein density

---

**Hole BA4A-15M Section 3, Top of Section 31.26 (m CCD)**

---

**Description**: Magnetic contact Brittle Crystal plastic Veins
**SEQUENCE:** I  
**UNIT/SUBUNIT:** 12a  
**ROCK NAME:** Dunite

**CONTACT:** Continuous  
**TEXTURE:**  
**IGNEOUS SUMMARY:** serpentinized dunite with moderate fractures and rubble  
**ALTERATION:** serpentinized  
**VEINS:** white and green veins with white microveins  
**STRUCTURE:** Brittle-

<table>
<thead>
<tr>
<th>Fabric intensity</th>
<th>Vein density (per meter)</th>
<th>Grain size</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>4</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>2</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>1</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>0</td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

**Hole BAA-15M Section 4, Top of Section 32.11 (m CCD)**  
**Depth (m CCD):**  
**Core length (cm):**  
**Shipboard samples:**  
**Scanned image:**  
**CT image:**

**Magnetic susceptibility**  
**MSCL-W:**

**Lithology:**  
**Primary mineralogy:**

<table>
<thead>
<tr>
<th>%</th>
<th>Main minerals</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>Biotite, Chl, Plag</td>
</tr>
<tr>
<td>75</td>
<td>Biotite, Plag, Spn</td>
</tr>
<tr>
<td>50</td>
<td>Biotite, Plag, Spn, Clp</td>
</tr>
<tr>
<td>25</td>
<td>Biotite, Plag, Spn, Clp, Gr</td>
</tr>
<tr>
<td>0</td>
<td>Biotite, Plag, Spn, Clp, Gr, Sph</td>
</tr>
</tbody>
</table>

**Degree of deformation:**

<table>
<thead>
<tr>
<th>Fault zones</th>
<th>Apparent offset</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Altersation:**

<table>
<thead>
<tr>
<th>Intensity</th>
<th>Fresh (&lt;5%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Stiff (0–10%)</td>
</tr>
<tr>
<td>2</td>
<td>Moderate (11–30%)</td>
</tr>
<tr>
<td>3</td>
<td>Substantial (31–60%)</td>
</tr>
<tr>
<td>4</td>
<td>Extensive (61–90%)</td>
</tr>
<tr>
<td>5</td>
<td>Complete (&gt;90%)</td>
</tr>
</tbody>
</table>

**Fracture/ Vein density (per meter):**

<table>
<thead>
<tr>
<th>Density</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 per 10 cm</td>
<td>&gt;10 per 10 cm</td>
<td>10–30</td>
<td>&gt;20 per 10 cm</td>
<td>30–50</td>
<td>&gt;20 per 10 cm</td>
<td>50–70</td>
<td>&gt;20 per 10 cm</td>
<td>70–90</td>
</tr>
</tbody>
</table>

**RE-DRILLED INTERVAL**

**Core BA4A-15M Section 4, Top of Section 32.11 (m CCD)**  
**Core length (cm):**  
**Shipboard samples:**  
**Scanned image:**  
**CT image:**

**Magnetic susceptibility**  
**MSCL-W:**

**Lithology:**  
**Primary mineralogy:**

<table>
<thead>
<tr>
<th>%</th>
<th>Main minerals</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>Biotite, Chl, Plag</td>
</tr>
<tr>
<td>75</td>
<td>Biotite, Plag, Spn</td>
</tr>
<tr>
<td>50</td>
<td>Biotite, Plag, Spn, Clp</td>
</tr>
<tr>
<td>25</td>
<td>Biotite, Plag, Spn, Clp, Gr</td>
</tr>
<tr>
<td>0</td>
<td>Biotite, Plag, Spn, Clp, Gr, Sph</td>
</tr>
</tbody>
</table>

**Degree of deformation:**

<table>
<thead>
<tr>
<th>Fault zones</th>
<th>Apparent offset</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Altersation:**

<table>
<thead>
<tr>
<th>Intensity</th>
<th>Fresh (&lt;5%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Stiff (0–10%)</td>
</tr>
<tr>
<td>2</td>
<td>Moderate (11–30%)</td>
</tr>
<tr>
<td>3</td>
<td>Substantial (31–60%)</td>
</tr>
<tr>
<td>4</td>
<td>Extensive (61–90%)</td>
</tr>
<tr>
<td>5</td>
<td>Complete (&gt;90%)</td>
</tr>
</tbody>
</table>

**Fracture/ Vein density (per meter):**

<table>
<thead>
<tr>
<th>Density</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 per 10 cm</td>
<td>&gt;10 per 10 cm</td>
<td>10–30</td>
<td>&gt;20 per 10 cm</td>
<td>30–50</td>
<td>&gt;20 per 10 cm</td>
<td>50–70</td>
<td>&gt;20 per 10 cm</td>
<td>70–90</td>
</tr>
</tbody>
</table>
SEQUENCE: I
UNIT/SUBUNIT: 12b
ROCK NAME: Wehrlite
CONTACT: Tectonic
TEXTURE: Granular
IGNEOUS SUMMARY: altered wehrlite with rubble zone and increasing amount of cpx down core
ALTERATION: serpentinized
VEINS: green veins and thin white veins
STRUCTURE: Brittle-
Veins-
Crystal plastic-

SEQUENCE: I
UNIT/SUBUNIT: 12c
ROCK NAME: Dunite
CONTACT: Tectonic
TEXTURE: Igneous Summary: highly serpentinized dunite, weakly fractured
ALTERATION: serpentinized
VEINS: green veins, black veins
STRUCTURE: Brittle-
Veins-
Crystal plastic-
### Sequence I: 12c
- **Rock Name:** Dunite
- **Contact:** Continuous
- **Texture:**
- **Igneous Summary:** Highly serpentinized dunite, weakly fractured
- **Alteration:** Serpentinized
- **Veins:** Green veins, black veins
- **Structure:** Brittle

### Sequence I: 12d
- **Rock Name:** Dunite
- **Contact:** Colour
- **Texture:**
- **Igneous Summary:** Oxidized serpentinized dunite with olivine gabbro dykes
- **Alteration:** Serpentinized
- **Veins:** Black and green veins
- **Structure:** Brittle

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>CT image</th>
<th>Magnetic susceptibility</th>
<th>GRA (g/cm²)</th>
<th>Primary mineralogy</th>
<th>Lithology</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>33.00</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>33.10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>33.30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>33.50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>33.70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>33.90</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**SEQUENCE 1:** 34.80  
**UNIT/SUBUNIT:** 12e  
**ROCK NAME:** Dunite  
**CONTACT:** Continuous  
**TEXTURE:**  
**IGNEOUS SUMMARY:** Highly fractured serpentinized dunite with slickenlines developed in fractures some fractures after highly altered cross cutting pyroxenitic dykes  
**ALTERATION:** Serpentinized  
**VEINS:** Black and green veins  
**STRUCTURE:** Brittle, Vein, Crystal plastic  

---  

**SEQUENCE 1:** 34.90  
**UNIT/SUBUNIT:** 12f  
**ROCK NAME:** Dunite  
**CONTACT:** Tectonic  
**TEXTURE:**  
**IGNEOUS SUMMARY:** Serpentinized dunite crosscut by pyroxenitic dykes with minor harzburgite zone and oxidized zones  
**ALTERATION:** Serpentinized  
**VEINS:** Black and green veins  
**STRUCTURE:** Brittle, Vein, Crystal plastic  

---  

**Fabric Intensity**  

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>34.80</th>
<th>34.90</th>
<th>35.00</th>
<th>35.10</th>
<th>35.20</th>
<th>35.30</th>
<th>35.40</th>
<th>35.50</th>
<th>35.60</th>
<th>35.70</th>
<th>35.80</th>
<th>35.90</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core length (cm)</td>
<td>0</td>
<td>10</td>
<td>20</td>
<td>30</td>
<td>40</td>
<td>50</td>
<td>60</td>
<td>70</td>
<td>80</td>
<td>90</td>
<td>100</td>
<td>110</td>
</tr>
<tr>
<td>Samples</td>
<td>CT image</td>
<td>Magnetic susceptibility</td>
<td>GRA (g/cm³)</td>
<td>Primary mineralogy</td>
<td>Grain size</td>
<td>Degree of deformation</td>
<td>Fracture/ Vein density (per meter)</td>
<td>Alteration</td>
<td>Density (per meter)</td>
<td>Degree of deformation</td>
<td>Discrete brittle features</td>
<td>Veins</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sequence</td>
<td>Unit/Subunit</td>
<td>Rock Name</td>
<td>Contact</td>
<td>Texture</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------</td>
<td>--------------</td>
<td>-----------</td>
<td>---------</td>
<td>---------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>12f</td>
<td>Dunite</td>
<td>Continuous</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Igneous Summary:** Serpentinized dunite crosscut by pyroxenitic dykes with minor harzburgite zone and oxidized zones.

**Alteration:** Serpentinized

**Veins:** Black and green veins

**Structure:** Brittle-

<table>
<thead>
<tr>
<th>Fabric intensity</th>
<th>Vein density (per meter)</th>
<th>Alteration intensity</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>6</td>
<td>Fresh (&lt;3%)</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>Slight (3–10%)</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
<td>Moderate (11–30%)</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>Substantial (31–60%)</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>Extensive (61–90%)</td>
</tr>
<tr>
<td>0</td>
<td>1</td>
<td>Complete (≥90%)</td>
</tr>
</tbody>
</table>

**Density (g/cm³):**

| GRA (g/cm³) | 2.74 | 2.69 | 2.64 |

**CT image:**

- **Magnetic contact**
- **Brittle**
- **Crystal plastic**
- **Biotite**
- **Veins**
- **Fault zones**
- **Structures**
  - **Apparent offset**
  - **Alteration halos**

**Degree of deformation:**

- **Discrete brittle features**
  - 5
  - 4
  - 3
  - 2
  - 1
  - 0

- **Vein crosscutting alteration intensity**
  - 100
  - 80
  - 60
  - 40
  - 20
  - 0

- **Description:**
  - Fault zones
  - Structures

**Contact types:**

- Magmatic
- Layering
- Foliation

**Mineralogy:**

- **Primary mineralogy (%):**
  - 100
  - 75
  - 50
  - 25
  - 0

- **Secondary mineralogy:**
  - Sulfide
  - Amphibole
  - Spinel
  - Orthopyroxene
  - Clinopyroxene
  - Plagioclase
  - Olivine

- **Textural parameters:**
  - 90
  - 45
  - 0

- **Magmatic layering:**
  - Protogranular
  - Porphyroclastic
  - Strongly foliated

- **Protomylonite**
- **Mylonite**
- **Ultramylonite**

- **Granulite:**
  - Isotropic
  - Weak
  - Moderate
  - Strong

- **Grain size:**
  - Fine grained (0.2–1 mm)
  - Medium grained (1–5 mm)
  - Coarse grained (5–30 mm)
  - Pegmatitic (>30 mm)

- **Orientation:**
  - Dip
  - Uniaxial
  - Biaxial

**Core length (cm):**

- 0
- 10
- 20
- 30
- 40
- 50
- 60

**Shipboard samples:**

- Hole BA4A-18Z Section 1, Top of Section 35.70 (m CCD)
**Hole BA4A-18Z Section 2, Top of Section 36.40 (m CCD)**

### Sequence

**Unit/Subunit:** 12g

**Rock Name:** Dunite

**Contact:** Continuous

**Textured:**
- **Igneous Summary:** Serpentinized dunite crosscut by few gabbroic dykes
- **Alteration:** Serpentinized
- **Veins:** Network of black veins, some white and green

### Structure

**Vein/Structures:**
- Brittle
- Conjugate vein sets
- Crystal plastic

### Fabric Intensity

- **Vein density (per meter):** 0
- **Grain size:** 5

### Degree of Deformation

- **Fracture/ Vein:**
  - Count
  - Extent
  - Intensity
- **Vein crosscutting:**
  - Count
  - Extent

### Lithology

**Primary mineralogy (%):**
- Olivine
- Plagioclase
- Chlorite
- Amphibole
- Spinel
- Sulfide

**Degree of deformation:**
- **Discrete brittle features:**
  - Count
  - Extent

### Magnetic Susceptibility

**MSCL-W MSP (SI x 10⁻⁵):**
- 1.932

### Contact

**GRA (g/cm³):**
- 2.12

### Density

**GRA (g/cm³):**
- 2.52

### Description

- **Fault zones:**
  - Clipboard
  - CT image

---

**Sequencing:**

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magneto contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>36.40</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>36.50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>36.60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>36.70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>36.80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>36.90</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>37.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>37.10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Hole BA4A-18Z Section 3, Top of Section 37.17 (m CCD)

| Depth (m CCD) | Core length (cm) | Lithology | Primary mineralogy (%) | Degree of deformation | Alteration intensity | Dip | Magnetic contact | Brittle Crystal plastic | Vein density (per meter) | Alteration | Vein crosscutting |
|--------------|------------------|-----------|-------------------------|-----------------------|---------------------|-----|-----------------|--------------------------|------------------------|-------------|----------------|}
| 37.21        | 0                |          |                         |                       |                     |     |                 |                          |                        |             |                |
| 37.31        | 10               |          |                         |                       |                     |     |                 |                          |                        |             |                |
| 37.41        | 20               |          |                         |                       |                     |     |                 |                          |                        |             |                |
| 37.51        | 30               |          |                         |                       |                     |     |                 |                          |                        |             |                |
| 37.61        | 40               |          |                         |                       |                     |     |                 |                          |                        |             |                |
| 37.71        | 50               |          |                         |                       |                     |     |                 |                          |                        |             |                |
| 37.81        | 60               |          |                         |                       |                     |     |                 |                          |                        |             |                |

**Description**

SEQ: 1
UNIT/SUBUNIT: 12g
ROCK NAME: Dunite
CONTACT: continuous
TEXTURE: IGNEOUS
SUMMARY: Serpentinized dunite crosscut by few gabbroic dykes
ALTERATION: serpentinized
VEINS: Network of black veins, some white and green
STRUCTURE: Brittle- Shear veins

SEQ: 2
UNIT/SUBUNIT: 12g
ROCK NAME: Gabbro
CONTACT: Intrusive
TEXTURE: Granular
SUMMARY: Highly altered gabbro
ALTERATION: completely altered
VEINS: green vein
STRUCTURE: Brittle- Narrow shear zone along lower contact of dike

**Fabric parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sequence</td>
<td>12g</td>
</tr>
<tr>
<td>Unit/Subunit</td>
<td>12g</td>
</tr>
<tr>
<td>Rock Name</td>
<td>Dunite</td>
</tr>
<tr>
<td>Contact</td>
<td>Continuous</td>
</tr>
<tr>
<td>Texture</td>
<td>Igneous</td>
</tr>
<tr>
<td>Summary</td>
<td>Serpentinized</td>
</tr>
<tr>
<td>Alteration</td>
<td>Serpentinized</td>
</tr>
<tr>
<td>Veins</td>
<td>Network of black veins, some white and green</td>
</tr>
<tr>
<td>Structure</td>
<td>Brittle-Shear veins</td>
</tr>
</tbody>
</table>

**Magnetic parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sequence</td>
<td>12g</td>
</tr>
<tr>
<td>Unit/Subunit</td>
<td>12g</td>
</tr>
<tr>
<td>Rock Name</td>
<td>Gabbro</td>
</tr>
<tr>
<td>Contact</td>
<td>Intrusive</td>
</tr>
<tr>
<td>Texture</td>
<td>Granular</td>
</tr>
<tr>
<td>Summary</td>
<td>Highly altered gabbro</td>
</tr>
<tr>
<td>Alteration</td>
<td>Completely altered</td>
</tr>
<tr>
<td>Veins</td>
<td>Green vein</td>
</tr>
<tr>
<td>Structure</td>
<td>Brittle-Narrow shear zone along lower contact of dike</td>
</tr>
</tbody>
</table>

**Vein density**

<table>
<thead>
<tr>
<th>Vein density (per meter)</th>
<th>0</th>
<th>5</th>
<th>10</th>
<th>15</th>
<th>20</th>
<th>25</th>
<th>30</th>
<th>35</th>
<th>40</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Grain size**

<table>
<thead>
<tr>
<th>Grain size</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sequence</td>
<td>12g</td>
</tr>
<tr>
<td>Unit/Subunit</td>
<td>12g</td>
</tr>
<tr>
<td>Rock Name</td>
<td>Dunite</td>
</tr>
<tr>
<td>Contact</td>
<td>Continuous</td>
</tr>
<tr>
<td>Texture</td>
<td>Igneous</td>
</tr>
<tr>
<td>Summary</td>
<td>Serpentinized</td>
</tr>
<tr>
<td>Alteration</td>
<td>Serpentinized</td>
</tr>
<tr>
<td>Veins</td>
<td>Network of black veins, some white and green</td>
</tr>
<tr>
<td>Structure</td>
<td>Brittle-Shear veins</td>
</tr>
</tbody>
</table>

**Fabric parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sequence</td>
<td>12g</td>
</tr>
<tr>
<td>Unit/Subunit</td>
<td>12g</td>
</tr>
<tr>
<td>Rock Name</td>
<td>Gabbro</td>
</tr>
<tr>
<td>Contact</td>
<td>Intrusive</td>
</tr>
<tr>
<td>Texture</td>
<td>Granular</td>
</tr>
<tr>
<td>Summary</td>
<td>Highly altered gabbro</td>
</tr>
<tr>
<td>Alteration</td>
<td>Completely altered</td>
</tr>
<tr>
<td>Veins</td>
<td>Green vein</td>
</tr>
<tr>
<td>Structure</td>
<td>Brittle-Narrow shear zone along lower contact of dike</td>
</tr>
</tbody>
</table>

**Vein density**

<table>
<thead>
<tr>
<th>Vein density (per meter)</th>
<th>0</th>
<th>5</th>
<th>10</th>
<th>15</th>
<th>20</th>
<th>25</th>
<th>30</th>
<th>35</th>
<th>40</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Hole BA4A-18Z Section 4, Top of Section 37.85 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard scans</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>MSCL-W MSP</th>
<th>GRA (g/cm²)</th>
<th>Sequence</th>
<th>Lithology</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip Magnetic contact</th>
<th>Brittle Crystal plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>37.85</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>95</td>
<td>Dunite</td>
<td>Olivine 90, Plagioclase 5, Amphibole 5, Sulfide 0</td>
<td>Coarse</td>
<td>Undeformed</td>
<td>0.0</td>
<td>Fresh (&gt;3%)</td>
<td>0-10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>37.90</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2.1</td>
<td>95</td>
<td>Gabbro</td>
<td>Olivine 45, Amphibole 35, Spinel 10, Orthopyroxene 5</td>
<td>Fine</td>
<td>Minor fracturing</td>
<td>1.0</td>
<td>Slight (3–10%)</td>
<td>0-10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>38.00</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2.6</td>
<td>95</td>
<td>Olivine gabbro</td>
<td>Olivine 90, Amphibole 3, Plagioclase 2, Clinopyroxene 2</td>
<td>Coarse</td>
<td>GS reduction and rotation</td>
<td>3.0</td>
<td>Moderate (11–30%)</td>
<td>0-10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>38.15</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2.8</td>
<td>95</td>
<td>Gabbro</td>
<td>Olivine 45, Amphibole 35, Spinel 10, Orthopyroxene 5</td>
<td>Fine</td>
<td>Well-developed cataclasis</td>
<td>5.0</td>
<td>Substantial (31–60%)</td>
<td>0-10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>38.25</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2.7</td>
<td>95</td>
<td>Olivine gabbro</td>
<td>Olivine 90, Amphibole 3, Plagioclase 2, Clinopyroxene 2</td>
<td>Coarse</td>
<td>Ultracataclastite</td>
<td>7.0</td>
<td>Extensive (61–90%)</td>
<td>0-10</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Description**
- **SEQUENCE 1:** 12g
- **ROCK NAME:** Dunite
- **CONTACT:** continuous
- **TEXTURE:** Granular
- **LITHOFACIES SUMMARY:** Serpentinized dunite crosscut by few gabbroic dykes
- **ALTERATION:** serpentinized
- **VEINS:** Network of black veins, some white and green
- **STRUCTURE:** Brittle Narrow fault zone
- **Degree of deformation:** Undeformed
- **Magnetic contact:** Brittle
- **Brittle Crystal plastic:** Veins
- **Veins:** Gabbro
- **Alteration:** Fresh (>3%)
- **Magnetic susceptibility:** MSCL-W
- **MSP (SI 10^-5):**
- **GRA (g/cm²):** 2.1
- **Sequence:** 95
- **Lithology:** Dunite
- **Primary mineralogy:** Olivine 90, Plagioclase 5, Amphibole 5, Sulfide 0
- **Grain size:** Coarse
- **Degree of deformation:** Undeformed
- **Fracture/ Vein density (per meter):** 0.0
- **Alteration intensity:** Fresh (>3%)
- **Dip Magnetic contact:** Brittle
- **Brittle Crystal plastic:** Veins
- **Veins:** Gabbro
- **Alteration:** Fresh (>3%)
- **Magnetic susceptibility:** MSCL-W
- **MSP (SI 10^-5):**
- **GRA (g/cm²):** 2.6
- **Sequence:** 95
- **Lithology:** Gabbro
- **Primary mineralogy:** Olivine 45, Amphibole 35, Spinel 10, Orthopyroxene 5
- **Grain size:** Fine
- **Degree of deformation:** Minor fracturing
- **Fracture/ Vein density (per meter):** 1.0
- **Alteration intensity:** Slight (3–10%)
- **Dip Magnetic contact:** Brittle
- **Brittle Crystal plastic:** Veins
- **Veins:** Gabbro
- **Alteration:** Fresh (>3%)
- **Magnetic susceptibility:** MSCL-W
- **MSP (SI 10^-5):**
- **GRA (g/cm²):** 2.8
- **Sequence:** 95
- **Lithology:** Olivine gabbro
- **Primary mineralogy:** Olivine 90, Amphibole 3, Plagioclase 2, Clinopyroxene 2
- **Grain size:** Coarse
- **Degree of deformation:** GS reduction and rotation
- **Fracture/ Vein density (per meter):** 3.0
- **Alteration intensity:** Moderate (11–30%)
- **Dip Magnetic contact:** Brittle
- **Brittle Crystal plastic:** Veins
- **Veins:** Gabbro
- **Alteration:** Moderate (11–30%)
- **Magnetic susceptibility:** MSCL-W
- **MSP (SI 10^-5):**
- **GRA (g/cm²):** 2.7
- **Sequence:** 95
- **Lithology:** Gabbro
- **Primary mineralogy:** Olivine 45, Amphibole 35, Spinel 10, Orthopyroxene 5
- **Grain size:** Fine
- **Degree of deformation:** Well-developed cataclasis
- **Fracture/ Vein density (per meter):** 5.0
- **Alteration intensity:** Substantial (31–60%)
- **Dip Magnetic contact:** Brittle
- **Brittle Crystal plastic:** Veins
- **Veins:** Gabbro
- **Alteration:** Substantial (31–60%)
- **Magnetic susceptibility:** MSCL-W
- **MSP (SI 10^-5):**
- **GRA (g/cm²):** 2.1
- **Sequence:** 95
- **Lithology:** Dunite
- **Primary mineralogy:** Olivine 90, Plagioclase 5, Amphibole 5, Sulfide 0
- **Grain size:** Coarse
- **Degree of deformation:** Undeformed
- **Fracture/ Vein density (per meter):** 0.0
- **Alteration intensity:** Fresh (>3%)
- **Dip Magnetic contact:** Brittle
- **Brittle Crystal plastic:** Veins
- **Veins:** Gabbro
- **Alteration:** Fresh (>3%)
- **Magnetic susceptibility:** MSCL-W
- **MSP (SI 10^-5):**
- **GRA (g/cm²):** 2.6
- **Sequence:** 95
- **Lithology:** Gabbro
- **Primary mineralogy:** Olivine 45, Amphibole 35, Spinel 10, Orthopyroxene 5
- **Grain size:** Fine
- **Degree of deformation:** Minor fracturing
- **Fracture/ Vein density (per meter):** 1.0
- **Alteration intensity:** Slight (3–10%)
- **Dip Magnetic contact:** Brittle
- **Brittle Crystal plastic:** Veins
- **Veins:** Gabbro
- **Alteration:** Slight (3–10%)
- **Magnetic susceptibility:** MSCL-W
- **MSP (SI 10^-5):**
- **GRA (g/cm²):** 2.8
- **Sequence:** 95
- **Lithology:** Olivine gabbro
- **Primary mineralogy:** Olivine 90, Amphibole 3, Plagioclase 2, Clinopyroxene 2
- **Grain size:** Coarse
- **Degree of deformation:** GS reduction and rotation
- **Fracture/ Vein density (per meter):** 3.0
- **Alteration intensity:** Moderate (11–30%)
- **Dip Magnetic contact:** Brittle
- **Brittle Crystal plastic:** Veins
- **Veins:** Gabbro
- **Alteration:** Moderate (11–30%)
- **Magnetic susceptibility:** MSCL-W
- **MSP (SI 10^-5):**
- **GRA (g/cm²):** 2.7
- **Sequence:** 95
- **Lithology:** Dunite
- **Primary mineralogy:** Olivine 90, Plagioclase 5, Amphibole 5, Sulfide 0
- **Grain size:** Coarse
- **Degree of deformation:** Undeformed
- **Fracture/ Vein density (per meter):** 0.0
- **Alteration intensity:** Fresh (>3%)
- **Dip Magnetic contact:** Brittle
- **Brittle Crystal plastic:** Veins
- **Veins:** Gabbro
- **Alteration:** Fresh (>3%)
- **Magnetic susceptibility:** MSCL-W
- **MSP (SI 10^-5):**
- **GRA (g/cm²):** 2.1
- **Sequence:** 95
- **Lithology:** Gabbro
- **Primary mineralogy:** Olivine 45, Amphibole 35, Spinel 10, Orthopyroxene 5
- **Grain size:** Fine
- **Degree of deformation:** Minor fracturing
- **Fracture/ Vein density (per meter):** 1.0
- **Alteration intensity:** Slight (3–10%)
- **Dip Magnetic contact:** Brittle
- **Brittle Crystal plastic:** Veins
- **Veins:** Gabbro
- **Alteration:** Slight (3–10%)
- **Magnetic susceptibility:** MSCL-W
- **MSP (SI 10^-5):**
- **GRA (g/cm²):** 2.6
- **Sequence:** 95
- **Lithology:** Olivine gabbro
- **Primary mineralogy:** Olivine 90, Amphibole 3, Plagioclase 2, Clinopyroxene 2
- **Grain size:** Coarse
- **Degree of deformation:** GS reduction and rotation
- **Fracture/ Vein density (per meter):** 3.0
- **Alteration intensity:** Moderate (11–30%)
- **Dip Magnetic contact:** Brittle
- **Brittle Crystal plastic:** Veins
- **Veins:** Gabbro
- **Alteration:** Moderate (11–30%)
**SEQUENCE: 12f**  
**ROCK NAME: Dunite**  
**CONTACT: Continuous**  
**TEXTURE:**  
**IGNEOUS SUMMARY:** serpentinized dunite with a small patch of Opx ALTERATION: serpentinized  
**VEINS:** large green vein, a network of milimetric green veins and few fine white veins  
**STRUCTURE:** Brittle-Veins- conjugate vein sets  
**Crystal plastic-Fabric intensity**  
**Fracture/ Vein density (per meter)**  
**Alteration intensity**  
**Dip Magnetic contact Brittle Crystal plastic Veins**  
**Description**

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Stained image</th>
<th>CT image</th>
<th>Magnetic susceptibility</th>
<th>MSCL-W MSP (SI x 10^-5)</th>
<th>GRA (g/cm²)</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnetic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>38.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>38.83</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>38.93</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>39.03</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>39.13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>39.23</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TEXTUAL CONTENT:**

- **SEQUENCE:** 12f
- **ROCK NAME:** Dunite
- **CONTACT:** Continuous
- **TEXTURE:**
- **IGNEOUS SUMMARY:** Serpentinized dunite with a small patch of Opx
- **ALTERATION:** Serpentinized
- **VEINS:** Large green vein, a network of milimetric green veins and few fine white veins
- **STRUCTURE:**Brittle
- **Crystal Plastic:** Fabric intensity
- **Fracture/ Vein Density (per meter):**
- **Alteration Intensity:**
- **Dip Magnetic Contact:**
- **Brittle:** Crystal plastic
- **Veins:**

**GRAPHICAL CONTENT:**

- **Diagram:** A detailed diagram showing the distribution of various rock types and mineralogical features, including layers, veins, and foliations.
- **Data:** Various measurements and annotations related to the rock's properties and conditions.

**NOTES:**

- **Seismic Properties:**
  - **GRA:** 2.56, 2.46, 2.36 (g/cm²)
  - **Loneliness:** 2.61, 2.46 (g/cm²)

- **Mineralogy:**
  - Olivine, Plagioclase
  - Amphibole, Spinel, Sulfide

- **Grain Size:**
  - 0.2–1 mm, 1–5 mm, 5–30 mm, >30 mm

- **Fabric Intensity:**
  - Pervasive, Moderate, Weak

- **Degree of Deformation:**
  - Undeformed, Minor Fracturing, GS Reduction and Rotation

- **Alteration Intensity:**
  - Fresh (<3%), Slight (3–10%), Moderate (11–30%), Substantial (31–60%), Extensive (61–90%), Complete (≥90%)

- **Crystal Plastic Fabric Intensity:**
  - 100, 80, 60, 40, 20, 0

- **Discrete Brittle Features:**
  - 5, 4, 3, 2, 1, 0

- **Vein Crosscutting Alteration Intensity:**
  - 0–10, 10–30, 30–50, 50–70, 70–90, 90–100

- **Degree of Vein Density (per meter):**
  - 0, 1 per 10 cm, 3–5 per 10 cm, >20 per 10 cm, 5–15 per 10 cm, 15–20 per 10 cm
### Hole BA4A-19Z Section 2, Top of Section 39.31 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Stained image</th>
<th>CT image</th>
<th>MSCL-W MSP (SI x 10^-5)</th>
<th>GRA (g/cm^2)</th>
<th>Sequence</th>
<th>Lithology</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
</tr>
</thead>
<tbody>
<tr>
<td>39.33</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>39.43</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>39.53</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>39.63</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>39.73</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>39.83</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Lithology:**
- Primary mineralogy:
  - Olivine
  - Plagioclase
  - Amphibole
  - Orthopyroxene
  - Clinopyroxene
  - Sulfide
- Fabric intensity:
  - Foliation
  - Foliation (fine)
  - Foliation (medium)
  - Foliation (coarse)
- Degree of deformation:
  - Undeformed
  - Minor fracturing
  - Moderate fracturing
  - GS reduction and rotation
  - Well-developed cataclasis
  - Ultracataclastite
  - Protogranular
  - Porphyroclastic
  - Strongly foliated
  - Protomylonite
  - Mylonite
  - Ultramylonite
- Magmatic layering:
  - Undeformed
  - Minor fracturing
  - Moderate fracturing
- Vein crosscutting:
  - Undeformed
  - Minor fracturing
  - Moderate fracturing
- Alteration intensity:
  - Fresh (<3%)
  - Slight (3–10%)
  - Moderate (11–30%)
  - Substantial (31–60%)
  - Extensive (61–90%)
  - Complete (≥90%)
- Dip:
  - Magnetic contact
  - Brittle
  - Crystal plastic
  - Veins

**Description:**
- Fault zones
- Structures
- Apparent offset
- Alteration halos
- Magnetic susceptibility
- MSCL-W MSP (SI x 10^-5)
- GRA (g/cm^2)
- Core length (cm)
- Depth (m CCD)
**Hole BA4A-19Z Section 4, Top of Section 40.84 (m CCD)**

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Lithology</th>
<th>Primary mineralogy (%)</th>
<th>Grain size (µm)</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein (per meter)</th>
</tr>
</thead>
<tbody>
<tr>
<td>40.85</td>
<td></td>
<td>Dunite</td>
<td>Serpentinized dunite</td>
<td></td>
<td>Brittle</td>
<td></td>
</tr>
<tr>
<td>40.95</td>
<td></td>
<td>Gabbro</td>
<td>Highly altered olivine gabbro</td>
<td></td>
<td>Brittle</td>
<td></td>
</tr>
</tbody>
</table>

**Core descriptions**
- **SEQUENCE:** 1
- **ROCK NAME:** Dunite
- **CONTACT:** Modal
- **TEXTURE:** Igneous summary: serpentinized dunite
- **ALTERATION:** Serpentinized
- **VEINS:** Dense network of fine white veins
- **STRUCTURE:** Brittle

**Core descriptions**
- **SEQUENCE:** 1
- **ROCK NAME:** Gabbro
- **CONTACT:** Intrusive
- **TEXTURE:** Granular
- **IGNEOUS SUMMARY:** Highly altered olivine-bearing micro gabbro
- **ALTERATION:** Highly altered
- **VEINS:** Few green and white veins
- **STRUCTURE:** Brittle

**Fabric intensity**
- Ranges from 0 to 100

**Vein density**
- Per meter

**Grain size**
- Ranges from 0 to 100

**Hole BA4A-19Z Section 4, Top of Section 40.84 (m CCD)**

- **Description**
  - Brittle
  - Crystal plastic
  - Veins
  - Sulfide
  - Amphibole
  - Spinel
  - Orthopyroxene
  - Clinopyroxene
  - Plagioclase
  - Olivine

**Magmatic contact**
- Magnetic susceptibility (MSCL-W MSP (SI 10^-5))
  - Ranges from 0 to 100

**Alteration intensity**
- Ranges from 0 to 100

**Magmatic Layering**
- Ranges from 0 to 100

**Foliation**
- Ranges from 0 to 100

**Discrete brittle features**
- Ranges from 0 to 100

**Fracture/ Vein density**
- Per meter

**Degree of deformation**
- Brittle, Magmatic contact, Dip, Vein crosscutting

**Structures**
- Apparent offset

**Alteration halos**
- Alteration intensity

**Fault zones**
- Structures

**Angles**
- Ranges from 0 to 90

**Core length (cm)**
- Depth (m CCD)
<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Lithology</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Alteration intensity</th>
</tr>
</thead>
<tbody>
<tr>
<td>41.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>41.83</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>41.93</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>42.09</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>42.13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>42.23</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>42.33</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>42.43</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Description**

- **Sequencing**: I, 13b
- **Rock Name**: Dunite
- **Contact**: Continuous
- **Igneous Summary**: Serpentinized dunite
- **Alteration**: Serpentinized
- **Veins**: Dense network of fine white veins
- **Structure**: Brittle

**Surface**

- **Sequencing**: I, 13b
- **Unit/Subunit**: 13b
- **Rock Name**: Gabbro
- **Contact**: Intrusive
- **Texture**: Granular
- **Igneous Summary**: Highly altered gabbro
- **Alteration**: Highly altered
- **Veins**: Few green and white veins
- **Structure**: Brittle

**Alteration Intensity**

- **Fresh (<3%)**
- **Slight (3–10%)**
- **Moderate (11–30%)**
- **Substantial (31–60%)**
- **Extensive (61–90%)**
- **Complete (≥90%)**

**Degree of Deformation**

- **Undeformed**
- **Minor fracturing**
- **Moderate fracturing**
- **GS Reduction and Rotation**
- **Well-developed Cataclasis**
- **Ultracataclastite**

**Lithology**

- **Olivine**
- **Plagioclase**
- **Clinoptyroxene**
- **Orthopyroxene**
- **Amphibole**
- **Sulphide**

**Fabric Intensity**

- **0**
- **1**
- **2**
- **3**
- **4**
- **5**

**Magnetic Susceptibility (SI 10^-5)**

- **0**
- **1**
- **10**
- **100**
- **1000**

**Core length (cm)**

- **10**
- **20**
- **30**
- **40**
- **50**
- **60**

**GRA (g/cm^3)**

- **1.00**
- **1.50**
- **2.00**

**Magnetic contact**

- **Brittle**
- **Crystal plastic**

**Veins**

- **0**
- **1**
- **2**
- **3**
- **4**
- **5**
- **6**
- **7**

**Discrete brittle features**

- **0**
- **1**
- **2**
- **3**
- **4**
- **5**

**Vein Crosscutting Alteration Halos**

- **0**
- **1**
- **2**
- **3**
- **4**
- **5**

**CT Image**

- **Sulfide**
- **Amphibole**
- **Spinel**
- **Orthopyroxene**
- **Clinopyroxene**
- **Plagioclase**
- **Olivine**

**Fault zones**

- **0**
- **1**
- **2**
- **3**
- **4**
- **5**

**Structures**

- **0**
- **1**
- **2**
- **3**
- **4**
- **5**

**Apparent Offset**

- **0**
- **1**
- **2**
- **3**
- **4**
- **5**

**Alteration Halos**

- **Complete (≥90%)**
- **Extensive (61–90%)**
- **Substantial (31–60%)**
- **Moderate (11–30%)**
- **Slight (3–10%)**
- **Fresh (<3%)**

**Fresh (<3%)**

- **Slight (3–10%)**
- **Moderate (11–30%)**
- **Substantial (31–60%)**
- **Extensive (61–90%)**
- **Complete (≥90%)**
### Hole BA4A-20Z Section 2, Top of Section 42.48 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Stained image</th>
<th>CT image</th>
<th>Magnetic susceptibility</th>
<th>Primary mineralogy</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnatic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Voids</th>
</tr>
</thead>
<tbody>
<tr>
<td>42.49</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>42.49</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>42.49</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>42.49</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>42.49</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>42.49</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>42.49</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>42.49</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Description**
- **foam**: Foamed column
- **CT image**: Computed tomography image
- **Magnetic susceptibility**: MSCL-W (SI x 10^-5)
- **Primary mineralogy**: Olivine, Plagioclase, Clinopyroxene, Orthopyroxene, Amphibole, Sulfide
- **Grain size**: μm
- **Degree of deformation**: Discrete brittle features
- **Fracture/ Vein density (per meter)**: per 10 cm
- **Alteration intensity**: Fresh (<3%), Slight (3–10%), Moderate (11–30%), Substantial (31–60%), Extensive (61–90%), Complete (>90%)
- **Dip**: Magnetic contact
- **Brittle**: Crystal plastic
- **Voids**: Typically voids

**Lithology Notes**:
- **Rock Name**: gabbro
- **Contact**: Continuous
- **Texture**: Granular
- **Igneous Summary**: altered gabbro
- **Alteration**: highly altered
- **Veins**: few milimetric green veins
- **Structure**: Brittle-Veins-Crystal plastic
### Hole BA4A-20Z Section 3, Top of Section 43.23 (m CCD)

<table>
<thead>
<tr>
<th>Sequence</th>
<th>Unit/Subunit</th>
<th>Lithology</th>
<th>Primary mineralogy</th>
<th>Degree of deformation</th>
<th>Discrete brittle features</th>
<th>Alteration intensity</th>
<th>Vein density (per meter)</th>
<th>Fabric intensity</th>
<th>Dip</th>
<th>Magnetic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Voids</th>
<th>Structures</th>
<th>Vein crosscutting</th>
<th>Alteration halos</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>13b</td>
<td>Dunite</td>
<td>Olivine, Plagioclase, Clinopyroxene</td>
<td>Brittle</td>
<td>Veins</td>
<td>100</td>
<td>0</td>
<td>5</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td>Discrete brittle features</td>
<td>Brittle, Veins</td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>13c</td>
<td>Gabbro</td>
<td>Orthopyroxene, Amphibole, Spinel</td>
<td>Brittle</td>
<td>Veins</td>
<td>100</td>
<td>0</td>
<td>5</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td>Brittle, Veins</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Harzburgite</td>
<td>Olivine, Plagioclase, Clinopyroxene</td>
<td>Brittle</td>
<td>Veins</td>
<td>100</td>
<td>0</td>
<td>5</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td>Brittle, Veins</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Alteration**
- Serpentinized
- Highly altered

**Veins**
- Dense network of fine white veins
- Few green veins

**Structure**
- Brittle-splayed cataclastic zone offsetting dike
- Conjugate vein sets
- Crystal plastic

### Magnetic susceptibility
- MSCL-W MSP
- GRA (g/cm³)

### Core length (cm)
- Holes BA4A-20Z

### Depth (m CCD)
- Hole BA4A-20Z Section 3, Top of Section 43.23 (m CCD)

### Description
- Fabric intensity
- Vein density (per meter)
- Degree of deformation
- Alteration intensity
- Dip
SEQUENCE: I
UNIT/SUBUNIT: 13c
ROCK NAME: Harzburgite
CONTACT: Continuous
TEXTURE: Granular
IGNEOUS SUMMARY: serpentinized harzburgite with few cross cutting small dikes, dunite patches
ALTERATION: serpentinized
VEINS: network of black veins, few black, green veins
STRUCTURE: Brittle-
Veins-
Crystal plastic-
Pyroxene grains are rounded and slightly elongated.

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>Magnetic susceptibility (SI × 10^-5)</th>
<th>GRA (g/cm³)</th>
<th>Magnetic susceptibility MSCL-W</th>
<th>MSP</th>
</tr>
</thead>
<tbody>
<tr>
<td>44.03</td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**ALTERATION SUMMARY**: serpentinization

**VEINS**: network of black veins, few black, green veins

**STRUCTURE**: Brittle-
Veins-
Crystal plastic-

**Veins**: Crystal-plastic: Pyroxene grains are rounded and slightly elongated.
SEQUENCE: 13c

UNIT/SUBUNIT: 13c

ROCK NAME: Harzburgite

CONTACT: Modal

TEXTURE:

IGNEOUS SUMMARY: serpentinized harzburgite with few cross cutting small dikes, dunite patches

ALTERATION: serpentinized

VEINS: network of black veins, few black, green veins

STRUCTURE: Brittle

Veins

Crystal plastic - Pyroxene grains are rounded and slightly elongated.
# Hole BA4A-21Z Section 2, Top of Section 45.20 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shiptboard samples</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>Primary mineralogy</th>
<th>Lithology</th>
<th>Degree of deformation</th>
<th>Alteration intensity</th>
<th>Vein density (per meter)</th>
<th>Alteration halos</th>
<th>Fault zone</th>
<th>Structures</th>
<th>Veins</th>
<th>Magnetic contact</th>
<th>Brittle contact</th>
<th>Dip</th>
<th>Fabric intensity</th>
<th>Vein crosscutting</th>
<th>Abnormal holes</th>
<th>Vein crosscutting</th>
<th>Degree of deformation</th>
</tr>
</thead>
<tbody>
<tr>
<td>45.20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>45.30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>45.40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>45.50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>45.60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>45.70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>45.80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>45.90</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>46.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Description**

- **SEQUENCE I**: 13c
- **ROCK NAME**: Harzburgite
- **CONTACT**: Continuous

**IGNEOUS SUMMARY**: Serpentinized harzburgite with few cross cutting small dikes, dunite patches

**ALTERATION**: Serpentinized

- **VEINS**: Network of black veins, few black, green veins

- **TEXTURE**: Brittle - Veins - Crystal plastic - Pyroxene grains are rounded and slightly elongated.

**Notes**

- **Veins**: Cryotectonic - Pyroxene grains are rounded and slightly elongated.
SEQUENCE: I
UNIT/SUBUNIT: 13f
ROCK NAME: Harzburgite
CONTACT: Continuous
TEXTURE: IGNEOUS SUMMARY: serpentinized harzburgite crosscut by gabbroic dike
ALTERATION: serpentinized
VEINS: black, green, white veins
STRUCTURE: Brittle
---

SEQUENCE: I
UNIT/SUBUNIT: 13g
ROCK NAME: Dunite
CONTACT: Modal
TEXTURE: IGNEOUS SUMMARY: serpentinized dunite
ALTERATION: serpentinized
VEINS: few black veins
STRUCTURE: Brittle
---

SEQUENCE: I
UNIT/SUBUNIT: 13h
ROCK NAME: Harzburgite
CONTACT: Modal
TEXTURE: Granular
IGNEOUS SUMMARY: serpentinized harzburgite crosscutted by thin pyroxenitic dikes
ALTERATION: serpentinized
VEINS: few black veins
STRUCTURE: Brittle
Crystal plastic- Porphyroclastic fabric
### Sequence: I

**Unit/Subunit:** 13h  
**Rock Name:** Harzburgite  
**Contact:** Continuous  
**Texture:** Granular  
**Igneous Summary:** Serpentinized harzburgite crosscutted by thin pyroxenitic dikes  
**Alteration:** Serpentinized  
**Veins:** Few black veins  
**Structure:** Brittle-  
**Crystal Plastic:** Pyroxene grains are rounded and slightly elongated.

### Sequence: I

**Unit/Subunit:** 14a  
**Rock Name:** Harzburgite  
**Contact:** Intrusive  
**Texture:** Granular  
**Igneous Summary:** Serpentinized harzburgite crosscutted by gabbroic dikes  
**Alteration:** Serpentinized  
**Veins:**  
**Structure:** Brittle-  
**Crystal Plastic:** Pyroxene grains are rounded and slightly elongated.

---

<table>
<thead>
<tr>
<th>Sequence</th>
<th>Unit/Subunit</th>
<th>Rock Name</th>
<th>Contact</th>
<th>Texture</th>
<th>Igneous Summary</th>
<th>Alteration</th>
<th>Veins</th>
<th>Structure</th>
<th>Crystal Plastic</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>13h</td>
<td>Harzburgite</td>
<td>Continuous</td>
<td>Granular</td>
<td>Serpentinized harzburgite crosscutted by thin pyroxenitic dikes</td>
<td>Serpentinized</td>
<td>Few black veins</td>
<td>Brittle-</td>
<td>Pyroxene grains are rounded and slightly elongated.</td>
</tr>
<tr>
<td>I</td>
<td>14a</td>
<td>Harzburgite</td>
<td>Intrusive</td>
<td>Granular</td>
<td>Serpentinized harzburgite crosscutted by gabbroic dikes</td>
<td>Serpentinized</td>
<td></td>
<td>Brittle-</td>
<td>Pyroxene grains are rounded and slightly elongated.</td>
</tr>
</tbody>
</table>

---

### Fabric intensity

- 5
- 4
- 3
- 2
- 1
- 0

### Vein density (per meter)

- 6
- 5
- 4
- 3
- 2
- 1
- 0

### Grain size

- 6
- 5
- 4
- 3
- 2
- 1
- 0

### Hole BA4A-22Z Section 1, Top of Section 47.70 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Lithology</th>
<th>Primary mineralogy (% of area)</th>
<th>Magnetic susceptibility (SI x 10^-5)</th>
<th>GRA (g/cm³)</th>
<th>Degree of deformation</th>
<th>Vein density (per meter)</th>
<th>Alteration intensity</th>
</tr>
</thead>
<tbody>
<tr>
<td>47.70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

### Description

- **Fault zones:** Discrete brittle features  
- **Alteration halos:**  
  - Fresh (<3%)
  - Slight (3–10%)
  - Moderate (11–30%)
  - Substantial (31–60%)
  - Extensive (61–90%)
  - Complete (>90%)

---

### Structures

- **Discrete brittle features:**  
  - Vein crosscutting

### Alteration

- **Intensity:**  
  - 100
  - 80
  - 60
  - 40
  - 20
  - 0

---

### Contacts

- **Magnetic contact:** Brittle  
- **Brittle:**  
  -  
- **Crystal plastic:**  
  -  
- **Vugs:**  
  -  

---

### Veins

- **Description:**  
  - Crystal plastic: Pyroxene grains are rounded and slightly elongated.
<table>
<thead>
<tr>
<th>Sequence</th>
<th>Unit/Subunit</th>
<th>Rock Name</th>
<th>Contact</th>
<th>Texture</th>
<th>Igneous Summary</th>
<th>Alteration</th>
<th>Veins</th>
<th>Structure</th>
<th>Degree of deformation</th>
<th>Fabric intensity</th>
</tr>
</thead>
<tbody>
<tr>
<td>14a</td>
<td>14a</td>
<td>Harzburgite</td>
<td>Continuous</td>
<td>Granular</td>
<td>Serpentinized harzburgite crosscutted by gabbroic dikes</td>
<td>Serpentinized</td>
<td>White veins</td>
<td>Brittle-Veins-Crystal plastic-Pyroxene grains are rounded and slightly elongated.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14b</td>
<td>14b</td>
<td>Olivine gabbro</td>
<td>Intrusive</td>
<td>Granular</td>
<td>Olivine gabbro dike crosscut by green veins</td>
<td></td>
<td></td>
<td>Brittle-Veins-Crystal plastic-Pyroxene grains are rounded and slightly elongated.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14c</td>
<td>14c</td>
<td>Harzburgite</td>
<td>Intrusive</td>
<td>Granular</td>
<td>Serpentinized harzburgite</td>
<td>Serpentinized</td>
<td>Black, green, thin white veins</td>
<td>Brittle-Veins-Crystal plastic-Pyroxene grains are rounded and slightly elongated.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depth (m CCD)</td>
<td>Core length (cm)</td>
<td>Shipboard samples</td>
<td>Stained image</td>
<td>Magnetic susceptibility</td>
<td>Primary mineralogy (%)</td>
<td>Grain size</td>
<td>Degree of deformation</td>
<td>Fracture/ Vein density (per meter)</td>
<td>Alteration intensity</td>
<td>Dip Magnatic contact</td>
</tr>
<tr>
<td>--------------</td>
<td>-----------------</td>
<td>-------------------</td>
<td>--------------</td>
<td>------------------------</td>
<td>------------------------</td>
<td>-----------</td>
<td>----------------------</td>
<td>-----------------------------------</td>
<td>---------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>49.21</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SEQUENCE:** 1c
**ROCK NAME:** Harzburgite
**CONTACT:** Continuous
**TEXTURE:** Granular
**IGNEOUS SUMMARY:** serpentinized harzburgite
**ALTERATION:** serpentinized
**VEINS:** black, green thin white veins
**STRUCTURE:** Brittle-

---

**SEQUENCE:** 1d
**ROCK NAME:** Olivine gabbro
**CONTACT:** intrusive
**TEXTURE:** Granular
**IGNEOUS SUMMARY:** olivine gabbro dike crosscut by green veins
**ALTERATION:**
**VEINS:** green, white veins
**STRUCTURE:** Brittle-

---

**SEQUENCE:** 1e
**ROCK NAME:** Dunite
**CONTACT:** Intrusive
**TEXTURE:**
**IGNEOUS SUMMARY:** serpentinized dunite
**ALTERATION:** serpentinized
**VEINS:** thin white veins
**STRUCTURE:** Brittle-

---

**FACTOR INTENSITY**

**Vein density** (per meter)

**Grain size**

**Magnetic susceptibility**

**CT image**

**Description**
Hole BA44A-22Z Section 4, Top of Section 49.86 (m CCD)

<table>
<thead>
<tr>
<th>Sequence</th>
<th>Unit/Subunit</th>
<th>Rock Name</th>
<th>Contact</th>
<th>Texture</th>
<th>Igneous Summary</th>
<th>Alteration</th>
<th>Vein Density (per meter)</th>
<th>Fracture/ Vein Density (per meter)</th>
<th>Degree of Deformation</th>
<th>Alteration Intensity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>14a</td>
<td>Dunite</td>
<td>Continuous</td>
<td>Igneous</td>
<td>Serpentinized dunite</td>
<td>Serpentinized</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>14f</td>
<td>Olivine gabbro</td>
<td>Intrusive</td>
<td>Granular</td>
<td>Offset olivine gabbro dike</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>14g</td>
<td>Harzburgite</td>
<td>Intrusive</td>
<td>Granular</td>
<td>Serpentinized harzburgite crosscut by offset gabbroic dikes</td>
<td>Prehnitized, Serpentinized</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Core length (cm)</th>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Depth (m CCD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>49.90</td>
<td>0</td>
<td>49.90</td>
</tr>
<tr>
<td>10</td>
<td>49.80</td>
<td>10</td>
<td>49.80</td>
</tr>
<tr>
<td>20</td>
<td>49.70</td>
<td>20</td>
<td>49.70</td>
</tr>
<tr>
<td>30</td>
<td>49.60</td>
<td>30</td>
<td>49.60</td>
</tr>
<tr>
<td>40</td>
<td>49.50</td>
<td>40</td>
<td>49.50</td>
</tr>
<tr>
<td>50</td>
<td>49.40</td>
<td>50</td>
<td>49.40</td>
</tr>
<tr>
<td>60</td>
<td>49.30</td>
<td>60</td>
<td>49.30</td>
</tr>
<tr>
<td>70</td>
<td>49.20</td>
<td>70</td>
<td>49.20</td>
</tr>
<tr>
<td>80</td>
<td>49.10</td>
<td>80</td>
<td>49.10</td>
</tr>
<tr>
<td>90</td>
<td>49.00</td>
<td>90</td>
<td>49.00</td>
</tr>
</tbody>
</table>

**Magnetic susceptibility (SI x 10^-5)**

**Lithology**

**Primary mineralogy (%)**
- Olivine
- Plagioclase
- Clinopyroxene
- Orthopyroxene

**Grain size**
- Spinel
- Sulfide

**Degree of deformation**
- Magmatic
- Brittle
- Veins
- Crystal plastic

**Alteration intensity**
- Fresh (<3%)
- Slight (3–10%)
- Moderate (11–30%)
- Substantial (31–60%)
- Extensive (61–90%)
- Complete (≥90%)

**Vein density (per meter)**
- 0–10
- 10–30
- 30–50
- 50–70
- 70–90
- >100

**Fabric intensity**

**Fracture/ Vein density (per meter)**
- 0–10
- 10–30
- 30–50
- 50–70
- 70–90
- >100

**Fracture/ Vein density (per meter)**
- 0–10
- 10–30
- 30–50
- 50–70
- 70–90
- >100

**Discrete brittle features**
- Veins
- Crystal plastic

**Structures**
- Fault zones
- Veins
- Brittle
- Magmatic contact

**Degree of deformation**
- Undeformed
- Minor fracturing
- Moderate fracturing
- GS reduction and rotation
- Well-developed cataclasis
- Ultracataclastite

**Effect of deformation**
- Protogranular
- Porphyroclastic
- StrONGLY foliated
- Protomylonite
- Mylonite
- Ultramylonite

**Isotropic**
- Weak
- Moderate
- Strong

**Grain size**
- Fine grained (0.2–1 mm)
- Medium grained (1–5 mm)
- Coarse grained (5–30 mm)
- Pegmatitic (>30 mm)
- Glassy
- Cryptocrystalline (<0.1 mm)
- Microcrystalline (0.1–0.2 mm)

**Vein density (per meter)**
- 0–10
- 10–30
- 30–50
- 50–70
- 70–90
- >100

**Alteration**
- Fresh (<3%)
- Slight (3–10%)
- Moderate (11–30%)
- Substantial (31–60%)
- Extensive (61–90%)
- Complete (≥90%)

**Texture**
- Protogranular
- Porphyroclastic
- Strongly foliated
- Protomylonite
- Mylonite
- Ultramylonite

**Mineralogy**
- Amphibole
- Spinel
- Orthopyroxene
- Clinopyroxene
- Plagioclase
- Olivine

**Alteration**
- Fresh (<3%)
- Slight (3–10%)
- Moderate (11–30%)
- Substantial (31–60%)
- Extensive (61–90%)
- Complete (≥90%)

**Vein density (per meter)**
- 0–10
- 10–30
- 30–50
- 50–70
- 70–90
- >100
### Hole BA4A-23Z Section 2, Top of Section 51.47 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>CT image</th>
<th>Magnetic susceptibility</th>
<th>MSCL-W MSP</th>
<th>GRA (g/cm²)</th>
<th>Sequence</th>
<th>Lithology</th>
<th>Unit/subunit</th>
<th>Primary mineralogy (%)</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration</th>
<th>Dip</th>
</tr>
</thead>
<tbody>
<tr>
<td>51.49</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>51.48</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>51.47</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>51.46</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>51.45</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>51.44</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>51.43</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>51.42</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>51.41</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>51.40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>51.39</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>51.38</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Description**

- **SEQUENCE 1**: UNITSUBUNIT 14: ROCK NAME: Olivine gabbro CONTACT: Continuous TEXTURE: Granular KINEMATIC SUMMARY: olivine gabbro dike AlterATION: Veins: white veins, black veins STRUCTURE: Brittle Network of fault surfaces

- **SEQUENCE 1**: UNITSUBUNIT 14: ROCK NAME: Olivine gabbro CONTACT: Continuous TEXTURE: Granular KINEMATIC SUMMARY: olivine gabbro dike AlterATION: Veins: grey veins, white veins STRUCTURE: Brittle Network of fault surfaces

- **SEQUENCE 1**: UNITSUBUNIT 14: ROCK NAME: Olivine gabbro CONTACT: Continuous TEXTURE: Granular KINEMATIC SUMMARY: olivine gabbro dike AlterATION: Veins: grey veins, white veins STRUCTURE: Brittle Network of fault surfaces

- **SEQUENCE 1**: UNITSUBUNIT 14: ROCK NAME: Olivine gabbro CONTACT: Continuous TEXTURE: Granular KINEMATIC SUMMARY: olivine gabbro dike AlterATION: Veins: grey veins, white veins STRUCTURE: Brittle Network of fault surfaces

**Magnetic contact Brittle Crystal plastic Voids**

- Fabric intensity: 0–10
- Vein intensity: 0–10
- Dip: 0° - 90°

**Table Contents**

- **Depth (m CCD)**
- **Core length (cm)**
- **Shipboard samples**
- **Stained image**
- **CT image**
- **Magnetic susceptibility**
- **MSCL-W MSP**
- **GRA (g/cm²)**
- **Sequence**
- **Lithology**
- **Unit/subunit**
- **Primary mineralogy (%)**
- **Degree of deformation**
- **Fracture/ Vein density (per meter)**
- **Alteration**
- **Dip**

**Legend**

- **Veins**: grey veins, white veins
- **STRUCTURE**: Brittle Network of fault surfaces
- **Crystal plastic**: Pores/eve grains are rounded and slightly elongated.
<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Lithology</th>
<th>Primary mineralogy (%)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Vein density (per meter)</th>
<th>Alteration halos</th>
<th>Magnetic susceptibility (MSCL-W)</th>
<th>Alteration halos</th>
<th>Structure</th>
<th>Alteration halos</th>
<th>Degree of deformation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>52.25</td>
<td>0</td>
<td>Sequence: I</td>
<td>Olivine</td>
<td>Fresh (&lt;3%)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.025 x 10⁻⁵</td>
<td>0.025 x 10⁻⁵</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Unit/subunit: 14k</td>
<td>Plagioclase</td>
<td>Slight (3–10%)</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.025 x 10⁻⁵</td>
<td>0.025 x 10⁻⁵</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Amphibole</td>
<td>Moderate (11–30%)</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.025 x 10⁻⁵</td>
<td>0.025 x 10⁻⁵</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Sulfide</td>
<td>Substantial (31–60%)</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.025 x 10⁻⁵</td>
<td>0.025 x 10⁻⁵</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Glassy</td>
<td>Extensive (61–90%)</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.025 x 10⁻⁵</td>
<td>0.025 x 10⁻⁵</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Glassy</td>
<td>Complete (≥ 90%)</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.025 x 10⁻⁵</td>
<td>0.025 x 10⁻⁵</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Glassy</td>
<td></td>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.025 x 10⁻⁵</td>
<td>0.025 x 10⁻⁵</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Glassy</td>
<td></td>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.025 x 10⁻⁵</td>
<td>0.025 x 10⁻⁵</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SEQUENCE: I**

ROCK NAME: Harzburgite

CONTACT: Tectonic

KIGLICOS SUMMARY: fractured, serpentinized harzburgite cross cut by olivine gabbro dikes

ALTERATION: serpentinized

VEINS: white veins, black veins

STRUCTURE: Brittle-

Veins-

Crystal plastic-

---

**SEQUENCE: I**

UNIT/SUBUNIT: 14k

ROCK NAME: Olivine gabbro

CONTACT: Intrusive

TEXTURE: Granular

IGNEOUS SUMMARY: olivine gabbro dike

ALTERATION: serpentinized

VEINS: white veins, grey veins, black veins

STRUCTURE: Brittle-

Veins-

Crystal plastic-

---

**SEQUENCE: I**

UNIT/SUBUNIT: 14k

ROCK NAME: Olivine gabbro

CONTACT: Intrusive

TEXTURE: Granular

IGNEOUS SUMMARY: gabbroic dike

ALTERATION: fully serpentinized

VEINS: white veins, grey veins, black veins

STRUCTURE: Brittle-

Veins-

Crystal plastic-

---

**SEQUENCE: I**

UNIT/SUBUNIT: 15a

ROCK NAME: Dunite

CONTACT: Intrusive

TEXTURE: Protogranular peridotite fabric

IGNEOUS SUMMARY: fully serpentinized dunite crosscut by gabbroic dikes

ALTERATION: fully serpentinized

VEINS: white veins

STRUCTURE: Brittle-

Veins-

Crystal plastic-

---

**SEQUENCE: I**

UNIT/SUBUNIT: 15a

ROCK NAME: Dunite

CONTACT: Intrusive

TEXTURE: Protogranular peridotite fabric

IGNEOUS SUMMARY: fully serpentinized dunite crosscut by gabbroic dikes

ALTERATION: fully serpentinized

VEINS: white veins

STRUCTURE: Brittle-

Veins-

Crystal plastic-

---

**SEQUENCE: I**

UNIT/SUBUNIT: 15a

ROCK NAME: Dunite

CONTACT: Intrusive

TEXTURE: Protogranular peridotite fabric

IGNEOUS SUMMARY: fully serpentinized dunite crosscut by gabbroic dikes

ALTERATION: fully serpentinized

VEINS: white veins

STRUCTURE: Brittle-

Veins-

Crystal plastic-
<table>
<thead>
<tr>
<th>Sequence</th>
<th>Unit/Subunit</th>
<th>Rock Name</th>
<th>Contact</th>
<th>Texture</th>
<th>Igneous Summary</th>
<th>Alteration</th>
<th>Veins</th>
<th>Structure</th>
<th>Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnetic contact</th>
<th>Brittle Fracture Membrane</th>
<th>Crystal Plastic Membrane</th>
<th>Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnetic contact</th>
<th>Brittle Fracture Membrane</th>
<th>Crystal Plastic Membrane</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Sequence: 15b
- **ROCK NAME:** dunite
- **CONTACT:** Continuous
- **TEXTURE:** Igneous: fully serpentinized dunite crosscut by gabbroic dikes
- **ALTERATION:** Serpentinized
- **VEINS:** White veins, black veins, green veins
- **STRUCTURE:** Brittle-fracture membrane

### Sequence: 15b
- **ROCK NAME:** gabbro
- **CONTACT:** Intrusive
- **TEXTURE:** Granular
- **IGNEOUS SUMMARY:** Highly altered gabbroic dike
- **ALTERATION:** Serpentinized
- **VEINS:** White veins, grey-green veins
- **STRUCTURE:** Brittle-fracture membrane

---

### Fabric Intensity
- 5
- 4
- 3
- 2
- 1
- 0

### Vein Density (per meter)
- 6
- 5
- 4
- 3
- 2
- 1
- 0

### Grain Size
- 6
- 5
- 4
- 3
- 2
- 1
- 0

### Magmatic Layering
- 3
- 2
- 1
- 0

### Degree of Deformation
- Undeformed
- Minor fracturing
- Moderate fracturing
- GS reduction and rotation
- Well-developed cataclasis
- Ultracataclastite

### Discrete Brittle Features
- 0
- 1
- 2
- 3
- 4
- 5

### Alteration Intensity
- Fresh (<3%)
- Slight (3–10%)
- Moderate (11–30%)
- Substantial (31–60%)
- Extensive (61–90%)
- Complete (>90%)

### Alteration Halos
- 100
- 80
- 60
- 40
- 20
- 0

### Degree of Alteration
- Complete (<90%)

---

### Lithology
- Primary mineralogy (%)
- 100
- 75
- 50
- 25
- 0

### Sulfide
- Amphibole
- Spinel
- Orthopyroxene
- Clinopyroxene
- Plagioclase
- Olivine

---

### Fracture/ Vein density (per meter)
- 0
- 1
- 2
- 3
- 4
- 5

---

### Core Length (cm)
- 53.70 (m CCD)

---

### Description
- Hole BA4A-24Z Section 1, Top of Section 53.70 (m CCD)
<table>
<thead>
<tr>
<th>Sequence</th>
<th>Unit/SUBUNIT</th>
<th>Rock Name</th>
<th>Contact</th>
<th>Texture</th>
<th>Igneous Summary</th>
<th>Alteration</th>
<th>Veins</th>
<th>Structure</th>
<th>Degree of deformation</th>
<th>Fracture/Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip Magnatic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Vents</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>15b</td>
<td>dunite</td>
<td>Continuous</td>
<td></td>
<td>fully serpentinized dunite crosscut by gabbroic dikes</td>
<td>serpentinized</td>
<td>white veins, black veins, green veins</td>
<td>Brittle</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Olivine</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Plagioclase</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Clinopyroxene</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Table:**

- **Depth (m CCD):** 54.24
- **Core length (cm):** 0
- **Sampled image:** CT image
- **Magnetic susceptibility:** MSCL-W (SI x 10^-5)
- **GRA (g/cm³):** 2.68
- **Sequence:** I

**Lithology:**
- Olivine
- Plagioclase
- Clinopyroxene
- Orthopyroxene
- Amphibole
- Sulfide

**Primary mineralogy (%):**
- 100

**Grain size:**
- 0.1

**Degree of deformation:**
- Brittle

**Veins:**
- White veins
- Black veins
- Green veins

**Fabric intensity:**
- 5

**Vein density (per meter):**
- 0 per 10 cm

**Alteration intensity:**
- Fresh (<3%)

**Dip Magnatic contact:**
- Brittle

**Brittle:**
- Crystalline

**Crystal plastic:**
- Vents

**Vents:**
- Crystal plastic
### Hole BA4A-24Z Section 3, Top of Section 54.92 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnatic contact</th>
<th>Brittle</th>
<th>Crystall plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>54.92</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Sequences:**
- 15b

**Unit/Subunit:** 15b

**Rock Name:** dunite

**Contact:** Continuous

**Igneous Summary:** Fully serpentinized dunite crosscut by gabbroic dikes

**Alteration:** Serpentinized

**Veins:** White veins, black veins, green veins

**Structure:** Brittle- Fracture network with small offset

**Veins - Crystal plastic - Fabric intensity:**

- 5
- 4
- 3
- 2
- 1
- 0

**Vein density (per meter):**

- 6
- 5
- 4
- 3
- 2
- 1
- 0

**Grain size:**

- 6
- 5
- 4
- 3
- 2
- 1
- 0

**Hole BA4A-24Z Section 3, Top of Section 54.92 (m CCD)**

**Core length (cm):**

- 54.92

**Phased samples:**

- CT image

**Description:**

- Sequence: 15b
- Unit/Subunit: 15b
- Rock Name: dunite
- Contact: Continuous
- Igneous Summary: Fully serpentinized dunite crosscut by gabbroic dikes
- Alteration: Serpentinized
- Veins: White veins, black veins, green veins
- Structure: Brittle - Fracture network with small offset

**Magnetic susceptibility:**

- MSCL-W
- MSP
-GRA (SI 10^-6)

**Vein crosscutting Alteration intensity:**

- Fresh (<3%)
- Slight (3–10%)
- Moderate (11–30%)
- Substantial (31–60%)
- Extensive (61–90%)
- Complete (>90%)

**Degree of deformation:**

- Undeformed
- Minor fracturing
- Moderate fracturing
- GS reduction and rotation
- Well-developed cataclasis
- Ultracataclastite

**Magmatic contact:**

- Dip
- Brittle
- Crystall plastic
- Veins

**Lithology:**

- Primary mineralogy (%)

- Olivine
- Plagioclase
- Clinopyroxene
- Orthopyroxene
- Amphibole
- Spinel
- Sulfide

**Fabric intensity:**

- Protogranular
- Porphyroclastic
- Strongly foliated
- Protomylonite
- Mylonite
- Ultramylonite

** Degree of deformation:**

- Brittle
- Magmatic
- Contact

**Dip:**

- 0
- 45
- 90

**Fracture/ Vein density (per meter):**

- 0–10
- 10–30
- 30–50
- 50–70
- 70–90
- >100

**Vein density (per meter):**

- 1 per 10 cm
- 3-5 per 10 cm
- >20 per 10 cm
- 5-15 per 10 cm
- 15-20 per 10 cm
### Hole BA4A-25Z Section 1, Top of Section 56.70 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Scanned image</th>
<th>Magnetic susceptibility</th>
<th>Primary mineralogy</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnatic contact Brittle Crystal plastic Voids</th>
</tr>
</thead>
<tbody>
<tr>
<td>56.70</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>56.80</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>56.90</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>57.00</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>57.10</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>57.20</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>57.30</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>57.40</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>57.50</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>57.60</td>
<td>90</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Description**

**SEQUENCE I, 15a**
- CONTACT: Continuous
- IGNEOUS SUMMARY: fractured, serpentinized harzburgite with a melt impregnation fabric and multiple pyroxenite dikes
- ALTERATION: serpentinized
- VEINS: brown veins, black veins, grey veins
- STRUCTURE: Brittle

**SEQUENCE I, 15b**
- CONTACT: Intrusive
- IGNEOUS SUMMARY: serpentinized dunite with near-harzburgitic zone cross-cut by olivine gabbro dikes
- ALTERATION: serpentinized
- VEINS: cut by variety of serpentine veins
- STRUCTURE: Brittle

**SEQUENCE I, 15c**
- CONTACT: Continuous
- IGNEOUS SUMMARY: fractured, serpentinized harzburgite with a melt impregnation texture and multiple pyroxenite dikes
- ALTERATION: serpentinized
- VEINS: brown veins, black veins, grey veins
- STRUCTURE: Brittle

**SEQUENCE I, 15d**
- CONTACT: Intrusive
- IGNEOUS SUMMARY: serpentinized dunite with near-harzburgitic zone cross-cut by olivine gabbro dikes
- ALTERATION: serpentinized
- VEINS: cut by variety of serpentine veins
- STRUCTURE: Brittle

**ALTERATION INTENSITY**
- Fresh (<3%)
- Slight (3–10%)
- Moderate (11–30%)
- Substantial (31–60%)
- Extensive (61–90%)
- Complete (>90%)

**FABRIC INTENSITY**
- Undeformed
- Minor fracturing
- Moderate fracturing
- GS reduction and rotation
- Well-developed cataclasis
- Ultracataclastite

**UNIT/SUBUNIT**
- LITHOLOGY
- PRIMARY MINERALOGY (%)

**STRUCTURE**
- Brittle
- Veins
- Crystal plastic

**ALTERATION HALOS**
- Sulfide
- Amphibole
- Spinel
- Orthopyroxene
- Clinopyroxene
- Plagioclase
- Olivine

**DISCRETE BRITTLE FEATURES**
- Vein crosscutting
- Alteration intensity

**FOLIATION**
- Protogranular
- Porphyroclastic
- Strongly foliated
- Protomylonite
- Mylonite
- Ultramylonite

**LAYERING**
- Protolastic
- Porphyroclastic
- Strongly foliated

**SCANNED IMAGE**
- MAGNETIC SUSCEPTIBILITY
- MSCL-W
- MSP
- GRA (SI x 10^-5)
- GRA (g/cm^3)

**HOLE BA4A-25Z SECTION 1, TOP OF SECTION 56.70 (m CCD)**

**DESCRIPTION**

**SEQUENCE I, 15a**
- ROCK NAME: Harzburgite
- CONTACT: Continuous
- IGNEOUS SUMMARY: fractured, serpentinized harzburgite with a melt impregnation fabric and multiple pyroxenite dikes
- ALTERATION: serpentinized
- VEINS: brown veins, black veins, grey veins
- STRUCTURE: Brittle

**SEQUENCE I, 15b**
- ROCK NAME: Harzburgite
- CONTACT: Intrusive
- IGNEOUS SUMMARY: serpentinized dunite with near-harzburgitic zone cross-cut by olivine gabbro dikes
- ALTERATION: serpentinized
- VEINS: cut by variety of serpentine veins
- STRUCTURE: Brittle

**SEQUENCE I, 15c**
- ROCK NAME: Harzburgite
- CONTACT: Continuous
- IGNEOUS SUMMARY: fractured, serpentinized harzburgite with a melt impregnation texture and multiple pyroxenite dikes
- ALTERATION: serpentinized
- VEINS: brown veins, black veins, grey veins
- STRUCTURE: Brittle

**SEQUENCE I, 15d**
- ROCK NAME: Harzburgite
- CONTACT: Intrusive
- IGNEOUS SUMMARY: serpentinized dunite with near-harzburgitic zone cross-cut by olivine gabbro dikes
- ALTERATION: serpentinized
- VEINS: cut by variety of serpentine veins
- STRUCTURE: Brittle
Hole BA4A-25Z Section 2, Top of Section 57.65 (m CCD)

Sequence: I
Unit/Subunit: 15d
Rock Name: dunite
Contact: Tectonic
Texture: IGNEOUS
SUMMARY: serpentinized dunite with near-harzburgitic zone cross-cut by olivine gabbro dikes
Alteration: serpentinised
Veins: cut by a variety of serpentine veins
Structure: Brittle-
Veins-
Crystal plastic-

Sequence: I
Unit/Subunit: 15d
Rock Name: Olivine gabbro
Contact: Intrusive
Texture: Granular
Igneous Summary: olivine gabbro dike
Alteration: altered and pseudomorphed
Veins: grey veins, white veins, grey green veins
Structure: Brittle- Fault zone cuts dike
Veins-
Crystal plastic-

Sequence: I
Unit/Subunit: 15d
Rock Name: Olivine gabbro
Contact: Intrusive
Texture: Granular
Igneous Summary: olivine gabbro dike
Alteration: altered and pseudomorphed
Veins: thick black veins, white veins, brown veins, grey green veins
Structure: Brittle- Fault zone cuts dike
Veins-
Crystal plastic-
Hole BA4A-25Z Section 4, Top of Section 59.44 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>Primary mineralogy</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnetic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Vents</th>
<th>Structures</th>
<th>Alteration halos</th>
<th>Vein density (per meter)</th>
<th>Fracture zones</th>
<th>Apparent offset</th>
<th>Fault zones</th>
</tr>
</thead>
<tbody>
<tr>
<td>59.45</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>59.55</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>59.65</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>59.75</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>59.85</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>59.95</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Hole BA4A-26Z Section 1, Top of Section 59.70 (m CCD)

#### Magnetic susceptibility

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>MSCL-W</th>
<th>MSP</th>
</tr>
</thead>
<tbody>
<tr>
<td>59.70</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Primary mineralogy

<table>
<thead>
<tr>
<th>Sequence</th>
<th>Lithology</th>
<th>Unit/subunit</th>
<th>Magnatic contact</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Brittle fractures</th>
</tr>
</thead>
<tbody>
<tr>
<td>15d</td>
<td>dunite</td>
<td>15d</td>
<td>intrusive</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15d</td>
<td>olivine</td>
<td>15d</td>
<td>intrusive</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15d</td>
<td>wehrlite</td>
<td>15d</td>
<td>intrusive</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Sequence: I

#### Unit/Subunit: 15d

- **ROCK NAME:** dunite
- **CONTACT:** intrusive
- **TEXTURE:** igneous
- **IGNEOUS SUMMARY:** serpentinized dunite with near-harzburgitic zone cross-cut by olivine gabbro dikes
- **ALTERATION:** serpentinised
- **VEINS:** cut by a variety of serpentine veins
- **STRUCTURE:** brittle fractures

#### Unit/Subunit: 15d

- **ROCK NAME:** olivine gabbro
- **CONTACT:** intrusive
- **TEXTURE:** granular
- **IGNEOUS SUMMARY:** altered and pseudomorphed olivine gabbro
- **ALTERATION:** altered and pseudomorphed
- **VEINS:** cut by green/white composite veins
- **STRUCTURE:** brittle fractures

#### Unit/Subunit: 15d

- **ROCK NAME:** wehrlite
- **CONTACT:** intrusive
- **TEXTURE:** granular
- **IGNEOUS SUMMARY:** altered and pseudomorphed wehrlite
- **ALTERATION:** altered and pseudomorphed
- **VEINS:** cut by sigmoidal white/black composite veins
- **STRUCTURE:** brittle fractures

#### Fabric intensity

- 0
- 1
- 2
- 3
- 4
- 5

#### Vein density (per meter)

- 1
- 2
- 3
- 4
- 5

#### Sequence: I

- **Description**
- **CT image**
- **Structures**
- **Alteration intensity**
- **Vein density (per meter)**
- **Alteration halos**
- **Rearrangement of veins**
- **Degree of deformation**
- **Fault zones**
- **Vein crosscutting**

#### Lithology

- **Primary mineralogy**
- **Mafic minerals**
- **Clay minerals**
- **Silica minerals**
- **Carbonate**
- **Sulphides**

#### Degree of deformation

- **Magmatic contact**
- **Structural features**
- **Discrete brittle features**
- **Vein crosscutting**
- **Alteration intensity**

#### Dip

- **Magnetic contact**
- **Brittle**
- **Crystal plastic**
- **Veins**
**Hole BA4A-26Z Section 3, Top of Section 61.29 (m CCD)**

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>Sequence</th>
<th>Lithology</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnetic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.33</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.34</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.35</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.36</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.37</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.38</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.39</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.41</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.42</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.43</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.44</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.45</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.46</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.47</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.48</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.49</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.51</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.52</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.53</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.54</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.55</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.56</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.57</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.58</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.59</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.61</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.62</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.63</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.64</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.65</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.66</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.67</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.68</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.69</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.71</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.72</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.74</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.75</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.76</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.77</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.78</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.79</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.81</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.82</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.83</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Hole BA4A-26Z Section 4, Top of Section 61.86 (m CCD)

<table>
<thead>
<tr>
<th>Sequence</th>
<th>Unit/Subunit</th>
<th>Lithology</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Alteration</th>
<th>Dip</th>
<th>Magnetic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I</td>
<td>dunite</td>
<td>olivine</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>I</td>
<td>wehlrite</td>
<td>plagioclase</td>
<td>75</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>I</td>
<td>gabbro</td>
<td>clinopyroxene</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>I</td>
<td>gabbro</td>
<td>orthopyroxene</td>
<td>25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>I</td>
<td>gabbro</td>
<td>plagioclase</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fabric intensity</th>
<th>Vein density (per meter)</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Alteration</th>
<th>Dip</th>
<th>Magnetic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>0–10</td>
<td>0–10</td>
<td>0–10</td>
<td>0–10</td>
<td>0–10</td>
<td>0–10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30–50</td>
<td>30–50</td>
<td>30–50</td>
<td>30–50</td>
<td>30–50</td>
<td>30–50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50–70</td>
<td>50–70</td>
<td>50–70</td>
<td>50–70</td>
<td>50–70</td>
<td>50–70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>70–90</td>
<td>70–90</td>
<td>70–90</td>
<td>70–90</td>
<td>70–90</td>
<td>70–90</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt;90</td>
<td>&gt;90</td>
<td>&gt;90</td>
<td>&gt;90</td>
<td>&gt;90</td>
<td>&gt;90</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Description</th>
<th>Fault zones</th>
<th>Structures</th>
<th>Apparent offset</th>
<th>Alteration halos</th>
<th>Veins</th>
<th>Magmatic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**SEQUENCE:** 15e  
**UNIT/SUBUNIT:** 15e  
**ROCK NAME:** Dunite  
**CONTACT:** Continuous  
**TEXTURE:** Igneous  
**SUMMARY:** Serpentinized dunite, crosscutted by gabbroic and pyroxenitic dikes, partially oxidized, weakly fractured  
**ALTERATION:** Serpentinized  
**VEINS:** Green, white veins, frankestein texture  
**STRUCTURE:** Brittle-Veins- conjugate vein sets  
**Crystal plastic- Fabric intensity**  
**Vein density (per meter)**  
**Grain size**  
**Depth (m CCD)**  
**Core length (cm)**  
**Shiptboard samples**  
**Stained image**  
**Magnetic susceptibility**  
**MSCL-W MSP (SI x 10⁻⁵)**  
**GRA (g/cm²)**  
**Sequence**  
**Lithology**  
**Primary mineralogy (%)**  
**Olivine**  
**Plagioclase**  
**Clinopyroxene**  
**Orthopyroxene**  
**Amphibole**  
**Spinel**  
**Sulfide**  
**Degree of deformation**  
**Fracture/ Vein density (per meter)**  
**Alteration intensity**  
**Magnetic contact Brittle**  
**Crystal plastic Veins**  
**Voins**  
**Dip**  
**Description**
<table>
<thead>
<tr>
<th>Sequence</th>
<th>Unit/Subunit</th>
<th>Rock Name</th>
<th>Contact</th>
<th>Texture</th>
<th>Igneous Summary</th>
<th>Alteration</th>
<th>Veins</th>
<th>Structure</th>
<th>Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Fabric intensity</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>15e</td>
<td>Dunite</td>
<td>Continuous</td>
<td></td>
<td>serpentinized dunite, crosscutted by gabbroic and pyroxenitic dikes, partially oxidized, weakly fractured</td>
<td>serpentinized</td>
<td>green, white veins, frankestein texture</td>
<td>Brittle-Veins-Veins-Crystal plastic</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>15e</td>
<td>Gabbro</td>
<td>Intrusive</td>
<td></td>
<td>fractured and filled by serpentinization</td>
<td>highly altered</td>
<td>green veins</td>
<td>Brittle-Veins-Crystal plastic</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Hole BA4A-27Z Section 4, Top of Section 65.00 (m CCD)
### Hole BA4A-28Z Section 2, Top of Section 66.58 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>CT image</th>
<th>Magnetic susceptibility</th>
<th>MSCL-W (SI x 10^-5)</th>
<th>MSP (g/cm^2)</th>
<th>GRA</th>
<th>Sequence</th>
<th>Unite/Subunit</th>
<th>Lithology</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnetic contact</th>
<th>Brittle Crystal plastic</th>
<th>Veins</th>
<th>Structures</th>
<th>Alteration halos</th>
<th>Vein crosscutting</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>66.61</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>66.61</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>66.68</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>66.68</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>66.68</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>66.68</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>66.68</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>66.68</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>66.68</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SEQUENCE 1**: 15g
**ROCK NAME**: Dunite
**CONTACT**: Continuous

**IGNEOUS SUMMARY**: Serpentinized dunite, partially oxidized, weakly fractured, crosscut by gabbroic and pyroxenitic dikes.

**ALTERATION**: Serpentinized

**VEINS**: Green, white, and few black veins

**STRUCTURE**: Brittle. Network of anastomosing fault surfaces mostly with mineral fill. Vein density: 5-15 per 10 cm.
### Hole BA4A-28Z Section 3, Top of Section 67.43 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Lithology</th>
<th>Degree of deformation</th>
<th>Magmatic contact</th>
<th>Structures</th>
<th>Alteration intensity</th>
<th>Vein density (per meter)</th>
<th>Alteration</th>
<th>Vein density (per meter)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>67.45</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>67.48</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>67.50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>67.53</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>67.55</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>67.58</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>67.60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>67.63</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>67.65</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>67.68</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>67.70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>67.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>67.75</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>67.78</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>67.80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>67.83</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>67.85</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>67.88</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>67.90</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>67.93</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>67.95</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>67.98</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>68.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>68.03</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>68.05</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>68.08</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>68.10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>68.12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>68.15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>68.18</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>68.20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>68.23</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>68.25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>68.28</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>68.30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>68.33</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>68.35</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Description**

- **SEQUENCE 1**: 15g
- **ROCK NAME**: Dunite
- **CONTACT**: Continuous
- **KIND OF SUMMARY**: serpentinitized dunite, partially oxidized, weakly fractured, crosscutted by gabbroic and pyroxenitic dikes
- **ALTERATION**: serpentinized
- **VEINS**: green, white, and few black veins
- **STRUCTURE**: Brittle-Veins- conjugate vein sets are common
- **Magmatic contact**: Brittle
- **Crystal plastic**: Veins
- **Voids**: Ductile
- **Vein crosscutting**: Brittle

**Alteration intensity**

- Fresh (<3%)
- Slight (3–10%)
- Moderate (11–30%)
- Substantial (31–60%)
- Extensive (61–90%)
- Complete (≥90%)

**Vein density (per meter)**

- 0
- 1 per 10 cm
- 3-5 per 10 cm
- >20 per 10 cm
- 5-15 per 10 cm
- 15-20 per 10 cm
### Hole BAA4-28Z Section 4, Top of Section 68.35 (m CCD)

<table>
<thead>
<tr>
<th>Sequence</th>
<th>Unit/Subunit</th>
<th>Rock Name</th>
<th>Contact</th>
<th>Texture</th>
<th>Igneous Summary</th>
<th>Alteration</th>
<th>Veins</th>
<th>Structure</th>
<th>Degree of Deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip of Magnetic contact</th>
<th>Brittle Veins</th>
<th>Crystal plastic</th>
<th>Veins</th>
<th>Fabrics</th>
<th>Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>15g</td>
<td>Dunite</td>
<td>Continuous</td>
<td>Igneous</td>
<td>Serpentinized dunite, partially oxidized, weakly fractured, crosscutted by gabbroic and pyroxenitic dikes</td>
<td>Serpentinized</td>
<td>Green, white, and few black veins</td>
<td>Brittle</td>
<td>Veins- conjugate vein sets are common</td>
<td>Veins: incongruent vein sets are common</td>
<td>Fabric intensity: 5</td>
<td>Vein density: 1 per 10 cm</td>
<td>0</td>
<td>45</td>
<td>90</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>15g</td>
<td>Clinopyroxenite</td>
<td>Intrusive</td>
<td>Equigranular</td>
<td>Offset</td>
<td>Highly altered</td>
<td>Thin green veins</td>
<td>Brittle</td>
<td>Veins- conjugate vein sets are common</td>
<td>Veins: incongruent vein sets are common</td>
<td>Fabric intensity: 3</td>
<td>Vein density: 1 per 10 cm</td>
<td>0</td>
<td>45</td>
<td>90</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Magnetic susceptibility (SI x 10^-5)

<table>
<thead>
<tr>
<th>GRA (g/cm³)</th>
<th>Magnetic susceptibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.146</td>
<td>10^-5</td>
</tr>
<tr>
<td>2.147</td>
<td>10^-5</td>
</tr>
<tr>
<td>2.148</td>
<td>10^-5</td>
</tr>
<tr>
<td>2.149</td>
<td>10^-5</td>
</tr>
</tbody>
</table>

### Core length (cm)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>68.39</td>
<td>10</td>
</tr>
<tr>
<td>68.49</td>
<td>10</td>
</tr>
<tr>
<td>68.59</td>
<td>10</td>
</tr>
<tr>
<td>68.69</td>
<td>10</td>
</tr>
</tbody>
</table>

### CT Image

- Sequence I: 15g
- Rock Name: Dunite
- Contact: Continuous
- Igneous Summary: Serpentinized dunite, partially oxidized, weakly fractured, cross-cutted by gabbroic and pyroxenitic dikes
- Alteration: Serpentinized
- Veins: Green, white, and few black veins
- Structure: Brittle
- Degree of deformation: Veins: conjugate vein sets are common
- Fracture/vein density: 1 per 10 cm
- Alteration intensity: Fabric intensity: 5
- Dip of Magnetic contact: 0
- Brittle Veins: Incongruent vein sets are common
- Crystal plastic: Vein density: 1 per 10 cm

### Lithology

- Primary mineralogy: Olivine, Plagioclase, Clinopyroxene, Orthopyroxene, Amphibole, Sulfide
- Grain size: 100, 300, 500, 700, 1000
- Discrete brittle features: None
- Magmatic Layering: None
- Foliation: None
- Fracture/ Vein density: None
- Alteration: None
- Fresh: None
- Undeformed: None
- Minor fracturing: None
- Moderate fracturing: None
- GS reduction and rotation: None
- Well-developed cataclasis: None
- Ultracataclastite: None
- Protogranular: None
- Porphyroclastic: None
- Strongly foliated: None
- Protomylonite: None
- Mylonite: None
- Ultramylonite: None
- Isotropic: None
- Weak: None
- Moderate: None
- Strong: None
- Fine grained: None
- Medium grained: None
- Coarse grained: None
- Pegmatitic: None
- Glassy: None
- Cryptocrystalline: None
- Microcrystalline: None

### Core Analysis

- Core length (cm)
- Depth (m CCD)
- Sequence
- Unit/Subunit
- Lithology
- Primary mineralogy
- Grain size
- Magmatic susceptibility (SI x 10^-5)
- GRA (g/cm³)
- Degree of deformation
- Fracture/ Vein density (per meter)
- Alteration intensity
- Dip of Magnetic contact
- Brittle Veins
- Crystal plastic
- Veins
- Fabrics
- Description
**Hole BA4A-29Z Section 1, Top of Section 68.70 (m CCD)**

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>CT image</th>
<th>Magnetic susceptibility</th>
<th>MSCL-W</th>
<th>MSP</th>
<th>GRA (g/cm³)</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnetic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
<th>Structures</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.00</td>
<td>0.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>68.73</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>68.83</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>68.93</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>69.03</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>69.13</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>69.23</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Hole BA4A-29Z Section 3, Top of Section 70.28 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>Primary mineralogy (%</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnatic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
<th>Structures</th>
<th>Abnormal habit</th>
<th>Vein crosscutting</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Sequence I:**

**Unit/Subunit:** 15g

**Rock Name:** Dolerite

**Contact:** Intrusive

**Texture:** Igneous

**Igneous Summary:** Serpentinized dunite, partially oxidized, weakly fractured, crosscutted by gabbroic and pyroxenitic dikes

**Alteration:** Serpentinized

**Veins:** Green, white, and few black veins

**Structure:** Brittle

**Description:**

- Crystal plastic
- Discrete brittle features
- Vein crosscutting
- Alteration halos
- Fault zones
- Degree of deformation
- Vein density
- Alteration intensity
- Dip
- Magnetic contact

**Fabric intensity**

- 5
- 4
- 3
- 2
- 1
- 0

**Vein density**

- 6 per 10 cm
- 5 per 10 cm
- 4 per 10 cm
- 3 per 10 cm
- 2 per 10 cm
- 1 per 10 cm
- 0 per 10 cm

**Grain size**

- 6
- 5
- 4
- 3
- 2
- 1
- 0

**Hole BA4A-29Z Section 3, Top of Section 70.28 (m CCD)**

**Core length (cm)**

- 100
- 50
- 25
- 10
- 5
- 2
- 1
- 0

**Degree of deformation**

- Undeformed
- Minor fracturing
- Moderate fracturing
- GS reduction and rotation
- Well-developed cataclasis
- Ultracataclastite

**Vein density**

- 5-15 per 10 cm
- 15-20 per 10 cm
- >20 per 10 cm

**Alteration intensity**

- Complete (≥90%)
- Extensive (61–90%)
- Substantial (31–60%)
- Moderate (11–30%)
- Slight (3–10%)
- Fresh (<3%)

**Textural summary:** Serpentinized dunite, partially oxidized, weakly fractured, crosscutted by gabbroic and pyroxenitic dikes

**Alteration:** Serpentinized

**Veins:** Green, white, and few black veins

**Structure:** Brittle

**Description:**

- Crystal plastic
- Discrete brittle features
- Vein crosscutting
- Alteration halos
- Fault zones
- Degree of deformation
- Vein density
- Alteration intensity
- Dip
- Magnetic contact

**Fabric intensity**

- 5
- 4
- 3
- 2
- 1
- 0

**Vein density**

- 6 per 10 cm
- 5 per 10 cm
- 4 per 10 cm
- 3 per 10 cm
- 2 per 10 cm
- 1 per 10 cm
- 0 per 10 cm

**Grain size**

- 6
- 5
- 4
- 3
- 2
- 1
- 0

**Hole BA4A-29Z Section 3, Top of Section 70.28 (m CCD)**

**Core length (cm)**

- 100
- 50
- 25
- 10
- 5
- 2
- 1
- 0
<table>
<thead>
<tr>
<th>Sequence</th>
<th>Unit/Subunit</th>
<th>Rock Name</th>
<th>Contact</th>
<th>Texture</th>
<th>IGNEOUS SUMMARY</th>
<th>Alteration</th>
<th>Veins</th>
<th>Structure</th>
<th>Degree of deformation</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>15g</td>
<td>Dunite</td>
<td>Continuous</td>
<td></td>
<td>serpentinized dunite, partially oxidized, weakly fractured, crosscutted by</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>gabbroic and pyroxenitic dikes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>15h</td>
<td>Olivine gabbro</td>
<td>Intrusive</td>
<td>Granular</td>
<td>fractured</td>
<td></td>
<td>white veins</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>15i</td>
<td>Dunite</td>
<td>Intrusive</td>
<td></td>
<td>serpentinized dunite, partially oxidized, weakly fractured, crosscutted by</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>gabbroic and pyroxenitic dikes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>15i</td>
<td>Clinopyroxenite</td>
<td>Intrusive</td>
<td>Equigranular</td>
<td>fractured and filled by serpentinization</td>
<td></td>
<td>green veins</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>Primary mineralogy</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnetic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>70.69</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>70.79</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>70.89</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>70.99</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>70.99</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>71.09</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>71.09</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>71.19</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>71.19</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>71.29</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>71.29</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>71.39</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>Primary mineralogy</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnetic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Description**

- **SEQUENCE:** 15g
- **ROCK NAME:** Dunite
- **CONTACT:** Continuous
- **TEXTURE:** 
- **IGNEOUS SUMMARY:** serpentinized dunite, partially oxidized, weakly fractured, crosscutted by gabbroic and pyroxenitic dikes
- **ALTERATION:** serpentinized
- **VEINS:** green, white, and few black veins
- **STRUCTURE:** Brittle
- **Degree of deformation:**
  - Fracture density (per meter)
  - Vein density (per meter)
  - Grain size
  - Magnetic susceptibility

**Sequence:**

- **SEQUENCE:** 15h
- **ROCK NAME:** Olivine gabbro
- **CONTACT:** Intrusive
- **TEXTURE:** Granular
- **IGNEOUS SUMMARY:** fractured
- **ALTERATION:** highly altered
- **VEINS:** white veins
- **STRUCTURE:** Brittle

**Sequence:**

- **SEQUENCE:** 15i
- **ROCK NAME:** Dunite
- **CONTACT:** Intrusive
- **TEXTURE:** serpentinized dunite, partially oxidized, weakly fractured, crosscutted by gabbroic and pyroxenitic dikes
- **ALTERATION:** serpentinized
- **VEINS:** green, white, and few black veins
- **STRUCTURE:** Brittle

**Sequence:**

- **SEQUENCE:** 15i
- **ROCK NAME:** Clinopyroxenite
- **CONTACT:** Intrusive
- **TEXTURE:** Equigranular
- **IGNEOUS SUMMARY:** fractured and filled by serpentinization
- **ALTERATION:** highly altered
- **VEINS:** green veins
- **STRUCTURE:** Brittle

**Sequence:**

- **SEQUENCE:** 15i
- **ROCK NAME:** Dunite
- **CONTACT:** Intrusive
- **TEXTURE:** serpentinized dunite, partially oxidized, weakly fractured, crosscutted by gabbroic and pyroxenitic dikes
- **ALTERATION:** serpentinized
- **VEINS:** green, white, and few black veins
- **STRUCTURE:** Brittle

**Sequence:**

- **SEQUENCE:** 15i
- **ROCK NAME:** Clinopyroxenite
- **CONTACT:** Intrusive
- **TEXTURE:** Equigranular
- **IGNEOUS SUMMARY:** fractured and filled by serpentinization
- **ALTERATION:** highly altered
- **VEINS:** green veins
- **STRUCTURE:** Brittle
Hole BA4A-30Z Section 1, Top of Section 71.70 (m CCD)

SEQUENCE: 1G
ROCK NAME: Dunite
CONTACT: Continuous

TEXTURE:
IGNEOUS
SUMMARY: serpentinized dunite, partially oxidized, weakly fractured, crosscutted by gabbroic and pyroxenitic dikes

ALTERATION: serpentinized

VEINS: green, white, and few black veins

STRUCTURE: Brittle-

Veins- conjugate vein sets are common
Crystal plastic-

Fabric intensity

Vein density (per meter)

6
5
4
3
2
1
0

Fracture/ Vein density (per meter)

100
10
1
0

Discrete brittle features

Degree of deformation

Vein crosscutting

Alteration intensity

90
45
0

Description

Fault zones

Stained image

Core length (cm)

Sequence

Core
length (cm)

Depth (m CCD)

MSCL-W

MSP

(μl x 10^-5)

GRA

(g/cm³)

Primary mineralogy (%)

Olivine
Plagioclase
Clinopyroxene
Orthopyroxene
Amphibole
Spinel
Sulfide

Granulite
Porphyroclastic
Strongly foliated
Protomylonite
Mylonite
Ultramylonite
Isotropic
Weak
Moderate
Strong

Fracture/ Vein density

0–10
10–30
30–50
50–70
70–90
>100

Degree of deformation

Undeformed
Minor fracturing
Moderate fracturing
GS reduction and rotation
Well-developed cataclasis
Ultracataclastite

Alteration halos

Fresh (<3%)
Slight (3–10%)
Moderate (11–30%)
Substantial (31–60%)
Extensive (61–90%)
Complete (>90%)

Magmatic contact

Brittle
Crystal plastic

Veins

Crystal plastic

Veins

CT image

Sulfide

Amphibole

Spinel

Orthopyroxene

Clinopyroxene

Plagioclase

Olivine

Foliation

3
2
1
0

Layering

3
2
1
0

Magmatic

Protogranular

Porphyroclastic

Strongly foliated

Ultramylonite

Mylonite

Protomylonite

Isotropic

Weak

Moderate

Strong

Fine grained (0.2–1 mm)
Medium grained (1–5 mm)
Coarse grained (5–30 mm)
Pegmatitic (>30 mm)

Glassy

Cryptocrystalline (<0.1 mm)
Microcrystalline (0.1–0.2 mm)

GRA (g/cm³)

2.74
2.69
2.64

0-10
10-30
30-50
50-70
70-90
>100

3-5 per 10 cm
15-20 per 10 cm
5-15 per 10 cm
>20 per 10 cm
1-3 per 10 cm
5-10 per 10 cm

10
30
50
70
90
100

0
45
90

4
3
2
1
0

Vein density

Vein crosscutting

Alteration intensity

Dip

Magnetic

contact

Brittle

Crystal plastic

Veins
### Table: Hole BA4A-31Z Section 3, Top of Section 76.20 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Scanned image</th>
<th>Magnetic susceptibility</th>
<th>MSCL-W MSP</th>
<th>GRA (g/cm²)</th>
<th>Sequence</th>
<th>Lithology</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
</tr>
</thead>
<tbody>
<tr>
<td>76.20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>76.30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>76.40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>76.50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>76.60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>76.70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>76.80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>76.90</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>77.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>77.10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Description**: The image shows a detailed geological section with various geological features marked. The section includes various lithologies, primary mineralogy, alteration intensity, and other geological characteristics, which are recorded in the table format above. The section is from Hole BA4A-31Z, Top of Section 76.20 (m CCD).
<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>MSCL-W</th>
<th>MSP</th>
<th>GRA (g/cm³)</th>
<th>GR (°)</th>
<th>Fabric intensity</th>
<th>Vein density (per meter)</th>
<th>Degree of deformation</th>
<th>Magmatic Layering</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magmatic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
<th>Structures</th>
</tr>
</thead>
<tbody>
<tr>
<td>77.17</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>77.27</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>77.37</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>77.47</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>77.57</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>77.67</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>77.77</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>77.87</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sequence</td>
<td>Unit/Subunit</td>
<td>Rock Name</td>
<td>Contact</td>
<td>Texture</td>
<td>Igneous Summary</td>
<td>Alteration</td>
<td>Veins</td>
<td>Structure</td>
<td>Alteration Intensity</td>
<td>Vein Density (per meter)</td>
<td>Degree of Deformation</td>
<td>Fabric Intensity</td>
<td>Fracture/Vein Density (per meter)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------</td>
<td>--------------</td>
<td>-----------</td>
<td>---------</td>
<td>---------</td>
<td>-----------------</td>
<td>------------</td>
<td>-------</td>
<td>-----------</td>
<td>----------------------</td>
<td>------------------------</td>
<td>----------------------</td>
<td>----------------</td>
<td>----------------------------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>16d</td>
<td>dunite</td>
<td>intrusive</td>
<td>Granular</td>
<td>densely veined black dunite</td>
<td>serpentinised with paler haloes around the veins</td>
<td>cut by a variety of serpentine veins</td>
<td>Brittle- Zone of cohesive possibly magmatic derived brecciation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>17a</td>
<td>wehrlite</td>
<td>intrusive</td>
<td>Granular</td>
<td>altered fine-grained wehrlite dike</td>
<td>altered and pseudomorphed</td>
<td>cut by green veins</td>
<td>Brittle- Crystal plastic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>17a</td>
<td>dunite</td>
<td>intrusive</td>
<td>Granular</td>
<td>altered fine-grained wehrlite dike</td>
<td>altered and pseudomorphed</td>
<td>cut by green veins</td>
<td>Brittle- Crystal plastic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Hole BA4A-32Z Section 3, Top of Section 79.37 (m CCD)

| Depth (m CCD) | Core length (cm) | Shipboard samples | Stained image | Magnetic susceptibility | MSCL-W MSP (SI x 10^-5) | GRA (g/cm²) | Sequence | Lithology | Primary mineralogy (%) | Grain size (µm) | Degree of deformation | Fabric intensity | Discrete brittle features | Fracture/ Vein density (per meter) | Alteration intensity | Alteration halos | Vein density (per meter) | Structures | Vein crosscutting | Alteration | Dip | Magnetic contact | Brittle | Crystal plastic | Veins | Apparent offset | Description |
|--------------|------------------|-------------------|---------------|------------------------|---------------------------|----------------|---------|----------|--------------|----------------|----------------------|----------------|------------------------|-----------------|------------------------|--------------------------|----------------|--------------|-------------------|----------|------------------|----------------|----------------|----------------|
| 79.40        | 0                |                   |               |                        |                           |                 |         |         |              |                |                      |                |                        |                 |                        |                          |                |              |                   |         |                 |                |                | | |
| 79.50        | 10               |                   |               |                        |                           |                 |         |         |              |                |                      |                |                        |                 |                        |                          |                |              |                   |         |                 |                |                | | |
| 79.60        | 20               |                   |               |                        |                           |                 |         |         |              |                |                      |                |                        |                 |                        |                          |                |              |                   |         |                 |                |                | | |
| 79.70        | 30               |                   |               |                        |                           |                 |         |         |              |                |                      |                |                        |                 |                        |                          |                |              |                   |         |                 |                |                | | |
| 79.80        | 40               |                   |               |                        |                           |                 |         |         |              |                |                      |                |                        |                 |                        |                          |                |              |                   |         |                 |                |                | | |
| 79.90        | 50               |                   |               |                        |                           |                 |         |         |              |                |                      |                |                        |                 |                        |                          |                |              |                   |         |                 |                |                | | |
| 80.00        | 60               |                   |               |                        |                           |                 |         |         |              |                |                      |                |                        |                 |                        |                          |                |              |                   |         |                 |                |                | | |
| 80.10        | 70               |                   |               |                        |                           |                 |         |         |              |                |                      |                |                        |                 |                        |                          |                |              |                   |         |                 |                |                | | |
| 80.20        | 80               |                   |               |                        |                           |                 |         |         |              |                |                      |                |                        |                 |                        |                          |                |              |                   |         |                 |                |                | | |
| 80.30        | 90               |                   |               |                        |                           |                 |         |         |              |                |                      |                |                        |                 |                        |                          |                |              |                   |         |                 |                |                | | |

**Sequence:** 17a

**Rock Name:** dunite

**Contact:** continuous

**Texture:** igneous

**Summary:** densely veined black dunite

**Alteration:** serpentinised with paler haloes around the veins

**Veins:** cut by a variety of serpentine veins

**Structure:** Brittle-Veins-Crystal plastic-

---

**Fabric intensity**

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Undeformed</td>
</tr>
<tr>
<td>1</td>
<td>Minor fracturing</td>
</tr>
<tr>
<td>2</td>
<td>Moderate fracturing</td>
</tr>
<tr>
<td>3</td>
<td>Well-developed cataclasis</td>
</tr>
<tr>
<td>4</td>
<td>Ultracataclastite</td>
</tr>
</tbody>
</table>

**Degree of deformation**

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Undeformed</td>
</tr>
<tr>
<td>1</td>
<td>Minor fracturing</td>
</tr>
<tr>
<td>2</td>
<td>Moderate fracturing</td>
</tr>
<tr>
<td>3</td>
<td>GS reduction and rotation</td>
</tr>
<tr>
<td>4</td>
<td>Well-developed cataclasis</td>
</tr>
<tr>
<td>5</td>
<td>Ultracataclastite</td>
</tr>
</tbody>
</table>

**Discrete brittle features**

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Undeformed</td>
</tr>
<tr>
<td>1</td>
<td>Minor fracturing</td>
</tr>
<tr>
<td>2</td>
<td>Moderate fracturing</td>
</tr>
<tr>
<td>3</td>
<td>GS reduction and rotation</td>
</tr>
<tr>
<td>4</td>
<td>Well-developed cataclasis</td>
</tr>
<tr>
<td>5</td>
<td>Ultracataclastite</td>
</tr>
</tbody>
</table>

**Fracture/ Vein density (per meter)**

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Undeformed</td>
</tr>
<tr>
<td>1</td>
<td>Minor fracturing</td>
</tr>
<tr>
<td>2</td>
<td>Moderate fracturing</td>
</tr>
<tr>
<td>3</td>
<td>GS reduction and rotation</td>
</tr>
<tr>
<td>4</td>
<td>Well-developed cataclasis</td>
</tr>
<tr>
<td>5</td>
<td>Ultracataclastite</td>
</tr>
</tbody>
</table>

**Alteration intensity**

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Unaltered</td>
</tr>
<tr>
<td>1</td>
<td>Slight alteration</td>
</tr>
<tr>
<td>2</td>
<td>Moderate alteration</td>
</tr>
<tr>
<td>3</td>
<td>Substantial alteration</td>
</tr>
<tr>
<td>4</td>
<td>Extensive alteration</td>
</tr>
<tr>
<td>5</td>
<td>Complete alteration</td>
</tr>
</tbody>
</table>

**Vein density (per meter)**

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Undeformed</td>
</tr>
<tr>
<td>1</td>
<td>Minor fracturing</td>
</tr>
<tr>
<td>2</td>
<td>Moderate fracturing</td>
</tr>
<tr>
<td>3</td>
<td>GS reduction and rotation</td>
</tr>
<tr>
<td>4</td>
<td>Well-developed cataclasis</td>
</tr>
<tr>
<td>5</td>
<td>Ultracataclastite</td>
</tr>
</tbody>
</table>

**Sequence:** 17a

**Rock Name:** wehrlite

**Contact:** intrusive

**Texture:** granular

**Summary:** densely veined wehrlite

**Alteration:** altered and pseudomorphed

**Veins:** 50% obscured by veins up to 3 cm thick

**Structure:** Brittle - Zone of cohesive possibly magmatic derived brecciation

---

**Measurements**

- **Vein density (per meter)**
  - 0: Undeformed
  - 1: 0–10 per 10 cm
  - 2: 10–30 per 10 cm
  - 3: 30–50 per 10 cm
  - 4: 50–70 per 10 cm
  - 5: 70–90 per 10 cm
  - 6: >90 per 10 cm

- **Grain size**
  - 0: Undeformed
  - 1: Fine grained (0.2–1 mm)
  - 2: Medium grained (1–5 mm)
  - 3: Coarse grained (5–30 mm)
  - 4: Pegmatitic (>30 mm)
  - 5: Glassy
  - 6: Cryptocrystalline (<0.1 mm)
  - 7: Microcrystalline (0.1–0.2 mm)

- **Density (g/cm³)**
  - 0: Undeformed
  - 1: 2.4
  - 2: 1.4
  - 3: 0.4
  - 4: 0.2

**Structures**

- **Fault zones**
  - Discrete brittle features
  - Brittle-Magmatic contact

**Other Observations**

- **Magnetic susceptibility**
  - MSCL-W MSP (SI x 10^-5)

**Sample Information**

- **Sample number**
  - BA4A-32Z Section 3, Top of Section 79.37 (m CCD)

**Mineralogy**

- **Primary mineralogy**
  - Olivine
  - Plagioclase
  - Clinopyroxene
  - Orthopyroxene
  - Amphibole
  - Spinel
  - Sulfide

---

**Additional Observations**

- **Apparent offset**
  - 0: Undeformed
  - 1: Minor fracturing
  - 2: Moderate fracturing
  - 3: GS reduction and rotation
  - 4: Well-developed cataclasis
  - 5: Ultracataclastite

- **GS reduction and rotation**
  - Protogranular
  - Porphyroclastic
  - Strongly foliated
  - Protomylonite
  - Mylonite
  - Ultramylonite

- **Degree of deformation**
  - Undeformed
  - Minor fracturing
  - Moderate fracturing
  - GS reduction and rotation
  - Well-developed cataclasis
  - Ultracataclastite

- **Alteration intensity**
  - Fresh (<3%)
  - Slight (3–10%)
  - Moderate (11–30%)
  - Substantial (31–60%)
  - Extensive (61–90%)
  - Complete (≥90%)

---

**Notes**

- The sequence is 17a, indicating a specific unit or subunit.

---

**Visual Observations**

- **CT image**
  - Images of the samples with various mineralogical and textural features.

---

**Appendix**

- **Magnetic susceptibility measurements**
  - MSCL-W MSP (SI x 10^-5)

- **Dip**
  - Magnetic contact
  - Brittle
  - Crystal plastic
  - Veins
<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>80.33</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>100</td>
<td>0</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>80.43</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>80</td>
<td>0</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>80.53</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>60</td>
<td>0</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>80.63</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>40</td>
<td>0</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>80.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>20</td>
<td>0</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>80.83</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td>0</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Sequence**

- 1

**Unit/subunit**

- 17a

**Lithology**

- Magmatic
- Layering
- Foliation

**Discrete brittle features**

- 5

**Vein crosscutting**

- 4

**Alteration intensity**

- Fresh (<3%)
- Slight (3–10%)
- Moderate (11–30%)
- Substantial (31–60%)
- Extensive (61–90%)
- Complete (>90%)

**Magmatic contact**

- Dip

- Structure

- Fracture/ Vein density (per meter)

- 0–10
- 10–30
- 30–50
- 50–70
- 70–90
- >100

**Vein density (per meter)**

- 0–10
- 10–30
- 30–50
- 50–70
- 70–90
- >100

**Alteration intensity**

- 0–10
- 10–30
- 30–50
- 50–70
- 70–90
- >100

**Dip**

- Magnetic contact
- Brittle
- Crystal plastic
- Veins
Hole BA4A-33Z Section 1, Top of Section 80.70 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Lithology</th>
<th>Primary mineralogy (%</th>
<th>Degree of deformation</th>
<th>Alteration intensity</th>
</tr>
</thead>
<tbody>
<tr>
<td>80.70</td>
<td>0</td>
<td>Dunite</td>
<td>Olivine, Clinopyroxene, Orthopyroxene</td>
<td>Brittle-Veins</td>
<td>Fresh (&lt;3%)</td>
</tr>
<tr>
<td>80.80</td>
<td>10</td>
<td>Harzburgite</td>
<td>Magnetic Contact, Garnet</td>
<td>Brittle-Veins</td>
<td>Slight (3–10%)</td>
</tr>
<tr>
<td>80.90</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>81.00</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>81.10</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>81.20</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>81.30</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>81.40</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>81.50</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>81.60</td>
<td>90</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TEXTURE**: Grains are moderately elongated.
### Sequence I: 18a
**Rock Name:** Harzburgite

- **Contact:** Continuous
- **Texture:** Igneous Summary: Serpentised harzburgite with thin gabbroid veins
- **Alteration:** Serpentinised
- **Veins:** Cut by a variety of serpentine veins

### Sequence I: 18b
**Rock Name:** Dunite

- **Contact:** Modal
- **Texture:** Igneous Summary: Serpentinised dunite with thin gabbroid veins
- **Alteration:** Serpentinised
- **Veins:** Cut by a variety of serpentine veins

### Sequence I: 18b
**Rock Name:** Gabbro

- **Contact:** Intrusive
- **Texture:** Igneous Summary: Replaced gabbro vein
- **Alteration:** Altered and pseudomorphed
- **Veins:** Composite white/grey veins and pale green veins to 4 mm emanating from dyke

| Sequence | Unit/Subunit | Lithology | Primary Mineralogy (%) | Grain Size | Degree of deformation | Fracture/ Vein density (per meter) | Alteration intensity | Dip
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>18a</td>
<td>18a</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Magnetic susceptibility:**
  - MSCL-W MSP: (SI x 10^-5)

- **Vein density (per meter):**
- **Vein crosscutting:**
- **Degree of alteration:**
  - Fresh (<3%)
  - Slight (3–10%)
  - Moderate (11–30%)
  - Substantial (31–60%)
  - Extensive (61–90%)
  - Complete (>90%)

- **Lithology:**
  - **Primary mineralogy:**
    - Olivine
    - Plagioclase
    - Clinopyroxene
    - Orthopyroxene
    - Amphibole
    - Sulfide

- **Grain size:**
  - < 30
  - 30 – 50
  - 50 – 100
  - 100 – 150
  - 150 – 200

- **Contact:**
  - Continuous
  - Modal
  - Intrusive

- **Texture:**
  - Igneous Summary:

- **Fabric intensity:**
  - 0
  - 1
  - 2
  - 3
  - 4

- **Discrete brittle features:**

- **Fault zones:**

- **Structures:**

- **Apparent offset:**

- **Alteration halos:**

- **Degree of deformation:**
  - Undeformed
  - Minor fracturing
  - Moderate fracturing
  - GS reduction and rotation
  - Well-developed cataclasis
  - Ultracataclastite

- **Protodiorite:**
  - Protogranular
  - Porphyroclastic
  - Strongly foliated
  - Protomylonite
  - Mylonite
  - Ultramylonite

- **Protomylonite:**
  - Isotropic
  - Weak
  - Moderate
  - Strong

- **Porphyroclastic:**
  - Fine grained (0.2–1 mm)
  - Medium grained (1–5 mm)
  - Coarse grained (5–30 mm)
  - Pegmatitic (>30 mm)

- **Retrograde:**
  - Glassy
  - Cryptocrystalline (<0.1 mm)
  - Microcrystalline (0.1–0.2 mm)

- **Grain size:**
  - < 30
  - 30 – 50
  - 50 – 100
  - 100 – 150
  - 150 – 200

- **Hole:** BA4A-33Z

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>CT image</th>
<th>Magnetic susceptibility</th>
<th>Primary mineralogy</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip Magnatic contact brittle</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Voins</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>81.65</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>81.69</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>81.74</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>81.77</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>81.80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>81.83</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>81.86</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>81.89</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>81.92</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>81.95</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>82.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>82.03</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>82.06</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>82.09</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>82.12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>82.15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>82.18</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>82.21</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>82.24</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**SEQUENCE:** 1
**UNIT/SUBUNIT:** 18d
**ROCK NAME:** dunite
**CONTACT:** continuous
**TEXTURE:**
**IGNEOUS SUMMARY:** serpentinised dunite hosting diffuse gabbroid veins
**ALTERATION:** serpentinised
**VEINS:** cut by a variety of serpentine veins, some fine black and white veins
**STRUCTURE:** Brittle-

**SEQUENCE:** 1
**UNIT/SUBUNIT:** 18d
**ROCK NAME:** Clinopyroxenite
**CONTACT:** Intrusive
**TEXTURE:** granular
**IGNEOUS SUMMARY:** highly altered clinopyroxenite dike
**ALTERATION:** highly altered
**VEINS:** network of green veins
**STRUCTURE:** Brittle-

---

### Fabric intensity

<table>
<thead>
<tr>
<th>Core length (cm)</th>
<th>0</th>
<th>10</th>
<th>20</th>
<th>30</th>
<th>40</th>
<th>50</th>
<th>60</th>
<th>70</th>
<th>80</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRA (g/cm²)</td>
<td>0.8</td>
<td>1.3</td>
<td>2.3</td>
<td>3.3</td>
<td>4.3</td>
<td>5.3</td>
<td>6.3</td>
<td>7.3</td>
<td>8.3</td>
</tr>
</tbody>
</table>
| Magnetic
susceptibility | MSCL-W MSP (SI x 10⁻⁵) |
|                  | 84.43 | 84.33 | 84.23 | 84.13 | 84.03 | 83.93 | 83.83 | 83.73 | 83.63 |
|                  | 0     | 10   | 20   | 30   | 40   | 50   | 60   | 70   | 80   |

### Vein density (per meter)

<table>
<thead>
<tr>
<th>Core length (cm)</th>
<th>0</th>
<th>10</th>
<th>20</th>
<th>30</th>
<th>40</th>
<th>50</th>
<th>60</th>
<th>70</th>
<th>80</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRA (g/cm²)</td>
<td>0.8</td>
<td>1.3</td>
<td>2.3</td>
<td>3.3</td>
<td>4.3</td>
<td>5.3</td>
<td>6.3</td>
<td>7.3</td>
<td>8.3</td>
</tr>
</tbody>
</table>
| Magnetic
susceptibility | MSCL-W MSP (SI x 10⁻⁵) |
|                  | 84.43 | 84.33 | 84.23 | 84.13 | 84.03 | 83.93 | 83.83 | 83.73 | 83.63 |
|                  | 0     | 10   | 20   | 30   | 40   | 50   | 60   | 70   | 80   |

### Grain size

<table>
<thead>
<tr>
<th>Core length (cm)</th>
<th>0</th>
<th>10</th>
<th>20</th>
<th>30</th>
<th>40</th>
<th>50</th>
<th>60</th>
<th>70</th>
<th>80</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRA (g/cm²)</td>
<td>0.8</td>
<td>1.3</td>
<td>2.3</td>
<td>3.3</td>
<td>4.3</td>
<td>5.3</td>
<td>6.3</td>
<td>7.3</td>
<td>8.3</td>
</tr>
</tbody>
</table>
| Magnetic
susceptibility | MSCL-W MSP (SI x 10⁻⁵) |
|                  | 84.43 | 84.33 | 84.23 | 84.13 | 84.03 | 83.93 | 83.83 | 83.73 | 83.63 |
|                  | 0     | 10   | 20   | 30   | 40   | 50   | 60   | 70   | 80   |

### Degree of deformation

<table>
<thead>
<tr>
<th>Core length (cm)</th>
<th>0</th>
<th>10</th>
<th>20</th>
<th>30</th>
<th>40</th>
<th>50</th>
<th>60</th>
<th>70</th>
<th>80</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRA (g/cm²)</td>
<td>0.8</td>
<td>1.3</td>
<td>2.3</td>
<td>3.3</td>
<td>4.3</td>
<td>5.3</td>
<td>6.3</td>
<td>7.3</td>
<td>8.3</td>
</tr>
</tbody>
</table>
| Magnetic
susceptibility | MSCL-W MSP (SI x 10⁻⁵) |
<p>|                  | 84.43 | 84.33 | 84.23 | 84.13 | 84.03 | 83.93 | 83.83 | 83.73 | 83.63 |
|                  | 0     | 10   | 20   | 30   | 40   | 50   | 60   | 70   | 80   |</p>
<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>CT image</th>
<th>Magnetic susceptibility</th>
<th>GRA (g/cm²)</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnetic contact</th>
<th>Brittle</th>
<th>Brittle</th>
<th>Veins</th>
<th>Structures</th>
<th>Alteration halos</th>
<th>Vein density (per meter)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>85.45</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>85.50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>85.55</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>85.60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>85.65</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>85.70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>85.75</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>85.80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>85.85</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>85.90</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>85.95</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>86.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>86.05</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>86.10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>86.15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depth (m CCD)</td>
<td>Core length (cm)</td>
<td>Stained image</td>
<td>Magnetic susceptibility</td>
<td>Primary mineralogy</td>
<td>Alteration intensity</td>
<td>Degree of deformation</td>
<td>Description</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------</td>
<td>------------------</td>
<td>---------------</td>
<td>-------------------------</td>
<td>-------------------</td>
<td>---------------------</td>
<td>----------------------</td>
<td>-------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>86.17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>86.27</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>86.37</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>86.47</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>86.57</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>86.67</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>86.77</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Lithology:**
- **Primary mineralogy:**
  - Olivine
  - Plagioclase
  - Amphibole
  - Orthopyroxene
  - Sulfide
- **Grain size:**
  - Finer than 0.2 mm
- **Degree of deformation:**
  - Undeformed
- **Alteration:**
  - Fresh (<3%)
  - Slight (3–10%)
  - Moderate (11–30%)
  - Substantial (31–60%)
  - Extensive (61–90%)
  - Complete (>90%)

**Structures:**
- **Vein crosscutting**
- **Alteration halos**

**Magnetic contact**
- Brittle
- Crystal plastic

**Veins:**
- **Sulfide**
- **Amphibole**
- **Spinel**
- **Orthopyroxene**
- **Clinopyroxene**
- **Plagioclase**
- **Olivine**

**Magmatic Layering**
- Discrete brittle features

**Vein density (per meter):**
- 0–10
- 10–30
- 30–50
- 50–70
- 70–90
- 90–100
- >100

**Alteration intensity**
- 0
- 45
- 90

**Contact:**
- Intrusive

**Texture:**
- Protodolerite
- Protogranular
- Porphyroclastic
- Strongly foliated
- Protomylonite
- Mylonite
- Ultramylonite
- Isotropic

**Dip:**
- 0–45°
- 45–90°

**Description:**
- Sequence: I
- Unit/Subunit: 18d
- Rock Name: dunite
- Contact: continuous
- Igneous Summary: serpentinised dunite hosting diffuse gabbroid veins
- Alteration: serpentinised
- Veins: cut by a variety of serpentine veins, some fine black and white veins
- Structure: Brittle- Zone of cohesive possibly magmatic derived brecciation

**Fabric intensity:**
- 5
- 4
- 3
- 2
- 1
- 0

**Vein density:**
- 1 per 10 cm
- 3-5 per 10 cm
- >20 per 10 cm
- 5-15 per 10 cm
- 15-20 per 10 cm

**Magnetic susceptibility (SI x 10^-5):**
- 1000
- 100
- 10
- 1
- 0

**Sulfide density (per meter):**
- 0
- 1
- 3
- 5
- 10
- 15
- 20
- 30
- 50
- 70
- 90
- 100

**Magmatic contact:**
- Brittle
- Crystal plastic

**Voids:**
- 0
- 45
- 90

**Fresh (<3%):**
- Undeformed
- Minor fracturing
- Moderate fracturing
- GS reduction and rotation
- Well-developed cataclasis

**Moderate (3–10%):**
- Ultracataclastite

**Substantial (11–30%):**
- Protogranular
- Porphyroclastic
- Strongly foliated
- Protomylonite
- Mylonite
- Ultramylonite

**Extensive (31–60%):**
- Isotropic

**Complete (>90%):**
- Weak
- Moderate
- Strong
### Hole BA4A-35Z Section 3, Top of Section 88.20 (m CCD)

| Depth (m CCD) | Core length (cm) | Shipboard samples | Stained image | Magnetic susceptibility | MSCL-W MSP (SI x 10^-5) | GRA (g/cm²) | Density | Core length | Fabric intensity | Unit/subunit | Lithology | Primary mineralogy (%) | Degree of deformation | Fracture/ Vein density (per meter) | Alteration intensity | Alteration halos |
|--------------|------------------|-------------------|---------------|-----------------------|--------------------------|-------------------------|---------|------------|-------------|---------------------|--------------|-----------|------------------------|-----------------------|-----------------------------|---------------------|----------------| |
| 88.20        | 0                |                   |               |                       |                          |                      |         |            |             |                     |              |           |                        |                       |                             |                     |                | |
| 88.30        | 10               |                   |               |                       |                          |                      |         |            |             |                     |              |           |                        |                       |                             |                     |                | |
| 88.40        | 20               |                   |               |                       |                          |                      |         |            |             |                     |              |           |                        |                       |                             |                     |                | |
| 88.50        | 30               |                   |               |                       |                          |                      |         |            |             |                     |              |           |                        |                       |                             |                     |                | |
| 88.60        | 40               |                   |               |                       |                          |                      |         |            |             |                     |              |           |                        |                       |                             |                     |                | |
| 88.70        | 50               |                   |               |                       |                          |                      |         |            |             |                     |              |           |                        |                       |                             |                     |                | |
| 88.80        | 60               |                   |               |                       |                          |                      |         |            |             |                     |              |           |                        |                       |                             |                     |                | |

**Description**

- **SEQUENCE I**: 18d
- **UNIT/SUBUNIT**: 18d
- **CONTACT**: continuous
- **TEXTURE**: igneous
- **IGNEOUS SUMMARY**: Serpentinised dunite hosting diffuse gabbroid veins
- **ALTERATION**: Serpentinised
- **VEINS**: Cut by a variety of serpentine veins, some fine black and white veins
- **STRUCTURE**: Brittle-Veins-Crystal plastic

---

**Notes**

- **Magnetic contact**
- **Brittle**
- **Crystal plastic**
- **Veins**

---

**Textual Content**

**ROCK NAME**: dunite

**CONTACT**: continuous

**TEXTURE**: Igneous

**IGNEOUS SUMMARY**: Serpentinised dunite hosting diffuse gabbroid veins

**ALTERATION**: Serpentinised

**VEINS**: Cut by a variety of serpentine veins, some fine black and white veins

**STRUCTURE**: Brittle-Veins-Crystal plastic
### Hole BA4A-35Z Section 4, Top of Section 88.83 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>CT image</th>
<th>Magnetic susceptibility</th>
<th>MSCL-W MSP (SI \times 10^{-5})</th>
<th>GRA (g/cm²)</th>
<th>Primary mineralogy</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Fabric intensity</th>
<th>Vein density (per meter)</th>
<th>Alteration phenozone</th>
<th>Dip</th>
<th>Structures</th>
<th>Alteration phenozone</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>88.85</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>88.95</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>89.05</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>89.15</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>89.25</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>89.35</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>89.45</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>89.55</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>89.65</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>89.75</td>
<td>90</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Lithology:**
- **Sequence:** I, Unit/SUBUNIT: 18d, Rock Name: dunite, Contact: continuous, Texture: igneous summary: serpentinised dunite hosting diffuse gabbroid veins, Alteration: serpentinised, Veins: cut by a variety of serpentine veins, some fine black and white veins.

**Sequence:** I, Unit/SUBUNIT: 18d, Rock Name: Olivine gabbro, Contact: Intrusive, Texture: granular, Igneous summary: highly altered olivine rich micro gabbro, Alteration: highly altered, Veins: green veins, Structure: Brittle- Minor faulting.

**Sequence:** I, Unit/SUBUNIT: 18d, Rock Name: Olivine gabbro, Contact: Intrusive, Texture: granular, Igneous summary: highly altered olivine rich micro gabbro, Alteration: highly altered, Veins: few green veins, Structure: Brittle- Minor faulting.

**Fabric intensity:**
- 1: Undeformed, 2: Minor fracturing, 3: Moderate fracturing, 4: GS reduction and rotation, 5: Well-developed cataclasis.

**Vein density (per meter):**
- 0: Undeformed, 1: Minor fracturing, 2: Moderate fracturing, 3: GS reduction and rotation, 4: Well-developed cataclasis.

**Discrete brittle features:**

**Alteration intensity:**
- Fresh (<3%), Slight (3–10%), Moderate (11–30%), Substantial (31–60%), Extensive (61–90%), Complete (>90%).

**Degree of deformation:**
- Undeformed, Minor fracturing, Moderate fracturing, GS reduction and rotation, Well-developed cataclasis.

**Magmatic contact:**
- Brittle, Crystal plastic, Veins.

**Vesicles:**
- Discrete features, Brittle features, Magmatic features, Vein crosscutting, Alteration intensity, Degree of deformation, Universal offset, Fault zonation, Structures, Abnormal halos, Vein concentration.

**Units:**

**Geomagnetic:**
- Magnetic susceptibility: MSCL-W MSP (SI \times 10^{-5}).

**Image:**
- CT image, Sulfide, Amphibole, Spinel, Orthopyroxene, Clinopyroxene, Plagioclase, Olivine, Glassy, Cryptocrystalline (<0.1 mm), Microcrystalline (0.1–0.2 mm), Pegmatitic (>30 mm).

**Lithology:**
- Primary mineralogy: Olivine, Plagioclase, Clinopyroxene, Orthopyroxene, Amphibole, Sulfide, Grain size (0.2–1 mm), Median grained (1–5 mm), Coarse grained (5–30 mm), Pegmatitic (>30 mm).

**Degree of deformation:**
- Magmatic layering, Foliation, Protogranular, Porphyroclastic, Strongly foliated, Protomylonite, Mylonite, Ultramylonite, Isotropic, Weak, Moderate, Strong.
<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Lithology</th>
<th>Primary mineralogy (%)</th>
<th>Degree of deformation</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnetic contact</th>
<th>Alteration halo</th>
<th>Vein density (per meter)</th>
<th>Alteration halo</th>
<th>Vein density (per meter)</th>
</tr>
</thead>
<tbody>
<tr>
<td>90.33</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>90.43</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>90.53</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>90.63</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>90.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>90.83</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depth (m CCD)</td>
<td>Core length (cm)</td>
<td>Lithology</td>
<td>Primary mineralogy (%)</td>
<td>Grain size</td>
<td>Degree of deformation</td>
<td>Fracture/ Vein density (per meter)</td>
<td>Alteration intensity</td>
<td>Dip</td>
<td>Magnetic contact</td>
<td>Brittle</td>
<td>Crystal plastic</td>
</tr>
<tr>
<td>--------------</td>
<td>-----------------</td>
<td>-----------</td>
<td>------------------------</td>
<td>-----------</td>
<td>----------------------</td>
<td>-----------------------------------</td>
<td>-------------------</td>
<td>-----</td>
<td>-----------------</td>
<td>--------</td>
<td>----------------</td>
</tr>
<tr>
<td>90.90</td>
<td>0</td>
<td>Dunite</td>
<td>Olivine</td>
<td>100</td>
<td>Undeformed</td>
<td>0</td>
<td>Fresh (&lt;3%)</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>91.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>91.10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>91.20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>91.30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>91.40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>91.50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>91.60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>91.70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>91.80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Hole BA4A-36Z Section 4, Top of Section 91.85 (m CCD)

<p>| Depth (m CCD) | Core length (cm) | Shipboard samples | Stained image | Magnetic susceptibility | MSCL-W (SI × 10^-5) | MSP | GRA (g/cm³) | Sequence | Lithology | Uncertainties | Alteration intensity | Degree of deformation | Fracture/ Vein density (per meter) | Vein density (per meter) | Alteration | Dip | Magnetic contact | Brittle | Crystal plastic | Veins | Structures | Apparent offset | Alteration halos | Fault zones | Fabric intensity | Vein crosscutting | Description |
|--------------|------------------|-------------------|---------------|------------------------|----------------------|-----|------------|----------|-----------|--------------|---------------------|-----------------------|---------------------------|------------------------|------------|-----|------------------|---------|----------------|--------|------------|---------------|----------------|----------------|---------------|-------------|-------------|----------------|-----------|
| 0            |                  |                   |               |                        |                      |     |           |          |           |              |                     |                        |                          |                        |            |     |                 |        |                |        |            |               |               |              |               |             |             |               |          |</p>
<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>MSCL-W (SI x 10^-5)</th>
<th>MSP</th>
<th>GRA (g/cm^3)</th>
<th>Sequence</th>
<th>Lithology</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fabric</th>
<th>Discrete brittle features</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sequence</td>
<td>UNIT/SUBUNIT</td>
<td>ROCK NAME</td>
<td>CONTACT</td>
<td>TEXTURE</td>
<td>IGNEOUS SUMMARY</td>
<td>ALTERATION</td>
<td>VEINS</td>
<td>STRUCTURE</td>
<td>Alteration intensity</td>
<td>Vein density (per meter)</td>
<td>Fracture/ Vein density (per meter)</td>
<td>Degree of deformation</td>
<td>Alteration intensity</td>
<td>Dip</td>
</tr>
<tr>
<td>----------</td>
<td>--------------</td>
<td>-----------</td>
<td>---------</td>
<td>---------</td>
<td>-----------------</td>
<td>------------</td>
<td>-------</td>
<td>-----------</td>
<td>---------------------</td>
<td>------------------------</td>
<td>-----------------------------</td>
<td>------------------------</td>
<td>------------------</td>
<td>------</td>
</tr>
<tr>
<td>I 18f</td>
<td></td>
<td>dunite</td>
<td>Intrusive</td>
<td></td>
<td>serpentinized</td>
<td>serpentinized</td>
<td>black veins, white veins</td>
<td>Brittle-Veins-Crystal plastic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Hole BA4A-37Z Section 3, Top of Section 94.57 (m CCD)**
### Hole BA4A-37Z Section 4, Top of Section 95.25 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>CT image</th>
<th>Magnetic susceptibility</th>
<th>MSCL-W MSP (SI x 10^{-5})</th>
<th>GRA (g/cm³)</th>
<th>Unit/subunit</th>
<th>Lithology</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Alteration intensity</th>
<th>Dip Magnetic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Voids</th>
</tr>
</thead>
<tbody>
<tr>
<td>95.29</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>95.39</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>95.49</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>95.59</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>95.69</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depth (m CCD)</td>
<td>Core length (cm)</td>
<td>Shipboard samples</td>
<td>Stained image</td>
<td>Magnetic susceptibility</td>
<td>MSCL-W (SI × 10^-5)</td>
<td>MSP</td>
<td>GRA (g/cm²)</td>
<td>CT image</td>
<td>Sequence</td>
<td>Unit/subunit</td>
<td>Lithology</td>
<td>Primary mineralogy</td>
<td>Degree of deformation</td>
<td>Discrete brittle features</td>
<td>Fracture/ Vein density (per meter)</td>
<td>Alteration intensity</td>
<td>Dip</td>
<td>Magnetic contact</td>
<td>Brittle</td>
</tr>
<tr>
<td>--------------</td>
<td>-----------------</td>
<td>-------------------</td>
<td>---------------</td>
<td>------------------------</td>
<td>----------------------</td>
<td>-----</td>
<td>-------------</td>
<td>----------</td>
<td>----------</td>
<td>-------------</td>
<td>-----------</td>
<td>------------------</td>
<td>-------------------</td>
<td>----------------------</td>
<td>-----------------------------</td>
<td>---------------------</td>
<td>-----</td>
<td>------------------</td>
<td>--------</td>
</tr>
<tr>
<td>95.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>95.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>95.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>95.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>95.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>95.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>95.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>95.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>95.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>95.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>95.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>95.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>95.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>95.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>95.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>95.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>95.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>95.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>95.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>95.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>95.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>95.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>95.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>95.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>95.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>95.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>95.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>95.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>95.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>95.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>95.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>95.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>95.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>95.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>95.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Sequence: I

#### Unit/Subunit: 18f

**Rock Name:** Dunite

**Contact:** Tectonic

**Texture:** Igneous

**Summary:** Serpentinized dunite

**Alteration:** Serpentinized

**Veins:** Black veins, white veins

**Structure:** Brittle

<table>
<thead>
<tr>
<th>Fabric intensity</th>
<th>Vein density (per meter)</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Degree of deformation</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnetic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-10</td>
<td>0-10</td>
<td>0-10</td>
<td>0-10</td>
<td>0-10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10-30</td>
<td>10-30</td>
<td>10-30</td>
<td>10-30</td>
<td>10-30</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30-50</td>
<td>30-50</td>
<td>30-50</td>
<td>30-50</td>
<td>30-50</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50-70</td>
<td>50-70</td>
<td>50-70</td>
<td>50-70</td>
<td>50-70</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>70-90</td>
<td>70-90</td>
<td>70-90</td>
<td>70-90</td>
<td>70-90</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt;90</td>
<td>&gt;90</td>
<td>&gt;90</td>
<td>&gt;90</td>
<td>&gt;90</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Magnetic susceptibility:**

- **MSCL-W**
  - **MSP (SI x 10^-5):**
    - 10
    - 5
    - 1

**Gra (g/cm^2):**

- 1
- 0.5
- 0.2

**Lithology:**

- Orthopyroxene
- Spinel
- Amphibole
- Quartz
- Sulfide
- Plagioclase
- Olivine

**Primary mineralogy (%):**

- 100
- 75
- 50
- 25
- 0

**Magmatic Layering:**

- 3
- 2
- 1
- 0

**Foliation:**

- Protogranular
- Porphyroclastic
- Strongly foliated
- Protomylonite
- Mylonite
- Ultramylonite

**Discrete brittle features:**

<table>
<thead>
<tr>
<th>Vein crosscutting alteration halos</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
</tr>
</tbody>
</table>

**Alteration intensity:**

- Fresh (<3%)
- Slight (3–10%)
- Moderate (11–30%)
- Substantial (31–60%)
- Extensive (61–90%)
- Complete (>90%)

**Degree of deformation:**

- Undeformed
- Minor fracturing
- Moderate fracturing
- GS reduction and rotation
- Well-developed cataclasis
- Ultracataclastite
- Protogranular
- Porphyroclastic
- Strongly foliated
- Protomylonite
- Mylonite
- Ultramylonite

**Structures:**

- Fault zones
- Structures
- Apparent offset

**Vein density (per meter):**

<table>
<thead>
<tr>
<th>Vein density (per meter)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0–10</td>
</tr>
<tr>
<td>10–30</td>
</tr>
<tr>
<td>30–50</td>
</tr>
<tr>
<td>50–70</td>
</tr>
<tr>
<td>&gt;70</td>
</tr>
</tbody>
</table>

**Core length (cm):**

- 60
- 50
- 40
- 30
- 20
- 10
- 5
- 1

**Depth (m CCD):**

- 96.53
- 96.63
- 96.73
- 96.83
- 96.93
- 97.03

**Hole BA4A-38Z Section 2, Top of Section 96.49 (m CCD)**
SEQUENCE: I
UNIT/SUBUNIT: 19c
ROCK NAME: dunite
CONTACT: Tectonic
TEXTURE: IGNEOUS SUMMARY: slightly fractured serpentinized dunite with minor dikes
ALTERATION: serpentinized
VEINS: grey-green veins, white veins
STRUCTURE: Brittle-Stepped shear vein with pull apart structure
Vein crosscutting

SEQUENCE: I
UNIT/SUBUNIT: 19c
ROCK NAME: gabbro
CONTACT: Intrusive
TEXTURE: Granular
IGNEOUS SUMMARY: gabbroic dike
ALTERATION: 
VEINS: grey-green veins, black veins
STRUCTURE: Brittle-
Vein crosscutting

SEQUENCE: I
UNIT/SUBUNIT: 19d
ROCK NAME: Harzburgite
CONTACT: Continuous
TEXTURE: IGNEOUS SUMMARY: serpentinized harzburgic with multiple gabbroic intrusions
ALTERATION: serpentinized
VEINS: grey veins, black veins
STRUCTURE: Brittle-
Pyroxene grains are rounded and slightly elongated.
**Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)**

**Fabric intensity**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**Vein density**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**Primary mineralogy**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**Degree of deformation**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**Alteration intensity**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**Dip of contact**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**Brittle**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**Crystal plastic**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**Veins**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**Structures**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**Alteration halos**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**CT image**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**Magnetic susceptibility**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**MSCL-W MSP**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**GRA**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**Depth (m CCD)**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**Core length (cm)**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**Shipboard samples**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**Scanned image**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**Magnetic contact**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**Degree of deformation**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**Brittle**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**Crystal plastic**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**Veins**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**CT image**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**Magnetic susceptibility**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**MSCL-W MSP**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**GRA**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**Depth (m CCD)**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**Core length (cm)**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**Shipboard samples**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**Scanned image**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**Magnetic contact**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**Degree of deformation**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**Brittle**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**Crystal plastic**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**Veins**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**CT image**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**Magnetic susceptibility**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**MSCL-W MSP**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**GRA**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**Depth (m CCD)**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**Core length (cm)**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**Shipboard samples**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**Scanned image**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**Magnetic contact**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**Degree of deformation**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**Brittle**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**Crystal plastic**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**Veins**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**CT image**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**Magnetic susceptibility**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**MSCL-W MSP**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**GRA**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**Depth (m CCD)**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**Core length (cm)**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**Shipboard samples**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**Scanned image**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**Magnetic contact**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**Degree of deformation**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**Brittle**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**Crystal plastic**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**Veins**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**CT image**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**Magnetic susceptibility**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**MSCL-W MSP**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**GRA**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**Depth (m CCD)**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**Core length (cm)**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**Shipboard samples**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**Scanned image**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**Magnetic contact**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**Degree of deformation**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**Brittle**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**Crystal plastic**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)

**Veins**

- Hole BA4A-39Z Section 1, Top of Section 98.70 (m CCD)
**Hole BA4A-39Z Section 4, Top of Section 100.95 (m CCD)**

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>Primary mineralogy</th>
<th>Degree of deformation</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnetic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>100.97</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100.05</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100.10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100.15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100.20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100.25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100.30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100.35</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100.40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100.45</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100.50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100.55</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100.60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100.65</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100.70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100.75</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100.80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100.85</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100.90</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100.95</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depth (m CCD)</td>
<td>Core length (cm)</td>
<td>Sampled image</td>
<td>Magnetic susceptibility</td>
<td>MSCL-W</td>
<td>MSP</td>
<td>GRA (μT)</td>
<td>LITHOLOGY</td>
<td>GRAI</td>
<td>Unit/subunit</td>
<td>Degree of deformation</td>
<td>Fracture/ Vein density (per meter)</td>
<td>Alteration intensity</td>
</tr>
<tr>
<td>--------------</td>
<td>------------------</td>
<td>---------------</td>
<td>------------------------</td>
<td>--------</td>
<td>-----</td>
<td>----------</td>
<td>------------</td>
<td>------</td>
<td>--------------</td>
<td>----------------------</td>
<td>--------------------------</td>
<td>----------------------</td>
</tr>
<tr>
<td>101.73</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>101.83</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>101.93</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>102.03</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>102.13</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>102.23</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>102.33</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SEQUENCE 1:** 30m
**ROCK NAME:** Harzburgite
**CONTACT:** Continuous
**IGNEOUS SUMMARY:** fractured, erpentinized harzburgite crosscut by multiple gabbroic dikes
**ALTERATION:** erpentinized
**VEINS:** grey, green veins

**SEQUENCE 2:** 10m
**ROCK NAME:** Olivine gabbro
**CONTACT:** Intrusive
**TEXTURE:** Granular
**IGNEOUS SUMMARY:** gabbroic dike
**ALTERATION:**
**VEINS:** grey veins

**SEQUENCE 3:** 10m
**ROCK NAME:** Gabbro
**CONTACT:** Intrusive
**TEXTURE:** Granular
**IGNEOUS SUMMARY:** fractured gabbroic dike
**ALTERATION:**
**VEINS:** grey veins, green veins

**Magmatic contact**
**Brittle**
**Crystal plastic**
**Veins**

**Fabric intensity**

**Magmatic Layering**

**Foliation**

**Discrete brittle features**

**Vein crosscutting**

**Alteration intensity**

**Degree of deformation**

**Vein density (per meter)**

**Fracture/ Vein density (per meter)**

**Alteration intensity**

**Dip**

**Description**
### Hole BA4A-40Z Section 2, Top of Section 102.39 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Lithology</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Magnetic contact</th>
<th>Brittle Crystal plastic</th>
<th>Veins</th>
<th>Structures</th>
<th>Alteration halos</th>
<th>Vein density (per meter)</th>
</tr>
</thead>
<tbody>
<tr>
<td>102.41</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>102.51</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>102.61</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>102.71</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>102.81</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>102.91</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>103.01</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>103.11</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Description**

**Sequence:** I 

**Rock Name:** Olivine gabbro 

**Contact:** Continuous 

**Texture:** Granular 

**Igneous Summary:** Olivine gabbro dike 

**Alteration:** 

**Veins:** Thick replacive green vein, white veins 

**Structure:** Brittle

---

**Sequence:** I 

**Unit/Subunit:** 20f 

**Rock Name:** Dunite 

**Contact:** Intrusive 

**Texture:** 

**Igneous Summary:** Fully serpentinized dunite crosscut by gabbroic dikes 

**Alteration:** Serpentinized 

**Veins:** White, grey veins, grey-green veins 

**Structure:** Brittle

---

**Sequence:** I 

**Unit/Subunit:** 20f 

**Rock Name:** Clinopyroxenite 

**Contact:** Intrusive 

**Texture:** Granular 

**Igneous Summary:** Orthopyroxenite dike 

**Alteration:** 

**Veins:** Black veins, grey veins 

**Structure:** Brittle

---

**Fabric intensity**

100

**Vein density**

(per meter)

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
</tr>
</tbody>
</table>

**Grain size**

<table>
<thead>
<tr>
<th>Fine grained (0.2–1 mm)</th>
<th>Medium grained (1–5 mm)</th>
<th>Coarse grained (5–30 mm)</th>
<th>Pegmatitic (&gt;30 mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

**Hole BA4A-40Z Section 2, Top of Section 102.39 (m CCD)**
Hole BA4A-40Z Section 3, Top of Section 103.18 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>MSCL-W (SI x 10^-5)</th>
<th>MR-A (SI x 10^-5)</th>
<th>GRA (g/cm²)</th>
<th>Sequance</th>
<th>Unit/subunit</th>
<th>Lithology</th>
<th>Primary mineralogy</th>
<th>Degree of deformation</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnetic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>103.20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>103.30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>103.40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>103.50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>103.60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>103.70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>103.80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>103.90</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>104.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SEQUENCE:** I
**UNIT/SUBUNIT:** 20f
**ROCK NAME:** dunite
**CONTACT:** Continuous
**TEXTURE:** IGNEOUS
**SUMMARY:** fully serpentinized dunite crosscut by gabbroic dikes
**ALTERATION:** serpentinized
**VEINS:** white, grey veins, grey-green veins
**STRUCTURE:** Brittle-

**SEQUENCE:** I
**UNIT/SUBUNIT:** 20g
**ROCK NAME:** Harzburgite
**CONTACT:** Intrusive
**TEXTURE:** IGNEOUS
**SUMMARY:** highly fractured, serpentinized harzburgite with numerous thick gabbroic intrusions
**ALTERATION:** serpentinized
**VEINS:** black veins, grey veins, grey-green veins
**STRUCTURE:** Brittle-

**SEQUENCE:** I
**UNIT/SUBUNIT:** 20g
**ROCK NAME:** Olivine gabbro
**CONTACT:** Intrusive
**TEXTURE:** IGNEOUS
**SUMMARY:** altered, rubbly gabbroic dike
**ALTERATION:**
**VEINS:** grey-green veins, white veins, grey veins
**STRUCTURE:** Brittle-

**Description**

- Brittle: Shear zones associated with dikes
- Crystal plastic: Pyroxene grains are rounded and slightly elongated
- Veins:
  - White, grey veins, grey-green veins
  - Black veins, grey veins, grey-green veins

**Table:**

- **Fabric intensity**
- **Vein density (per meter)**
- **Grain size**
- **Hole BA4A-40Z Section 3, Top of Section 103.18 (m CCD)**
- **Core length (cm)**
- **Shipboard samples**
- **Stained image**
- **Magnetic susceptibility**
- **MSCL-W (SI x 10^-5)**
- **MR-A (SI x 10^-5)**
- **GRA (g/cm²)**
- **Sequence**
- **Unit/subunit**
- **Lithology**
- **Primary mineralogy**
- **Degree of deformation**
- **Fracture/ Vein density (per meter)**
- **Alteration intensity**
- **Dip**
- **Magnetic contact**
- **Brittle**
- **Crystal plastic**
- **Veins**

**Legend:**

- **Sequence:** I
- **Unit/subunit:** 20f
- **Rock Name:** dunite
- **Contact:** Continuous
- **Texture:** Igneous
- **Summary:** Fully serpentinized dunite crosscut by gabbroic dikes
- **Alteration:** Serpentinized
- **Veins:** White, grey veins, grey-green veins
- **Structure:** Brittle-

- **Sequence:** I
- **Unit/subunit:** 20g
- **Rock Name:** Harzburgite
- **Contact:** Intrusive
- **Texture:** Igneous
- **Summary:** Highly fractured, serpentinized harzburgite with numerous thick gabbroic intrusions
- **Alteration:** Serpentinized
- **Veins:** Black veins, grey veins, grey-green veins
- **Structure:** Brittle-

- **Sequence:** I
- **Unit/subunit:** 20g
- **Rock Name:** Olivine gabbro
- **Contact:** Intrusive
- **Texture:** Igneous
- **Summary:** Altered, rubbly gabbroic dike
- **Alteration:**
- **Veins:** Grey-green veins, white veins, grey veins
- **Structure:** Brittle-

**Notes:**

- **Degree of deformation**
  - Brittle-
  - Crystal plastic-
  - Veins-

- **Vein crosscutting**
- **Alteration intensity**
  - Fresh (<3%)
  - Slight (3–10%)
  - Moderate (11–30%)
  - Substantial (31–60%)
  - Extensive (61–90%)
  - Complete (≥90%)

- **Fracture/Vein density (per meter)**
  - 0–1 per 10 cm
  - 1–3 per 10 cm
  - 3–5 per 10 cm
  - >5 per 10 cm

- **Magnetic contact**
- **Brittle**
- **Crystal plastic**
- **Veins**
### Hole BA4A-41Z Section 1, Top of Section 104.70 (m CCD)

| Depth (m CCD) | Core length (cm) | Shipboard samples | Stained image | Magnetic susceptibility | MSCL-W | MSP (SI x 10^-5) | GRA (g/cm^3) | Sequence | Lithology | Unit/subunit | Primary mineralogy (%) | Grainsize | Degree of deformation | Alteration intensity | Dip | Magnatic contact | Brittle | Crystal plastic | Veins | Fabic intensity | Vein density (per meter) | Discrete brittle features | Alteration halos | Structures | Abnormal heating | Vein crosscutting | Alteration halo | Fault zones | Apparent offset | Description |
|---------------|------------------|-------------------|---------------|------------------------|---------|--------------------|--------------|----------|-----------|-------------|------------------------|---------|-------------------|---------------------|-----|------------------|---------|-----------------|---|----------------|---------------------------|---------------------|----------------|-----------|------------------|----------------------|---------------|------------|-------------|----------------|-----------------|
| 104.70        |                  |                   |               |                        |         |                    |              |          |           |             |                        |         |                   |                      |     |                  |         |                |   |                |                       |                     |              |            |                 |                   |               |            |             |                |                |
| 104.80        |                  |                   |               |                        |         |                    |              |          |           |             |                        |         |                   |                      |     |                  |         |                |   |                |                       |                     |              |            |                 |                   |               |            |             |                |                |
| 104.90        |                  |                   |               |                        |         |                    |              |          |           |             |                        |         |                   |                      |     |                  |         |                |   |                |                       |                     |              |            |                 |                   |               |            |             |                |                |
| 105.00        |                  |                   |               |                        |         |                    |              |          |           |             |                        |         |                   |                      |     |                  |         |                |   |                |                       |                     |              |            |                 |                   |               |            |             |                |                |
| 105.10        |                  |                   |               |                        |         |                    |              |          |           |             |                        |         |                   |                      |     |                  |         |                |   |                |                       |                     |              |            |                 |                   |               |            |             |                |                |
| 105.20        |                  |                   |               |                        |         |                    |              |          |           |             |                        |         |                   |                      |     |                  |         |                |   |                |                       |                     |              |            |                 |                   |               |            |             |                |                |
| 105.30        |                  |                   |               |                        |         |                    |              |          |           |             |                        |         |                   |                      |     |                  |         |                |   |                |                       |                     |              |            |                 |                   |               |            |             |                |                |
| 105.40        |                  |                   |               |                        |         |                    |              |          |           |             |                        |         |                   |                      |     |                  |         |                |   |                |                       |                     |              |            |                 |                   |               |            |             |                |                |
| 105.50        |                  |                   |               |                        |         |                    |              |          |           |             |                        |         |                   |                      |     |                  |         |                |   |                |                       |                     |              |            |                 |                   |               |            |             |                |                |
| 105.60        |                  |                   |               |                        |         |                    |              |          |           |             |                        |         |                   |                      |     |                  |         |                |   |                |                       |                     |              |            |                 |                   |               |            |             |                |                |

**SEQUENCE:** 1

**ROCK NAME:** dunite

**CONTACT:** Continuous

**TEXTURE:** IGNEOUS SUMMARY: mildly fractured, serpentinized dunite crosscut by fractured gabbroic dikes, harzburgitic zones

**ALTERATION:** serpentinized

**VEINS:** grey-green veins, grey veins

**STRUCTURE:** Brittle- Veins- conjugate vein sets occur Crystal plastic- Pyroxene grains are rounded and slightly elongated.
<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>CT image</th>
<th>Magnetic susceptibility</th>
<th>MSCL-W</th>
<th>MSP (SI x 10^-5)</th>
<th>GRA (g/cm²)</th>
<th>GRA Sequence</th>
<th>Lithology</th>
<th>Unit/subunit</th>
<th>rocks</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnetic contact</th>
<th>Brittle contact</th>
<th>Crystal plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>105.64</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>105.65</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>105.70</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>105.75</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>105.80</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>105.85</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>105.90</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>105.95</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>106.00</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>106.05</td>
<td>90</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Description**: Details about the rock sequence, contact types, textures, and deformation characteristics are provided. The image shows a CT scan and core samples with annotations indicating the various rock types, alteration, and deformation features.
<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnetic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>106.61</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>106.71</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>106.81</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>106.91</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>107.01</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Sequence:** 1
**Unit/Subunit:** 21c
**Rock Name:** dunite
**Contact:** Tectonic
**Igneous Summary:** Fractured serpentinized dunite crosscut by numerous olivine gabbro dikes
**Alteration:** Serpentinized
**Veins:** grey veins, grey-green veins, brown veins, black veins
**Structure:** Brittle

---

**Sequence:** 1
**Unit/Subunit:** 21c
**Rock Name:** Olivine gabbro
**Contact:** Intrusive
**Texture:** Granular
**Igneous Summary:** olivine gabbro dike
**Alteration:**
**Veins:** grey veins, grey-green veins
**Structure:** Brittle

---

**Sequence:** 1
**Unit/Subunit:** 21c
**Rock Name:** Olivine gabbro
**Contact:** Intrusive
**Texture:** Granular
**Igneous Summary:** olivine gabbro dike
**Alteration:**
**Veins:** grey veins, grey-green veins
**Structure:** Brittle

---

**Fabric intensity**
<table>
<thead>
<tr>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

**Vein density (per meter)**
<table>
<thead>
<tr>
<th>20</th>
<th>15</th>
<th>10</th>
<th>5</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>5</td>
<td>6</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

**Degree of deformation**
<table>
<thead>
<tr>
<th>Undeformed</th>
<th>Minor fracturing</th>
<th>Moderate fracturing</th>
<th>Magmatic contact</th>
<th>Dip of contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

**Alteration intensity**
<table>
<thead>
<tr>
<th>Fresh (&lt;3%)</th>
<th>Slight (3–10%)</th>
<th>Moderate (11–30%)</th>
<th>Substantial (31–60%)</th>
<th>Extensive (61–90%)</th>
<th>Complete (≥ 90%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

**Magmatic contact**
<table>
<thead>
<tr>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>45</td>
<td>90</td>
</tr>
</tbody>
</table>

**Magnetic susceptibility**
<table>
<thead>
<tr>
<th>MSCL-W</th>
<th>MSP</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.72</td>
<td>2.67</td>
</tr>
</tbody>
</table>

**Primary mineralogy**
- Olivine
- Plagioclase
- Clinopyroxene
- Orthopyroxene
- Amphibole
- Sulfide

**Grain size**
- Fine grained (0.2–1 mm)
- Medium grained (1–5 mm)
- Coarse grained (5–30 mm)
- Pegmatitic (>30 mm)

**Alteration halos**
- Fresh (<3%)
- Slight (3–10%)
- Moderate (11–30%)
- Substantial (31–60%)
- Extensive (61–90%)
- Complete (≥ 90%)
**Hole BA4A-42Z Section 1, Top of Section 107.70 (m CCD)**

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Lithology</th>
<th>Primary mineralogy (%</th>
<th>Degree of deformation</th>
<th>Magmatic Layering</th>
<th>Foliation</th>
<th>Discrete brittle features</th>
<th>Vein crosscutting</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnetic contact</th>
<th>Brittle contacts</th>
<th>Crystal plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>107.70</td>
<td></td>
<td>Dunite</td>
<td>100</td>
<td>Undeformed</td>
<td>Protogranular</td>
<td>Porphyroclastic</td>
<td>Strongly foliated</td>
<td>Fresh (&lt;3%)</td>
<td>0–10</td>
<td>0</td>
<td>Discrete</td>
<td>Brittle</td>
<td>Crystalline</td>
<td></td>
</tr>
<tr>
<td>107.71</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Protomylonite</td>
<td>Mylonite</td>
<td>Ultramylonite</td>
<td>Slight (3–10%)</td>
<td>10–30</td>
<td>45</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>107.72</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Isotropic</td>
<td>Weak</td>
<td>Fine grained (0.2–1 mm)</td>
<td>Substantial (31–60%)</td>
<td>30–50</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>107.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Medium</td>
<td>Medium grained (1–5 mm)</td>
<td>Extensive (61–90%)</td>
<td>50–70</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Description:**
- Sequence: 21c
- Rock Name: Dunite
- Contact: Continuous
- Textural Summary: Fractured serpentinized dunite crosscut by numerous olivine gabbro dikes
- Alteration: Serpentinized
- Veins: Grey veins, grey-green veins, brown veins, black veins
- Structure: Brittle contacts and crystalline veins occur
<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>MSCL-W</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sequence</th>
<th>Unit/subunit</th>
<th>Rock name</th>
<th>Contact</th>
<th>Texture</th>
<th>Igneous summary</th>
<th>Alteration</th>
<th>Veins</th>
<th>Structure</th>
<th>Alteration intensity</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sequence</td>
<td>21d</td>
<td>Gabbro</td>
<td>Continuous</td>
<td>Granular</td>
<td>Highly altered, moderately fractured</td>
<td>Serpentinized</td>
<td>Green, white veins</td>
<td>Brittle-Veins-Crystal plastic</td>
<td>50%</td>
<td>20%</td>
<td></td>
</tr>
</tbody>
</table>

| Hole BA4A-42Z Section 3, Top of Section 109.29 (m CCD) |

**Description**

- ROCK NAME: Gabbro
- CONTACT: Continuous
- TEXTURE: Granular
- Alteration: Serpentinized
- Veins: Green, white veins
- Structure: Brittle-Veins-Crystal plastic
- Alteration intensity: 50%
- Degree of deformation: 20%
- Fracture/ Vein density (per meter): 20%
### Hole BA4A-42Z Section 4, Top of Section 110.00 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>Magnetic susceptibility (MSCL-W MSP (SI x 10^-5))</th>
<th>GRA (g/cm²)</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
</tr>
</thead>
<tbody>
<tr>
<td>110.00</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>110.10</td>
<td>10</td>
<td></td>
<td>MEBC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>110.20</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>110.30</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>110.40</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>110.50</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>110.60</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>110.70</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>110.80</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>110.90</td>
<td>90</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Description**

SEQUENCE 1: T

ROCK NAME: Dunite

CONTACT: Continuous

KINEMATIC SUMMARY: Serpentinized dunite crosscutted by gabbroic dikes, orthopyroxene enriched towards top

ALTERATION: Serpentinized

VEINS: Green, white, few black veins

TEXTURE: Brittle

**Structure**

Vein crosscutting

**Alteration**

Alteration halos

**Degree of deformation**

Degree of deformation

**Magmatic contact**

Brittle

Crystal plastic

**Veins**

- Green
- White
- Few black

**Degree of deformation**

- Brittle
- Crystal plastic

**Fabric intensity**

5

**Vein density (per meter)**

- 0
- 1 per 10 cm
- 3-5 per 10 cm
- >20 per 10 cm
- 5-15 per 10 cm
- 15-20 per 10 cm
| Depth (m CCD) | Core length (cm) | Shipboard samples | Stained image | Magnetic susceptibility | MSCL-W MSP (SI x 10^-5) | GRA (g/cm^3) | Sequence | Lithology | Primary mineralogy (%) | Degree of deformation | Fracture/ Vein density (per meter) | Alteration intensity | Dip | Magnetic contact | Brittle | Crystal plastic | Veins | Alteration halos | Structures | Vein crosscutting | Discrete brittle features | Vein density (per meter) | Fabric intensity | Magmatic Layering | Foliation |
|--------------|------------------|-------------------|--------------|------------------------|-------------------------|------------------------|-----------|-----------|----------------------|------------------------|----------------------|--------------------------|--------|------------------|---------|------------------|-------|-----------------|----------------|------------------|----------------|-----------------|----------------|---------|----------------|----------|
| 110.70       | 0                |                    |              |                        |                         |                       | I         | 21f       | Grano-phyric        |                       |                      |                          |        |                  |         |                 |       |                |              |                  |                |                  |            |        |               |          |
| 110.80       | 10               |                    |              |                        |                         |                       | I         | 22a       | Porphyroclastic    |                       |                      |                          |        |                  |         |                 |       |                |              |                  |                |                  |            |        |               |          |

**Description**

- **SEQUENCE**: 1
- **UNIT/SUBUNIT**: 21f
- **ROCK NAME**: Gabbro
- **CONTACT**: Continuous
- **TEXTURE**: Granular

**IGNEOUS SUMMARY**:
- Highly altered, moderately fractured

**ALTERATION**:
- Veins: green, white veins

**STRUCTURE**:
- Brittle
- Veins: conjugate vein sets occur

**Veins**
- Discrete brittle features

**Grain size**
- Fine grained (0.2–1 mm)
- Medium grained (1–5 mm)
- Coarse grained (5–30 mm)
- Pegmatitic (>30 mm)

**Hole BA4A-43Z Section 1, Top of Section 110.70 (m CCD)**
<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>MSCL-W MSP (SI x 10^-5)</th>
<th>GRA (g/cm²)</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>111.61</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>111.71</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>111.81</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>111.91</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>112.01</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>112.11</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>112.21</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>112.31</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>112.41</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SEQUENCE:** I

**UNIT/SUBUNIT:** 22a

**ROCK NAME:** Dunite

**CONTACT:** Continuous

**TEXTURE:** Igneous

**SUMMARY:** Serpentinized dunite, orthopyroxenitic zones

**ALTERATION:** Serpentinized

**VEINS:** Green frankenstein veins

**STRUCTURE:** Brittle

---

**SEQUENCE:** I

**UNIT/SUBUNIT:** 22b

**ROCK NAME:** Harzburgite

**CONTACT:** Modal

**TEXTURE:** Granular

**IGNEOUS SUMMARY:** Serpentinized harzburgite

**ALTERATION:** Serpentinized

**VEINS:**

**STRUCTURE:** Brittle

Crystal plastic - Pyroxene grains are rounded and slightly elongated.

---

**SEQUENCE:** I

**UNIT/SUBUNIT:** 22c

**ROCK NAME:** Dunite

**CONTACT:** Modal

**TEXTURE:** Igneous

**SUMMARY:** Serpentinized dunite crosscutted by offset pyroxenitic dike, thin gabbroic dike, sporadic orthopyroxene patches

**ALTERATION:** Serpentinized

**VEINS:** Green, white veins

**STRUCTURE:** Brittle

### Fabric intensity

- 1
- 2
- 3
- 4
- 5

### Vein density (per meter)

- 0
- 1
- 2
- 3
- 4
- 5
- 6

### Grain size

- Fine grained (0.2–1 mm)
- Medium grained (1–5 mm)
- Coarse grained (5–30 mm)
- Pegmatitic (>30 mm)

### Magnetic contact

- Brittle
- Magmatic

### Degree of deformation

- Undeformed
- Minor fracturing
- Moderate fracturing
- GS reduction and rotation
- Well-developed cataclasis
- Ultracataclastite

### Vein crosscutting alteration halos

- Alteration halos

### Degree of deformation

- Protomylonite
- Mylonite
- Ultramylonite

### Dip

- 0
- 0–10
- 10–30
- 30–50
- 50–70
- 70–90
- >90

### Vein density (per meter)

- 0–1 per 10 cm
- 1–3 per 10 cm
- 3–5 per 10 cm
- >5 per 10 cm

### Degree of deformation

- Fresh (<3%)
- Slight (3–10%)
- Moderate (11–30%)
- Substantial (31–60%)
- Extensive (61–90%)
- Complete (≥90%)

### Lithology

- Amphibole
- Spinel
- Orthopyroxene
- Clinopyroxene
- Plagioclase
- Olivine

### Magmatic contact

- Dip
- Contact

### Description

- Crystal plastic
- Discrete brittle features
- Brittle fault zones
- Discrete brittle features
SEQUENCE: I
UNIT/SUBUNIT: 22c
ROCK NAME: Dunite
CONTACT: Continuous
TEXTURE:
IGNEOUS SUMMARY: serpentinized dunite crosscutted by offsetpyroxenitic dike, thin gabbroic dike, sporadic orthopyroxene patches
ALTERATION: serpentinzed
VEINS: green, white veins
STRUCTURE: Brittle-
Veins-
Crystal plastic-

SEQUENCE: I
UNIT/SUBUNIT: 22d
ROCK NAME: Harzburgite
CONTACT: Intrusive
TEXTURE: Granular
IGNEOUS SUMMARY: serpentinized harzburgite crosscutted by pyroxenitic
dike
ALTERATION: serpentinzed
VEINS: thin black, blue/grey veins
STRUCTURE: Brittle-
Veins-
Crystal plastic- Pyroxene grains are rounded and slightly elongated.

SEQUENCE: I
UNIT/SUBUNIT: 22e
ROCK NAME: Dunite
CONTACT: Modal
TEXTURE:
IGNEOUS SUMMARY: serpentinized dunite crosscutted by pyroxenitic dike, mesh texture zone, weakly fractured, locally oxidized
ALTERATION: serpentinzed
VEINS: black, green, white veins
STRUCTURE: Brittle-
Veins-
Crystal plastic-
### Rock Name and Contact
- **Rock Name**: Dunite
- **Contact**: Continuous

### Petrographic Summary
- **Sericinized dunite crosscutted by pyroxenitic dike, mesh texture zone, weakly fractured, locally oxidized**

### Fabric Intensity
- **Vein density**:
  - 0–1 per 10 cm
  - 1–2 per 10 cm
  - 2–4 per 10 cm
  - 4–15 per 10 cm
  - >15 per 10 cm

### Lithology
- **Mineralogy**:
  - Orthopyroxene
  - Clinopyroxene
  - Amphibole
  - Olivine
  - Plagioclase
  - Sulfide

### Grain Size
- **Grain size**:
  - Fine grained (0.2–1 mm)
  - Medium grained (1–5 mm)
  - Coarse grained (5–30 mm)
  - Pegmatitic (>30 mm)

### Degree of Deformation
- **Foliation**:
  - Protomylonite
  - Mylonitve
  - Ultramylonite

### Alteration Intensity
- **Alteration halos**:
  - Fresh (<3%)
  - Slight (3–10%)
  - Moderate (11–30%)
  - Substantial (31–60%)
  - Extensive (61–90%)
  - Complete (≥90%)

### Structures
- **Fault zones**: Rearrangement of layers, folding, fracturing, vein crosscutting

### Magnetic Properties
- **Magnetic susceptibility**
  - MSCL-W (SI x 10^-9)
  - MSP

### Density
- **GRA (g/cm^3)**
  - 2.1
  - 2.7

### Table

<table>
<thead>
<tr>
<th>Sequence</th>
<th>Unit/Subunit</th>
<th>Contact</th>
<th>Texture</th>
<th>IGNEOUS SUMMARY</th>
<th>ALTERATION</th>
<th>VEINS</th>
<th>STRUCTURE</th>
<th>VEIN DENSITY</th>
<th>ALTERATION INTENSITY</th>
<th>MAGNETIC CONTACT</th>
<th>Dip</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>22e</td>
<td>Continuous</td>
<td>Igneous</td>
<td>Serpentinized dunite crosscutted by pyroxenitic dike, mesh texture zone, weakly fractured, locally oxidized</td>
<td>Serpentinized</td>
<td>Black, green, white veins</td>
<td>Brittle-fracture, crystal plastic</td>
<td>Density (per meter)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Hole BA4A-44Z Section 2, Top of Section 114.65 (m CCD)

**ROCK NAME:** Dunite

**CONTACT:** Continuous

**TEXTURE:**
- IGNEOUS
  - Summary: serpentinized dunite crosscutted by pyroxenitic dike, mesh texture zone, weakly fractured, locally oxidized

**ALTERATION:** serpentinized

**VEINS:** black, green, white veins

**STRUCTURE:** Brittle
- Zone of cohesive possibly magmatic derived brecciation

**FABRIC INTENSITY:**
- Vein density (per meter):
  - 0
  - 1 per 10 cm
  - 3-5 per 10 cm
  - >20 per 10 cm
  - 5-15 per 10 cm
  - 15-20 per 10 cm

**GRA (g/cm³):**
- 2.52
- 2.32
- 2.12

**Primary mineralogy (%):**
- Olivine
- Plagioclase
- Chlorite
- Spinel
- Orthopyroxene
- Sulfide

**Other features:**
- Discrete brittle features
- Alteration intensity
- Fresh (<3%)
- Slight (3–10%)
- Moderate (11–30%)
- Substantial (31–60%)
- Extensive (61–90%)
- Complete (≥90%)

**Degree of deformation:**
- Undeformed
- Minor fracturing
- Moderate fracturing
- GS reduction and rotation
- Well-developed cataclasis
- Ultracataclastite

**Lithology:**
- Protogranular
- Porphyroclastic
- Strongly foliated
- Protomylonite
- Mylonite
- Ultramylonite

**Magmatic Layering:**
- Protogranular
- Porphyroclastic
- Strongly foliated

**Dip:**
- Magnetic contact
- Brittle
- Crystal plastic

**Vein density (per meter):**
- 0
- 5-10 cm
- 10-30 cm
- >50 cm
- 50-70 cm
- 70-90 cm
- >90 cm

**CT image:**
- Sedimentary rock
- Diagenetic overprint
- Fracture/vein density (per meter)
- 0
- 1 per 10 cm
- 3-5 per 10 cm
- >20 per 10 cm
- 5-15 per 10 cm
- 15-20 per 10 cm

**Magnetic susceptibility:**
- MSCL-W
- MSP

**Scanned image:**
- Sedimentary rock
- Diagenetic overprint

**Sequences and units:**
- Sequence: I
- Unit/subunit: 22e

**Shaded areas:**
- Contact zone
- Sedimentary rock
- Diagenetic overprint
- Fracture/vein density (per meter)

**Depth (m CCD):**
- 114.69
- 114.79
- 114.89
- 114.99
- 115.09

**Core length (cm):**
- Hole BA4A-44Z Section 2
### Hole BA4A-44Z Section 3, Top of Section 115.15 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>Primary mineralogy (%)</th>
<th>Grain size (mm)</th>
<th>Degree of deformation</th>
<th>Discrete brittle features</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Alteration</th>
<th>Dip</th>
<th>Magnetic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>115.15</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>115.25</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>115.35</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>115.45</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>115.55</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>115.65</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>115.75</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>115.85</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>115.95</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Sequences and Units**

- **Sequence I**: Unit 23a, Rock Name: Dunite, Contact: Intrusive
- **Lithology**: Igneous Summary - Highly serpentinized dunite, harzburgitic patch, crosscutted by branched out dikes
- **Alteration**: Serpentinized
- **Veins**: Structure - Brittle, Veins - Crystal plastic

- **Sequence II**: Unit 23b, Rock Name: Olivine gabbro, Contact: Intrusive
- **Lithology**: Igneous Summary - Branched out
- **Alteration**: Highly altered
- **Veins**: Structure - Brittle, Grey, White veins

- **Sequence III**: Unit 23c, Rock Name: Harzburgite, Contact: Intrusive
- **Lithology**: Igneous Summary - Serpentinized harzburgite, locally oxidized, crossed by serpentinized veins
- **Alteration**: Serpentinized
- **Veins**: Structure - Brittle, Green, White veins

**Fabric Intensity**

- Sequence: I
- Unit/Subunit: 23a
- Rock Name: Dunite
- Contact: Intrusive
- Texture: Granular
- Igneous Summary: Highly serpentinized dunite, harzburgitic patch, crosscutted by branched out dikes
- Alteration: Serpentinized
- Veins: Structure - Brittle, Veins - Crystal plastic

**Itemized List**

- **Primary Mineralogy**:
  - Olivine
  - Plagioclase
  - Clinopyroxene
  - Orthopyroxene
  - Amphibole
  - Sulfide

- **Grain Size**: mm (microscopic scale)

- **Depth Range**: m CCD
- **Core Length**: cm
- **Shipboard Samples**: Y/N
- **Stained Image**: Y/N
- **Magnetic Susceptibility**: SI 10^-5
- **MSCL-W**: SI 10^-5
- **MSP**: SI 10^-5
SEQUENCE: I  
UNIT/SUBUNIT: 23b  
ROCK NAME: Harzburgite  
CONTACT: Continuous  
TEXTURE: Granular  
IGNEOUS SUMMARY: serpentinized harzburgite, locally oxidized, crossed by sutured serpentinized veins  
ALTERATION: serpentinized  
VEINS: green, white veins  
STRUCTURE: Brittle-  
Crystal plastic-  
Pyroxene grains are rounded and slightly elongated.

SEQUENCE: I  
UNIT/SUBUNIT: 23c  
ROCK NAME: Dunite  
CONTACT: Modal  
TEXTURE:  
IGNEOUS SUMMARY: serpentinized dunite  
ALTERATION: serpentinized  
VEINS: green, white veins  
STRUCTURE: Brittle-  
Crystal plastic-  

SEQUENCE: I  
UNIT/SUBUNIT: 23d  
ROCK NAME: Dunite  
CONTACT: Intrusive  
TEXTURE:  
IGNEOUS SUMMARY: serpentinized dunite  
ALTERATION: serpentinized  
VEINS:  
STRUCTURE: Brittle-  
Crystal plastic-  

Fabric intensity  
Vein density (per meter)  
Grain size  
Hole BA4A-44Z Section 4, Top of Section 116.05 (m CCD)  
Depth (m CCD)  
Core length (cm)  
Sequence  
Lithology  
Primary mineralogy (%)  
Grain size  
Degree of deformation  
Fracture/ Vein density (per meter)  
Alteration intensity  
Dip  
Magnetic contact  
Brittle  
Crystal plastic  
Veins  
Magmatic  
Layering  
Foliation  
Discrete brittle features  
Fracture zones  
Alteration halos  
Fault zones  
Structures  
Apparent offset  
Alteration  
Intensity  
Description
SEQUENCE: I
UNIT/SUBUNIT: 23e
ROCK NAME: Dunite
CONTACT: Continuous
TEXTURE:
IGNEOUS SUMMARY: highly serpentinized dunite, moderately fractured, crosscutted by gabbroic and offset branched out pyroxenitic dikes, locally oxidized, mesh texture
ALTERATION: serpentinized
VEINS: black, green, white veins
STRUCTURE: Brittle- Veins- conjugate vein sets occur

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dipl</th>
<th>Magnetic contact</th>
<th>Brittle Fabric plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>117.30</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td>Olivena</td>
<td>100</td>
<td>0</td>
<td>1 per 10 cm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>117.40</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td>Plagioclase</td>
<td>95</td>
<td>1</td>
<td>3-5 per 10 cm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>117.50</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td>Amphibole</td>
<td>90</td>
<td>2</td>
<td>&gt;20 per 10 cm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>117.60</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td>Spinel</td>
<td>85</td>
<td>3</td>
<td>5-15 per 10 cm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>117.70</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td>Orthopyroxene</td>
<td>80</td>
<td>4</td>
<td>15-20 per 10 cm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>117.80</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td>Clinopyroxene</td>
<td>75</td>
<td>5</td>
<td>&gt;30 per 10 cm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>117.90</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td>Plagioclase</td>
<td>70</td>
<td>6</td>
<td>90-100 (m CCD)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>118.00</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td>Amphibole</td>
<td>60</td>
<td>7</td>
<td>80-90 (m CCD)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>118.10</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
<td>Spinel</td>
<td>50</td>
<td>8</td>
<td>70-80 (m CCD)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>118.20</td>
<td>90</td>
<td></td>
<td></td>
<td></td>
<td>Orthopyroxene</td>
<td>40</td>
<td>9</td>
<td>60-70 (m CCD)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**DESCRIPTION:**
- Fault zones
- Structures
- Vein density
- Degree of deformation
- Magnetic contact
- Brittle Fabric
- Crystal plastic
- Veins
SEQUENCE: I
UNIT/SUBUNIT: 23e
ROCK NAME: Dunite
CONTACT: Continuous
TEXTURE:
IGNEOUS SUMMARY: highly serpentinized dunite, moderately fractured, crosscutted by gabbroic and offset branched out pyroxenitic dikes, locally oxidized, mesh texture
ALTERATION: serpentinized

VEINS: black, green, white veins

STRUCTURE: Brittle-
Veins- conjugate vein sets occur
Crystal plastic-

SEQUENCE: I
UNIT/SUBUNIT: 23e
ROCK NAME: Clinopyroxenite
CONTACT: Intrusive
TEXTURE: Granular
IGNEOUS SUMMARY: branched out
ALTERATION: highly altered

VEINS: 

STRUCTURE: Brittle-

SEQUENCE: I
UNIT/SUBUNIT: 23f
ROCK NAME: Dunite
CONTACT: Intrusive
TEXTURE:
IGNEOUS SUMMARY: serpentinized dunite, harzburgitic patche, crosscutted by thin pyroxenitic dikes
ALTERATION: serpentinized

VEINS: green, white veins
STRUCTURE: Brittle-
Veins- conjugate vein sets occur
Crystal plastic-

---

**Fabric intensity**

**Vein density (per meter)**

**Grain size**

**Hole BA4A-45Z Section 3, Top of Section 118.23 (m CCD)**

**Depth (m CCD)**

**Core length (cm)**

**Sequence**

**Contact**

**TEXTURE**

**IGNEOUS SUMMARY**

**ALTERATION**

**VEINS**

**STRUCTURE**

**Description**

**Magnetic contact**

**Brittle**

**Crystal plastic**

**Vents**

**Discrete brittle features**

**Vein crosscutting**

**Alteration intensity**

**Degree of deformation**

**Vein density (per meter)**

**Core length (cm)**

**Sequence**

**Contact**

**TEXTURE**

**IGNEOUS SUMMARY**

**ALTERATION**

**VEINS**

**STRUCTURE**

**Description**

**Magnetic contact**

**Brittle**

**Crystal plastic**

**Vents**

**Discrete brittle features**

**Vein crosscutting**

**Alteration intensity**

**Degree of deformation**

**Vein density (per meter)**

**Core length (cm)**

**Sequence**

**Contact**

**TEXTURE**

**IGNEOUS SUMMARY**

**ALTERATION**

**VEINS**

**STRUCTURE**

**Description**

**Magnetic contact**

**Brittle**

**Crystal plastic**

**Vents**

**Discrete brittle features**

**Vein crosscutting**

**Alteration intensity**

**Degree of deformation**

**Vein density (per meter)**

**Core length (cm)**

**Sequence**

**Contact**

**TEXTURE**

**IGNEOUS SUMMARY**

**ALTERATION**

**VEINS**

**STRUCTURE**

**Description**

**Magnetic contact**

**Brittle**

**Crystal plastic**

**Vents**

**Discrete brittle features**

**Vein crosscutting**

**Alteration intensity**

**Degree of deformation**

**Vein density (per meter)**

**Core length (cm)**
**Hole BA4A-45Z Section 4, Top of Section 119.01 (m CCD)**

### Core length (cm) | Depth (m CCD) | Shipboard samples | Stained image | Magnetic susceptibility (SI x 10^-5) | MSCL-W | MSP | GRA (g/cm³) | Surface Unit | Lithology | Primary mineralogy (%) | Grain size | Degree of deformation | Fracture/ Vein density (per meter) | Alteration intensity | Dip Magnetic contact | Brittle | Crystal plastic | Veins |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>119.01</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>119.05</td>
<td>119.06</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>119.10</td>
<td>119.11</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>119.15</td>
<td>119.16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>119.20</td>
<td>119.21</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>119.25</td>
<td>119.26</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>119.30</td>
<td>119.31</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>119.35</td>
<td>119.36</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>119.40</td>
<td>119.41</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>119.45</td>
<td>119.46</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>119.50</td>
<td>119.51</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>119.55</td>
<td>119.56</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>119.60</td>
<td>119.61</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>119.65</td>
<td>119.66</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>119.70</td>
<td>119.71</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>119.75</td>
<td>119.76</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Description**
- **SEQUENCE 1:** I
- **UNIT/SUBUNIT:** 23f
- **CONTACT:** Continuous
- **TEXTURE:**
  - IGNEOUS: Serpentinized dunite, harzburgitic patch, crosscut by thin pyroxenitic dikes
- **ALTERATION:** Serpentinized
- **VEINS:** Green, white veins
- **STRUCTURE:** Brittle-Veins: Conjugate vein sets occur
  - Crystal plastic:
  - Vein density (per meter): 3-5 per 10 cm
- **Veins:**
  - Fabric intensity: 5
  - Grain size: 6
  - Hole BA4A-45Z Section 4, Top of Section 119.01 (m CCD)
  - Depth (m CCD): 0
  - Core length (cm): 119.75

### Lithology
- **Primary mineralogy:**
  - Olivine
  - Plagioclase
  - Clinopyroxene
  - Orthopyroxene
  - Amphibole
  - Sulfide

### Degree of deformation
- **Discrete brittle features:**
  - Fabric intensity: 5
  - Grain size: 6

### Alteration intensity
- **Altered:**
  - Serpentinized

### Structures
- **Veins:**
  - Vein density (per meter): 3-5 per 10 cm

### Fabric intensity
- **Vein crosscutting:**
  - Degree of deformation: 5
  - Vein density (per meter): 3-5 per 10 cm

### Veins
- **Alteration intensity:**
  - Fresh (<3%): 90
  - Slight (3–10%): 45
  - Moderate (11–30%): 0
  - Substantial (31–60%): 45
  - Extensive (61–90%): 0
  - Complete (≥90%): 0

### Vein density (per meter)
- 0–10: 0
- 10–30: 0
- 30–50: 0
- 50–70: 0
- 70–90: 0
- >100: 0

### Blow-by-build sequence
- **CT image:**
  - Sulfide
  - Amphibole
  - Clinopyroxene
  - Orthopyroxene
  - Plagioclase
  - Olivine

### Magnetic susceptibility
- **MSCL-W:**
  - MSP
  - GRA (g/cm³)
  - Surface Unit
  - Lithology
  - Degree of deformation
  - Fabric intensity
  - Vein density (per meter)
  - Alteration intensity
  - Dip Magnetic contact
  - Brittle
  - Crystal plastic
  - Veins

### Core length (cm)
- 119.01
- 119.06
- 119.11
- 119.16
- 119.21
- 119.26
- 119.31
- 119.36
- 119.41
- 119.46
- 119.51
- 119.56
- 119.61
- 119.66
- 119.71
- 119.76
<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>Primary mineralogy (%</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Lithology</th>
<th>Primary mineralogy (unit/subunit)</th>
<th>Hole BA4A-46Z Section 1, Top of Section 119.70 (m CCD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>119.73</td>
<td></td>
<td>119.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>119.83</td>
<td></td>
<td>119.83</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>119.93</td>
<td></td>
<td>119.93</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>120.03</td>
<td></td>
<td>120.03</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>120.13</td>
<td></td>
<td>120.13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>120.23</td>
<td></td>
<td>120.23</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>120.33</td>
<td></td>
<td>120.33</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>120.43</td>
<td></td>
<td>120.43</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SEQUENCE:** Dunite
**ROCK NAME:** Dunite
**CONTACT:** Continuous
**ALTERATION SUMMARY:** Serpentinised dunite

**SEQUENCE:** Gabbro
**ROCK NAME:** Gabbro
**CONTACT:** Intrusive
**ALTERATION SUMMARY:** Partially altered and pseudomorphed

**VEINS:** Threadlike white veins, denser near dyke, cut by a variety of serpentine veins

**TEXTURE:** Brittle

**DIMENSIONS**

- **Vein density (per meter):** 0 to 10, 10 to 30, 30 to 50, 50 to 70, 70 to 90, >90
- **Grain size (mm):** 0.2 to 1, 1 to 5, 5 to 30, >30
- **Degree of deformation:** Undeformed, Minor fracturing, Moderate fracturing, GS reduction and rotation, Well-developed cataclasis
- **Alteration intensity:** Fresh (<3%), Slight (3–10%), Moderate (11–30%), Substantial (31–60%), Extensive (61–90%), Complete (>90%)

**Lithology**

- **Primary Mineralogy:**
  - Orthopyroxene
  - Clinopyroxene
  - Amphibole
  - Plagioclase
  - Sulfide
  - Olivine
- **Secondary Mineralogy:**
  - Chlorite
  - Serpentine

**Magnetic contact**

- **Contact Type:** Brittle
- **Texture:** Crystal plastic

**Structures**

- **Fault zones:** 0 to 10, 10 to 30, 30 to 50, 50 to 70, 70 to 90, >90
- **Vein crosscutting:** 0 to 10, 10 to 30, 30 to 50, 50 to 70, 70 to 90, >90
- **Alteration halos:** 0 to 10, 10 to 30, 30 to 50, 50 to 70, 70 to 90, >90

**Fabric Intensity**

- **Elemental distribution:**
  - GRA (g/cm²)
  - CT image
- **Texture:**
  - Protogranular
  - Protomylonite
  - Mylonite
  - Ultramylonite

**Vein crosscutting**

- **Description:**
  - Magnetic contact
  - Brittle
  - Crystal plastic
  - Veins
### Sequence I: Dunite

**Unit/Subunit:** 23g
- **Rock Name:** Dunite
- **Contact:** Continuous
- **Texture:** Igneous
- **Summary:** Serpentinized dunite
- **Alteration:** Serpentinized
  - **Veins:** Thread-like white veins, denser near dyke, cut by a variety of serpentine veins
- **Structure:** Brittle-Veins-Crystal plastic

---

### Sequence I: Harzburgite

**Unit/Subunit:** 23h
- **Rock Name:** Harzburgite
- **Contact:** Modal
- **Texture:** Granular
- **Summary:** Serpentinized opx-poor harzburgite
- **Alteration:** Serpentinized
  - **Veins:** Cut by a variety of serpentine veins
- **Structure:** Brittle-Veins-Crystal plastic

**Pyroxene Grains are Moderately Elongated.**

---

### Sequence I: Dunite

**Unit/Subunit:** 23i
- **Rock Name:** Dunite
- **Contact:** Modal
- **Texture:** Igneous
- **Summary:** Serpentinized dunite
- **Alteration:** Serpentinized
  - **Veins:** Cut by a variety of serpentine veins
- **Structure:** Brittle-Veins-Crystal plastic

---

### Fabric Intensity

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Vein density (per meter)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-10</td>
<td>0</td>
</tr>
<tr>
<td>10-20</td>
<td>1</td>
</tr>
<tr>
<td>20-30</td>
<td>2</td>
</tr>
<tr>
<td>30-40</td>
<td>3</td>
</tr>
<tr>
<td>40-50</td>
<td>4</td>
</tr>
<tr>
<td>50-60</td>
<td>5</td>
</tr>
</tbody>
</table>

### Depth (m CCD)

<table>
<thead>
<tr>
<th>Core length (cm)</th>
<th>10</th>
<th>20</th>
<th>30</th>
<th>40</th>
<th>50</th>
<th>60</th>
<th>70</th>
<th>80</th>
<th>90</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>CT image</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Lithology

<table>
<thead>
<tr>
<th>Magnetic susceptibility</th>
<th>MSCL-W</th>
<th>MSP</th>
</tr>
</thead>
<tbody>
<tr>
<td>(SI x 10^-5)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Primary Mineralogy

<table>
<thead>
<tr>
<th>Plagioclase</th>
<th>Amphibole</th>
<th>Orthopyroxene</th>
<th>Clinopyroxene</th>
<th>Spinel</th>
<th>Magnetite</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

### Degree of deformation

<table>
<thead>
<tr>
<th>Fractures</th>
<th>Vein density (per meter)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-10</td>
<td>0</td>
</tr>
<tr>
<td>10-20</td>
<td>1</td>
</tr>
<tr>
<td>20-30</td>
<td>2</td>
</tr>
<tr>
<td>30-40</td>
<td>3</td>
</tr>
<tr>
<td>40-50</td>
<td>4</td>
</tr>
<tr>
<td>50-60</td>
<td>5</td>
</tr>
</tbody>
</table>

### Alteration intensity

<table>
<thead>
<tr>
<th>Alteration intensity</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-10</td>
</tr>
<tr>
<td>10-20</td>
</tr>
<tr>
<td>20-30</td>
</tr>
<tr>
<td>30-40</td>
</tr>
<tr>
<td>40-50</td>
</tr>
<tr>
<td>50-60</td>
</tr>
</tbody>
</table>

### Description

- **Veins:** Serpentine veins are present near dyke, cut by a variety of serpentine veins.
- **Structure:** Brittle-Veins-Crystal plastic
**Hole BA4A-47Z Section 3, Top of Section 124.34 (m CCD)**

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>Lithology</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnetic contact</th>
<th>Brittle Crystal plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>124.37</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>124.47</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>124.57</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>124.67</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>124.77</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>124.87</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>124.97</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depth (m CCD)</td>
<td>Magnetic susceptibility</td>
<td>Lithology</td>
<td>Primary mineralogy (%)</td>
<td>Grain size</td>
<td>Degree of deformation</td>
<td>Alteration intensity</td>
<td>Dip</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------</td>
<td>-------------------------</td>
<td>-----------</td>
<td>------------------------</td>
<td>-----------</td>
<td>----------------------</td>
<td>---------------------</td>
<td>-----</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>125.70</td>
<td>0</td>
<td>Dunite</td>
<td>Olivine - Plagioclase</td>
<td>Medium</td>
<td>Brittle</td>
<td>Fresh (&lt;3%)</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>125.80</td>
<td>10</td>
<td>Wehrlite</td>
<td>Amphibole - Spinel</td>
<td>Fine</td>
<td>Brittle</td>
<td>Fresh (&lt;3%)</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>125.90</td>
<td>20</td>
<td>Olivine</td>
<td>Orthopyroxene - Clinopyroxene</td>
<td>Medium</td>
<td>Brittle</td>
<td>Fresh (&lt;3%)</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>126.00</td>
<td>30</td>
<td>Amphibole</td>
<td>Orthopyroxene</td>
<td>Coarse</td>
<td>Brittle</td>
<td>Fresh (&lt;3%)</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>126.10</td>
<td>40</td>
<td>Plagioclase</td>
<td>Orthopyroxene</td>
<td>Fine</td>
<td>Brittle</td>
<td>Fresh (&lt;3%)</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>126.20</td>
<td>50</td>
<td>Clinopyroxene</td>
<td>Orthopyroxene</td>
<td>Medium</td>
<td>Brittle</td>
<td>Fresh (&lt;3%)</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>126.30</td>
<td>60</td>
<td>Orthopyroxene</td>
<td>Orthopyroxene</td>
<td>Fine</td>
<td>Brittle</td>
<td>Fresh (&lt;3%)</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>126.40</td>
<td>70</td>
<td>Orthopyroxene</td>
<td>Orthopyroxene</td>
<td>Medium</td>
<td>Brittle</td>
<td>Fresh (&lt;3%)</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>126.50</td>
<td>80</td>
<td>Orthopyroxene</td>
<td>Orthopyroxene</td>
<td>Fine</td>
<td>Brittle</td>
<td>Fresh (&lt;3%)</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>126.60</td>
<td>90</td>
<td>Orthopyroxene</td>
<td>Orthopyroxene</td>
<td>Medium</td>
<td>Brittle</td>
<td>Fresh (&lt;3%)</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**SEQUENCE:** I  
**UNIT/SUBUNIT:** 23k  
**ROCK NAME:** dunite  
**CONTACT:** continuous  
**TEXTURE:**  
**IGNEOUS SUMMARY:** serpentinised dunite  
**ALTERATION:** serpentinised  
**VEINS:** cut by a variety of serpentine veins  
**STRUCTURE:** Brittle-

**Vein density (per meter):**

- 0  
- 1: 2-5 per 10 cm  
- 2: >20 per 10 cm  
- 3: 5-15 per 10 cm  
- 4: 15-20 per 10 cm  
- 5: 20-30 per 10 cm  
- 6: 30-50 per 10 cm  
- 7: 50-70 per 10 cm  
- 8: 70-90 per 10 cm  
- 9: >90 per 10 cm

**Granulometry:**

- 0  
- 1: Fine grained (0.2–1 mm)  
- 2: Medium grained (1–5 mm)  
- 3: Coarse grained (5–30 mm)  
- 4: Pegmatitic (>30 mm)  

**Alteration intensity:**

- 0: Fresh (<3%)  
- 1: Slight (3–10%)  
- 2: Moderate (11–30%)  
- 3: Substantial (31–60%)  
- 4: Extensive (61–90%)  
- 5: Complete (>90%)

**Magmatic contact:**

- 0: Undeformed  
- 1: Minor fracturing  
- 2: Moderate fracturing  
- 3: GS reduction and rotation  
- 4: Well-developed cataclasis  
- 5: Ultracataclastite

**Dip:**

- 0: Protomylonite  
- 1: Mylonite  
- 2: Ultramylonite  
- 3: Isotropic  
- 4: Weak  
- 5: Moderate  
- 6: Strong

**Degree of deformation:**

- 0: Undeformed  
- 1: Minor fracturing  
- 2: Moderate fracturing  
- 3: GS reduction and rotation  
- 4: Well-developed cataclasis  
- 5: Ultracataclastite

**Magmatic layering:**

- 0: Protogranular  
- 1: Porphyroclastic  
- 2: Strongly foliated  
- 3: Protomylonite  
- 4: Mylonite  
- 5: Ultramylonite

**Fabric intensity:**

- 0: Undeformed  
- 1: Minor fracturing  
- 2: Moderate fracturing  
- 3: GS reduction and rotation  
- 4: Well-developed cataclasis  
- 5: Ultracataclastite

**Vein crosscutting:**

- 0: Undeformed  
- 1: Minor fracturing  
- 2: Moderate fracturing  
- 3: GS reduction and rotation  
- 4: Well-developed cataclasis  
- 5: Ultracataclastite

**Strength:**

- 0: Undeformed  
- 1: Minor fracturing  
- 2: Moderate fracturing  
- 3: GS reduction and rotation  
- 4: Well-developed cataclasis  
- 5: Ultracataclastite

**Drillhole description:**

- 0: Fault zones  
- 1: Structures  
- 2: Apparent offset  
- 3: Alteration halos  
- 4: Vein zones  
- 5: Vein crosscutting  
- 6: Vein density (per meter)  
- 7: Degree of deformation  
- 8: Magmatic contact  
- 9: Brittle plastic  
- 10: Veins  

**Depth (m CCD):**

- 126.70  
- 126.80  
- 126.90  
- 127.00  
- 127.10  
- 127.20  
- 127.30  
- 127.40  
- 127.50  
- 127.60  
- 127.70  
- 127.80  
- 127.90  
- 128.00

**Core length (cm):**

- 90  
- 80  
- 70  
- 60  
- 50  
- 40  
- 30  
- 20  
- 10  
- 0

**Magnetic susceptibility (MSCL-W):**

- SP (SI 10^-5)

**MSCL-W:**

- MSP  
- GRA (g/cm^3)

**Primary mineralogy:**

- Olivine  
- Plagioclase  
- Chloropyroxene  
- Orthopyroxene  
- Amphibole  
- Sulfide

**Degree of deformation:**

- 0: Undeformed  
- 1: Minor fracturing  
- 2: Moderate fracturing  
- 3: GS reduction and rotation  
- 4: Well-developed cataclasis  
- 5: Ultracataclastite

**Vein density (per meter):**

- 0  
- 1: 2-5 per 10 cm  
- 2: >20 per 10 cm  
- 3: 5-15 per 10 cm  
- 4: 15-20 per 10 cm  
- 5: 20-30 per 10 cm  
- 6: 30-50 per 10 cm  
- 7: 50-70 per 10 cm  
- 8: 70-90 per 10 cm  
- 9: >90 per 10 cm

**Mineralogy:**

- Sulfide  
- Amphibole  
- Spinel  
- Orthopyroxene  
- Clinopyroxene  
- Plagioclase  
- Olivine

**Grain size:**

- 0  
- 1: Fine grained (0.2–1 mm)  
- 2: Medium grained (1–5 mm)  
- 3: Coarse grained (5–30 mm)  
- 4: Pegmatitic (>30 mm)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Scanned image</th>
<th>Magnetic susceptibility</th>
<th>Primary mineralogy</th>
<th>Degree of deformation</th>
<th>Vein density (per meter)</th>
<th>Alteration intensity</th>
</tr>
</thead>
<tbody>
<tr>
<td>126.70</td>
<td>90</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>126.80</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>126.90</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>127.00</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>127.10</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>127.20</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>127.30</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>127.40</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>127.50</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>127.60</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Description:**

- Sheet image  
- CT image  
- Sequence  
- Unit/subunit  
- Rock name  
- Contact  
- Texture  
- Igneous summary  
- Alteration  
- Veins  
- Structure  
- Apparent offset  
- Alteration halos  
- Vein crosscutting  
- Vein density (per meter)  
- Degree of deformation  
- Primary mineralogy  
- Grain size  
- Magnetic susceptibility  
- GRA (g/cm^3)  

**Hole BA4A-48Z Section 2, Top of Section 126.69 (m CCD)**
### Table: Integrated Rock Description

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>Magnetic susceptibility (SI 10^-5)</th>
<th>MSCL-W MSP</th>
<th>GRA (g/cm³)</th>
<th>Sequence</th>
<th>Sedimentology</th>
<th>Lithology</th>
<th>Grain size (%)</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>DIP</th>
<th>Magnetic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Voids</th>
</tr>
</thead>
<tbody>
<tr>
<td>127.61</td>
<td>0</td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td>1.6</td>
<td>1</td>
<td>25</td>
<td>Dunite</td>
<td>75</td>
<td>Fresh (&lt;3%)</td>
<td>Serpentinised</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>127.71</td>
<td>10</td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td>2.16</td>
<td>2</td>
<td>50</td>
<td>Gabbro</td>
<td>100</td>
<td>alteration</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>127.81</td>
<td>20</td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td>2.18</td>
<td>2</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>127.91</td>
<td>30</td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td>2.18</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>128.01</td>
<td>40</td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td>2.18</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>128.11</td>
<td>50</td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td>2.18</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>128.21</td>
<td>60</td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td>2.18</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>128.31</td>
<td>70</td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td>2.18</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Hole BA4A-48Z Section 4, Top of Section 128.32 (m CCD)**

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Stained image</th>
<th>CT image</th>
<th>Magnetic susceptibility</th>
<th>MSCL-W (SI)</th>
<th>GRA (g/cm³)</th>
<th>Sequence</th>
<th>Lithology</th>
<th>Unit/subunit</th>
<th>Primary mineralogy (%)</th>
<th>Degree of deformation</th>
<th>Fabric intensity</th>
<th>Fracture/Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
</tr>
</thead>
<tbody>
<tr>
<td>128.33</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>128.34</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>128.35</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>128.36</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>128.37</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>128.38</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>128.39</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>128.40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>128.41</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>128.42</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>128.43</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>128.44</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>128.45</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>128.46</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>128.47</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>128.48</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>128.49</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>128.50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>128.51</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>128.52</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>128.53</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>128.54</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>128.55</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>128.56</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>128.57</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>128.58</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>128.59</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>128.60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>128.61</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>128.62</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>128.63</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Description**

- **Lithology:** Serpentinitised dunite
- **TEXTURE:** Igneous
- **ALTERATION:** Serpentinitised
- **VEINS:** Cut by a variety of serpentine veins
- **STRUCTURE:** Brittle, Veins, Crystal plastic

**Samples**

- **Unit/Subunit:** 23k
- **Contact:** Continuous
- **ROCK NAME:** Dunite
- **MSCL-W:** 128.83
- **GRA:** 128.73
- **Orthopyroxene:** 128.63
- **Clinoxylosene:** 128.53
- **Plagioclase:** 128.43
- **Olivine:** 128.33

**Alteration Intensity**

- **Alteration:** Slight (3–10%)
- **Visual:** Serpentinitised, altered plagioclase

**Vein Crosscutting**

- **Density:** 1–5 per 10 cm

**Grain Size**

- **Grain size:** 0.2–1 mm

**Degree of Deformation**

- **Minor fracturing**
- **Moderate fracturing**
- **GS reduction and rotation**
- **Well-developed cataclasis**
- **Ultracataclastite**

**Contact:** Intrusive

**Texture:** Granular

**Igneous Summary:** Serpentinitised dunite

**Alteration:** Slight (3–10%)
<table>
<thead>
<tr>
<th>Sequence</th>
<th>Unit/Subunit</th>
<th>Lithology</th>
<th>Primary Mineralogy (%)</th>
<th>Degree of Deformation</th>
<th>Magmatic Layering</th>
<th>Fracture/ Vein Density (per meter)</th>
<th>Alteration Intensity</th>
<th>Magnetic Contact</th>
<th>Brittle Features</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>23a</td>
<td>23a</td>
<td>Dunite</td>
<td>Olivine</td>
<td>Undeformed</td>
<td>Protomylonite</td>
<td>&lt; 0.1</td>
<td>Fresh (&lt;3%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24a</td>
<td>24a</td>
<td>Dunite</td>
<td>Orthopyroxene</td>
<td>Undeformed</td>
<td>Protomylonite</td>
<td>0.1–1</td>
<td>Fresh (&lt;3%)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Fabric Intensity

- 0
- 1
- 2
- 3
- 4
- 5

### Vein Density (per meter)

- < 0.1
- 0.1–1
- 1–10
- 10–30
- 30–50
- 50–70
- 70–90
- > 90

### Magnetic Susceptibility

- MSCL-W
- MSP
- GRA

### Core Sample Details

- Core length (cm)
- Core orientation (°)
- Core image

### Core Description

- Sequence
- Unit/Subunit
- Lithology
- Primary Mineralogy ( (%) )
- Degree of Deformation
- Magmatic Layering
- Fracture/ Vein Density (per meter)
- Alteration Intensity
- Magnetic Contact
- Brittle Features
- Description
<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Magmatic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
<th>Alteration intensity</th>
<th>Dip</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>132.79</td>
<td>30</td>
<td>10</td>
<td>30</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>132.79</td>
<td>30</td>
<td>10</td>
<td>30</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>132.79</td>
<td>30</td>
<td>10</td>
<td>30</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>132.79</td>
<td>30</td>
<td>10</td>
<td>30</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>132.79</td>
<td>30</td>
<td>10</td>
<td>30</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>

**SEQUENCE: I**

**UNIT/SUBUNIT: 24a**

**ROCK NAME:** Dunite

**CONTACT:** Continuous

**TEXTURE:**

**IGNEOUS SUMMARY:** Serpentinized dunite

**ALTERATION:** Serpentinized

**VEINS:** Network of millimetric green veins and few thin white veins

**STRUCTURE:** Brittle-

**Sequence:** I

**Unit/Subunit:** 24a

**Rock Name:** Dunite

**Contact:** Continuous

**Texture:**

**Igneous Summary:** Serpentinized dunite

**Alteration:** Serpentinized

**Veins:** Network of millimetric green veins and few thin white veins

**Structure:** Brittle-

---

**SEQUENCE: I**

**UNIT/SUBUNIT: 24f**

**ROCK NAME:** Olivine gabbro

**CONTACT:** Intrusive

**TEXTURE:**

**IGNEOUS SUMMARY:** Highly altered olivine gabbro

**ALTERATION:** Highly altered

**VEINS:** Green veins

**STRUCTURE:** Brittle-

**Sequence:** I

**Unit/Subunit:** 24f

**Rock Name:** Olivine gabbro

**Contact:** Intrusive

**Texture:**

**Igneous Summary:** Highly altered olivine gabbro

**Alteration:** Highly altered

**Veins:** Green veins

**Structure:** Brittle-

---

**SEQUENCE: I**

**UNIT/SUBUNIT: 24g**

**ROCK NAME:** Dunite

**CONTACT:** Intrusive

**TEXTURE:**

**IGNEOUS SUMMARY:** Serpentinized dunite with a patch of layered Opx

**ALTERATION:** Serpentinized

**VEINS:** Network of millimetric green veins and few thin black and white veins

**STRUCTURE:** Brittle-

**Sequence:** I

**Unit/Subunit:** 24g

**Rock Name:** Dunite

**Contact:** Intrusive

**Texture:**

**Igneous Summary:** Serpentinized dunite with a patch of layered Opx

**Alteration:** Serpentinized

**Veins:** Network of millimetric green veins and few thin black and white veins

**Structure:** Brittle-
### Sequence: I

**Unit/Subunit:** 24g  
**Rock Name:** Dunite  
**Contact:** Continuous  

**Igneous Summary:** Serpentinized dunite with a patch of layered Opx  
**Alteration:** Serpentinized  
**Veins:** Network of milimetric green veins and few thin black and white veins  
**Structure:** Brittle-Veins-Crystal plastic-

---

### Sequence: I

**Unit/Subunit:** 24g  
**Rock Name:** Olivine gabbro  
**Contact:** Intrusive  

**Igneous Summary:** Highly altered olivine gabbro  
**Alteration:** Highly altered  
**Veins:** Green veins  
**Structure:** Brittle-Veins-Crystal plastic-

---

### Scan Image

**Description:** Series of images depicting core samples with various textural and structural features.
### Sequence: I

#### Unit/Subunit: 24g
- **Rock Name:** Dunite
- **Contact:** Continuous
- **Texture:**
- **Igneous Summary:** Serpentinized dunite with a patch of layered Opx
- **Alteration:** Serpentinized
- **Veins:** Network of millimetric green veins and few thin black and white veins
- **Structure:** Brittle-

#### Fabric Intensity

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Fabric Intensity</th>
</tr>
</thead>
<tbody>
<tr>
<td>135.43</td>
<td>5</td>
</tr>
<tr>
<td>135.33</td>
<td>4</td>
</tr>
<tr>
<td>135.23</td>
<td>3</td>
</tr>
<tr>
<td>135.13</td>
<td>2</td>
</tr>
<tr>
<td>135.03</td>
<td>1</td>
</tr>
<tr>
<td>134.93</td>
<td>0</td>
</tr>
</tbody>
</table>

#### Grain Size

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Grain Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>135.43</td>
<td>6</td>
</tr>
<tr>
<td>135.33</td>
<td>5</td>
</tr>
<tr>
<td>135.23</td>
<td>4</td>
</tr>
<tr>
<td>135.13</td>
<td>3</td>
</tr>
<tr>
<td>135.03</td>
<td>2</td>
</tr>
<tr>
<td>134.93</td>
<td>1</td>
</tr>
</tbody>
</table>

#### Degree of Deformation

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Degree of Deformation</th>
</tr>
</thead>
<tbody>
<tr>
<td>135.43</td>
<td>Undeformed</td>
</tr>
<tr>
<td>135.33</td>
<td>Minor fracturing</td>
</tr>
<tr>
<td>135.23</td>
<td>Moderate fracturing</td>
</tr>
<tr>
<td>135.13</td>
<td>GS reduction and rotation</td>
</tr>
<tr>
<td>135.03</td>
<td>Well-developed cataclasis</td>
</tr>
<tr>
<td>134.93</td>
<td>Ultracataclastite</td>
</tr>
</tbody>
</table>

#### Lithology

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Lithology</th>
</tr>
</thead>
<tbody>
<tr>
<td>135.43</td>
<td>Protogranular</td>
</tr>
<tr>
<td>135.33</td>
<td>Porphyroclastic</td>
</tr>
<tr>
<td>135.23</td>
<td>Strongly foliated</td>
</tr>
<tr>
<td>135.13</td>
<td>Protomylonite</td>
</tr>
<tr>
<td>135.03</td>
<td>Mylonite</td>
</tr>
<tr>
<td>134.93</td>
<td>Ultramylonite</td>
</tr>
</tbody>
</table>

#### Magnetic Susceptibility (SI x 10^-5)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Magnetic Susceptibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>135.43</td>
<td>2.96</td>
</tr>
<tr>
<td>135.33</td>
<td>2.86</td>
</tr>
<tr>
<td>135.23</td>
<td>2.76</td>
</tr>
</tbody>
</table>

#### Degree of Alteration

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Degree of Alteration</th>
</tr>
</thead>
<tbody>
<tr>
<td>135.43</td>
<td>Fresh (&lt;3%)</td>
</tr>
<tr>
<td>135.33</td>
<td>Slight (3–10%)</td>
</tr>
<tr>
<td>135.23</td>
<td>Moderate (11–30%)</td>
</tr>
<tr>
<td>135.13</td>
<td>Substantial (31–60%)</td>
</tr>
<tr>
<td>135.03</td>
<td>Extensive (61–90%)</td>
</tr>
<tr>
<td>134.93</td>
<td>Complete (≥90%)</td>
</tr>
</tbody>
</table>

#### Discrete Vein density (per meter)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Discrete Vein density</th>
</tr>
</thead>
<tbody>
<tr>
<td>135.43</td>
<td>0–1 per 10 cm</td>
</tr>
<tr>
<td>135.33</td>
<td>1 per 10 cm</td>
</tr>
<tr>
<td>135.23</td>
<td>3 per 10 cm</td>
</tr>
<tr>
<td>135.13</td>
<td>&gt;20 per 10 cm</td>
</tr>
<tr>
<td>135.03</td>
<td>5–15 per 10 cm</td>
</tr>
<tr>
<td>134.93</td>
<td>15–20 per 10 cm</td>
</tr>
</tbody>
</table>

#### Vein density (per meter)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Vein density</th>
</tr>
</thead>
<tbody>
<tr>
<td>135.43</td>
<td>0–1 per 10 cm</td>
</tr>
<tr>
<td>135.33</td>
<td>1 per 10 cm</td>
</tr>
<tr>
<td>135.23</td>
<td>3 per 10 cm</td>
</tr>
<tr>
<td>135.13</td>
<td>&gt;20 per 10 cm</td>
</tr>
<tr>
<td>135.03</td>
<td>5–15 per 10 cm</td>
</tr>
<tr>
<td>134.93</td>
<td>15–20 per 10 cm</td>
</tr>
</tbody>
</table>

#### Magnetic contact

- Brittle

#### Structures

- Fault zones
- Vein cross-cutting

#### Alteration halos

- Fresh (<3%)
- Slight (3–10%)
- Moderate (11–30%)
- Substantial (31–60%)
- Extensive (61–90%)
- Complete (≥90%)

#### Key Points:
- **SEQUENCE:** I
- **UNIT:** 24g
- **ROCK NAME:** Dunite
- **CONTACT:** Continuous
- **TEXTURE:**
- **Igneous Summary:** Serpentinized dunite with a patch of layered Opx
- **Alteration:** Serpentinized
- **Veins:** Network of millimetric green veins and few thin black and white veins
- **Structure:** Brittle-

---

### Sequence: II

#### Unit/Subunit: 24h
- **Rock Name:** Olivine gabbro
- **Contact:** Modal
- **Texture:**
- **Igneous Summary:** Highly altered olivine gabbro
- **Alteration:** Highly altered
- **Veins:** Dense network of millimetric green veins
- **Structure:** Brittle-

#### Depth (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>135.43</td>
</tr>
<tr>
<td>135.33</td>
</tr>
<tr>
<td>135.23</td>
</tr>
<tr>
<td>135.13</td>
</tr>
<tr>
<td>135.03</td>
</tr>
<tr>
<td>134.93</td>
</tr>
</tbody>
</table>

#### Key Points:
- **SEQUENCE:** II
- **UNIT:** 24h
- **ROCK NAME:** Olivine gabbro
- **CONTACT:** Modal
- **TEXTURE:**
- **Igneous Summary:** Highly altered olivine gabbro
- **Alteration:** Highly altered
- **Veins:** Dense network of millimetric green veins
- **Structure:** Brittle-
Hole BA4A-51Z Section 2, Top of Section 135.48 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Lithology</th>
<th>Fabric intensity</th>
<th>Degree of deformation</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Structures</th>
<th>Vein density (per meter)</th>
<th>Alteration</th>
<th>Degree of deformation</th>
<th>Vein density (per meter)</th>
</tr>
</thead>
<tbody>
<tr>
<td>135.48</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>135.58</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>135.68</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>135.78</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>135.88</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>135.98</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>136.08</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>136.18</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>136.28</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Description:**
- **SEQUEL:** 24h
- **ROCK NAME:** olivine gabbro
- **CONTACT:** Continuous
- **TEXTURE:** Brittle
- **ALTERATION:** Highly altered
- **VEINS:** Dense network of milimetric green veins
- **STRUCTURE:** Brittle

**Core data:**
- **Magnetic susceptibility (SI x 10^-5)**
- **GRA (g/cm^3)**
- **Primary mineralogy (%)**
  - Olivine
  - Plagioclase
  - Amphibole
  - Spinel
  - Sulfide
- **Grain size (mm)**
- **Fracture/ Vein density (per meter)**
- **Alteration intensity**
  - Fresh (<3%)
  - Slight (3–10%)
  - Moderate (11–30%)
  - Substantial (31–60%)
  - Extensive (61–90%)
  - Complete (≥ 90%)

**Additional data:**
- ** chocolating features**
- **Contact:** Modal
- **Texture:** Brittle
- **Igneous Summary:** Highly altered olivine gabbro
- **Alteration:** Highly altered
- **Veins:** Dense network of milimetric green veins
- **Structure:** Brittle
**Hole BA4A-52Z Section 1, Top of Section 137.70 (m CCD)**

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Lithology</th>
<th>Vein density (per meter)</th>
<th>Vein crosscutting Alteration intensity</th>
<th>Discrete brittle features</th>
<th>Degree of deformation</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnetic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Vents</th>
<th>Structures</th>
<th>Apparent offset</th>
</tr>
</thead>
<tbody>
<tr>
<td>137.70</td>
<td>100</td>
<td>Dunite</td>
<td>5</td>
<td>Fresh (&lt;3%)</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
<td>0</td>
<td>Magnetic contact</td>
<td>Brittle</td>
<td>Crystal plastic</td>
<td>Vents</td>
<td>Structures</td>
<td>Apparent offset</td>
</tr>
<tr>
<td>137.73</td>
<td>100</td>
<td>Olivine gabbro</td>
<td>3</td>
<td>Slight (3–10%)</td>
<td>1</td>
<td>Minor fracturing</td>
<td>1</td>
<td>45</td>
<td>Brittle</td>
<td>Crystal plastic</td>
<td>Vents</td>
<td>Structures</td>
<td>Apparent offset</td>
<td></td>
</tr>
<tr>
<td>137.83</td>
<td>100</td>
<td>Harzburgite</td>
<td>2</td>
<td>Moderate (11–30%)</td>
<td>2</td>
<td>Moderate fracturing</td>
<td>2</td>
<td>90</td>
<td>Brittle</td>
<td>Crystal plastic</td>
<td>Vents</td>
<td>Structures</td>
<td>Apparent offset</td>
<td></td>
</tr>
<tr>
<td>137.93</td>
<td>100</td>
<td>Protogranular</td>
<td>1</td>
<td>Substantial (31–60%)</td>
<td>3</td>
<td>Well-developed cataclasis</td>
<td>3</td>
<td>150</td>
<td>Brittle</td>
<td>Crystal plastic</td>
<td>Vents</td>
<td>Structures</td>
<td>Apparent offset</td>
<td></td>
</tr>
<tr>
<td>138.03</td>
<td>100</td>
<td>Porphyroclastic</td>
<td>0</td>
<td>Extensive (61–90%)</td>
<td>4</td>
<td>Ultracataclastite</td>
<td>4</td>
<td>0</td>
<td>Brittle</td>
<td>Crystal plastic</td>
<td>Vents</td>
<td>Structures</td>
<td>Apparent offset</td>
<td></td>
</tr>
<tr>
<td>138.13</td>
<td>100</td>
<td>Strongly foliated</td>
<td>0</td>
<td>Complete (≥90%)</td>
<td>5</td>
<td>Ultramylonite</td>
<td>5</td>
<td>0</td>
<td>Brittle</td>
<td>Crystal plastic</td>
<td>Vents</td>
<td>Structures</td>
<td>Apparent offset</td>
<td></td>
</tr>
</tbody>
</table>

**Legend:***
- **Dunite**: serpentinized dunite
- **Olivine gabbro**: highly altered olivine gabbro
- **Harzburgite**: serpentinized harzburgite
- **Brittle**: brittle-plastic features
- **Crystal plastic**: crystal plastic features
- **Vents**: green veins
- ** Structures**: brittle-fracture veins
- **Apparent offset**: 0 45 90
<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Scanned image</th>
<th>Magnetic</th>
<th>Magnetic</th>
<th>Primary mineralogy</th>
<th>Degree of deformation</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Structures</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>138.25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Olivine, Plagioclase, Clinopyroxene</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>138.35</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>138.45</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>138.55</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>138.65</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>138.75</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>138.85</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>138.95</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>139.05</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>139.15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Sequence: I**

**Unit/Subunit: 24m**

**Rock Name:** Harzburgite

**Contact:** Continuous

**Texture:** Granular

**Igneous Summary:** serpentinized harzburgite

**Alteration:** serpentinized

**Veins:** dense network of green veins

**Structure:** Brittle-

Crystal plastic- Pyroxene grains are moderately elongated.

**Sequence: I**

**Unit/Subunit: 24n**

**Rock Name:** Olivine gabbro

**Contact:** intrusive

**Texture:**

**Igneous Summary:** highly altered olivine gabbro

**Alteration:** highly altered

**Veins:** few green veins

**Structure:** Brittle-

**Sequence: I**

**Unit/Subunit: 24o**

**Rock Name:** Dunite

**Contact:** intrusive

**Texture:**

**Igneous Summary:** serpentinized dunite

**Alteration:** serpentinized

**Veins:** network of green veins

**Structure:** Brittle-

Crystal plastic- Pyroxene grains are moderately elongated.

**Sequence: I**

**Unit/Subunit: 25a**

**Rock Name:** Harzburgite

**Contact:** modal

**Texture:** Granular

**Igneous Summary:** serpentinized harzburgite

**Alteration:** serpentinized

**Veins:** green and fine white veins

**Structure:** Brittle-

Pyroxene grains are rounded and slightly elongated.
### Hole BA4A-52Z Section 4, Top of Section 139.96 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Stained image</th>
<th>Magnetic susceptibility (MSCL-W MSP (SI x 10^-5))</th>
<th>GRA (g/cm^3)</th>
<th>Primary mineralogy (%)</th>
<th>Lithology</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Structures</th>
<th>Vein density (per meter)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>139.96</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>140.06</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>140.16</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>140.26</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>140.36</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>140.46</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>140.56</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>140.66</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Hole BA4A-53Z Section 4, Top of Section 142.95 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Scanned image</th>
<th>Magnetic susceptibility</th>
<th>MSCL-W (SI x 10^-5)</th>
<th>MSP (g/cm^3)</th>
<th>GRA (1/cm^3)</th>
<th>Primary mineralogy (%)</th>
<th>Degree of deformation</th>
</tr>
</thead>
<tbody>
<tr>
<td>142.95</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>143.05</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>143.15</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>143.25</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>143.5</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>143.65</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>143.75</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>143.85</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>143.95</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Magnetic susceptibility
- **MSCL-W** (SI x 10^-5)
- **MSP (g/cm^3)**
- **GRA (1/cm^3)**

### Primary mineralogy (%)
- **Olivine**
- **Plagioclase**
- **Clinopyroxene**
- **Orthopyroxene**
- **Amphibole**
- **Spinel**
- **Sulfide**

### Degree of deformation
- **Fabric intensity**
- **Vein crosscutting**
- **Alteration intensity**
- **Fracture/ Vein density (per meter)**
- **Vein density (per meter)**
- **Alteration halos**
- **Magnetic contact**
- **Brittle**
- **Crystal plastic**
- **Veins**

### Description
- **SEQUENCE I**: 26a
  - **ROCK NAME**: dunite
  - **CONTACT**: Tectonic
  - **IGNEOUS SUMMARY**: mildly fractured, fully serpentinized dunite cross-cut by fractured gabbroic dikes
  - **ALTERATION**: serpentinized
  - **VEINS**: grey veins
  - **STRUCTURE**: Brittle

- **SEQUENCE I**: 26a
  - **ROCK NAME**: olivine gabbro
  - **CONTACT**: Intrusive
  - **TEXTURE**: Granular
  - **IGNEOUS SUMMARY**: fractured varitextured gabbroic dike
  - **ALTERATION**: serpentinized
  - **VEINS**: grey-green veins, white veins
  - **STRUCTURE**: Brittle

- **SEQUENCE I**: 26a
  - **ROCK NAME**: Clinopyroxenite
  - **CONTACT**: Intrusive
  - **TEXTURE**: Granular
  - **IGNEOUS SUMMARY**: orthopyroxenite dike
  - **ALTERATION**: serpentinized
  - **VEINS**: black veins, grey veins
  - **STRUCTURE**: Brittle

- **SEQUENCE I**: 26a
  - **ROCK NAME**: Clinopyroxenite
  - **CONTACT**: Intrusive
  - **TEXTURE**: Granular
  - **IGNEOUS SUMMARY**: orthopyroxenite dike
  - **ALTERATION**: serpentinized
  - **VEINS**: grey veins, grey-green/white veins
  - **STRUCTURE**: Brittle
**Sequence: I
Unit/Subunit: 26a
Rock Name: Dunite
Contact: Continuous
Texture:
Igneous Summary: Mildly fractured, fully serpentinized dunite cross-cut by fractured gabbroic dikes
Alteration: Serpentinized
Veins: Grey veins, black veins, grey-green veins
Structure: Brittle-
Veins-
Crystal plastic-
---
**

**Sequence: I
Unit/Subunit: 26a
Rock Name: Clinopyroxenite
Contact: Intrusive
Texture:
Igneous Summary: Sheared pyroxenitic dike
Alteration:
Veins: Grey-green veins, grey veins
Structure: Brittle-
Veins-
Crystal plastic-
---

**Sequence: I
Unit/Subunit: 26b
Rock Name: Olivine gabbro
Contact: Intrusive
Texture: Granular
Igneous Summary: Sheared gabbroic dike
Alteration:
Veins: Grey veins, white veins, black veins
Structure: Brittle-
Veins-
Crystal plastic-

**Sequence: I
Unit/Subunit: 26c
Rock Name: Dunite
Contact: Intrusive
Texture:
Igneous Summary: Mildly fractured, fully serpentinized dunite cross-cut by fractured gabbroic dikes
Alteration: Serpentinized
Veins: Brown veins, grey veins, black veins
Structure: Brittle-
Subtle black fracture network runs up most of section offsetting dikes by several cm
Veins-
Crystal plastic-

**Sequence: I
Unit/Subunit: 26c
Rock Name: Gabbro
Contact: Intrusive
Texture: Granular
Igneous Summary: Sheared gabbroic dike
Alteration:
Veins: Grey veins, black veins, green veins
Structure: Brittle-
Veins-
Crystal plastic-

**Sequence: I
Unit/Subunit: 26c
Rock Name: Olivine Gabbro
Contact: Intrusive
Texture: Granular
Igneous Summary: Sheared gabbroic dike
Alteration:
Veins:
Structure: Brittle-
---
### Sequence: I
#### Unit/Subunit: 26c

**Rock Name:** dunite

**Contact:** Tectonic

**Texture:** Igneous

**Summary:** Mildly fractured, fully serpentinized dunite cross-cut by fractured gabbroic dikes

**Alteration:** Serpentinized

**Veins:** Brown veins, grey veins, black veins

**Structure:** Brittle-Veins-Crystal plastic

---

### Sequence: I
#### Unit/Subunit: 26c

**Rock Name:** gabbro

**Contact:** Intrusive

**Texture:** Granular

**Summary:** Gabbroic dike

**Alteration:**

**Veins:** Grey veins, green veins

**Structure:** Brittle-Veins-Crystal plastic

---

#### Fabric Intensity

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Core samples</th>
<th>Scanned image</th>
<th>Magnetic susceptibility</th>
<th>Core images</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Structures</th>
<th>Alteration halos</th>
<th>Fractures/ Vein density (per meter)</th>
<th>Vein density (per meter)</th>
</tr>
</thead>
<tbody>
<tr>
<td>144.55</td>
<td>10</td>
<td>10</td>
<td>0</td>
<td>0</td>
<td>26c</td>
<td>100</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>144.65</td>
<td>10</td>
<td>10</td>
<td>0</td>
<td>0</td>
<td>26c</td>
<td>100</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>144.75</td>
<td>10</td>
<td>10</td>
<td>0</td>
<td>0</td>
<td>26c</td>
<td>100</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>144.85</td>
<td>10</td>
<td>10</td>
<td>0</td>
<td>0</td>
<td>26c</td>
<td>100</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>144.95</td>
<td>10</td>
<td>10</td>
<td>0</td>
<td>0</td>
<td>26c</td>
<td>100</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>145.05</td>
<td>10</td>
<td>10</td>
<td>0</td>
<td>0</td>
<td>26c</td>
<td>100</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>145.15</td>
<td>10</td>
<td>10</td>
<td>0</td>
<td>0</td>
<td>26c</td>
<td>100</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>145.25</td>
<td>10</td>
<td>10</td>
<td>0</td>
<td>0</td>
<td>26c</td>
<td>100</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>145.35</td>
<td>10</td>
<td>10</td>
<td>0</td>
<td>0</td>
<td>26c</td>
<td>100</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>145.45</td>
<td>10</td>
<td>10</td>
<td>0</td>
<td>0</td>
<td>26c</td>
<td>100</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>145.55</td>
<td>10</td>
<td>10</td>
<td>0</td>
<td>0</td>
<td>26c</td>
<td>100</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>145.65</td>
<td>10</td>
<td>10</td>
<td>0</td>
<td>0</td>
<td>26c</td>
<td>100</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>145.75</td>
<td>10</td>
<td>10</td>
<td>0</td>
<td>0</td>
<td>26c</td>
<td>100</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>145.85</td>
<td>10</td>
<td>10</td>
<td>0</td>
<td>0</td>
<td>26c</td>
<td>100</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>145.95</td>
<td>10</td>
<td>10</td>
<td>0</td>
<td>0</td>
<td>26c</td>
<td>100</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

#### Site/Ship Samples
- Magnetic contact: 36c
- Rock Name: dunite
- Core length (cm): 0 to 10
- Scanned image: 0
- Magnetic susceptibility: 26c

#### Primary Mineralogy
- Olivine
- Plagioclase
- Clinopyroxene
- Orthopyroxene
- Amphibole
- Spinel
- Sulfide

#### Degree of Deformation
- Undeformed
- Minor fracturing
- Moderate fracturing
- GS reduction and rotation
- Well-developed cataclasis
- Ultracataclastite

#### Fabric Intensity
- Protomylonite
- Mylonite
- Ultramylonite
- Protogranular
- Porphyroclastic
- Strongly foliated
- Weak
- Moderate
- Strong

#### Grain Size
- Fine grained (0.2–1 mm)
- Medium grained (1–5 mm)
- Coarse grained (5–30 mm)
- Pegmatitic (>30 mm)
- Glassy
- Cryptocrystalline (<0.1 mm)
- Microcrystalline (0.1–0.2 mm)

#### Vein Density
- 0–10 per 10 cm
- 10–30 per 10 cm
- 30–50 per 10 cm
- 50–70 per 10 cm
- 70–90 per 10 cm
- >90 per 10 cm

#### Dip
- Magnetic contact: 36c
- Brittle-Crystal plastic:
- Veins:
  - Grey veins
  - Green veins
  - Black veins
Hole BA4A-54Z Section 3, Top of Section 145.45 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>CT image</th>
<th>Magnetic susceptibility</th>
<th>MSCL-W MSP (SI × 10^-5)</th>
<th>GRA (g/cm²)</th>
<th>Sequence</th>
<th>Lithology</th>
<th>Primary mineralogy</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnetic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
<th>Fabric intensity</th>
<th>Discrete brittle features</th>
<th>Alteration halos</th>
<th>Structures</th>
<th>Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depth (m CCD)</td>
<td>Core length (cm)</td>
<td>Shipboard samples</td>
<td>Stained image</td>
<td>Magnetic susceptibility</td>
<td>MSCL-W MSP (SI x 10^-5)</td>
<td>GRA (g/cm²)</td>
<td>GRA (%)</td>
<td>Sequence</td>
<td>Lithology</td>
<td>Primary mineralogy (%)</td>
<td>Grain size</td>
<td>Degree of deformation</td>
<td>Fabric intensity</td>
<td>Fracture/ Vein density (per meter)</td>
<td>Alteration intensity</td>
<td>Alteration</td>
<td>Dip</td>
<td>Magnetic contact</td>
<td>Brittle</td>
<td>Crystal plastic</td>
<td>Veins</td>
<td>Structures</td>
<td>Fissure alteration</td>
<td>fault zones</td>
<td>Apparent offset</td>
<td>Alteration halos</td>
</tr>
<tr>
<td>-------------</td>
<td>-----------------</td>
<td>-------------------</td>
<td>--------------</td>
<td>-----------------------</td>
<td>--------------------------</td>
<td>----------------</td>
<td>---------</td>
<td>---------</td>
<td>----------</td>
<td>-----------------------</td>
<td>-----------</td>
<td>-----------------------</td>
<td>----------------</td>
<td>-----------------------</td>
<td>-----------------</td>
<td>------------</td>
<td>----------</td>
<td>----------------</td>
<td>---------</td>
<td>---------------</td>
<td>-------</td>
<td>------------</td>
<td>----------------</td>
<td>--------------</td>
<td>---------------</td>
<td>-------------</td>
</tr>
<tr>
<td>146.13</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>146.23</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>146.33</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>146.43</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>146.53</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>146.63</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>146.73</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Sequence 1: 26e
- **Unit/Subunit:** 26e
- **Rock Name:** dunite
- **Contact:** Continuous
- **Igneous Summary:** fractured serpentinized dunite with cross-cutting gabbroic dikes
- **Alteration:** serpentinized
- **Veins:** brown veins, white veins, grey veins, black veins
- **Structure:** Brittle-Veins--Crystal plastic--

### Sequence 1: 26e
- **Unit/Subunit:** 26e
- **Rock Name:** gabbro
- **Contact:** Intrusive
- **Texture:** Granular
- **Igneous Summary:** gabbroic dike
- **Alteration:** altered
- **Veins:** white veins
- **Structure:** Brittle-Veins--

### Sequence 1: 26e
- **Unit/Subunit:** 26e
- **Rock Name:** gabbro
- **Contact:** Intrusive
- **Texture:**
- **Igneous Summary:** gabbroic dike
- **Alteration:**
- **Veins:** grey veins, grey-green veins
- **Structure:** Brittle-Veins--

---

### Fabric Intensity
- 5
- 4
- 3
- 2
- 1
- 0

### Vein Density (per meter)
- 6
- 5
- 4
- 3
- 2
- 1
- 0

### Grain Size (cm)
- 6
- 5
- 4
- 3
- 2
- 1
- 0

### Hole BA4A-55Z Section 1: Top of Section 146.70 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>Primary mineralogy</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Discrete brittle features</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnatic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>146.70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depth (m CCD)</td>
<td>Core length (cm)</td>
<td>Shapedboard samples</td>
<td>X-ray image</td>
<td>Magnetic susceptibility</td>
<td>MSCL-W MSP (SI x 10^-5)</td>
<td>GRA (g/cm³)</td>
<td>Primary mineralogy (%)</td>
<td>Grain size</td>
<td>Degree of deformation</td>
<td>Fracture/ Vein density (per meter)</td>
<td>Alteration intensity</td>
<td>Dip</td>
<td>Magnitic contact</td>
<td>Brittle</td>
<td>Crystal plastic</td>
</tr>
<tr>
<td>--------------</td>
<td>-----------------</td>
<td>---------------------</td>
<td>-------------</td>
<td>------------------------</td>
<td>--------------------------</td>
<td>----------------</td>
<td>-----------------------</td>
<td>------------</td>
<td>-----------------------</td>
<td>--------------------------------</td>
<td>-------------------</td>
<td>-----</td>
<td>-------------------</td>
<td>--------</td>
<td>---------------</td>
</tr>
<tr>
<td>147.35</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>147.45</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>147.55</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>147.65</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>147.75</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>147.85</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>147.95</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>148.05</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>148.15</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>148.25</td>
<td>90</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SEQUENCE:** I
**UNIT/SUBUNIT:** 26e
**ROCK NAME:** dunite
**CONTACT:** tectonic
**TEXTURE:** IGNEOUS: Serpentinized dunite with cross-cutting gabbroic dikes
**ALTERATION:** Serpentinized
**VEINS:** Brown veins, white veins, grey veins, black veins
**STRUCTURE:** Brittle

**SEQUENCE:** I
**UNIT/SUBUNIT:** 26f
**ROCK NAME:** Harzburgite
**CONTACT:** Modal
**TEXTURE:** IGNEOUS: Serpentinized harzburgite
**ALTERATION:** Serpentinized
**VEINS:** Black veins, grey-green veins
**STRUCTURE:** Brittle

**SEQUENCE:** I
**UNIT/SUBUNIT:** 26h
**ROCK NAME:** Dunite
**CONTACT:** Tectonic
**TEXTURE:** IGNEOUS: Rubbly serpentinized dunite fracture zone
**ALTERATION:** Serpentinized
**VEINS:** Grey veins, grey-green veins, white veins
**STRUCTURE:** Brittle

**Fabric intensity**
- 5
- 4
- 3
- 2
- 1
- 0

**Vein density (per meter)**
- 0
- 1
- 2
- 3
- 4
- 5
- 6

**Grain size**
- 0
- 1
- 2
- 3
- 4
- 5

**Hole BA4A-55Z Section 2, Top of Section 147.33 (m CCD)**
Hole BA4A-55Z Section 3, Top of Section 148.31 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>Magnetic susceptibility (MSCL-W MSP)</th>
<th>GRA (g/cm³)</th>
<th>Sequence</th>
<th>Lithology</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Alteration halos</th>
<th>Structures</th>
<th>Vein density (per meter)</th>
<th>Magnetic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>148.31</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>26h</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>148.33</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>26i</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Lithology:**
- **26h:** Dunite
- **26i:** Dunite

**Primary Mineralogy (%):**
- Olivine
- Plagioclase
- Clinopyroxene
- Amphibole
- Spinel
- Sulfide

**Degree of Deformation:**
- Discrete brittle features

**Fracture/ Vein density (per meter):**
- Veins:
  - Grey
  - Grey-green
  - White

**Alteration intensity:**
- Fresh (<3%)
- Slight (3–10%)
- Moderate (11–30%)
- Substantial (31–60%)
- Extensive (61–90%)
- Complete (>90%)

**Structures:**
- Fault zones
- Veins

**Vein density (per meter):**
- Veins:
  - 0–1 per 10 cm
  - 1–3 per 10 cm
  - 3–5 per 10 cm
  - >20 per 10 cm

**Magnetic contact:**
- Brittle
- Crystal plastic

**Veins:**
- Grey
- Grey-green
- White
### Sequence: I
#### Unit/Subunit: 26j
- **Rock Name:** Dunite
- **Contact:** Intrusive
- **Texture:**
- **Igneous Summary:** Serpentinized dunite with minor harzburgitic zones
- **Alteration:** Serpentinized
- **Veins:** White veins, brown veins, grey-green veins
- **Structure:** Brittle-

### Sequence: I
#### Unit/Subunit: 26i
- **Rock Name:** Olivine gabbro
- **Contact:** Intrusive
- **Texture:**
- **Igneous Summary:** Gabbroic dike
- **Alteration:**
- **Veins:** Grey veins, grey-green veins
- **Structure:** Brittle-

### Fabric intensity

- **Vein density (per meter):**
  - 0–1
  - 1–3
  - 3–5
  - >20

### Degree of deformation

- **Vein crosscutting:**
  - 0
  - 1
  - 2
  - 3

### Alteration intensity

- **Description:**
  - Fresh (<3%)
  - Slight (3–10%)
  - Moderate (11–30%)
  - Substantial (31–60%)
  - Extensive (61–90%)
  - Complete (≥90%)

### Lithology

- **Primary mineralogy (%):**
  - Olivine
  - Plagioclase
  - Clinopyroxene
  - Orthopyroxene
  - Amphibole
  - Sulfide

### Magnetic susceptibility

- **MSCL-W MSP (SI x 10^-5):**
  - 0
  - 1
  - 2
  - 3
  - 4
  - 5

### Grain size

- **Primary:**
  - Fine grained (0.2–1 mm)
  - Medium grained (1–5 mm)
  - Coarse grained (5–30 mm)
  - Pegmatitic (>30 mm)

- **Alteration:**
  - Glassy
  - Cryptocrystalline (<0.1 mm)
  - Microcrystalline (0.1–0.2 mm)

### Degree of deformation

- **Discrete brittle features:**
  - 0
  - 1
  - 2
  - 3

### Structures

- **Fault zones:**
  - Apparent offset:**
  - 0
  - 0.5
  - 1
  - 1.5

### Alteration halos

- **Description:**
  - Fresh (<3%)
  - Slight (3–10%)
  - Moderate (11–30%)
  - Substantial (31–60%)
  - Extensive (61–90%)
  - Complete (≥90%)

### Degree of deformation

- **Structure:**
  - Undeformed
  - Minor fracturing
  - Moderate fracturing
  - GS reduction and rotation
  - Well-developed cataclasis
  - Ultracataclastite

### Literature references

- [fabric intensity](#)
- [primary mineralogy](#)
- [magnetic susceptibility](#)
- [grain size](#)
- [degree of deformation](#)
- [structures](#)
- [alteration halos](#)
SEQUENCE: I
UNIT/SUBUNIT: 26j
ROCK NAME: dunite
CONTACT: Intrusive
TEXTURE: IGNEOUS
SUMMARY: serpentinized dunite with minor harzburgitic zones
ALTERATION: serpentinized
VEINS: brown veins, black veins, grey veins
STRUCTURE: Brittle-
Veins-
Crystal plastic-

Vein density (per meter)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>GRA (g/cm²)</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Discrete brittle features</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip Magnatic contact</th>
<th>Brittles</th>
<th>Crystal plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>149.70</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>149.75</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>149.80</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>149.90</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>150.00</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>150.10</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>150.20</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>150.30</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>150.40</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>150.50</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

VEINS: brown veins, black veins, grey veins
MSCL-W MSP (SI x 10^-5)
GRA (g/cm²)

Dip Magnatic contact Brittles Crystal plastic Veins

MINERALOGY:
- Olive
- Plagioclase
- Clinopyroxene
- Orthopyroxene
- Amphibole
- Spinel
- Sulfide

Degree of deformation:
- Magmatic contact
- Dip
- Brittles
- Crystal plastic
- Veins

Contact:
- Intrusive

Texture:
- IGNEOUS
- Alteration: serpentinized
- Veins: brown, black, grey

Sequence:
- I

Unit/Subunit:
- 26j

Rock Name:
- Dunite

Description:
- Serpentinized dunite with minor harzburgitic zones
- Alteration: serpentinized
- Veins: brown, black, grey
### Hole BA4A-56Z Section 2, Top of Section 150.60 (m CCD)

#### Magnetic susceptibility

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Grained image</th>
<th>Contact</th>
<th>Lithology</th>
<th>Primary mineralogy</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Alteration</th>
<th>Dip</th>
<th>Magnitic contact Brittle Crystal plastic Voids</th>
</tr>
</thead>
<tbody>
<tr>
<td>150.00</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>150.70</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>150.80</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>150.90</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>151.00</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>151.10</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>151.20</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>151.30</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>151.40</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>151.50</td>
<td>90</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Description**

- **SEQUENCE I:**
  - **Unit/Subunit:** 26
  - **Rock Name:** dunite
  - **Contact:** Continuous
  - **KINEMATIC SUMMARY:** Serpentinized dunite with minor harzburgitic zones
  - **Igneous Summary:** Serpentinized dunite with minor harzburgitic zones
  - **Alteration:** Serpentinized
  - **Veins:** Black veins, brown veins, white veins
  - **Structure:** Brittle

- **SEQUENCE II:**
  - **Unit/Subunit:** 26
  - **Rock Name:** dunite
  - **Contact:** Intrusive
  - **KINEMATIC SUMMARY:** Serpentinized dunite with minor harzburgitic zones
  - **Igneous Summary:** Serpentinized dunite with minor harzburgitic zones
  - **Alteration:** Serpentinized
  - **Veins:** Black veins, grey veins, white veins
  - **Structure:** Brittle

- **SEQUENCE III:**
  - **Unit/Subunit:** 26
  - **Rock Name:** dunite
  - **Contact:** Intrusive
  - **KINEMATIC SUMMARY:** Serpentinized dunite with minor harzburgitic zones
  - **Igneous Summary:** Serpentinized dunite with minor harzburgitic zones
  - **Alteration:** Serpentinized
  - **Veins:** Black veins, grey veins, white veins
  - **Structure:** Brittle

- **SEQUENCE IV:**
  - **Unit/Subunit:** 26
  - **Rock Name:** olivine gabbro
  - **Contact:** Intrusive
  - **KINEMATIC SUMMARY:** Fractured gabbroic dike
  - **Igneous Summary:** Fractured gabbroic dike
  - **Alteration:**
  - **Veins:** Grey veins, grey-green veins
  - **Structure:** Brittle, semi-brittle shear zone within dike

- **SEQUENCE V:**
  - **Unit/Subunit:** 26
  - **Rock Name:** dunite
  - **Contact:** Intrusive
  - **KINEMATIC SUMMARY:** Serpentinized dunite with minor harzburgitic zones
  - **Igneous Summary:** Serpentinized dunite with minor harzburgitic zones
  - **Alteration:** Serpentinized
  - **Veins:** Black veins, grey-green veins, white veins
  - **Structure:** Brittle

**Alteration Intensity**

- Fresh (<3%)
- Slight (3–10%)
- Moderate (11–30%)
- Substantial (31–60%)
- Complete (≥90%)

**Degree of Deformation**

- Undeformed
- Minor fracturing
- Moderate fracturing
- GS reduction and rotation
- Well-developed cataclasis
- Ultracataclastite

**Fabric Intensity**

- Protogranular
- Porphyroclastic
- Strongly foliated
- Protomylonite
- Mylonite
- Ultramylonite
- Isotropic

**Vein Density**

- 0–1 per 10 cm
- 1–3 per 10 cm
- 3–5 per 10 cm
- >5 per 10 cm
- 5–15 per 10 cm
- 15–20 per 10 cm
- >20 per 10 cm

**Alteration Halos**

- Fresh (<3%)
- Slight (3–10%)
- Moderate (11–30%)
- Substantial (31–60%)
- Complete (≥90%)

**Magmatic Contact**

- Brittle
- Crystal plastic
- Voids

**Dip Magnitic contact**

- Brittle
- Crystal plastic
- Voids

**Veins**

- Continuous
- Intrusive
Hole BA4A-56Z Section 4, Top of Section 152.11 (m CCD)

| Depth (m CCD) | Core length (cm) | Stained image | Magnetic susceptibility | Primary mineralogy | Lithology | Grain size | Degree of deformation | Alteration intensity | Alteration | Dip | VMS | Structures | Alteration halos |
|--------------|------------------|---------------|------------------------|-------------------|-----------|-----------|----------------------|---------------------|-------------|-----|-----|------------|------------------|------------------|
| 152.11       | 0                |               |                        |                   |           |           |                      |                     |             |     |     |            |                   |                   |

**Sequence:** 1

**Unit/Subunit:** 26L

**Rock Name:** dunite

**Contact:** Tectonic

**Texture:**
- Igneous

**Summary:** serpentinized dunite with minor harzburgitic zones

**Alteration:** serpentinized

**Veins:** black veins

**Structure:** Brittle

**Vein density (per meter):**
- Undeformed
- Minor fracturing
- Moderate fracturing
- GS reduction and rotation
- Well-developed cataclasis
- Ultracataclastite

**Degree of deformation:**
- Protogranular
- Porphyroclastic
- Strongly foliated
- Protomylonite
- Mylonite
- Ultramylonite

**Fabric intensity:**
- Isotropic
- Weak
- Moderate
- Strong

**Grain size:**
- Fine grained (0.2–1 mm)
- Medium grained (1–5 mm)
- Coarse grained (5–30 mm)
- Pegmatitic (>30 mm)
- Glassy
- Cryptocrystalline (<0.1 mm)
- Microcrystalline (0.1–0.2 mm)

**Magnetic susceptibility:**
- MSCL-W MSP (SI $10^{-5}$)

**Magnetic contact:**
- Brittle

**Crystal plastic:**
- VMS

**Vein crosscutting:**
- Discrete brittle features

**Alteration intensity:**
- Fresh (<3%)
- Slight (3–10%)
- Moderate (11–30%)
- Substantial (31–60%)
- Extensive (61–90%)
- Complete ($\geq$ 90%)

**Magmatic contact:**
- Brittle

**Dip:**
- 0–45°
- 45–90°

**Alteration halos:**
- 0–10
- 10–30
- 30–50
- 50–70
- 70–90
- >100

**Degree of fracturing:**
- Undeformed
- Minor fracturing
- Moderate fracturing
- GS reduction and rotation
- Well-developed cataclasis

**Ultracataclastite:**
- Protogranular
- Porphyroclastic
- Strongly foliated
- Protomylonite
- Mylonite
- Ultramylonite

**Isotropic:**
- Weak
- Moderate
- Strong

**Fine grained:**
- 0.2–1 mm
- 1–5 mm
- 5–30 mm
- >30 mm

**Medium grained:**
- 0.1–0.2 mm
- 0.1–0.2 mm

**Coarse grained:**
- 0.1–0.2 mm
- 0.1–0.2 mm

**Pegmatitic:**
- 0.1–0.2 mm
- 0.1–0.2 mm

**Glassy:**
- 0–10
- 10–30
- 30–50
- 50–70
- 70–90
- >100

**Cryptocrystalline:**
- 0–10
- 10–30
- 30–50
- 50–70
- 70–90
- >100

**Microcrystalline:**
- 0–10
- 10–30
- 30–50
- 50–70
- 70–90
- >100

**Degree of deformation:**
- 0–10
- 10–30
- 30–50
- 50–70
- 70–90
- >100

**Pegmatitic:**
- 0–10
- 10–30
- 30–50
- 50–70
- 70–90
- >100

**Glassy:**
- 0–10
- 10–30
- 30–50
- 50–70
- 70–90
- >100

**Cryptocrystalline:**
- 0–10
- 10–30
- 30–50
- 50–70
- 70–90
- >100

**Microcrystalline:**
- 0–10
- 10–30
- 30–50
- 50–70
- 70–90
- >100

**Vein density (per meter):**
- Undeformed
- Minor fracturing
- Moderate fracturing
- GS reduction and rotation
- Well-developed cataclasis
- Ultracataclastite

**Degree of deformation:**
- Protogranular
- Porphyroclastic
- Strongly foliated
- Protomylonite
- Mylonite
- Ultramylonite

**Isotropic:**
- Weak
- Moderate
- Strong

**Fine grained:**
- 0.2–1 mm
- 1–5 mm
- 5–30 mm
- >30 mm

**Medium grained:**
- 0.1–0.2 mm
- 0.1–0.2 mm

**Coarse grained:**
- 0.1–0.2 mm
- 0.1–0.2 mm

**Pegmatitic:**
- 0.1–0.2 mm
- 0.1–0.2 mm

**Glassy:**
- 0–10
- 10–30
- 30–50
- 50–70
- 70–90
- >100

**Cryptocrystalline:**
- 0–10
- 10–30
- 30–50
- 50–70
- 70–90
- >100

**Microcrystalline:**
- 0–10
- 10–30
- 30–50
- 50–70
- 70–90
- >100
### Hole BA4A-57Z Section 1, Top of Section 152.70 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>Primary mineralogy</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnatic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Voins</th>
</tr>
</thead>
<tbody>
<tr>
<td>152.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>152.83</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>152.93</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>153.03</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>153.13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>153.23</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>153.33</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Description**

- **SEQUENCE**: 1; 26o
- **ROCK NAME**: Dunite
- **CONTACT**: Intrusive
- **TEXTURE**: Granular
- **IGNEOUS SUMMARY**: partially fractured
- **ALTERATION**: highly altered
- **VEINS**: white veins
- **STRUCTURE**: Brittle

**Alteration intensity**

- Fresh (<3%)
- Slight (3–10%)
- Moderate (11–30%)
- Substantial (31–60%)
- Extensive (61–90%)
- Complete (≥90%)

**Vein density**

- 0–1 per 10 cm
- 1–2 per 10 cm
- 3–5 per 10 cm
- >20 per 10 cm
- 5–15 per 10 cm
- 15–20 per 10 cm

**Degree of deformation**

- Undeformed
- Minor fracturing
- Moderate fracturing
- GS reduction and rotation
- Well-developed cataclasis
- Ultracataclastite

**Magmatic contact**

- Brittle
- Crystal plastic

**Magnetic susceptibility**

- MSCL-W
- MSP

**Lithology**

- Primary mineralogy (%)
  - Olivine
  - Plagioclase
  - Clinopyroxene
  - Orthopyroxene
  - Amphibole
  - Spinel
  - Sulfide

**Fabric intensity**

- 0
- 1
- 2
- 3
- 4
- 5

**Vein crosscutting**

**Alteration intensity**

- 0
- 10
- 20
- 30
- 40
- 50
- 60
- 70
- 80
- 90
- 100

**Discrete brittle features**

- 0
- 1
- 2
- 3
- 4
- 5

**Structures**

- Fault zones
- Apparent offset
- Alteration halos

**Discrete features**

- Discrete brittle features
- Sulfide
- Amphibole
- Spinel
- Orthopyroxene
- Clinopyroxene
- Plagioclase
- Olivine

**Vein crosscutting**

- Black, frankestein green and white veins

**Degree of deformation**

- Undeformed
- Minor fracturing
- Moderate fracturing
- GS reduction and rotation
- Well-developed cataclasis
- Ultracataclastite

**Structures**

- Protogranular
- Porphyroclastic
- Strongly foliated
- Protomylonite
- Mylonite
- Ultramylonite

**Isotropic**

- Weak
- Moderate
- Strong

**Grain size**

- Fine grained (0.2–1 mm)
- Medium grained (1–5 mm)
- Coarse grained (5–30 mm)
- Pegmatitic (>30 mm)

**Vein density**

- 0
- 1
- 2
- 3
- 4
- 5

**Vein crosscutting**

- Black, frankestein green and white veins

**Structures**

- Protogranular
- Porphyroclastic
- Strongly foliated
- Protomylonite
- Mylonite
- Ultramylonite

**Isotropic**

- Weak
- Moderate
- Strong
**Hole BA4A-57Z Section 2, Top of Section 153.43 (m CCD)**

**SEQUENCE:** 26n  
**ROCK NAME:** Dunite  
**CONTACT:** Continuous  
**TEXTURE:** Igneous  
**SUMMARY:** Serpentinized dunite, weakly fractured, crosscut by thin pyroxenitic dike, oxidation by dense zone of short white veins  
**ALTERATION:** Serpentinized, oxidized  
**VEINS:** Black, Frankestein green and white veins  
**STRUCTURE:** Brittle features  

| Depth (m CCD) | Core length (cm) | Stained image | Magnetic susceptibility (SI 10^-5) | GRA (g/cm³) | Sequence | Lithology | Unit/subunit | Text | Degree of deformation | Fracture/ Vein density (per meter) | Alteration intensity | Dip | Magneto contact | Brittle Contact | Crystal Plastic | Vens | Structures | Apparent offset |
|--------------|-----------------|--------------|-----------------------------------|------------|----------|-----------|-------------|------|---------------------|-------------------------------|---------------------|-----|---------------|----------------|---------------|-----|-------------|----------------|--------------|------|------------|----------------|
| 153.45       |                 |              |                                   |            |          |           |             |      |                     |                               |                     |     |              |               |               |     |            |                |             |      |            |                |

**Description**:
- **SEQUENCE**: 26n
- **ROCK NAME**: Dunite
- **CONTACT**: Continuous
- **TEXTURE**: Igneous
- **SUMMARY**: Serpentinized dunite, weakly fractured, crosscut by thin pyroxenitic dike, oxidation by dense zone of short white veins
- **ALTERATION**: Serpentinized, oxidized
- **VEINS**: Black, Frankestein green and white veins
- **STRUCTURE**: Brittle features

**Additional Notes**:
- Degree of deformation: Minor fracturing, Moderate fracturing, GS reduction and rotation, Well-developed cataclasis, Ultracataclastite
- Alteration intensity: Fresh (<3%), Slight (3–10%), Moderate (11–30%), Substantial (31–60%), Extensive (61–90%), Complete (>90%)
- Fabric: Protogranular, Porphyroclastic, Strongly foliated
- Degree of deformation: Undeformed, Minor fracturing, Moderate fracturing, GS reduction and rotation, Well-developed cataclasis, Ultracataclastite
- Structure: Brittle, Magmatic contact, Dip
- Core length: 10 cm, 20 cm, 30 cm, 40 cm, 50 cm, 60 cm, 70 cm
- GRA: 10, 20, 30, 40, 50, 60, 70
- Magnetic susceptibility: MSCL-W, MSP
- Degree of deformation: 0–10, 10–30, 30–50, 50–70, 70–90, >90
- Vein density: 0–1, 1–2, 2–3, 3–5, >5 per 10 cm
- Fresh (<3%), Slight (3–10%), Moderate (11–30%), Substantial (31–60%), Extensive (61–90%), Complete (>90%)
- Brittle contact: Lame, Dike, Vein
- Dip: 0, 45, 90

**Legend**:
- CT image
- Magnetite
- Serpentinite
- Sulfide
- Chalcopyrite
- Amphibole
- Plagioclase
- Orthopyroxene
- Clinopyroxene
- Magnetite
- Serpentinite
- Sulfide
- Veins
- Brittle
- Magmatic contact

**Notes**:
- CT image: CT scan of the sample
- Magnetite: Presence of Magnetite
- Serpentinite: Presence of Serpentinite
- Sulfide: Presence of Sulfide
- Chalcopyrite: Presence of Chalcopyrite
- Amphibole: Presence of Amphibole
- Plagioclase: Presence of Plagioclase
- Orthopyroxene: Presence of Orthopyroxene
- Clinopyroxene: Presence of Clinopyroxene
- Magnetite: Presence of Magnetite
- Serpentinite: Presence of Serpentinite
- Sulfide: Presence of Sulfide
- Veins: Presence of Veins
- Brittle: Brittle features
- Magmatic contact: Magmatic contact
<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>GRA (g/cm²)</th>
<th>Sequence</th>
<th>Lithology</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Alteration halos</th>
<th>Vein density (per meter)</th>
<th>Dip</th>
<th>Magnetic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
<th>Structures</th>
<th>Apparent offset</th>
<th>Alteration halos</th>
<th>Vein crosscutting</th>
<th>Alteration halos</th>
<th>Discrete brittle features</th>
</tr>
</thead>
</table>
**Hole BA4A-57Z Section 4, Top of Section 154.99 (m CCD)**

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fabric intensity</th>
<th>Fracture/Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnatic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>155.01</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>155.11</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>155.21</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>155.31</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>155.41</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>155.51</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>155.61</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>155.71</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>155.81</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SEQUENCE:** I

**UNIT/SUBUNIT:** 27a

**ROCK NAME:** Harzburgite

**CONTACT:** Continuous

**TEXTURE:** Granular

**IGNEOUS SUMMARY:** Highly serpentinized harzburgite, moderately fractured, crosscut by pyroxenitic, vertical thickness filled and branch out fractures.

**ALTERATION:** Serpentinized, locally oxidized

**VEINS:** Green, white veins

**STRUCTURE:** Brittle

- Discrete brittle features
- Vein crosscutting

**Alteration halos:**

- Fresh (<3%)
- Slight (3–10%)
- Moderate (11–30%)
- Substantial (31–60%)
- Extensive (61–90%)
- Complete (≥90%)

**Degree of deformation:**

- Undeformed
- Minor fracturing
- Moderate fracturing
- GS reduction and rotation
- Well-developed cataclasis
- Ultracataclastite

**Lithology:**

- Protogranular
- Porphyroclastic
- Strongly foliated
- Protomylonite
- Mylonite
- Ultramylonite

**Magmatic contact:**

- Dip
- Brittle
- Crystal plastic
- Veins

**Description:**

- Crystal plastic: Pyroxene grains are rounded and slightly elongated.
### Hole BA4A-58Z Section 1, Top of Section 155.70 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Stained image</th>
<th>CT image</th>
<th>Magnetic susceptibility</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Alteration intensity</th>
<th>Vein density (per meter)</th>
<th>Structure</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
</tr>
</thead>
<tbody>
<tr>
<td>155.7</td>
<td>10</td>
<td>CT image</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>155.8</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>155.9</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>156.0</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>156.1</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>156.2</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>156.3</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>156.4</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>156.5</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sequence</th>
<th>UNIT/SUBUNIT</th>
<th>ROCK NAME</th>
<th>CONTACT</th>
<th>TEXTURE</th>
<th>IGNEOUS SUMMARY</th>
<th>ALTERATION</th>
<th>VEINS</th>
<th>STRUCTURE</th>
<th>Degree of deformation</th>
<th>Discrete brittle features</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Vein density (per meter)</th>
<th>Altation intensity</th>
<th>Dip</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>27b</td>
<td>Harzburgite</td>
<td>Continuous</td>
<td>Granular</td>
<td>serpentinized harzburgite, crosscut by gabbroic and pyroxenitic dikes, dunitic patches with pyroxenitic layerings</td>
<td>serpentinized</td>
<td>black locally oriented, white veins</td>
<td>Brittle-</td>
<td>Veins-</td>
<td>Crystal plastic-</td>
<td>Pyroxene grains are moderately elongated.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>27b</td>
<td>Olivine gabbro</td>
<td>Intrusive</td>
<td>Granular</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note:** The diagram and table are filled with various geological data points and visual representations to illustrate the sequence, unit/subunit, rock name, contact, texture, igneous summary, alteration, veins, structure, degree of deformation, and other geological features.
**SEQUENCE: I**
**UNIT/SUBUNIT: 27b**
**ROCK NAME: Harzburgite**
**CONTACT: Continuous**
**TEXTURE: Granular**
**IGNEOUS SUMMARY: serpentinized harzburgite, crosscut by gabbroic and pyroxenitic dikes, dunitic patches with pyroxenitic layerings**
**ALTERATION: serpentinized**
**VEINS: black locally oriented, white veins**
**STRUCTURE: Brittle-Veins-Crystal plastic-Veins**

**SEQUENCE: I**
**UNIT/SUBUNIT: 27b**
**ROCK NAME: Olivine gabbro**
**CONTACT: Intrusive**
**TEXTURE: Granular**
**IGNEOUS SUMMARY: layered, offset**
**ALTERATION: altered**
**VEINS:**

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Lithology</th>
<th>Primary mineralogy (%)</th>
<th>Fabric intensity</th>
<th>Vein density (per meter)</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>156.58</td>
<td>27b</td>
<td>100</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

**Description:**
- **GRA (g/cm³):**
  - 2.9
  - 2.65
  - 2.4
  - 2.15
  - 1.9
  - 1.75
- **FABRIC INTENSITY:**
  - 0
  - 1
  - 2
  - 3
  - 4
  - 5
- **VEIN DENSITY:**
  - 0 per 10 cm
  - 1 per 10 cm
  - 3-5 per 10 cm
  - >20 per 10 cm
  - 5-15 per 10 cm
  - 15-20 per 10 cm
- **ALTERATION INTENSITY:**
  - Fresh (<3%)
  - Slight (3–10%)
  - Moderate (11–30%)
  - Substantial (31–60%)
  - Extensive (61–90%)
  - Complete (≥90%)
- **DIP:**
  - Magnetic contact
  - Brittle
  - Crystal plastic
  - Veins
### Hole BA4A-58Z Section 3, Top of Section 157.10 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnetic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>157.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>157.10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>157.20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>157.30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>157.40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>157.50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>157.60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>157.70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>157.80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>157.90</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SEQUENCE**: I

- **UNIT/SUBUNIT**: 27c
- **ROCK NAME**: Dunite
- **CONTACT**: Modal
- **TEXTURE**: Protogranular
- **IGNEOUS SUMMARY**: Serpentinized dunite, weakly fractured, crosscut by gabbroic and pyroxenitic dike
- **ALTERATION**: Serpentinized, oxidized
- **VEINS**: Set of thin oriented white veins, green ones cut dikes orthogonally
- **STRUCTURE**: Degree of deformation: 5; Brittle features: 5; Brittle/Magmatic contact layers: 5; Dip: 0–60°; Crystal plastic: 0; Veins: 0–100 per 10 cm

**Note**: Crystal plastic-Pyroxene grains are moderately exsolved.
**SEQUENCE:** 28a  
**ROCK NAME:** Dunite  
**CONTACT:** Continuous  

**TEXTURE:**  
**IGNEOUS SUMMARY:** serpentinized dunite, weakly fractured, crosscut by gabbroic and pyroxenitic dike  
**ALTERATION:** serpentinized, oxidized  
**VEINS:** set of thin oriented white veins, green ones cut dikes orthogonally  
**STRUCTURE:** Brittle-

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>Primary mineralogy (%)</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magmatic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
<th>Structures</th>
<th>Absorption index</th>
<th>Vein crosscutting</th>
<th>Alteration halos</th>
</tr>
</thead>
<tbody>
<tr>
<td>157.97</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>157.94 (m CCD)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Lithology**  
- Olivine  
- Plagioclase  
- Clinopyroxene  
- Orthopyroxene  
- Amphibole  
- Spinel  
- Sulfide

**Grain size** (μm)  
- Fine grained (0.2–1 mm)  
- Medium grained (1–5 mm)  
- Coarse grained (5–30 mm)  
- Pegmatitic (>30 mm)

**Hole BA4A-58Z Section 4, Top of Section 157.94 (m CCD)**

**Magnetic susceptibility (SI x 10^-5)**  
- MSCL-W  
- MSP

**GRA (g/cm³)**  
- 2.66  
- 2.61  
- 2.56  
- 2.51

**Vein density** (per meter)  
- 0  
- 1 per 10 cm  
- 3-5 per 10 cm  
- >20 per 10 cm  
- 5-15 per 10 cm  
- 15-20 per 10 cm

**Alteration intensity**  
- Fresh (<3%)  
- Slight (3–10%)  
- Moderate (11–30%)  
- Substantial (31–60%)  
- Extensive (61–90%)  
- Complete (≥90%)

**Vein crosscutting**  
- Brittle  
- Magmatic  
- Contact  
- Dip  
- Discrete brittle features

**Degree of deformation**  
- Undeformed  
- Minor fracturing  
- Moderate fracturing  
- GS reduction and rotation  
- Well-developed cataclasis  
- Ultracataclastite

**Protogranular**  
- Porphyroclastic

**Foliation**  
- Strongly foliated

**Protomylonite**  
- Mylonite  
- Ultramylonite

**Degree of deformation**  
- Brittle  
- Magmatic  
- Contact

**Dip**  
- 0  
- 45  
- 90

**Fabric intensity**  
- 0–10  
- 10–30  
- 30–50  
- 50–70  
- 70–90  
- >100

**Degree of deformation**  
- Undeformed  
- Minor fracturing  
- Moderate fracturing  
- GS reduction and rotation  
- Well-developed cataclasis  
- Ultracataclastite

**Protogranular**  
- Porphyroclastic

**Foliation**  
- Strongly foliated

**Protomylonite**  
- Mylonite  
- Ultramylonite

**Degree of deformation**  
- Brittle  
- Magmatic  
- Contact

**Dip**  
- 0  
- 45  
- 90

**Fabric intensity**  
- 0–10  
- 10–30  
- 30–50  
- 50–70  
- 70–90  
- >100
Hole BA4A-59Z Section 1, Top of Section 158.70 (m CCD)

| Depth (m CCD) | Core length (cm) | Shipboard samples | Stained image | Magnetic susceptibility (SI 10^-5) | MSCL-W MSP | GRA (g/cm²) | Sequence | Lithology | Unit/subunit | Alteration | Vein density (per meter) | Alteration intensity | Dip | Magnetic contact | Brittle | Crystal plastic |
|--------------|-----------------|------------------|--------------|----------------------------------|-------------|-------------|----------|-----------|-------------|------------|-----------------------|---------------------|-----|------------------|---------|----------------|---|
| 0           | 158.73          |                  |              |                                  |             |             |          |           |             |            |                      |                     |     |                  |        |                |   |
| 158.83       |                  |                  |              |                                  |             |             |          |           |             |            |                      |                     |     |                  |        |                |   |
| 158.93       |                  |                  |              |                                  |             |             |          |           |             |            |                      |                     |     |                  |        |                |   |
| 159.03       |                  |                  |              |                                  |             |             |          |           |             |            |                      |                     |     |                  |        |                |   |
| 159.13       |                  |                  |              |                                  |             |             |          |           |             |            |                      |                     |     |                  |        |                |   |
| 159.23       |                  |                  |              |                                  |             |             |          |           |             |            |                      |                     |     |                  |        |                |   |
| 159.33       |                  |                  |              |                                  |             |             |          |           |             |            |                      |                     |     |                  |        |                |   |
| 159.43       |                  |                  |              |                                  |             |             |          |           |             |            |                      |                     |     |                  |        |                |   |

SEQUENCE 1: 28a
RIG NAME: Dunite
CONTACT: Continuous
TEXTURE: IGNEOUS
SUMMARY: serpentinized dunite, weakly fractured, crosscut by gabbroic and pyroxenitic dike
ALTERATION: serpentinized, oxidized
VEINS: set of thin oriented white veins, green ones cut dikes orthogonally
STRUCTURE: Brittle-Veins- conjugate vein sets occur
Magmatic contact
Brittle
Crystal plastic
Veins

Mineralogy:
- Olivine
- Plagioclase
- Amphibole
- Orthopyroxene
- Clinopyroxene
- Spinel
- Sulfide
- Fresh (<3%)
- Slight (3–10%)
- Moderate (11–30%)
- Substantial (31–60%)
- Extensive (61–90%)
- Complete (≥90%)
- Undeformed
- Minor fracturing
- Moderate fracturing
- GS reduction and rotation
- Well-developed cataclasis

Degree of deformation:
- Protogranular
- Porphyroclastic
- Strongly foliated
- Protomylonite
- Mylonite
- Ultramylonite

Texture:
- Isotropic
- Weak
- Moderate
- Strong
- Fine grained (0.2–1 mm)
- Medium grained (1–5 mm)
- Coarse grained (5–30 mm)
- Pegmatitic (>30 mm)

Fabric intensity:
- Glassy
- Cryptocrystalline (<0.1 mm)
- Microcrystalline (0.1–0.2 mm)
- Medium grained (1–5 mm)
- Fine grained (0.2–1 mm)

Vein crosscutting:
- Discrete brittle features

Degree of deformation:
- Brittle
- Magmatic
- Contact

Dip
- 0
- 45
- 90

Description:
- Fault zones
- Structures
- Apparent offset
- Alteration halos
- Vein density (per meter)
- Degree of deformation
- Fracture/ Vein density (per meter)
- Magmatic Layering
- Foliation
- Discrete brittle features
- Grain size
- Vein density (per meter)
- Alteration intensity
- Degree of deformation
- Vein crosscutting
- Alteration halos
- Structures
- Apparent offset
- Vein density (per meter)
**Sequence:** 28a  
**Rock Name:** Dunite  
**Contact:** Continuous  
**Texture:** 
**Igneous Summary:** Serpentinized dunite, weakly fractured, crosscut by gabbroic and pyroxenitic dike  
**Alteration:** Serpentinized, oxidized  
**Veins:** Set of thin oriented white veins, green ones cut dikes orthogonally  
**Structure:** Brittle-

### Grain Size

<table>
<thead>
<tr>
<th>Fabric intensity</th>
<th>Grain size (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>0–10</td>
</tr>
<tr>
<td>4</td>
<td>10–30</td>
</tr>
<tr>
<td>3</td>
<td>30–50</td>
</tr>
<tr>
<td>2</td>
<td>50–70</td>
</tr>
<tr>
<td>1</td>
<td>70–90</td>
</tr>
<tr>
<td>0</td>
<td>90–100</td>
</tr>
<tr>
<td>0</td>
<td>&gt;100</td>
</tr>
</tbody>
</table>

### Magnetic susceptibility

<table>
<thead>
<tr>
<th>Magnetic susceptibility (SI 10^-5)</th>
<th>Core length (cm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

### Contact information

- **Shipboard samples**: [Details missing]
- **Scanned image**: [Details missing]
**SEQUENCE:** I  
**UNIT/SUBUNIT:** 28a  
**ROCK NAME:** Dunite  
**CONTACT:** Continuous  
**TEXTURE:** Igneous  
**SUMMARY:** Serpentinized dunite, weakly fractured, crosscut by gabbroic and pyroxenitic dike  
**ALTERATION:** Serpentinized, oxidized  
**VEINS:** Set of thin oriented white veins, green ones cut dikes orthogonally  
**STRUCTURE:** Brittle-Veins-Crystal plastic

**SEQUENCE:** I  
**UNIT/SUBUNIT:** 28b  
**ROCK NAME:** Dunite  
**CONTACT:** Colour  
**TEXTURE:** Igneous  
**SUMMARY:** Serpentinized dunite, weakly fractured  
**ALTERATION:** Highly oxidized  
**VEINS:** Few green, thin white veins  
**STRUCTURE:** Brittle-Veins-Conjugate vein sets occur

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>GRA (g/cm²)</th>
<th>Primary mineralogy (%)</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnitic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>160.41</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Hole BA4A-60Z Section 1, Top of Section 161.70 (m CCD)**

| Depth (m CCD) | Core length (cm) | Stained image | Magnetic susceptibility | Primary mineralogy (%) | Degree of deformation | Discrete brittle features | Fracture/ Vein density (per meter) | Alteration intensity | Alteration halos | Structures | Vein density (per meter) | Degree of deformation | Dip | Magnetic contact | Brittle Crystals plastic Veins |
|--------------|-----------------|---------------|-------------------------|------------------------|------------------------|--------------------------|-------------------------------|-------------------|----------------|------------------------|--------------------------|-----|---------------------|--------------------------------|
| 161.73       | 30              |               |                         |                        |                        |                          |                               |                   |               |                        |                          |     |                     |                               |
| 161.83       | 30              |               |                         |                        |                        |                          |                               |                   |               |                        |                          |     |                     |                               |
| 161.93       | 30              |               |                         |                        |                        |                          |                               |                   |               |                        |                          |     |                     |                               |

**Description**

SEQUENCE: 28b
ROCK NAME: Dunite
CONTACT: Continuous
TEXTURE:
IGNEOUS SUMMARY: serpentinized dunite, weakly fractured
ALTERATION: highly oxidized
VEINS: few green, white veins
STRUCTURE: Brittle-Veins-Crystal plastic
## Hole BA4A-60Z Section 2, Top of Section 162.03 (m CCD)

### Sequence: I

**Unit/Subunit:** 28c  
**Rock Name:** Dunite  
**Contact:** Continuous  
**Texture:**
- Igneous

**Summary:**
- Strongly serpentinized dunite, moderately fractured, crosscut by highly altered thin pyroxenitic dikes, sporadic harzburgitic patches

**Alteration:**
- Serpentinized, partially oxidized dunite

**Veins:**
- Green, white veins

**Structure:**
- Brittle-Veins-Crystal plastic

### Fabric Intensity

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>162.03</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Vein Density (per meter)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>162.03</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Grain Size

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>162.03</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Magnetic Susceptibility

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>1000</th>
<th>100</th>
<th>10</th>
<th>1</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>162.03</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Lithology

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Primary Mineralogy (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>162.03</td>
<td>-</td>
</tr>
</tbody>
</table>

### Degree of Deformation

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Fracture/Vein density (per meter)</th>
</tr>
</thead>
<tbody>
<tr>
<td>162.03</td>
<td></td>
</tr>
</tbody>
</table>

### Alteration

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Alteration intensity</th>
</tr>
</thead>
<tbody>
<tr>
<td>162.03</td>
<td></td>
</tr>
</tbody>
</table>

### Structures

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Structures</th>
</tr>
</thead>
<tbody>
<tr>
<td>162.03</td>
<td></td>
</tr>
</tbody>
</table>

### Description

- Sequence: I 30c
- Rock Name: Dunite
- Contact: Continuous
- Textural Summary: Strongly serpentinized dunite, moderately fractured, crosscut by highly altered thin pyroxenitic dikes, sporadic harzburgitic patches
- Alteration: Serpentinized, partially oxidized dunite
- Vein: Green, white veins
- Structure: Brittle-Veins-Crystal plastic
### Hole BA4A-60Z Section 3, Top of Section 162.98 (m CCD)

**Lithology**

<table>
<thead>
<tr>
<th>Sequence</th>
<th>Unit/Subunit</th>
<th>Rock Name</th>
<th>Contact</th>
<th>Texture</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>28c</td>
<td>Dunite</td>
<td>Continuous</td>
<td>Strongly serpentinized dunite, moderately fractured, crosscut by highly altered thin pyroxenitic dikes, sporadic harzburgitic patches</td>
</tr>
</tbody>
</table>

**Alteration**

<table>
<thead>
<tr>
<th>Sequence</th>
<th>Unit/Subunit</th>
<th>Rock Name</th>
<th>Contact</th>
<th>Texture</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>28c</td>
<td>Dunite</td>
<td>Continuous</td>
<td>Serpentinized, partially oxidized dunite</td>
</tr>
</tbody>
</table>

**Veins**

- Green, white veins

**Structures**

- Brittle-Semimnemonic fault zone

**Vein density (per meter)**

- 0-10
- 10-30
- 30-50
- 50-70
- 70-90
- >100

**Alteration intensity**

- Fresh (<3%)
- Slight (3–10%)
- Moderate (11–30%)
- Substantial (31–60%)
- Extensive (61–90%)
- Complete (>90%)

**Vein density (per meter)**

- 0-1
- 1-5
- >20
- >5-15
- >15-20

**Magnetic contact**

- Brittle
- Crystal plastic
- Veins

**Fabric intensity**

- 0-5
- 4-3
- 2-1
- 1-0

**Degree of deformation**

- Undeformed
- Minor fracturing
- Moderate fracturing
- GS reduction and rotation
- Well-developed cataclasis
- Ultracataclastite

**Alteration halos**

- Protogranular
- Porphyroclastic
- Strongly foliated
- Protomylonite
- Mylonite
- Ultramylonite

**Magmatic contact**

- Dip
- Contact

**CT image**

- Sulfide
- Amphibole
- Spinel
- Orthopyroxene
- Clinopyroxene
- Plagioclase
- Olivine

**Magnetic susceptibility**

- MSCL-W MSP
- GRA (g/cm³)

**Primary mineralogy**

- Olivine
- Plagioclase
- Clinopyroxene
- Orthopyroxene
- Amphibole
- Sulfide

**Grain size**

- 0-1
- 1-5
- 5-30
- >30

**Degree of deformation**

- Fracture/ Vein density (per meter)

**Alteration halos**

- Protogranular
- Porphyroclastic
- Strongly foliated
- Protomylonite
- Mylonite
- Ultramylonite

**Isotropic**

- Weak
- Moderate
- Strong

**Fine grained (0.2–1 mm)**

- Medium grained (1–5 mm)
- Coarse grained (5–30 mm)
- Pegmatitic (>30 mm)

**Glassy**

- Cryptocrystalline (<0.1 mm)
- Microcrystalline (0.1–0.2 mm)

**GRA (g/cm³)**

- 2.5
- 2
- 1.5
- 1
**Hole BA4A-60Z Section 4, Top of Section 163.97 (m CCD)**

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>CT image</th>
<th>Magnetic susceptibility</th>
<th>Primary mineralogy (%)</th>
<th>Lithology</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnetocontact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Voins</th>
<th>Structures</th>
<th>Area of focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>164.00</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>164.10</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>164.20</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>164.30</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>164.40</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>164.50</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>164.60</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>164.70</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>164.80</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SEQUENCE:** 28c

**ROCK NAME:** Dunite

**CONTACT:** Continuous

**TEXTURE:**

**IGNEOUS SUMMARY:** strongly serpentinized dunite, moderately fractured, crosscut by highly altered thin pyroxenitic dikes, sporadic harzburgitic patches

**ALTERATION:** serpentinized, partially oxidized dunite

**VEINS:** green, white veins

**STRUCTURE:** brittle, steeply dipping wavy shear vein

**Voids:**

**GRA:** (g/cm³)

- 2.58
- 2.48
- 2.38
- 2.28

**Magnetic susceptibility (SI 10⁻⁵):**

- 1000
- 100
- 10
- 1

**Degree of deformation:**

- Undeformed
- Minor fracturing
- Moderate fracturing
- GS reduction and rotation
- Well-developed cataclasis

**Vein crosscutting alteration:**

- 0–10
- 10–30
- 30–50
- 50–70
- 70–90
- >100

**Vein density (per meter):**

- 0
- 1 per 10 cm
- 3-5 per 10 cm
- >20 per 10 cm
- 5-15 per 10 cm
- 15-20 per 10 cm
SEQUENCE: I
UNIT/SUBUNIT: 28c
ROCK NAME: dunite
CONTACT: continuous
TEXTURE: IGNEOUS
SUMMARY: strongly serpentinized dunite, moderately fractured, crosscut by highly altered thin pyroxenitic dikes, sporadic harzburgitic patches
ALTERATION: serpentinized, partially oxidized dunite
VEINS: cut by a variety of serpentine veins
STRUCTURE: Brittle-Veins-Crystal plastic-

SEQUENCE: I
UNIT/SUBUNIT: 28d
ROCK NAME: Harzburgite
CONTACT: modal
TEXTURE: Granular
IGNEOUS SUMMARY: highly altered harzburgite with dunitic units and gabbro dykes
ALTERATION: highly serpentinized harzburgite
VEINS: cut by a variety of serpentine veins
STRUCTURE: Brittle-Veins-Crystal plastic-

Veins: Crystal plastic-Pyroxene grains are rounded and slightly elongated.
### Hole BA4A-61Z Section 2, Top of Section 165.66 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>CT image</th>
<th>Magnetic susceptibility</th>
<th>MSCL-W</th>
<th>MSP (SI x 10^-5)</th>
<th>GRA (g/cm²)</th>
<th>Sequence</th>
<th>Unit/subunit</th>
<th>Lithology</th>
<th>Primary mineralogy (%)</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip Magnetic contact Brittle Crystal plastic Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Sequence 1:**
- **Unit/subunit:** 28a
- **Rock Name:** harzburgite
- **Contact:** intrusive
- **Texture:** Granular
- **Igneous Summary:** highly fractured harzburgite with gabbro dykes
- **Alteration:** highly serpentinised
- **Veins:** cut by a variety of serpentine veins
- **Structure:** Brittle - Major faulting on anastamosing planes
- **Vein Cross-cutting:** Crystal plastic - Pyroxene grains are rounded and slightly elongated.

**Sequence 2:**
- **Unit/subunit:** 28b
- **Rock Name:** gabbro
- **Contact:** intrusive
- **Texture:** Granular
- **Igneous Summary:** altered gabbro dyke
- **Alteration:** altered and pseudomorphed
- **Veins:** white veins cut and emanate from dyke
- **Structure:** Brittle - Minor faulting on anastamosing planes
- **Vein Cross-cutting:** Crystal plastic - Pyroxene grains are rounded and slightly elongated.

**Sequence 3:**
- **Unit/subunit:** 28c
- **Rock Name:** harzburgite
- **Contact:** intrusive
- **Texture:** Granular
- **Igneous Summary:** highly serpentinised harzburgite with gabbro dykes
- **Alteration:** highly serpentinised
- **Veins:** cut by a variety of serpentine veins
- **Structure:** Brittle - Minor faulting on anastamosing planes
- **Vein Cross-cutting:** Crystal plastic - Pyroxene grains are rounded and slightly elongated.

**Sequence 4:**
- **Unit/subunit:** 28d
- **Rock Name:** harzburgite
- **Contact:** intrusive
- **Texture:** Granular
- **Igneous Summary:** highly fractured harzburgite with gabbro dykes
- **Alteration:** highly serpentinised
- **Veins:** cut by a variety of serpentine veins
- **Structure:** Brittle - Minor faulting on anastamosing planes
- **Vein Cross-cutting:** Crystal plastic - Pyroxene grains are rounded and slightly elongated.

**Sequence 5:**
- **Unit/subunit:** 28e
- **Rock Name:** harzburgite
- **Contact:** intrusive
- **Texture:** Granular
- **Igneous Summary:** highly fractured harzburgite with gabbro dykes
- **Alteration:** highly serpentinised
- **Veins:** cut by a variety of serpentine veins
- **Structure:** Brittle - Minor faulting on anastamosing planes
- **Vein Cross-cutting:** Crystal plastic - Pyroxene grains are rounded and slightly elongated.

**Sequence 6:**
- **Unit/subunit:** 28f
- **Rock Name:** harzburgite
- **Contact:** intrusive
- **Texture:** Granular
- **Igneous Summary:** highly serpentinised harzburgite with gabbro dykes
- **Alteration:** highly serpentinised
- **Veins:** cut by a variety of serpentine veins
- **Structure:** Brittle - Minor faulting on anastamosing planes
- **Vein Cross-cutting:** Crystal plastic - Pyroxene grains are rounded and slightly elongated.

**Sequence 7:**
- **Unit/subunit:** 28g
- **Rock Name:** harzburgite
- **Contact:** intrusive
- **Texture:** Granular
- **Igneous Summary:** highly fractured harzburgite with gabbro dykes
- **Alteration:** highly serpentinised
- **Veins:** cut by a variety of serpentine veins
- **Structure:** Brittle - Minor faulting on anastamosing planes
- **Vein Cross-cutting:** Crystal plastic - Pyroxene grains are rounded and slightly elongated.
### Hole BA4A-61Z Section 3, Top of Section 166.58 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Lithology</th>
<th>Degree of deformation</th>
<th>Structure</th>
<th>Alteration intensity</th>
<th>Vein density (per meter)</th>
<th>Altered halos</th>
<th>Vein crosscutting</th>
<th>Magnetic contact</th>
<th>Brittleness</th>
<th>Crystal plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>166.00</td>
<td>10.00</td>
<td>dunite</td>
<td>Minor fracturing</td>
<td>Fault zones</td>
<td>Poor</td>
<td>0</td>
<td>Fresh (&lt;3%)</td>
<td>Slight (3–10%)</td>
<td>None</td>
<td>Brittle</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>166.10</td>
<td>10.00</td>
<td>dunite</td>
<td>Minor fracturing</td>
<td>Fault zones</td>
<td>Poor</td>
<td>0</td>
<td>Fresh (&lt;3%)</td>
<td>Slight (3–10%)</td>
<td>None</td>
<td>Brittle</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>166.20</td>
<td>10.00</td>
<td>dunite</td>
<td>Minor fracturing</td>
<td>Fault zones</td>
<td>Poor</td>
<td>0</td>
<td>Fresh (&lt;3%)</td>
<td>Slight (3–10%)</td>
<td>None</td>
<td>Brittle</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>166.30</td>
<td>10.00</td>
<td>dunite</td>
<td>Minor fracturing</td>
<td>Fault zones</td>
<td>Poor</td>
<td>0</td>
<td>Fresh (&lt;3%)</td>
<td>Slight (3–10%)</td>
<td>None</td>
<td>Brittle</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>166.40</td>
<td>10.00</td>
<td>dunite</td>
<td>Minor fracturing</td>
<td>Fault zones</td>
<td>Poor</td>
<td>0</td>
<td>Fresh (&lt;3%)</td>
<td>Slight (3–10%)</td>
<td>None</td>
<td>Brittle</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>166.50</td>
<td>10.00</td>
<td>dunite</td>
<td>Minor fracturing</td>
<td>Fault zones</td>
<td>Poor</td>
<td>0</td>
<td>Fresh (&lt;3%)</td>
<td>Slight (3–10%)</td>
<td>None</td>
<td>Brittle</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>166.60</td>
<td>10.00</td>
<td>dunite</td>
<td>Minor fracturing</td>
<td>Fault zones</td>
<td>Poor</td>
<td>0</td>
<td>Fresh (&lt;3%)</td>
<td>Slight (3–10%)</td>
<td>None</td>
<td>Brittle</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>166.70</td>
<td>10.00</td>
<td>dunite</td>
<td>Minor fracturing</td>
<td>Fault zones</td>
<td>Poor</td>
<td>0</td>
<td>Fresh (&lt;3%)</td>
<td>Slight (3–10%)</td>
<td>None</td>
<td>Brittle</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>166.80</td>
<td>10.00</td>
<td>dunite</td>
<td>Minor fracturing</td>
<td>Fault zones</td>
<td>Poor</td>
<td>0</td>
<td>Fresh (&lt;3%)</td>
<td>Slight (3–10%)</td>
<td>None</td>
<td>Brittle</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>166.90</td>
<td>10.00</td>
<td>dunite</td>
<td>Minor fracturing</td>
<td>Fault zones</td>
<td>Poor</td>
<td>0</td>
<td>Fresh (&lt;3%)</td>
<td>Slight (3–10%)</td>
<td>None</td>
<td>Brittle</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>167.00</td>
<td>10.00</td>
<td>dunite</td>
<td>Minor fracturing</td>
<td>Fault zones</td>
<td>Poor</td>
<td>0</td>
<td>Fresh (&lt;3%)</td>
<td>Slight (3–10%)</td>
<td>None</td>
<td>Brittle</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>167.10</td>
<td>10.00</td>
<td>dunite</td>
<td>Minor fracturing</td>
<td>Fault zones</td>
<td>Poor</td>
<td>0</td>
<td>Fresh (&lt;3%)</td>
<td>Slight (3–10%)</td>
<td>None</td>
<td>Brittle</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>167.20</td>
<td>10.00</td>
<td>dunite</td>
<td>Minor fracturing</td>
<td>Fault zones</td>
<td>Poor</td>
<td>0</td>
<td>Fresh (&lt;3%)</td>
<td>Slight (3–10%)</td>
<td>None</td>
<td>Brittle</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>167.30</td>
<td>10.00</td>
<td>dunite</td>
<td>Minor fracturing</td>
<td>Fault zones</td>
<td>Poor</td>
<td>0</td>
<td>Fresh (&lt;3%)</td>
<td>Slight (3–10%)</td>
<td>None</td>
<td>Brittle</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>167.40</td>
<td>10.00</td>
<td>dunite</td>
<td>Minor fracturing</td>
<td>Fault zones</td>
<td>Poor</td>
<td>0</td>
<td>Fresh (&lt;3%)</td>
<td>Slight (3–10%)</td>
<td>None</td>
<td>Brittle</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>167.50</td>
<td>10.00</td>
<td>dunite</td>
<td>Minor fracturing</td>
<td>Fault zones</td>
<td>Poor</td>
<td>0</td>
<td>Fresh (&lt;3%)</td>
<td>Slight (3–10%)</td>
<td>None</td>
<td>Brittle</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>167.60</td>
<td>10.00</td>
<td>dunite</td>
<td>Minor fracturing</td>
<td>Fault zones</td>
<td>Poor</td>
<td>0</td>
<td>Fresh (&lt;3%)</td>
<td>Slight (3–10%)</td>
<td>None</td>
<td>Brittle</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>167.70</td>
<td>10.00</td>
<td>dunite</td>
<td>Minor fracturing</td>
<td>Fault zones</td>
<td>Poor</td>
<td>0</td>
<td>Fresh (&lt;3%)</td>
<td>Slight (3–10%)</td>
<td>None</td>
<td>Brittle</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>167.80</td>
<td>10.00</td>
<td>dunite</td>
<td>Minor fracturing</td>
<td>Fault zones</td>
<td>Poor</td>
<td>0</td>
<td>Fresh (&lt;3%)</td>
<td>Slight (3–10%)</td>
<td>None</td>
<td>Brittle</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>167.90</td>
<td>10.00</td>
<td>dunite</td>
<td>Minor fracturing</td>
<td>Fault zones</td>
<td>Poor</td>
<td>0</td>
<td>Fresh (&lt;3%)</td>
<td>Slight (3–10%)</td>
<td>None</td>
<td>Brittle</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>168.00</td>
<td>10.00</td>
<td>dunite</td>
<td>Minor fracturing</td>
<td>Fault zones</td>
<td>Poor</td>
<td>0</td>
<td>Fresh (&lt;3%)</td>
<td>Slight (3–10%)</td>
<td>None</td>
<td>Brittle</td>
<td>None</td>
<td></td>
</tr>
</tbody>
</table>

**Description**

- **Primary mineralogy**: Serpentinised dunite with gabbro dykes and patches of opx-rich material.
- **ALTERATION**: Highly serpentinised.
- **VEINS**: Cut by a variety of serpentine veins.
- **TEXTURE**: Brittle.

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Lithology</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Olivine</td>
<td>35</td>
<td>Brittleness features</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Plagioclase</td>
<td>25</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Clinopyroxene</td>
<td>21</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Orthopyroxene</td>
<td>15</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Amphibole</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Spinel</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Sulfide</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Magnetic susceptibility (SI x 10^-5):**

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

**Sequence:** I

**Contact:** Brittle

**Texture:** Brittleness of respective rocks

**Degree of deformation:** Brittleness of respective rocks

**Alteration intensity:** Brittleness of respective rocks

**Veins:** Brittleness of respective rocks

**Veins density (per meter):** Brittleness of respective rocks

**Core length (cm):** Brittleness of respective rocks

**Hole BA4A-61Z Section 4, Top of Section 167.38 (m CCD)**
<table>
<thead>
<tr>
<th>Sequence</th>
<th>Unit/Subunit</th>
<th>Rock Name</th>
<th>Contact</th>
<th>Texture</th>
<th>Igneous Summary</th>
<th>Alteration</th>
<th>Vein</th>
<th>Structure</th>
<th>Vein density (per meter)</th>
<th>Alteration intensity</th>
</tr>
</thead>
</table>
| I        | 28g          | dunite    | continuous | Granular | serpentinised dunite with gabbro dykes and patches of opx-rich material | highly serpentinised | cut by a variety of serpentine veins | Brittle | Veins: 3
| I        | 28g          | wehrlite  | intrusive | Granular | altered wehrlite dyke | altered and pseudomorphed | rare white veins | Brittle | Veins: 1
| I        | 29a          | harzburgite | intrusive | Granular | serpentinised harzburgite intruded by gabbro and wehrlite dykes | highly serpentinised | cut by a variety of serpentine veins | Brittle | Veins: 1
| I        | 29a          | gabbro    | intrusive | Granular | altered gabbro dyke | altered and pseudomorphed | white veins cut and emanate from dyke | Brittle | Veins: 1
| I        | 29b          | dunite    | modal | Granular | serpentinised dunite with wehrlite and gabbroic dykes | highly serpentinised | cut by a variety of serpentine veins | Brittle | Veins: 1
| I        | 29b          | wehrlite  | intrusive | Granular | altered wehrlite dyke | altered and pseudomorphed | white and white/green veins | Brittle | Veins: 1

**Fabric intensity**

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>167.70</td>
<td>0</td>
<td>10</td>
<td>20</td>
<td>30</td>
<td>40</td>
<td>50</td>
<td>60</td>
<td>70</td>
</tr>
</tbody>
</table>

**Description**

- Sequence: I, Unit/Subunit: 28g, Rock Name: dunite, Contact: continuous, Igneous Summary: serpentinised dunite with gabbro dykes and patches of opx-rich material, Alteration: highly serpentinised, Veins: cut by a variety of serpentine veins, Structure: Brittle, Vein density: 3
- Sequence: I, Unit/Subunit: 28g, Rock Name: wehrlite, Contact: intrusive, Igneous Summary: altered wehrlite dyke, Alteration: altered and pseudomorphed, Veins: rare white veins, Structure: Brittle, Vein density: 1
- Sequence: I, Unit/Subunit: 29a, Rock Name: harzburgite, Contact: intrusive, Igneous Summary: serpentinised harzburgite intruded by gabbro and wehrlite dykes, Alteration: highly serpentinised, Veins: cut by a variety of serpentine veins, Structure: Brittle, Vein density: 1
- Sequence: I, Unit/Subunit: 29a, Rock Name: gabbro, Contact: intrusive, Igneous Summary: altered gabbro dyke, Alteration: altered and pseudomorphed, Veins: white veins cut and emanate from dyke, Structure: Brittle, Vein density: 1
- Sequence: I, Unit/Subunit: 29b, Rock Name: dunite, Contact: modal, Igneous Summary: serpentinised dunite with wehrlite and gabbroic dykes, Alteration: highly serpentinised, Veins: cut by a variety of serpentine veins, Structure: Brittle, Vein density: 1
---
**SEQUENCE:** I
**UNIT/SUBUNIT:** 29b
**ROCK NAME:** dunite
**CONTACT:** continuous
**TEXTURE:** IGNEOUS
**SUMMARY:** serpentinised dunite with wehrlite and gabbroic dykes
**ALTERATION:** highly serpentinised
**VEINS:** cut by a variety of serpentine veins
**STRUCTURE:** Brittle

---
**SEQUENCE:** I
**UNIT/SUBUNIT:** 29c
**ROCK NAME:** harzburgite
**CONTACT:** modal
**TEXTURE:** Granular
**IGNEOUS SUMMARY:** highly serpentinised harzburgite with gabbro dykes
**ALTERATION:** highly serpentinised
**VEINS:** cut by a variety of serpentine veins
**STRUCTURE:** Brittle

---
**Fabric intensity**

**Vein density (per meter)**

**Grain size**

**Magnetic susceptibility**

**Lithology**

**Primary mineralogy (%):**
- Olivine
- Plagioclase
- Chloropyroxene
- Orthopyroxene
- Amphibole
- Spinel
- Sulfide

**Degree of deformation**

**Fracture/ Vein density (per meter)**

**Alteration intensity**

**Hole BA4A-62Z Section 2, Top of Section 168.59 (m CCD)**

---

**Magmatic contact**

**Brittle**

**Crystal plastic**

---
**Hole BA4A-62Z Section 3, Top of Section 169.38 (m CCD)**

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>CT image</th>
<th>Magnetic susceptibility</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnetic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>169.41</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>169.51</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>169.61</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>169.71</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>169.81</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>169.91</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>170.01</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**MBIO**

---
**SEQUENCE: I**
**UNIT/SUBUNIT: 29c**
**ROCK NAME: harzburgite**
**CONTACT: continuous**
**TEXTURE: Granular**

**IGNEOUS SUMMARY:** Highly serpentinised harzburgite with gabbro dykes

**ALTERATION:** Highly serpentinised

**VEINS:** Cut by a variety of serpentine veins

**STRUCTURE:** Brittle - Network of fine black fractures with small amounts of displacement

**Crystal plastic - Pyroxene grains are rounded and slightly exfoliated.**

---
**SEQUENCE: I**
**UNIT/SUBUNIT: 29c**
**ROCK NAME: gabbro**
**CONTACT: intrusive**
**TEXTURE: Granular**

**IGNEOUS SUMMARY:** Altered gabbro dyke

**ALTERATION:** Altered and pseudomorphed

**VEINS:** White veins cut and emanate from dyke

**STRUCTURE:** Brittle - Brittle contact
### Hole BA4A-63Z Section 1, Top of Section 170.70 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>MSCL-W (SI x 10^-5)</th>
<th>MSP (SI x 10^-5)</th>
<th>GRA (g/cm²)</th>
<th>Sequence</th>
<th>Lithology</th>
<th>Degree of deformation</th>
<th>Fabric intensity</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnetic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>170.70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>170.83</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>170.93</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>171.03</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>171.13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>171.23</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>171.33</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>171.43</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>171.53</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SEQUENCE 1:**

**UNIT/SUBUNIT:** 29e
**ROCK NAME:** harzburgite
**CONTACT:** continuous
**TEXTURE:** Granular

**IGNEOUS SUMMARY:** Serpentinised harzburgite with gabbroic and wehrlitic dykes

**ALTERATION:** Highly serpentinised

**VEINS:** Cut by a variety of serpentine veins

**STRUCTURE:** Brittle - Network of fine black fractures with small amounts of displacement runs down most of this section

---

**SEQUENCE 1:**

**UNIT/SUBUNIT:** 29e
**ROCK NAME:** wehrlite
**CONTACT:** intrusive
**TEXTURE:** Granular

**IGNEOUS SUMMARY:** Altered wehrlite dyke

**ALTERATION:** Altered and pseudomorphed

**VEINS:** White and green veins

**STRUCTURE:** Brittle - Veins - Crystal plastic -

---

**SEQUENCE 1:**

**UNIT/SUBUNIT:** 29f
**ROCK NAME:** dunite
**CONTACT:** modal
**TEXTURE:**

**IGNEOUS SUMMARY:** Serpenized and oxidized dunite with a partly displaced gabbroic dye

**ALTERATION:** Highly serpentinised

**VEINS:** Network of green veins and black veins and fine white veins

**STRUCTURE:** Brittle - Veins - Crystal plastic -
SEQUENCE: I
UNIT/SUBUNIT: 29f
ROCK NAME: dunite
CONTACT: continuous
TEXTURE: IGNEOUS SUMMARY: serpenized and oxidized dunite with a partly displaced gabbroic dike
ALTERATION: highly serpentinised
VEINS: network of green veins and black veins and fine white veins
STRUCTURE: Brittle-Veins- conjugate vein sets occur

SEQUENCE: I
UNIT/SUBUNIT: 29f
ROCK NAME: gabbro
CONTACT: intrusive
TEXTURE: Granular
IGNEOUS SUMMARY: altered gabbro dyke
ALTERATION: altered and pseudomorphed
VEINS: grey and white veins
STRUCTURE: Brittle-Veins-

SEQUENCE: I
UNIT/SUBUNIT: 29f
ROCK NAME: gabbro
CONTACT: intrusive
TEXTURE: Granular
IGNEOUS SUMMARY: altered gabbro dyke
ALTERATION: altered and pseudomorphed
VEINS: grey and white veins
STRUCTURE: Brittle-Veins-

SEQUENCE: I
UNIT/SUBUNIT: 29f
ROCK NAME: gabbro
CONTACT: intrusive
TEXTURE: Granular
IGNEOUS SUMMARY: altered gabbro dyke
ALTERATION: altered and pseudomorphed
VEINS: grey and white veins
STRUCTURE: Brittle-Zone of cohesive possibly magmatic derived brecciation

Fabric intensity

Vein density (per meter)

Grain size

Hole BA4A-63Z Section 2, Top of Section 171.54 (m CCD)

Depth (m CCD) | Core length (cm) | Striation image | Magnetic susceptibility | Primary mineralogy (%) | Degree of deformation | Fracture/ Vein density (per meter) | Alteration intensity | Dip | Magnetic contact | Brittle | Crystal plastic | Veins | Structures | Apparent offset |
---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
171.55 | 0 | | | | | | | | | | | | | | |
171.65 | 10 | | | | | | | | | | | | | | |
171.75 | 20 | | | | | | | | | | | | | | |
171.85 | 30 | | | | | | | | | | | | | | |
171.95 | 40 | | | | | | | | | | | | | | |
172.05 | 50 | | | | | | | | | | | | | | |
172.15 | 60 | | | | | | | | | | | | | | |
172.25 | 70 | | | | | | | | | | | | | | |
172.35 | 80 | | | | | | | | | | | | | | |
172.45 | 90 | | | | | | | | | | | | | | |

Sequences and Units:
- Sequence I: Unit/Subunit 29f
- Rock Name: Dunite
  - Contact: Continuous
  - Textural Summary: Serpentized and oxidized dunite with a partly displaced gabbroic dike
  - Alteration: Highly serpentinised
  - Veins: Network of green veins and black veins and fine white veins
  - Structure: Brittle Veins - Conjugate vein sets occur
- Sequence I: Unit/Subunit 29f
  - Rock Name: Gabbro
  - Contact: Intrusive
  - Texture: Granular
  - Igneous Summary: Altered gabbro dyke
  - Alteration: Altered and pseudomorphed
  - Veins: Grey and white veins
  - Structure: Brittle
- Sequence I: Unit/Subunit 29f
  - Rock Name: Gabbro
  - Contact: Intrusive
  - Texture: Granular
  - Igneous Summary: Altered gabbro dyke
  - Alteration: Altered and pseudomorphed
  - Veins: Grey and white veins
  - Structure: Brittle Zone of cohesive possibly magmatic derived brecciation
<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>Primary mineralogy</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Structure</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>172.57</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>172.77</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>172.79</td>
<td>15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>172.81</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Sequence:** I

**Unit/Subunit:** 29f

**Rock Name:** dunite

**Contact:** continuous

**Texture:** igneous

**Summary:** serpentinized and oxidized dunite with a partly displaced gabbroic dike

**Alteration:** highly serpentinised

**Veins:** network of green veins and black veins and fine white veins

**Fabric intensity:** 5

**Vein density (per meter):** 6

**Grain size:** 6

**Hole BA4A-63Z Section 3, Top of Section 172.54 (m CCD)**
<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Lithology</th>
<th>Primary mineralogy (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>173.36</td>
<td>0</td>
<td>Dunite</td>
<td>Olivine, Plagioclase, Amphibole</td>
</tr>
<tr>
<td>173.36</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>173.46</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>173.56</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>173.66</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>173.76</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>173.86</td>
<td>10</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**MSCL-W Magnetic susceptibility (SI x 10^-5)**

**GRA (g/cm³)**

**Degree of deformation**

- **Discrete brittle features**
- **Fracture/ Vein density (per meter)**
- **Alteration intensity**
- **Vein density (per meter)**

**Contact**
- Continuous

**Texture**
- Igneous
- Serpenized and oxidized dunite with a partly displaced gabbroic dike

**Alteration**
- Highly serpentinised

**Veins**
- Network of green veins and black veins and fine white veins

**Structure**
- Brittle- Incohesive, clearly bounded brittle fault zone

**Vein crosscutting Alteration halos**

**Vein density (per meter)**
- 0 per 10 cm
- 1 per 10 cm
- 10-30 per 10 cm
- >20 per 10 cm

**Alteration intensity**
- Fresh (<3%)
- Slight (3–10%)
- Moderate (11–30%)
- Substantial (31–60%)
- Extensive (61–90%)
- Complete (≥90%)

**Degree of deformation**
- Undeformed
- Minor fracturing
- Moderate fracturing
- GS reduction and rotation
- Well-developed cataclasis
- Ultracataclasite

**Magmatic contact**

**Dip**

**Magnetic contact**

**Brittle plastic**

**Veins**

**Structures**

- Fault zones

**fabrics**
- Protogranular
- Porphyroclastic
- Strongly foliated
- Protomylonite
- Mylonite
- Ultramylonite

**Degree of foliation**
- Isotropic
- Weak
- Moderate
- Strong

**Porphyroclast size**
- Fine grained (0.2–1 mm)
- Medium grained (1–5 mm)
- Coarse grained (5–30 mm)
- Pegmatitic (>30 mm)

**Degree of foliation**
- Glassy
- Cryptocrystalline (<0.1 mm)
- Microcrystalline (0.1–0.2 mm)

**Rock density (g/cm³)**
- 2.5
- 2.25
- 2.0
- 1.75

**Degree of deformation**
- 0–10
- 10–30
- 30–50
- 50–70
- 70–90
- >100

**Sequence 29f**

**Contact**
- Continuous

**Texture**
- Igneous
- Serpenized and oxidized dunite with a partly displaced gabbroic dike

**Alteration**
- Highly serpentinised

**Veins**
- Network of green veins and black veins and fine white veins

**Structure**
- Brittle- Incohesive, clearly bounded brittle fault zone

**Vein crosscutting Alteration halos**

**Vein density (per meter)**
- 0 per 10 cm
- 1 per 10 cm
- 10-30 per 10 cm
- >20 per 10 cm

**Alteration intensity**
- Fresh (<3%)
- Slight (3–10%)
- Moderate (11–30%)
- Substantial (31–60%)
- Extensive (61–90%)
- Complete (≥90%)

**Degree of deformation**
- Undeformed
- Minor fracturing
- Moderate fracturing
- GS reduction and rotation
- Well-developed cataclasis
- Ultracataclasite

**Magmatic contact**

**Brittle plastic**

**Veins**

**Structures**

- Fault zones

**fabrics**
- Protogranular
- Porphyroclastic
- Strongly foliated
- Protomylonite
- Mylonite
- Ultramylonite

**Degree of foliation**
- Isotropic
- Weak
- Moderate
- Strong

**Porphyroclast size**
- Fine grained (0.2–1 mm)
- Medium grained (1–5 mm)
- Coarse grained (5–30 mm)
- Pegmatitic (>30 mm)

**Degree of foliation**
- Glassy
- Cryptocrystalline (<0.1 mm)
- Microcrystalline (0.1–0.2 mm)

**Rock density (g/cm³)**
- 2.5
- 2.25
- 2.0
- 1.75

**Degree of deformation**
- 0–10
- 10–30
- 30–50
- 50–70
- 70–90
- >100
**SEQUENCE: 17**
**ROCK NAME: Dunite**
**CONTACT: Continuous**
**TEXTURE: IGNEOUS**
**SUMMARY: serpentinized and oxidized dunite with a partly displaced gabbroic dike**
**ALTERATION: highly serpentinised**
**VEINS: network of green veins and black veins and fine white veins**
**STRUCTURE: Brittle - Minor faulting**

---

**SEQUENCE: 17**
**ROCK NAME: Olivine gabbro**
**CONTACT: intrusive**
**TEXTURE: IGNEOUS**
**SUMMARY: highly altered olivine gabbro**
**ALTERATION: highly altered**
**VEINS: few green veins**

---

**Surface Fabric Intensity**

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Lithology</th>
<th>Primary mineralogy (wt %)</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Structures</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>174.50</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>174.60</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>174.70</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>174.80</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>174.90</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>175.00</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>175.10</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>175.20</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>175.30</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>175.40</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

**Degree of deformation**

<table>
<thead>
<tr>
<th>Fabric intensity</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brittle features</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

**Alteration intensity**

<table>
<thead>
<tr>
<th>Alteration</th>
<th>0</th>
<th>10</th>
<th>20</th>
<th>30</th>
<th>40</th>
<th>50</th>
<th>60</th>
<th>70</th>
<th>80</th>
<th>90</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fresh</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Slight</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moderate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Substantial</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extensive</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complete</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

**Magmatic contact**

<table>
<thead>
<tr>
<th>Dip</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>45</td>
<td>90</td>
<td></td>
</tr>
</tbody>
</table>

---

**Fault zones**

<table>
<thead>
<tr>
<th>Fault zone</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

**Degree of deformation**

<table>
<thead>
<tr>
<th>Degree of deformation</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undeformed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minor fracturing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moderate fracturing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GS reduction and rotation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Well-developed cataclasis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ultracataclastite</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

**Magmatic Layering**

<table>
<thead>
<tr>
<th>Magmatic Layering</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protogranular</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Porphyroclastic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strongly foliated</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Protomylonite</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mylonite</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ultramylonite</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

**Crystal plastic**

<table>
<thead>
<tr>
<th>Crystal plastic</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isotropic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weak</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moderate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strong</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

**Vein density (per meter)**

<table>
<thead>
<tr>
<th>Vein density (per meter)</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fresh (&lt;3%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Slight (3–10%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moderate (11–30%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Substantial (31–60%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extensive (61–90%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complete (&gt;90%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

**Magnetic susceptibility**

<table>
<thead>
<tr>
<th>Magnetic susceptibility (SI x 10^-5)</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fresh (&lt;3%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Slight (3–10%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moderate (11–30%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Substantial (31–60%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extensive (61–90%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complete (&gt;90%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

**Scanned image:**

- **Contact:** Continuous
- **Texture:** IGNEOUS
- **Summary:** Serpentinized and oxidized dunite with a partly displaced gabbroic dike
- **Alteration:** Highly serpentinized
- **Veins:** Network of green veins and black veins and fine white veins
- **Structure:** Brittle - Minor faulting

---

**Vein density (per meter):**

- 0-1 per 10 cm
- 1-5 per 10 cm
- >5 per 10 cm
- 5-15 per 10 cm
- 15-20 per 10 cm

---

**Primary mineralogy:**

- Olivine
- Plagioclase
- Clinopyroxene
- Orthopyroxene
- Amphibole
- Spinel
- Sulfide

---

**Degree of deformation:**

- Brittle

---

**Sequence:**

- 17

---

**Description:**

- Magnetic contact
- Brittle
- Crystal plastic
- Veins

---

**Structures:**

- Fault zones
**Hole BA4A-64Z Section 3, Top of Section 175.46 (m CCD)**

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>GRA (g/cm²)</th>
<th>MSCL-W (SI x 10⁻⁵)</th>
<th>Sequence</th>
<th>Lithology</th>
<th>Unit/subunit</th>
<th>Primary mineralogy (%)</th>
<th>Degree of deformation</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Structures</th>
<th>Vein density (per meter)</th>
<th>Alteration</th>
<th>Fracture/ Vein density (per meter)</th>
<th>MINING CONTACT</th>
<th>Fabric intensity</th>
</tr>
</thead>
<tbody>
<tr>
<td>175.49</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1000</td>
</tr>
<tr>
<td>175.59</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1000</td>
</tr>
<tr>
<td>175.69</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1000</td>
</tr>
<tr>
<td>175.79</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1000</td>
</tr>
<tr>
<td>175.89</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1000</td>
</tr>
<tr>
<td>175.99</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1000</td>
</tr>
</tbody>
</table>

**DESCRIPTION**: The image shows a section of a core sample with various geological features marked. The scale bar indicates the section length of 10 cm. The description includes color-coded sections for different rock types and features such as veins, fractures, and lithological units. The image helps in visualizing the spatial distribution of these features along the core. The table provides a structured overview of the geological data, including magnetic susceptibility, GRA, MSCL-W, GRA, and other parameters, allowing for a detailed analysis of the section's composition and structure.
### Sequence I: Section 1, Top of Section 176.20 (m CCD)

**Lithology**
- Dunite
  - **Primary mineralogy:** Olivine, Plagioclase, Amphibole
  - **Alteration:** Highly serpentinized
  - **Veins:** Network of green veins and black veins and fine white veins
  - **Texture:** Igneous, Brittle
  - **Structure:** Brittle

- Gabbro
  - **Primary mineralogy:** Plagioclase, Orthopyroxene
  - **Alteration:** Highly altered
  - **Veins:** Few green to white veins
  - **Texture:** Igneous, Brittle
  - **Structure:** Brittle

- Harzburgite
  - **Primary mineralogy:** Olivine
  - **Alteration:** Serpentinized
  - **Veins:** White and black veins
  - **Texture:** Granular, Brittle
  - **Structure:** Brittle

### Table

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>Primary mineralogy</th>
<th>Grain size</th>
</tr>
</thead>
<tbody>
<tr>
<td>176.21</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Description
- **Sequence:** I: 30a
- **Rock Name:** Harzburgite
- **Contact:** Intrusive
- **Texture:** Granular
- **Igneous Summary:** Serpentinized harzburgite with few smaller (<5mm) dikes
- **Alteration:** Serpentinized
- **Veins:** White and black veins
- **Structure:** Brittle

**Notes:**
- **Vein crosscutting:**
- **Alteration intensity:**
  - Fresh (<3%)
  - Slight (3–10%)
  - Moderate (11–30%)
  - Substantial (31–60%)
  - Extensive (61–90%)
  - Complete (>90%)
- **Degree of deformation:**
  - Undeformed
  - Minor fracturing
  - Moderate fracturing
  - GS reduction and rotation
  - Well-developed cataclasis
  - Ultracataclastite

**Table Columns:**
- **Sequence**
- **Unit/Subunit**
- **Lithology**
- **Primary mineralogy**
- **Alteration**
- **Veins**
- **Structure**
- **Alteration intensity**
- **Vein density**
- **Vein crosscutting**
- **Alteration halos**
- **CT image**
- **Sulfide**
- **Amphibole**
- **Spinel**
- **Orthopyroxene**
- **Clinopyroxene**
- **Plagioclase**
- **Olivine**

**Graphs and Images:**
- **Core length vs. Depth**
- **Stained image**
- **Magnetic susceptibility**
- **Primary mineralogy**
- **Grain size**
- **Degree of deformation**
- **Alteration intensity**
- **Vein density**
- **Vein crosscutting**
- **Alteration halos**
- **CT image**

**Additional Notes:**
- **Degree of deformation:**
  - Undeformed
  - Minor fracturing
  - Moderate fracturing
  - GS reduction and rotation
  - Well-developed cataclasis
  - Ultracataclastite
- **Texture:**
  - Protogranular
  - Porphyroclastic
  - Strongly foliated
  - Protomylonite
  - Mylonite
  - Ultramylonite
- **Strength:**
  - Isotropic
  - Weak
  - Moderate
  - Strong
- **Grain size class:**
  - Fine (0.2–1 mm)
  - Medium (1–5 mm)
  - Coarse (5–30 mm)
  - Pegmatitic (>30 mm)
- **CT image:**
  - 3D visualization of rock structure
- **Sulfide:**
  - Amphibole
  - Spinel
  - Orthopyroxene
  - Clinopyroxene
  - Plagioclase
  - Olivine
- **Magnetic susceptibility:**
  - MSCL-W
  - MSP
  - (SI x 10^-5)
  - 1000
  - 100
  - 10
  - 1
  - 0

**Contact Details:**
- **Continuous**
- **Intrusive**
**Lithology:**
- Harzburgite
- Contact: Continuous
- Texture: Granular
- Igneous Summary: Serpentinized harzburgite with few smaller (<5mm) dikes
- Alteration: Serpentinized
- Veins: White and black veins
- Structure: Brittle-

**Magnetic Susceptibility (MSCL-W)**

<table>
<thead>
<tr>
<th>Sequence</th>
<th>Unit/subunit</th>
<th>Rock Name</th>
<th>Contact</th>
<th>Texture</th>
<th>Igneous Summary</th>
<th>Alteration</th>
<th>Veins</th>
<th>Structure</th>
<th>Fabric intensity</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>30a</td>
<td>Harzburgite</td>
<td>Continuous</td>
<td>Granular</td>
<td>Serpentinized harzburgite with few smaller (&lt;5mm) dikes</td>
<td>Serpentinized</td>
<td>White and black veins</td>
<td>Brittle-</td>
<td>3</td>
</tr>
</tbody>
</table>

**Degree of deformation**

- Magmatic contact
- Dip
- Crystal plastic
- Veins

**Vein crosscutting**

- Alteration halos
- Fault zones

**Hole BA4A-66Z Section 1**

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>176.70</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Primary mineralogy</th>
<th>Grain size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfide</td>
<td>0–10</td>
</tr>
<tr>
<td>Amphibole</td>
<td>10–30</td>
</tr>
<tr>
<td>Spinel</td>
<td>30–50</td>
</tr>
<tr>
<td>Orthopyroxene</td>
<td>50–70</td>
</tr>
<tr>
<td>Clinopyroxene</td>
<td>70–90</td>
</tr>
<tr>
<td>Plagioclase</td>
<td>90–100</td>
</tr>
<tr>
<td>Olivine</td>
<td>&gt;100</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Magnetic susceptibility</th>
<th>Gamma (SI 10^-5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSCL-W</td>
<td>2.56</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Degree of deformation</th>
<th>Vein crosscutting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undeformed</td>
<td>None</td>
</tr>
<tr>
<td>Minor fracturing</td>
<td>None</td>
</tr>
<tr>
<td>Moderate fracturing</td>
<td>None</td>
</tr>
<tr>
<td>Well-developed cataclasis</td>
<td>None</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Brittle contact</th>
<th>Dip</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discrete</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fracture/ Vein density (per meter)</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>0–10</td>
<td>1 per 10 cm</td>
</tr>
<tr>
<td>10–30</td>
<td>3–5 per 10 cm</td>
</tr>
<tr>
<td>30–50</td>
<td>&gt;20 per 10 cm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fracture/ Vein density (per meter)</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>0–10</td>
<td>3 per 10 cm</td>
</tr>
<tr>
<td>10–30</td>
<td>5–15 per 10 cm</td>
</tr>
<tr>
<td>30–50</td>
<td>15–20 per 10 cm</td>
</tr>
</tbody>
</table>

**Description**

- Fault zones
- Structures
- Alteration halos
- Vein crosscutting
<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shiptboard samples</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>Primary mineralogy (%)</th>
<th>Grain size (SI)</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Structures</th>
<th>Alteration halos</th>
<th>Vein density (per meter)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>178.25</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>178.35</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>178.45</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>178.55</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>178.65</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Hole BA4A-66Z Section 4, Top of Section 178.73 (m CCD)

**Depth (m CCD)**

**Core length (cm)**

**Shipboard samples**

**Stained image**

**Magnetic susceptibility**

**MSCL-W MSP**

**GRA (g/cm²)**

**Primary mineralogy (%)**

**Sequence**

**Unit/ Subunit**

**Lithology**

**ROCK NAME**

**CONTACT**

**TEXTURE**

**IGNEOUS SUMMARY**

**ALTERATION**

**VEINS**

**STRUCTURE**

**Fabric intensity**

**Vein density (per meter)**

**Fracture / Vein density (per meter)**

**Degree of deformation**

**Discrete brittle features**

**Fracture halos**

**Alteration halos**

**CT image**

**Sulfide**

**Amphibole**

**Spinel**

**Orthopyroxene**

**Clinopyroxene**

**Plagioclase**

**Olivine**

**Degree of deformation**

**Vein crosscutting**

**Alteration intensity**

**Description**

**Foliation**

**Protogranular**

**Porphyroclastic**

**Strongly foliated**

**Protomylonite**

**Mylonite**

**Ultramylonite**

**Isotropic**

**Weak**

**Moderate**

**Strong**

**Fine grained (0.2–1 mm)**

**Medium grained (1–5 mm)**

**Coarse grained (5–30 mm)**

**Pegmatitic (>30 mm)**

**Glassy**

**Cryptocrystalline (<0.1 mm)**

**Microcrystalline (0.1–0.2 mm)**

**CONTACT**

**CONTINUOUS**

**MAGNETIC contact**

**Brittle**

**Crystal plastic**

**Veins**

**Apparent offset (cm)**

**Alteration halos**

**Alteration intensity**

**Description**

**Fault zones**

**Structures**

**Vein density (per meter)**

**Fracture / Vein density (per meter)**

**Degree of deformation**

**Discrete brittle features**

**Fracture halos**

**Alteration halos**

**CT image**

**Sulfide**

**Amphibole**

**Spinel**

**Orthopyroxene**

**Clinopyroxene**

**Plagioclase**

**Olivine**

**Degree of deformation**

**Vein crosscutting**

**Alteration intensity**

**Description**

**Foliation**

**Protogranular**

**Porphyroclastic**

**Strongly foliated**

**Protomylonite**

**Mylonite**

**Ultramylonite**

**Isotropic**

**Weak**

**Moderate**

**Strong**

**Fine grained (0.2–1 mm)**

**Medium grained (1–5 mm)**

**Coarse grained (5–30 mm)**

**Pegmatitic (>30 mm)**

**Glassy**

**Cryptocrystalline (<0.1 mm)**

**Microcrystalline (0.1–0.2 mm)**
**Hole BA4A-67Z Section 1, Top of Section 179.70 (m CCD)**

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Magnetic susceptibility MSCL-W MSP (SI x 10^-5)</th>
<th>GRA (g/cm³)</th>
<th>Lithology</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Structures</th>
<th>Vein density (per meter)</th>
<th>Alteration</th>
<th>Dip</th>
<th>Magnetic contact Brittle Crystal plastic Voids</th>
</tr>
</thead>
<tbody>
<tr>
<td>179.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>179.83</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>179.93</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>180.03</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>180.13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>180.23</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>180.33</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>180.43</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Lithology:**
  - Serpentinitized dunite
  - Brittle-vein conjugate sets common
  - Brittle-Magmatic contact
  - Strong foliation

- **Description:**
  - Serpentinitized dunite with dense network of green veins and thin white veins.
<p>| Depth (m CCD) | Core length (cm) | Shipboard samples | Stained image | Magnetic susceptibility | Magnetic susceptibility | MSCL-W MSP (SI x 10^-5) | GRA (g/cm²) | Depth (m CCD) | Core length (cm) | Shipboard samples | Stained image | Magnetic susceptibility | Magnetic susceptibility | MSCL-W MSP (SI x 10^-5) | GRA (g/cm²) | Depth (m CCD) | Core length (cm) | Shipboard samples | Stained image | Magnetic susceptibility | Magnetic susceptibility | MSCL-W MSP (SI x 10^-5) | GRA (g/cm²) | Sequence | Lithology | Degree of deformation | Structures | Vein density (per meter) | Alteration intensity | Dip | Magnetic contact | Brittle | Crystal plastic | Veins | Alteration intensity | Dip | Magnetic contact | Brittle | Crystal plastic | Veins |
|--------------|------------------|------------------|--------------|-----------------------|-----------------------|-------------------------|----------------|--------------|------------------|------------------|--------------|-----------------------|-----------------------|-------------------------|----------------|--------------|------------------|------------------|--------------|-----------------------|-----------------------|--------------|-------------------|----------------|-------------------|----------------|-------------------|----------------|-------------------|----------------|-------------------|----------------|
| 180.48       | 0                |                  |              |                       |                       |                         |                | 0            |                  |                  |              |                       |                       |                         |                | 0            |                  |                  |              |                       |                       |              |                   |                |                    |                |                   |                |                    |                |                   |
| 180.56       | 10               |                  |              |                       |                       |                         |                | 10           |                  |                  |              |                       |                       |                         |                | 10           |                  |                  |              |                       |                       |              |                   |                |                    |                |                   |                |                    |                |                   |
| 180.68       | 20               |                  |              |                       |                       |                         |                | 20           |                  |                  |              |                       |                       |                         |                | 20           |                  |                  |              |                       |                       |              |                   |                |                    |                |                   |                |                    |                |                   |
| 180.78       | 30               |                  |              |                       |                       |                         |                | 30           |                  |                  |              |                       |                       |                         |                | 30           |                  |                  |              |                       |                       |              |                   |                |                    |                |                   |                |                    |                |                   |
| 180.80       | 40               |                  |              |                       |                       |                         |                | 40           |                  |                  |              |                       |                       |                         |                | 40           |                  |                  |              |                       |                       |              |                   |                |                    |                |                   |                |                    |                |                   |</p>
<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Lithology</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnetic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Vein density (per meter)</th>
<th>Alteration halo</th>
<th>Structures</th>
<th>Apparent offset</th>
<th>Fault zones</th>
<th>Alteration halos</th>
<th>Veins</th>
<th>Discreet brittle features</th>
</tr>
</thead>
<tbody>
<tr>
<td>180.95</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>181.05</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>181.15</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>181.25</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>181.35</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>181.45</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>181.55</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>181.65</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>181.75</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>181.85</td>
<td>90</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Sampled image</th>
<th>Magnetic susceptibility</th>
<th>Primary mineralogy</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnatic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
<th>Structures</th>
<th>Abnormal hiatus</th>
<th>Vein density (per meter)</th>
<th>Alteration</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>181.95</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>182.05</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>182.15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>182.25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>182.35</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>182.45</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>182.55</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>182.65</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>182.75</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>182.85</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**SEQUENCE: I**
**UNIT/SUBUNIT: 30j**
**ROCK NAME: harzburgite**
**CONTACT: continuous**
**TEXTURE: Granular**
**IGNEOUS SUMMARY: serpentinised harzburgite with gabbroic veins**
**ALTERATION: serpentinised**
**VEINS: white thread veins with golden haloes, white/brown composite veins and a network of dark veins**
**STRUCTURE: Brittle-Veins-Crystal plastic-Pyroxene grains are rounded and slightly elongated.**

---

**Fabric intensity**

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core length (cm)</td>
<td>182.73</td>
<td>182.83</td>
<td>182.93</td>
<td>183.03</td>
<td>183.13</td>
</tr>
<tr>
<td>Depth (m CCD)</td>
<td>183.23</td>
<td>183.33</td>
<td>183.43</td>
<td>183.53</td>
<td>183.63</td>
</tr>
<tr>
<td>Core length (cm)</td>
<td>183.73</td>
<td>183.83</td>
<td>183.93</td>
<td>184.03</td>
<td>184.13</td>
</tr>
</tbody>
</table>

**Hole BA4A-68Z Section 1, Top of Section 182.70 (m CCD)**

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core length (cm)</td>
<td>182.73</td>
<td>182.83</td>
<td>182.93</td>
<td>183.03</td>
<td>183.13</td>
</tr>
<tr>
<td>Depth (m CCD)</td>
<td>183.23</td>
<td>183.33</td>
<td>183.43</td>
<td>183.53</td>
<td>183.63</td>
</tr>
<tr>
<td>Core length (cm)</td>
<td>183.73</td>
<td>183.83</td>
<td>183.93</td>
<td>184.03</td>
<td>184.13</td>
</tr>
</tbody>
</table>

**Table:**

<table>
<thead>
<tr>
<th>Sequence</th>
<th>Primary mineralogy (%)</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnetic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Olivine 75, Plagioclase 25</td>
<td>Minor fracturing</td>
<td>15-20 per 10 cm</td>
<td>Slight (3–10%)</td>
<td>0</td>
<td>Magnetic contact</td>
<td>Brittle</td>
<td>Crystal plastic</td>
<td>Veins</td>
</tr>
</tbody>
</table>

**Description:**

- Magnetic susceptibility (SI x 10^-5):
  - MSCL-W:
    - 1: 0.1, 10
    - MSP: 100
- GRA (g/cm³):
  - 1.4, 2.4
- Sequence:
  - I
- Lithology:
  - Unit/subunit: 30j
  - Rock name: Harzburgite
- Contact:
  - Continuous
- Texture:
  - Granular
- Igneous Summary:
  - Serpentinised harzburgite with gabbroic veins
- Alteration:
  - Serpentinised
- Veins:
  - White thread veins with golden haloes, white/brown composite veins and a network of dark veins
- Structure:
  - Brittle-Veins-Crystal plastic-Pyroxene grains are rounded and slightly elongated.
### Hole BA4A-68Z Section 2, Top of Section 183.37 (m CCD)

| Depth (m CCD) | Core length (cm) | Shipboard samples | Stained image | Magnetic susceptibility | MSCL-W MSP (SI x 10^-5) | GRA (g/cm³) | Sequence | Lithology | Primary mineralogy (%) | Grain size | Degree of deformation | Fracture/ Vein density (per meter) | Alteration intensity | Dip | Magnetics | Structures | Vein density (per meter) | Alteration | Discrete Vein features | Fault zones | Apparent offset | Description |
|---------------|------------------|-------------------|---------------|------------------------|--------------------------|--------------------------|-----------|-----------|----------------------|-----------|--------------------|--------------------------------|-------------------|-----|------------|-------------|-----------------|---------------|-------------|
| 183.41        | 0                |                   |               |                        |                          |                          |           |           |                      |          |                    |                               |                   |     |            |              |                 |               |             |
| 183.51        | 10               |                   |               |                        |                          |                          |           |           |                      |          |                    |                               |                   |     |            |              |                 |               |             |
| 183.61        | 20               |                   |               |                        |                          |                          |           |           |                      |          |                    |                               |                   |     |            |              |                 |               |             |
| 183.71        | 30               |                   |               |                        |                          |                          |           |           |                      |          |                    |                               |                   |     |            |              |                 |               |             |
| 183.81        | 40               |                   |               |                        |                          |                          |           |           |                      |          |                    |                               |                   |     |            |              |                 |               |             |
| 183.91        | 50               |                   |               |                        |                          |                          |           |           |                      |          |                    |                               |                   |     |            |              |                 |               |             |

**SERIES:** I

**UNIT/SUBUNIT:** 30k

**ROCK NAME:** dunite

**CONTACT:** continuous

**TEXTURE:** IGNEOUS SUMMARY: serpentinised dunite with thin gabbroic dykes

**ALTERATION:** serpentinised

**VEINS:** white thread veins and white/brown composite veins

**STRUCTURE:** Brittle

---

**SEQUENCE:** 1, 30k

**TEXTURE:** Granular

**IGNEOUS SUMMARY:** serpentinised dunite with thin gabbroic dykes

**ALTERATION:** serpentinised

**VEINS:** white thread veins and white/brown composite veins

**STRUCTURE:** Brittle

---

**SEQUENCE:** 1, 30k

**TEXTURE:** Granular

**IGNEOUS SUMMARY:** serpentinised dunite with thin gabbroic dykes

**ALTERATION:** serpentinised

**VEINS:** white thread veins and white/brown composite veins

**STRUCTURE:** Brittle

---

**SEQUENCE:** 1, 30k

**TEXTURE:** Granular

**IGNEOUS SUMMARY:** serpentinised dunite with thin gabbroic dykes

**ALTERATION:** serpentinised

**VEINS:** white thread veins and white/brown composite veins

**STRUCTURE:** Brittle

---

**SEQUENCE:** 1, 30k

**TEXTURE:** Granular

**IGNEOUS SUMMARY:** serpentinised dunite with thin gabbroic dykes

**ALTERATION:** serpentinised

**VEINS:** white thread veins and white/brown composite veins

**STRUCTURE:** Brittle

---

**SEQUENCE:** 1, 30k

**TEXTURE:** Granular

**IGNEOUS SUMMARY:** serpentinised dunite with thin gabbroic dykes

**ALTERATION:** serpentinised

**VEINS:** white thread veins and white/brown composite veins

**STRUCTURE:** Brittle

---

**SEQUENCE:** 1, 30k

**TEXTURE:** Granular

**IGNEOUS SUMMARY:** serpentinised dunite with thin gabbroic dykes

**ALTERATION:** serpentinised

**VEINS:** white thread veins and white/brown composite veins

**STRUCTURE:** Brittle

---

**SEQUENCE:** 1, 30k

**TEXTURE:** Granular

**IGNEOUS SUMMARY:** serpentinised dunite with thin gabbroic dykes

**ALTERATION:** serpentinised

**VEINS:** white thread veins and white/brown composite veins

**STRUCTURE:** Brittle

---

**SEQUENCE:** 1, 30k

**TEXTURE:** Granular

**IGNEOUS SUMMARY:** serpentinised dunite with thin gabbroic dykes

**ALTERATION:** serpentinised

**VEINS:** white thread veins and white/brown composite veins

**STRUCTURE:** Brittle

---

**SEQUENCE:** 1, 30k

**TEXTURE:** Granular

**IGNEOUS SUMMARY:** serpentinised dunite with thin gabbroic dykes

**ALTERATION:** serpentinised

**VEINS:** white thread veins and white/brown composite veins

**STRUCTURE:** Brittle

---

**SEQUENCE:** 1, 30k

**TEXTURE:** Granular

**IGNEOUS SUMMARY:** serpentinised dunite with thin gabbroic dykes

**ALTERATION:** serpentinised

**VEINS:** white thread veins and white/brown composite veins

**STRUCTURE:** Brittle

---

**SEQUENCE:** 1, 30k

**TEXTURE:** Granular

**IGNEOUS SUMMARY:** serpentinised dunite with thin gabbroic dykes

**ALTERATION:** serpentinised

**VEINS:** white thread veins and white/brown composite veins

**STRUCTURE:** Brittle

---

**SEQUENCE:** 1, 30k

**TEXTURE:** Granular

**IGNEOUS SUMMARY:** serpentinised dunite with thin gabbroic dykes

**ALTERATION:** serpentinised

**VEINS:** white thread veins and white/brown composite veins

**STRUCTURE:** Brittle

---

**SEQUENCE:** 1, 30k

**TEXTURE:** Granular

**IGNEOUS SUMMARY:** serpentinised dunite with thin gabbroic dykes

**ALTERATION:** serpentinised

**VEINS:** white thread veins and white/brown composite veins

**STRUCTURE:** Brittle

---

**SEQUENCE:** 1, 30k

**TEXTURE:** Granular

**IGNEOUS SUMMARY:** serpentinised dunite with thin gabbroic dykes

**ALTERATION:** serpentinised

**VEINS:** white thread veins and white/brown composite veins

**STRUCTURE:** Brittle

---

**SEQUENCE:** 1, 30k

**TEXTURE:** Granular

**IGNEOUS SUMMARY:** serpentinised dunite with thin gabbroic dykes

**ALTERATION:** serpentinised

**VEINS:** white thread veins and white/brown composite veins

**STRUCTURE:** Brittle

---

**SEQUENCE:** 1, 30k

**TEXTURE:** Granular

**IGNEOUS SUMMARY:** serpentinised dunite with thin gabbroic dykes

**ALTERATION:** serpentinised

**VEINS:** white thread veins and white/brown composite veins

**STRUCTURE:** Brittle

---

**SEQUENCE:** 1, 30k

**TEXTURE:** Granular

**IGNEOUS SUMMARY:** serpentinised dunite with thin gabbroic dykes

**ALTERATION:** serpentinised

**VEINS:** white thread veins and white/brown composite veins

**STRUCTURE:** Brittle

---

**SEQUENCE:** 1, 30k

**TEXTURE:** Granular

**IGNEOUS SUMMARY:** serpentinised dunite with thin gabbroic dykes

**ALTERATION:** serpentinised

**VEINS:** white thread veins and white/brown composite veins

**STRUCTURE:** Brittle

---

**SEQUENCE:** 1, 30k

**TEXTURE:** Granular

**IGNEOUS SUMMARY:** serpentinised dunite with thin gabbroic dykes

**ALTERATION:** serpentinised

**VEINS:** white thread veins and white/brown composite veins

**STRUCTURE:** Brittle

---

**SEQUENCE:** 1, 30k

**TEXTURE:** Granular

**IGNEOUS SUMMARY:** serpentinised dunite with thin gabbroic dykes

**ALTERATION:** serpentinised

**VEINS:** white thread veins and white/brown composite veins

**STRUCTURE:** Brittle

---

**SEQUENCE:** 1, 30k

**TEXTURE:** Granular

**IGNEOUS SUMMARY:** serpentinised dunite with thin gabbroic dykes

**ALTERATION:** serpentinised

**VEINS:** white thread veins and white/brown composite veins

**STRUCTURE:** Brittle

---

**SEQUENCE:** 1, 30k

**TEXTURE:** Granular

**IGNEOUS SUMMARY:** serpentinised dunite with thin gabbroic dykes

**ALTERATION:** serpentinised

**VEINS:** white thread veins and white/brown composite veins

**STRUCTURE:** Brittle

---

**SEQUENCE:** 1, 30k

**TEXTURE:** Granular

**IGNEOUS SUMMARY:** serpentinised dunite with thin gabbroic dykes

**ALTERATION:** serpentinised

**VEINS:** white thread veins and white/brown composite veins

**STRUCTURE:** Brittle
**Hole BA4A-68Z Section 3, Top of Section 183.92 (m CCD)**

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>Shipboard samples</th>
<th>Grained image</th>
<th>Primary mineralogy (%)</th>
<th>Grain size (μm)</th>
<th>Degree of deformation</th>
<th>Fracture/Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>183.95</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>184.05</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>184.15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>184.25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>184.35</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>184.45</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>184.55</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>184.65</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>184.75</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Sequence:** 30l

**Unit/Subunit:** 30l

**Rock Name:** Harzburgite

**Contact:** Continuous

**Texture:** Granular

**Igneous Summary:** Highly fractured serpentinised harzburgite with abundant veins and thin gabbroic dykes

**Alteration:** Serpentinised

**Veins:** White/black and green/white composite veins plus white thread veins

**Structure:** Brittle-Vein-Crystal plastic

**Veins:** Pyroxene grains are moderately elongated.
### Hole BA4A-68Z Section 4, Top of Section 184.83 (m CCD)

<table>
<thead>
<tr>
<th>Sequence</th>
<th>Unit/Subunit</th>
<th>Lithology</th>
<th>Primary mineralogy (%)</th>
<th>Degree of deformation</th>
<th>Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnetic contact</th>
<th>Structures</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>30l</td>
<td>harzburgite</td>
<td>Olivine, Plagioclase, Amphibole, Spinel, Sulfide</td>
<td>Brittle</td>
<td>6</td>
<td>Fresh (&lt;3%)</td>
<td>0</td>
<td>Brittle</td>
<td>Crystal plastic</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>31a</td>
<td>harzburgite</td>
<td>Olivine, Plagioclase, Amphibole, Spinel, Sulfide</td>
<td>Brittle</td>
<td>3</td>
<td>Slight (3–10%)</td>
<td>45</td>
<td>Brittle</td>
<td>Crystal plastic</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>31a</td>
<td>olivine gabbro</td>
<td>Olivine, Amphibole, Spinel, Sulfide</td>
<td>Brittle</td>
<td>1.4</td>
<td>Moderate (11–30%)</td>
<td>90</td>
<td>Brittle</td>
<td>Crystal plastic</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Hole BA4A-69Z Section 1, Top of Section 185.70 (m CCD)**

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Sampled image</th>
<th>Magnetic susceptibility (SI x 10^-5)</th>
<th>GRA (g/cm³)</th>
<th>Primary mineralogy</th>
<th>Degree of deformation</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnetic contact</th>
<th>Discrete brittle features</th>
<th>Vein density (per meter)</th>
<th>Vein density (per meter)</th>
<th>Fracture/ Vein density (per meter)</th>
</tr>
</thead>
<tbody>
<tr>
<td>185.70</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>185.80</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>185.90</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>186.00</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>186.10</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>186.20</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>186.30</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>186.40</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>186.50</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>186.60</td>
<td>90</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SEQUENCE:** I

**UNIT/SUBUNIT:** 31a

**CONTACT:** Continuous

**TEXTURE:** IGNEOUS

**SUMMARY:** serpentinized harzburgite

**ALTERATION:** serpentinised

**VEINS:** white complex, contorted veins and white/black composite veins, white veins, grey veins, grey-green veins, gilfy veins.

**STRUCTURE:** Brittle

**Veins:**

- Crystal plastic: Pyroxene grains are moderately exsolved.
**Hole BA4A-69Z Section 3, Top of Section 187.62 (m CCD)**

<table>
<thead>
<tr>
<th>Sequence: I</th>
<th>Unit/Subunit: 31b</th>
<th>Rock Name: Olivine gabbro</th>
<th>Contact: Intrusive</th>
<th>Textural Summary: Fractured, rubbly olivine gabbro dike</th>
<th>Alteration: Voids, grey vein, white vein, grey-green veins</th>
<th>Structure: Brittle-Vein-Crystal Plastic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sequence: I</td>
<td>Unit/Subunit: 31c</td>
<td>Rock Name: Harzburgite</td>
<td>Contact: Intrusive</td>
<td>Textural Summary: Fractured, serpentinized, harzburgite cross-cut by olivine gabbro dikes</td>
<td>Alteration: Serpentinization</td>
<td>Structure: Brittle-Vein-Crystal Plastic-Pyroxene grains are rounded and slightly elongated.</td>
</tr>
<tr>
<td>Sequence: I</td>
<td>Unit/Subunit: 31c</td>
<td>Rock Name: Olivine gabbro</td>
<td>Contact: Intrusive</td>
<td>Textural Summary: Fractured, rubbly olivine gabbro dike</td>
<td>Alteration: Voids, grey vein, white vein, grey-green veins</td>
<td>Structure: Brittle-Vein-Crystal Plastic</td>
</tr>
</tbody>
</table>

### Core Length (cm)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>187.62</td>
<td>10</td>
</tr>
<tr>
<td>187.65</td>
<td>10</td>
</tr>
<tr>
<td>187.68</td>
<td>10</td>
</tr>
<tr>
<td>187.71</td>
<td>10</td>
</tr>
<tr>
<td>187.74</td>
<td>10</td>
</tr>
<tr>
<td>187.77</td>
<td>10</td>
</tr>
<tr>
<td>187.80</td>
<td>10</td>
</tr>
<tr>
<td>187.83</td>
<td>10</td>
</tr>
<tr>
<td>187.86</td>
<td>10</td>
</tr>
<tr>
<td>187.89</td>
<td>10</td>
</tr>
<tr>
<td>187.92</td>
<td>10</td>
</tr>
<tr>
<td>187.95</td>
<td>10</td>
</tr>
<tr>
<td>187.98</td>
<td>10</td>
</tr>
<tr>
<td>188.01</td>
<td>10</td>
</tr>
<tr>
<td>188.04</td>
<td>10</td>
</tr>
<tr>
<td>188.07</td>
<td>10</td>
</tr>
<tr>
<td>188.10</td>
<td>10</td>
</tr>
<tr>
<td>188.13</td>
<td>10</td>
</tr>
<tr>
<td>188.16</td>
<td>10</td>
</tr>
<tr>
<td>188.19</td>
<td>10</td>
</tr>
<tr>
<td>188.22</td>
<td>10</td>
</tr>
<tr>
<td>188.25</td>
<td>10</td>
</tr>
<tr>
<td>188.28</td>
<td>10</td>
</tr>
<tr>
<td>188.31</td>
<td>10</td>
</tr>
<tr>
<td>188.34</td>
<td>10</td>
</tr>
<tr>
<td>188.37</td>
<td>10</td>
</tr>
<tr>
<td>188.40</td>
<td>10</td>
</tr>
<tr>
<td>188.43</td>
<td>10</td>
</tr>
</tbody>
</table>

### CT Image

- **X** marks the location of the drilled section.
- **X** marks the location of the CT scan.

### Scanned Image

- **X** marks the location of the scanned image.

### Alteration Halos

- Fresh (<3%)
- Slight (3–10%)
- Moderate (11–30%)
- Substantial (31–60%)
- Extensive (61–90%)
- Complete (>90%)

### Degree of Deformation

- Undeformed
- Minor fracturing
- Moderate fracturing
- GS reduction and rotation
- Well-developed cataclasis
- Ultracataclastite

### Magmatic Contact

- Discrete brittle features
- Fracture/vein density (per meter)
- Vein crosscutting

### Dip

- Magnetic contact
- Brittle
- Crystal plastic

### Vein Density (per meter)

- 0–1 per 10 cm
- 1–3 per 10 cm
- 4–20 per 10 cm
- 21–50 per 10 cm
- 51–100 per 10 cm
- >100 per 10 cm

### Fracture/ Vein Density (per meter)

- 0–1 per 10 cm
- 1–3 per 10 cm
- 3–5 per 10 cm
- >5 per 10 cm

### Magmatic Layering

- Protogranular
- Porphyroclastic
- Strongly foliated
- Protomylonite
- Mylonite
- Ultramylonite

### Foliation

- Isotropic
- Weak
- Moderate
- Strong

### Dip

- 0° 45° 90°

### Vein Crosscutting

- Alteration halos
- Structures
- Apparent offset

### Lithology

- Primary mineralogy (%)
- Degree of deformation
- Fracture/vein density (per meter)
- Vein density (per meter)
- Alteration intensity
- Dip
- Magmatic contact
- Brittle
- Crystal plastic

### Grain Size

- Medium grained (1–5 mm)
- Fine grained (0.2–1 mm)
- Coarse grained (5–30 mm)
- Pegmatitic (>30 mm)

### Fabric Intensity

- 0
- 1
- 2
- 3
- 4
- 5

### Vein Density

- 0
- 1
- 2
- 3
- 4
- 5

### Discrete Brittle Features

- Vein crosscutting
- Structures
- Apparent offset

### Alteration Halos

- Fresh (<3%)
- Slight (3–10%)
- Moderate (11–30%)
- Substantial (31–60%)
- Extensive (61–90%)
- Complete (>90%)

### Degree of Deformation

- Undeformed
- Minor fracturing
- Moderate fracturing
- GS reduction and rotation
- Well-developed cataclasis
- Ultracataclastite

### Magmatic Contact

- Discrete brittle features
- Fracture/vein density (per meter)
- Vein crosscutting

### Dip

- Magnetic contact
- Brittle
- Crystal plastic

### Vein Density (per meter)

- 0–1 per 10 cm
- 1–3 per 10 cm
- 3–5 per 10 cm
- >5 per 10 cm

### Fracture/ Vein Density (per meter)

- 0–1 per 10 cm
- 1–3 per 10 cm
- 3–5 per 10 cm
- >5 per 10 cm

### Magmatic Layering

- Protogranular
- Porphyroclastic
- Strongly foliated
- Protomylonite
- Mylonite
- Ultramylonite

### Foliation

- Isotropic
- Weak
- Moderate
- Strong

### Dip

- 0° 45° 90°

### Vein Crosscutting

- Alteration halos
- Structures
- Apparent offset

### Lithology

- Primary mineralogy (%)
- Degree of deformation
- Fracture/vein density (per meter)
- Vein density (per meter)
- Alteration intensity
- Dip
- Magmatic contact
- Brittle
- Crystal plastic

### Grain Size

- Medium grained (1–5 mm)
- Fine grained (0.2–1 mm)
- Coarse grained (5–30 mm)
- Pegmatitic (>30 mm)

### Fabric Intensity

- 0
- 1
- 2
- 3
- 4
- 5

### Vein Density

- 0
- 1
- 2
- 3
- 4
- 5

### Discrete Brittle Features

- Vein crosscutting
- Structures
- Apparent offset

### Alteration Halos

- Fresh (<3%)
- Slight (3–10%)
- Moderate (11–30%)
- Substantial (31–60%)
- Extensive (61–90%)
- Complete (>90%)

### Degree of Deformation

- Undeformed
- Minor fracturing
- Moderate fracturing
- GS reduction and rotation
- Well-developed cataclasis
- Ultracataclastite
### Harzburgite

**Contact:** Tectonic  
**Texture:** Igneous  
**Summary:** Fractured, serpentinized, harzburgite cross-cut by olivine gabbro dikes.  
**Alteration:** Serpentinized  
**Veins:** Black veins, grey veins.  
**Structure:** Brittle - Splayed fault zone  

**Crystal Plasticity:** Pyroxene grains are rounded and slightly elongated.

### Gabbro

**Contact:** Intrusive  
**Texture:** Granular  
**Summary:** Fractured gabbroic dike.  
**Alteration:**  
**Veins:** White veins, grey veins.  
**Structure:** Brittle - Splayed fault zone  

**Crystal Plasticity:** Well-developed cataclasis.

---

**Magnetic susceptibility**

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Magnetic susceptibility (SI x 10^-5)</th>
<th>GRA (g/cm²)</th>
<th>Sequence</th>
<th>Lithology</th>
<th>Primary mineralogy (%)</th>
<th>Grain size (µm)</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration</th>
<th>Dip</th>
<th>Fabric intensity</th>
<th>Vein density (per meter)</th>
<th>Adjacent offset</th>
<th>Structures</th>
<th>Alteration intensity</th>
<th>Dip</th>
</tr>
</thead>
<tbody>
<tr>
<td>188.40</td>
<td></td>
<td>10</td>
<td>2.0</td>
<td>I</td>
<td>Harzburgite</td>
<td>olivine, clinopyroxene</td>
<td>&lt; 25</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td>0–10</td>
<td>0–100</td>
<td>0</td>
<td></td>
<td>0–100</td>
<td></td>
</tr>
<tr>
<td>188.50</td>
<td></td>
<td>10</td>
<td>2.0</td>
<td>I</td>
<td>gabbro</td>
<td>plagioclase, orthopyroxene</td>
<td>&lt; 25</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td>0–10</td>
<td>0–100</td>
<td>0</td>
<td></td>
<td>0–100</td>
<td></td>
</tr>
<tr>
<td>188.60</td>
<td></td>
<td>10</td>
<td>2.0</td>
<td>I</td>
<td>gabbro</td>
<td>amphibole, Spinel</td>
<td>&lt; 25</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td>0–10</td>
<td>0–100</td>
<td>0</td>
<td></td>
<td>0–100</td>
<td></td>
</tr>
<tr>
<td>188.70</td>
<td></td>
<td>10</td>
<td>2.0</td>
<td>I</td>
<td>gabbro</td>
<td>orthopyroxene, clinopyroxene</td>
<td>&lt; 25</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td>0–10</td>
<td>0–100</td>
<td>0</td>
<td></td>
<td>0–100</td>
<td></td>
</tr>
</tbody>
</table>

**Description**

- **Visual:** Brittle contact.
- **Texture:** Fresh (<3%).
- **Alteration:** Complete (>90%).
<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Lithology</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Alteration</th>
<th>Vein density (per meter)</th>
<th>Degree of deformation</th>
<th>Structure</th>
</tr>
</thead>
<tbody>
<tr>
<td>189.67</td>
<td>0</td>
<td>31d</td>
<td>Olivine</td>
<td>100</td>
<td>Fresh</td>
<td>0–1 per 10 cm</td>
<td>Undeformed</td>
<td>Brittle</td>
</tr>
<tr>
<td>189.75</td>
<td>0</td>
<td>31e</td>
<td>Dunite</td>
<td>90</td>
<td>Slight</td>
<td>10–30 per 10 cm</td>
<td>Semi-cohesive cataclastic fault zone</td>
<td></td>
</tr>
<tr>
<td>189.85</td>
<td>0</td>
<td>Gabbro</td>
<td>Orthopyroxene, Plagioclase</td>
<td>50 25</td>
<td>Moderate</td>
<td>30–50 per 10 cm</td>
<td>Protomylonite</td>
<td></td>
</tr>
<tr>
<td>189.95</td>
<td>0</td>
<td>Gabbro</td>
<td>Amibbole, Spinel</td>
<td>0</td>
<td>Complete</td>
<td>&gt;100 per 10 cm</td>
<td>Ultramylonite</td>
<td></td>
</tr>
</tbody>
</table>

---

**Magnetic susceptibility**

- MSCL-W: 2.15 GRC/cm³
- MSP: 2.65 GRC/cm³

**Sequences**

- 31d: Intrusive, Fractured olivine gabbro dike
- 31e: Intrusive, Fractured, serpentinized dunite with minor near-harzburgitic zones, cross-cut by rubbly gabbroic dikes

**Contact**

- Intrusive

**Texture**

- Granular

**Igneous summary**

- Fractured olivine gabbro dike
- Fractured, serpentinized dunite with minor near-harzburgitic zones, cross-cut by rubbly gabbroic dikes

**Alteration**

- Serpentinized

**Veins**

- Green veins, grey veins, red veins, grey-green veins

**Structure**

- Brittle: Zone of cohesive cataclastic fault zone
Hole BA4A-72Z Section 1, Top of Section 191.70 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Lithology</th>
<th>Primary mineralogy (%)</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>LOI</th>
<th>CT image</th>
<th>MSCL-W MSP (SI x 10^-5)</th>
<th>GRA (g/cm^2)</th>
<th>Magnetic susceptibility</th>
<th>Dip</th>
<th>Contact</th>
<th>Texture</th>
<th>Veins</th>
<th>Discrete brittle features</th>
<th>Structures</th>
<th>Alteration halos</th>
<th>Vein crosscutting</th>
<th>Vein density (per meter)</th>
<th>Magnetic contact</th>
<th>Crystallinity</th>
<th>Veins</th>
<th>Fabric intensity</th>
</tr>
</thead>
<tbody>
<tr>
<td>191.70</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>191.80</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>191.90</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>192.00</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>192.10</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>192.20</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>192.30</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>192.40</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>192.50</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Hole BA4A-72Z Section 2, Top of Section 192.59 (m CCD)

| Depth (m CCD) | Core length (cm) | Stained image | Magnetic susceptibility | Primary mineralogy (%) | Grain size | Degree of deformation | Alteration intensity | Dip | Description
|--------------|------------------|---------------|-------------------------|------------------------|------------|----------------------|---------------------|-----|------------------|
| 0           | 10               | CT image      | 2.8                     | 100                    | 50         | 3                    | 0                   | 0   | SEQUENCE: 32a
| 192.00      | 1                |               |                         |                        |            |                      |                     |     | ROCK NAME: dunite
| 192.10      | 10               |               |                         |                        |            |                      |                     |     | CONTACT: tectonic
| 192.20      | 1                |               |                         |                        |            |                      |                     |     | SUMMARY: fractured, serpentized dunite, cross-cut by numerous gabbroic dikes
| 192.30      | 1                |               |                         |                        |            |                      |                     |     | A T E R T I O N: serpentized
| 192.40      | 1                |               |                         |                        |            |                      |                     |     | Un-filled: black, grey veins, white veins
| 192.50      | 1                |               |                         |                        |            |                      |                     |     | Veins: Crystal plastic
| 192.60      | 1                |               |                         |                        |            |                      |                     |     | Crystal plastic
<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>Primary minera</th>
<th>Lithology</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip Magnetic contact</th>
<th>Brittle Crystal plastic</th>
</tr>
</thead>
<tbody>
<tr>
<td>194.05</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>194.15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>194.25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>194.35</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>194.45</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>194.55</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>194.65</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>194.75</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>194.85</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SEQUENCE:** I 32a
**ROCK NAME:** dunite
**CONTACT:** Continuous
**IGNEOUS SUMMARY:** fractured, serpentized dunite, cross-cut by numerous gabbroic dikes
**ALTERATION:** serpentinized
**VEINS:** brown veins, grey veins, black veins
**STRUCTURE:** Brittle-Veins-Crystal plastic-

**SEQUENCE:** I 32a
**ROCK NAME:** gabbro
**CONTACT:** Intrusive
**TEXTURE:** Granular
**IGNEOUS SUMMARY:** olivine gabbro dike
**ALTERATION:**
**VEINS:** grey-green veins
**STRUCTURE:** Brittle-Veins-Crystal plastic-

**SEQUENCE:** I 32a
**ROCK NAME:** olivine gabbro
**CONTACT:** Intrusive
**TEXTURE:** Granular
**IGNEOUS SUMMARY:** sheared olivine gabbro dike
**ALTERATION:**
**VEINS:** grey veins, grey-green veins
**STRUCTURE:** Brittle-Veins-Crystal plastic-

**SEQUENCE:** I 32b
**ROCK NAME:** Harzburgite
**CONTACT:** Continuous
**TEXTURE:**
**IGNEOUS SUMMARY:** serpentinized, fractured harzburgite cross-cut by gabbroic dikes
**ALTERATION:** serpentinized
**VEINS:** white veins, grey veins, black veins
**STRUCTURE:** Brittle-Veins-Crystal plastic-
<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>CT image</th>
<th>Magnetic susceptibility</th>
<th>Sequence</th>
<th>Contact</th>
<th>Lithology</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration</th>
<th>Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnetic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>194.70</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Sequence: I
#### Unit/Subunit: 32b
**Rock Name:** Harzburgite
**Contact:** Continuous
**Texture:**
**Igneous Summary:** Serpentinized, fractured harzburgite cross-cut by gabbroic dikes
**Alteration:** Serpentinized
**Veins:** White veins, grey veins
**Structure:** Brittle
- **Footwall Vein:** Crosscut by gabbroic dikes.
- **Wallrock Vein:** Crosscut by gabbroic dikes.

#### Unit/Subunit: 32c
**Rock Name:** Dunite
**Contact:** Modal
**Texture:**
**Igneous Summary:** Fractured, serpentized dunite, cross-cut by numerous gabbroic dikes
**Alteration:** Serpentinized
**Veins:** Brown veins, grey veins, white veins
**Structure:** Brittle
- **Footwall Vein:** Crosscut by gabbroic dikes.
- **Wallrock Vein:** Crosscut by gabbroic dikes.

#### Unit/Subunit: 32d
**Rock Name:** Harzburgite
**Contact:** Modal
**Texture:**
**Igneous Summary:** Serpentinized, fractured harzburgite cross-cut by minor gabbroic dikes
**Alteration:** Serpentinized
**Veins:** Black veins, grey veins
**Structure:** Brittle
- **Footwall Vein:** Crosscut by gabbroic dikes.
- **Wallrock Vein:** Crosscut by gabbroic dikes.

---

<table>
<thead>
<tr>
<th>Fabric intensity</th>
<th>Vein density (per meter)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>1–5</td>
</tr>
<tr>
<td>2</td>
<td>5–15</td>
</tr>
<tr>
<td>3</td>
<td>15–20</td>
</tr>
<tr>
<td>4</td>
<td>20–30</td>
</tr>
<tr>
<td>5</td>
<td>&gt;30</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>GRA (g/cm³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.04</td>
</tr>
<tr>
<td>2.24</td>
</tr>
<tr>
<td>2.44</td>
</tr>
<tr>
<td>2.64</td>
</tr>
<tr>
<td>2.84</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Degree of deformation</th>
<th>Vein density (per meter)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undeformed</td>
<td>0</td>
</tr>
<tr>
<td>Minor fracturing</td>
<td>1–5</td>
</tr>
<tr>
<td>Moderate fracturing</td>
<td>5–15</td>
</tr>
<tr>
<td>GS reduction and rotation</td>
<td>15–20</td>
</tr>
<tr>
<td>Well-developed cataclasis</td>
<td>&gt;30</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dip</th>
<th>Magnetic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>80</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>90</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Degree of deformation</th>
<th>Vein crosscutting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undeformed</td>
<td>0</td>
</tr>
<tr>
<td>Minor fracturing</td>
<td>1–5</td>
</tr>
<tr>
<td>Moderate fracturing</td>
<td>5–15</td>
</tr>
<tr>
<td>GS reduction and rotation</td>
<td>15–20</td>
</tr>
<tr>
<td>Well-developed cataclasis</td>
<td>&gt;30</td>
</tr>
</tbody>
</table>

### Table of Lithology

<table>
<thead>
<tr>
<th>Unit/Subunit</th>
<th>Lithology</th>
<th>Primary mineralogy</th>
<th>Degree of deformation</th>
</tr>
</thead>
<tbody>
<tr>
<td>32b</td>
<td>Harzburgite</td>
<td>Olivine, Plagioclase, Clinopyroxene, Orthopyroxene, Spinel, Sulfide</td>
<td>Brittle</td>
</tr>
<tr>
<td>32c</td>
<td>Dunite</td>
<td>Olivine, Clinopyroxene, Pyroxene, Amphibole</td>
<td>Brittle</td>
</tr>
<tr>
<td>32d</td>
<td>Harzburgite</td>
<td>Olivine, Plagioclase, Clinopyroxene, Orthopyroxene, Spinel, Sulfide</td>
<td>Brittle</td>
</tr>
</tbody>
</table>

---

### Summary of Magnetic Susceptibility

<table>
<thead>
<tr>
<th>Sequence</th>
<th>Unit/Subunit</th>
<th>GRA (g/cm³)</th>
<th>Magnetite (SI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>1</td>
<td>2.04</td>
<td>10⁻⁵</td>
</tr>
<tr>
<td>I</td>
<td>2</td>
<td>2.24</td>
<td>10⁻⁵</td>
</tr>
<tr>
<td>I</td>
<td>3</td>
<td>2.44</td>
<td>10⁻⁵</td>
</tr>
<tr>
<td>I</td>
<td>4</td>
<td>2.64</td>
<td>10⁻⁵</td>
</tr>
<tr>
<td>I</td>
<td>5</td>
<td>2.84</td>
<td>10⁻⁵</td>
</tr>
</tbody>
</table>

---

### Summary of Core Length and Shipboard Samples

<table>
<thead>
<tr>
<th>Hole BA4A-73Z Section 2, Top of Section 195.59 (m CCD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depth (m CCD)</td>
</tr>
<tr>
<td>--------------</td>
</tr>
<tr>
<td>195.61</td>
</tr>
<tr>
<td>195.71</td>
</tr>
<tr>
<td>195.81</td>
</tr>
<tr>
<td>195.91</td>
</tr>
<tr>
<td>196.01</td>
</tr>
<tr>
<td>196.11</td>
</tr>
<tr>
<td>196.21</td>
</tr>
</tbody>
</table>

---

### Summary of Grains and Structures

<table>
<thead>
<tr>
<th>Degree of deformation</th>
<th>Vein density (per meter)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undeformed</td>
<td>0</td>
</tr>
<tr>
<td>Minor fracturing</td>
<td>1–5</td>
</tr>
<tr>
<td>Moderate fracturing</td>
<td>5–15</td>
</tr>
<tr>
<td>GS reduction and rotation</td>
<td>15–20</td>
</tr>
<tr>
<td>Well-developed cataclasis</td>
<td>&gt;30</td>
</tr>
</tbody>
</table>

---

### Summary of Alteration and Veins

<table>
<thead>
<tr>
<th>Degree of alteration</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fresh (&lt;3%)</td>
<td></td>
</tr>
<tr>
<td>Slight (3–10%)</td>
<td></td>
</tr>
<tr>
<td>Moderate (11–30%)</td>
<td></td>
</tr>
<tr>
<td>Substantial (31–60%)</td>
<td></td>
</tr>
<tr>
<td>Extensive (61–90%)</td>
<td></td>
</tr>
<tr>
<td>Complete (≥90%)</td>
<td></td>
</tr>
</tbody>
</table>

---

### Summary of Degree of Deformation

<table>
<thead>
<tr>
<th>Degree of deformation</th>
<th>Vein density (per meter)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undeformed</td>
<td>0</td>
</tr>
<tr>
<td>Minor fracturing</td>
<td>1–5</td>
</tr>
<tr>
<td>Moderate fracturing</td>
<td>5–15</td>
</tr>
<tr>
<td>GS reduction and rotation</td>
<td>15–20</td>
</tr>
<tr>
<td>Well-developed cataclasis</td>
<td>&gt;30</td>
</tr>
</tbody>
</table>

---

### Summary of Degree of Deformation

<table>
<thead>
<tr>
<th>Degree of deformation</th>
<th>Vein density (per meter)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undeformed</td>
<td>0</td>
</tr>
<tr>
<td>Minor fracturing</td>
<td>1–5</td>
</tr>
<tr>
<td>Moderate fracturing</td>
<td>5–15</td>
</tr>
<tr>
<td>GS reduction and rotation</td>
<td>15–20</td>
</tr>
<tr>
<td>Well-developed cataclasis</td>
<td>&gt;30</td>
</tr>
</tbody>
</table>

---

### Summary of Grains

<table>
<thead>
<tr>
<th>Grain size</th>
<th>Pegmatitic (&gt;30 mm)</th>
<th>Glassy</th>
<th>Cryptocrystalline (&lt;0.1 mm)</th>
<th>Microcrystalline (0.1–0.2 mm)</th>
<th>Fine grained (0.2–1 mm)</th>
<th>Medium grained (1–5 mm)</th>
<th>Coarse grained (5–30 mm)</th>
<th>Protomylonite</th>
</tr>
</thead>
<tbody>
<tr>
<td>0–10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10–30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30–50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50–70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt;70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

### Summary of Structures

<table>
<thead>
<tr>
<th>Structure</th>
<th>Degree of deformation</th>
<th>Vein density (per meter)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Footwall</td>
<td>Undeformed</td>
<td>0</td>
</tr>
<tr>
<td>Wallrock</td>
<td>Minor fracturing</td>
<td>1–5</td>
</tr>
<tr>
<td>GS reduction and rotation</td>
<td>5–15</td>
<td></td>
</tr>
<tr>
<td>Well-developed cataclasis</td>
<td>&gt;30</td>
<td></td>
</tr>
</tbody>
</table>

---

### Summary of Dip

<table>
<thead>
<tr>
<th>Sequence</th>
<th>Unit/Subunit</th>
<th>GRA (g/cm³)</th>
<th>Magnetite (SI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>1</td>
<td>2.04</td>
<td>10⁻⁵</td>
</tr>
<tr>
<td>I</td>
<td>2</td>
<td>2.24</td>
<td>10⁻⁵</td>
</tr>
<tr>
<td>I</td>
<td>3</td>
<td>2.44</td>
<td>10⁻⁵</td>
</tr>
<tr>
<td>I</td>
<td>4</td>
<td>2.64</td>
<td>10⁻⁵</td>
</tr>
<tr>
<td>I</td>
<td>5</td>
<td>2.84</td>
<td>10⁻⁵</td>
</tr>
</tbody>
</table>

---

### Summary of Sedimentary Structures

<table>
<thead>
<tr>
<th>Sequence</th>
<th>Unit/Subunit</th>
<th>GRA (g/cm³)</th>
<th>Magnetite (SI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>1</td>
<td>2.04</td>
<td>10⁻⁵</td>
</tr>
<tr>
<td>I</td>
<td>2</td>
<td>2.24</td>
<td>10⁻⁵</td>
</tr>
<tr>
<td>I</td>
<td>3</td>
<td>2.44</td>
<td>10⁻⁵</td>
</tr>
<tr>
<td>I</td>
<td>4</td>
<td>2.64</td>
<td>10⁻⁵</td>
</tr>
<tr>
<td>I</td>
<td>5</td>
<td>2.84</td>
<td>10⁻⁵</td>
</tr>
</tbody>
</table>

---

### Summary of Sedimentary Structures

<table>
<thead>
<tr>
<th>Sequence</th>
<th>Unit/Subunit</th>
<th>GRA (g/cm³)</th>
<th>Magnetite (SI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>1</td>
<td>2.04</td>
<td>10⁻⁵</td>
</tr>
<tr>
<td>I</td>
<td>2</td>
<td>2.24</td>
<td>10⁻⁵</td>
</tr>
<tr>
<td>I</td>
<td>3</td>
<td>2.44</td>
<td>10⁻⁵</td>
</tr>
<tr>
<td>I</td>
<td>4</td>
<td>2.64</td>
<td>10⁻⁵</td>
</tr>
<tr>
<td>I</td>
<td>5</td>
<td>2.84</td>
<td>10⁻⁵</td>
</tr>
</tbody>
</table>
Hole BA4A-73Z Section 3, Top of Section 196.24 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>CT image</th>
<th>Magnetic susceptibility</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magmatic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>196.25</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>196.35</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>196.45</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>196.55</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>196.65</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>196.75</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>196.85</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>196.95</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>197.05</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**NEDS SUMMARY**: Highly serpentinitized dunite, crosscut by several filled fractures both vertical and inclined

**ALTERATION**: Highly serpentinitized, oxidized

**VEINS**: Grey veins, grey-green veins, white veins, brown, frankestein green

**STRUCTURE**: Brittle-Conjugate fault sets

---

**SEQUENCE**: I
**UNIT/SUBUNIT**: 33a
**ROCK NAME**: Dunite
**CONTACT**: Continuous

**TEXTURE**: Igneous

**SUMMARY**: Highly serpentinized dunite, crosscut by several filled fractures both vertical and inclined

**ALTERATION**: Highly serpentinized, oxidized

**VEINS**: Grey veins, grey-green veins, white veins, brown, frankestein green

**STRUCTURE**: Brittle-Conjugate fault sets

---

**SEQUENCE**: I
**UNIT/SUBUNIT**: 33b
**ROCK NAME**: Dunite
**CONTACT**: Continuous

**TEXTURE**: Igneous

**SUMMARY**: Serpentinized dunite, crosscut by gabbroic dikes, few fractures with rubbly zone, few harzburgitic inclined layerings

**ALTERATION**: Highly serpentinized, oxidized

**VEINS**: Brown, green, white, few black veins

**STRUCTURE**: Brittle-Conjugate fault sets

---

**Fabric intensity**

| Density (per meter) | 6 | 5 | 4 | 3 | 2 | 1 | 0 |

**Vein density**

| Density (per meter) | 6 | 5 | 4 | 3 | 2 | 1 | 0 |

**Grain size**

| Density (per meter) | 6 | 5 | 4 | 3 | 2 | 1 | 0 |

**Depth (m CCD)**

| 198.60 | 198.70 | 198.80 | 198.90 | 199.00 | 199.10 | 199.20 | 199.30 | 199.40 |

**Core length (cm)**

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

**Hole BA4A-74Z Section 2, Top of Section 198.58 (m CCD)**
**Hole BA4A-74Z Section 3, Top of Section 199.46 (m CCD)**

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>MSCL-W (SI x 10^-5)</th>
<th>MSP</th>
<th>GRA (g/cm²)</th>
<th>Sequence</th>
<th>Unit/subunit</th>
<th>Lithology</th>
<th>Primary mineralogy</th>
<th>Grain size (°)</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnetic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
<th>Structures</th>
<th>Abnormal habit</th>
<th>Vein crosscutting</th>
</tr>
</thead>
<tbody>
<tr>
<td>199.49</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>199.59</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>199.69</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>199.99</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>200.09</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>200.19</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Hole BA4A-74Z Section 4, Top of Section 200.20 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>MSCL-W MSP (SI x 10^-5)</th>
<th>GRA (g/cm³)</th>
<th>Core alteration</th>
<th>Sequence</th>
<th>Lithology</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Fracture/ Vein density (per meter)</th>
</tr>
</thead>
<tbody>
<tr>
<td>200.21</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>33b</td>
<td>Dunite</td>
<td>Olivine</td>
<td>100</td>
<td>1.6</td>
</tr>
<tr>
<td>200.31</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Plagioclase</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>200.41</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Clinopyroxene</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>200.51</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Orthopyroxene</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>200.61</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Amphibole</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>200.71</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Spinel</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>200.81</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Sulfide</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>200.91</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Fresh (&lt;3%)</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

#### Contact:
- Continuous

#### Texture:
- Igneous

#### Summary:
- Serpentinized dunite, crosscut by gabbroic dikes, few fractures with rubbly zone, few harzburgitic inclined layerings

#### Alteration:
- Highly serpentinized, oxidized

#### Veins:
- Brown, green, white, few black veins

#### Structure:
- Brittle fractures

#### Vein/Structure:
- Brittle plastic fabrics

#### Degree of deformation:
- Brittle features

#### Degree of alteration:
- Fresh (<3%)

#### CT Image:
- Magnetic contact
- Brittle plastic fabrics

#### Fabric intensity:
- Protogranular

#### Degree of foliation:
- Strongly foliated

#### Degree of layering:
- Protomylonite

#### Degree of deformation:
- Well-developed cataclasis
- Ultramylonite

#### Dip:
- 0-45°
- 45°-90°

#### Grain size:
- Fine grained (0.2–1 mm)
- Medium grained (1–5 mm)
- Coarse grained (5–30 mm)
- Pegmatitic (>30 mm)

#### Degree of deformation:
- Minor fracturing
- Moderate fracturing
- GS reduction and rotation
- Well-developed cataclasis
- Ultramylonite

#### Degree of foliation:
- Strongly foliated
- Protomylonite
- Ultramylonite

#### Degree of alteration:
- Fresh (<3%)
- Slight (3–10%)
- Moderate (11–30%)
- Substantial (31–60%)
- Extensive (61–90%)
- Complete (≥90%)

#### Degree of deformation:
- Undeformed
- Minor fracturing
- Moderate fracturing
- GS reduction and rotation
- Well-developed cataclasis
- Ultramylonite

#### Degree of foliation:
- Strongly foliated
- Protomylonite
- Ultramylonite

#### Degree of alteration:
- Fresh (<3%)
- Slight (3–10%)
- Moderate (11–30%)
- Substantial (31–60%)
- Extensive (61–90%)
- Complete (≥90%)

#### Degree of deformation:
- Undeformed
- Minor fracturing
- Moderate fracturing
- GS reduction and rotation
- Well-developed cataclasis
- Ultramylonite

#### Degree of foliation:
- Strongly foliated
- Protomylonite
- Ultramylonite

#### Degree of alteration:
- Fresh (<3%)
- Slight (3–10%)
- Moderate (11–30%)
- Substantial (31–60%)
- Extensive (61–90%)
- Complete (≥90%)

#### Degree of deformation:
- Undeformed
- Minor fracturing
- Moderate fracturing
- GS reduction and rotation
- Well-developed cataclasis
- Ultramylonite

#### Degree of foliation:
- Strongly foliated
- Protomylonite
- Ultramylonite

#### Degree of alteration:
- Fresh (<3%)
- Slight (3–10%)
- Moderate (11–30%)
- Substantial (31–60%)
- Extensive (61–90%)
- Complete (≥90%)

#### Degree of deformation:
- Undeformed
- Minor fracturing
- Moderate fracturing
- GS reduction and rotation
- Well-developed cataclasis
- Ultramylonite

#### Degree of foliation:
- Strongly foliated
- Protomylonite
- Ultramylonite

#### Degree of alteration:
- Fresh (<3%)
- Slight (3–10%)
- Moderate (11–30%)
- Substantial (31–60%)
- Extensive (61–90%)
- Complete (≥90%)

#### Degree of deformation:
- Undeformed
- Minor fracturing
- Moderate fracturing
- GS reduction and rotation
- Well-developed cataclasis
- Ultramylonite

#### Degree of foliation:
- Strongly foliated
- Protomylonite
- Ultramylonite

#### Degree of alteration:
- Fresh (<3%)
- Slight (3–10%)
- Moderate (11–30%)
- Substantial (31–60%)
- Extensive (61–90%)
- Complete (≥90%)

#### Degree of deformation:
- Undeformed
- Minor fracturing
- Moderate fracturing
- GS reduction and rotation
- Well-developed cataclasis
- Ultramylonite

#### Degree of foliation:
- Strongly foliated
- Protomylonite
- Ultramylonite

#### Degree of alteration:
- Fresh (<3%)
- Slight (3–10%)
- Moderate (11–30%)
- Substantial (31–60%)
- Extensive (61–90%)
- Complete (≥90%)

#### Degree of deformation:
- Undeformed
- Minor fracturing
- Moderate fracturing
- GS reduction and rotation
- Well-developed cataclasis
- Ultramylonite

#### Degree of foliation:
- Strongly foliated
- Protomylonite
- Ultramylonite

#### Degree of alteration:
- Fresh (<3%)
- Slight (3–10%)
- Moderate (11–30%)
- Substantial (31–60%)
- Extensive (61–90%)
- Complete (≥90%)

#### Degree of deformation:
- Undeformed
- Minor fracturing
- Moderate fracturing
- GS reduction and rotation
- Well-developed cataclasis
- Ultramylonite

#### Degree of foliation:
- Strongly foliated
- Protomylonite
- Ultramylonite
SEQUENCE: 33b
UNIT/SUBUNIT: 33b
ROCK NAME: Dunite
CONTACT: Continuous
TEXTURE:
IGNEOUS SUMMARY: serpentinized dunite, crosscut by gabbroic dikes, few fractures with rubbly zone, few harzburgitic inclined layerings
ALTERATION: highly serpentinized, oxidized
VEINS: brown, green, white, few black veins
STRUCTURE: Brittle-
Vein density
Crystal plastic-
Fabric intensity
Degree of deformation
Crack/ Vein density (per meter)
ALTERATION INTENSITY:
0–10
10–30
30–50
50–70
70–90
90–100
>100

Degree of deformation:
Undeformed
Minor fracturing
Moderate fracturing
GS reduction and rotation
Well-developed cataclasis
Ultracataclastite
Protogranular
Porphyroclastic
Strongly foliated
Protomylonite
Mylonite
Ultramylonite
Isotropic
Weak
Moderate
Strong

Vein density (per meter):
1 per 10 cm
3–5 per 10 cm
>20 per 10 cm
5–15 per 10 cm
15–20 per 10 cm
**Hole BA4A-75Z Section 2, Top of Section 201.50 (m CCD)**

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>MSCL-W (SI &lt; 10&lt;sup&gt;-5&lt;/sup&gt;)</th>
<th>MSP (SI &lt; 10&lt;sup&gt;-6&lt;/sup&gt;)</th>
<th>GRA (g/cm&lt;sup&gt;2&lt;/sup&gt;)</th>
<th>Sequence</th>
<th>Lithology</th>
<th>Unit/subunit</th>
<th>Primary mineralogy (%)</th>
<th>Degree of deformation</th>
<th>Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
</tr>
</thead>
<tbody>
<tr>
<td>201.53</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10.6</td>
<td>5</td>
<td>Dunite</td>
<td>33b</td>
<td>Olivine, Plagioclase</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>201.63</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10.1</td>
<td>5</td>
<td>Dunite</td>
<td>33c</td>
<td>Olivine, Plagioclase</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Description**

1. Sequence 33b: Rock Name: Dunite
2. Sequence 33c: Rock Name: Dunite
3. Fabric intensity: 5
4. Vein density: 4
5. Alteration intensity: 90
6. Dip: 45°

**Alteration**

- Highly serpentinized, oxidized

**Veins**

- Brown, green, white, few black veins

**Structures**

- Brittle Veins

**Grade (g/cm<sup>3</sup>)**

- 2.6, 1.6, 0.6

**Vein Crosscutting**

- 1 per 10 cm

**Fracture/ Vein density (per meter)**

- 0–10, 10–30, 30–50, 50–70, 70–90, >100

**Detailed lithology and mineralogy**

- Olivine, Plagioclase, Amphibole, Spinel, Sulfd
- Crosscut by gabbroic dikes, few fractures with rubbly zones, few harzburgitic inclined layerings
- Highly serpentinized, oxidized
- Brown, green, white, few black veins
- Brittle plastic deformation

**Contact**

- Continuous
- Tectonic

**Texture**

- Igneous
- Brittle

**Fabric intensity**

- 5

**Grain size**

- 0.2–1 mm, 1–5 mm, 5–30 mm, >30 mm

**Magnetic susceptibility**

- MSCL-W: 10<sup>-5</sup>, MSP: 10<sup>-6</sup>

**Alteration halos**

- Sulfide, Amphibole, Spinel, Orthopyroxene, Clinopyroxene, Plagioclase, Olivine

**Degree of deformation**

- Discrete brittle features

**Degree of fracturing**

- Minor, Moderate, Significant, Well-developed cataclasis, Ultracataclastite

**Protomylonite**

- Protogranular, Porphyroclastic, Strongly foliated

**Detailed structures**

- Fault zones, Structures, Apparent offset

**Alteration halos**

- Fresh (<3%), Slight (3–10%), Moderate (11–30%), Substantial (31–60%), Extensive (61–90%), Complete (>90%)

**Degree of deformation**

- Undeformed, Undeformed, Minor fracturing, Moderate fracturing, GS reduction and rotation, Well-developed cataclasis, Ultracataclastite

**Protomylonite**

- Protogranular, Porphyroclastic, Strongly foliated

**Porphyroclastic**

- Strongly foliated

**Ultramylonite**

- Ultracataclastite, Mylonite, Ultramylonite

**Porphyroclastic**

- Strongly foliated

**Isotropic**

- Strong, Weak, Moderate

**Fine grained**

- (<0.1 mm), Microcrystalline (0.1–0.2 mm), Glassy

**Medium grained**

- (1–5 mm), Microcrystalline, Glassy

**Coarse grained**

- (5–30 mm), Glassy

**Pegmatitic**

- (>30 mm), Glassy

**Glassy**

- (<0.1 mm), Microcrystalline, Glassy

**Cryptocrystalline**

- (<0.1 mm), Microcrystalline, Glassy

**Microcrystalline**

- (0.1–0.2 mm), Glassy

**Ultramylonite**

- Ultracataclastite, Mylonite, Ultramylonite

**Porphyroclastic**

- Strongly foliated

**Isotropic**

- Strong, Weak, Moderate

**Fine grained**

- (<0.1 mm), Microcrystalline, Glassy

**Medium grained**

- (1–5 mm), Microcrystalline, Glassy

**Coarse grained**

- (5–30 mm), Glassy

**Pegmatitic**

- (>30 mm), Glassy

**Glassy**

- (<0.1 mm), Microcrystalline, Glassy

**Cryptocrystalline**

- (<0.1 mm), Microcrystalline, Glassy

**Microcrystalline**

- (0.1–0.2 mm), Glassy

**Ultramylonite**

- Ultracataclastite, Mylonite, Ultramylonite

**Porphyroclastic**

- Strongly foliated

**Isotropic**

- Strong, Weak, Moderate

**Fine grained**

- (<0.1 mm), Microcrystalline, Glassy

**Medium grained**

- (1–5 mm), Microcrystalline, Glassy

**Coarse grained**

- (5–30 mm), Glassy

**Pegmatitic**

- (>30 mm), Glassy

**Glassy**

- (<0.1 mm), Microcrystalline, Glassy

**Cryptocrystalline**

- (<0.1 mm), Microcrystalline, Glassy

**Microcrystalline**

- (0.1–0.2 mm), Glassy

**Ultramylonite**

- Ultracataclastite, Mylonite, Ultramylonite

**Porphyroclastic**

- Strongly foliated

**Isotropic**

- Strong, Weak, Moderate

**Fine grained**

- (<0.1 mm), Microcrystalline, Glassy

**Medium grained**

- (1–5 mm), Microcrystalline, Glassy

**Coarse grained**

- (5–30 mm), Glassy

**Pegmatitic**

- (>30 mm), Glassy

**Glassy**

- (<0.1 mm), Microcrystalline, Glassy

**Cryptocrystalline**

- (<0.1 mm), Microcrystalline, Glassy

**Microcrystalline**

- (0.1–0.2 mm), Glassy
<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>CT image</th>
<th>Magnetic susceptibility</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Discrete brittle features</th>
<th>Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Vein crosscutting</th>
<th>Structures</th>
<th>Alteration halos</th>
<th>Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>202.29</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>202.30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>202.39</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>202.49</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>202.59</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>202.69</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>202.79</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Hole BA4A-75Z Section 4, Top of Section 202.83 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Sediment samples</th>
<th>Magnetic susceptibility</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Alteration intensity</th>
<th>Alteration halos</th>
<th>Vein density (per meter)</th>
<th>Voids</th>
<th>Degree of deformation</th>
<th>Brittle contact</th>
<th>Dip</th>
<th>CT image</th>
</tr>
</thead>
<tbody>
<tr>
<td>202.83</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>202.85</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>202.95</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>203.05</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>203.15</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>203.25</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>203.35</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>203.45</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>203.55</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>203.65</td>
<td>90</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>203.75</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Description**
- **SEQUENCE:** 33c
- **ROCK NAME:** Dunite
- **CONTACT:** Continuous
- **TEXTURE:** IGNEOUS
- **SUMMARY:** Serpentinized dunite, crosscut by gabbroic and pyroxenitic dikes, rich in fractures with rubbly zones.
- **ALTERATION:** Highly serpentinized, oxidized
- **VEINS:** Green, white veins
- **STRUCTURE:** Brittle-Wide but relatively low intensity fault zone, fractured rock and signs of some melt impregnation.
- **Veins:** Crystal plastic
SEQUENCE: 33c
UNIT/SUBUNIT: 33c
ROCK NAME: Dunite
CONTACT: Continuous

TEXTURE:
IGNEOUS: serpentinized dunite, crosscut by gabbroic and pyroxenitic dikes, rich in fractures with rubbly zones,
ALTERATION: highly serpentinized, oxidized
VEINS: green, white veins
STRUCTURE: Brittle- Incohesive fault breccia

Vein density (per meter):
0-1 per 10 cm
3-5 per 10 cm
>20 per 10 cm
5-15 per 10 cm
15-20 per 10 cm

Degree of deformation:
Fracture/ Vein density (per meter):
0-1 per 10 cm
3-5 per 10 cm
>20 per 10 cm
5-15 per 10 cm
15-20 per 10 cm

Alteration intensity:
0-1 per 10 cm
3-5 per 10 cm
>20 per 10 cm
5-15 per 10 cm
15-20 per 10 cm

Magmatic contact
Brittle
Crystal plastic
Veins

Description

GRA (g/cm³)
2.74
2.64
2.54
2.44

Texture:
Isotropic
Weak
Moderate
Strong

Grain size:
Fine grained (0.2–1 mm)
Medium grained (1–5 mm)
Coarse grained (5–30 mm)
Pegmatitic (>30 mm)

fabric intensity:
0–10
10–30
30–50
50–70
70–90
90–100
>100

Degree of deformation:
Undeformed
Minor fracturing
Moderate fracturing
GS reduction and rotation
Well-developed cataclasis
Ultracataclastite

Magmatic Layering
Protogranular
Porphyroclastic
Strongly foliated
Protomylonite
Mylonite
Ultramylonite

Magmatic Layering:
Discrete brittle features
Thresholding Value: 0.0

Stained image
Shipboard samples
CT image
Magnetic susceptibility
MSCL-W
MSP
Depth (m CCD)
Core length (cm)
Hole BA4A-76Z Section 1, Top of Section 203.70 (m CCD)
**Hole BA4A-76Z Section 2, Top of Section 204.57 (m CCD)**

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-1</td>
<td>10-19</td>
<td></td>
<td>MSCL-W MSP (SI x 10^-6)</td>
<td>Olivine</td>
<td>50</td>
<td>Moderate</td>
<td>0-1 per 10 cm</td>
<td>Fresh (&lt;3%)</td>
<td></td>
</tr>
<tr>
<td>2-3</td>
<td>20-29</td>
<td></td>
<td>GRA (g/cm³)</td>
<td>Plagioclase</td>
<td>30</td>
<td>Minor</td>
<td>5-15 per 10 cm</td>
<td>Slight (3-10%)</td>
<td></td>
</tr>
<tr>
<td>4-5</td>
<td>30-39</td>
<td></td>
<td></td>
<td>Amphibole</td>
<td>25</td>
<td>Fine-grained</td>
<td>15-20 per 10 cm</td>
<td>Moderate (11-30%)</td>
<td></td>
</tr>
<tr>
<td>6-7</td>
<td>40-49</td>
<td></td>
<td></td>
<td>Orthopyroxene</td>
<td>20</td>
<td>Pegmatitic</td>
<td>&gt;20 per 10 cm</td>
<td>Substantial (31-60%)</td>
<td></td>
</tr>
<tr>
<td>8-9</td>
<td>50-59</td>
<td></td>
<td></td>
<td>Clinopyroxene</td>
<td>15</td>
<td>Glassy</td>
<td></td>
<td>Complete (≥ 90%)</td>
<td></td>
</tr>
</tbody>
</table>

**Lithology**
- **Primary mineralogy**: Olivine, Plagioclase, Amphibole, Orthopyroxene, Clinopyroxene, Spinel, Sulfide.
- **Grain size**: 50-70%.
- **Degree of deformation**: Moderate.
- **Fracture/ Vein density**: 0-1 per 10 cm.
- **Alteration intensity**: Fresh (<3%).

**Sequence**: 33d
**Unit/Subunit**: 33d
**Rock Name**: Dunite
**Contact**: Continuous
**Texture**: Igneous
**Summary**: Serpentinized dunite, crosscut by gabbroic and pyroxenitic dikes, few fractures.

**Alteration**: Serpentinized, oxidized.
**Veins**: Green, white, few black veins.

**Structure**: Brittle-Veins-Crystal plastic.
**Fabric intensity**: 4.
### Hole BA4A-76Z: Section 3, Top of Section 205.08 (m CCD)

#### Depth (m CCD)
<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>205.09</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Lithology
- **Primary mineralogy (%)**
  - Olivine
  - Plagioclase
  - Clinopyroxene
  - Amphibole
  - Spinel
  - Sulfide

#### Grain size (mm)
- 5
- 3
- 1
- 0

#### Degree of deformation
- Discrete brittle features
  - 5
  - 4
  - 3
  - 2
  - 1
  - 0

#### Fabric intensity
- 5
- 4
- 3
- 2
- 1
- 0

#### Fracture/ Vein density (per meter)
- 3-5 per 10 cm
- >20 per 10 cm
- 5-15 per 10 cm
- 15-20 per 10 cm

#### Alteration intensity
- Complete (>90%)
- Extensive (61–90%)
- Substantial (31–60%)
- Moderate (11–30%)
- Slight (3–10%)
- Fresh (<3%)

#### Structures
- Fault zones
- Vein crosscutting
- Alteration halos

#### Dip
- Magnetic contact
- Brittle
- Crystal plastic
- Veins

#### Description
- **Magnitude**: 33d
- **Unit/Subunit**: 33d
- **Rock Name**: Dunite
- **Contact**: Continuous
- **Texture**: Igneous
- **Summary**: Serpentinized dunite, crosscut by gabbroic and pyroxeinitic dikes, few fractures
- **Alteration**: Serpentinized, oxidized
- **Veins**: Green, white, few black veins
- **Structure**: Brittle-
- **Vein crosscutting**: Crystal plastic-
- **Fabric intensity**: 5
- **Fracture/ Vein density (per meter)**: 3-5 per 10 cm
- **Alteration intensity**: Complete (>90%)
- **Description**: Serpentinized dunite, crosscut by gabbroic and pyroxeinitic dikes, few fractures.
**Hole BA4A-76Z Section 4, Top of Section 205.84 (m CCD)**

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>MSCL-W MSP (SI x 10^-5)</th>
<th>GRA (g/cm²)</th>
<th>Sequence</th>
<th>Lithology</th>
<th>Primary mineralogy (%)</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnetic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
<th>Structures</th>
<th>Apparent offset</th>
<th>Alteration halo</th>
<th>Vein crosscutting</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>205.85</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>205.95</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>206.05</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>206.15</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>206.25</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>206.35</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>206.45</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>206.55</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>206.65</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>206.75</td>
<td>90</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Hole BA4A-77Z Section 1, Top of Section 206.70 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Sampled image</th>
<th>Magnetic susceptibility</th>
<th>MSCL-W MSP (SI x 10^-5)</th>
<th>GRA (g/cm²)</th>
<th>Sequence</th>
<th>Lithology</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnetic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>206.70</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>206.80</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>206.90</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>207.00</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>207.10</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>207.20</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>207.30</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>207.40</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>207.50</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>207.60</td>
<td>90</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Description**

SEQUENCE: I
UNIT/SUBUNIT: 34a
ROCK NAME: Gabbro
CONTACT: Intrusive
TEXTURE: IGNEOUS
SUMMARY: altered brecciated gabbro/dunite unit
ALTERATION: highly altered
VEINS: cut by white veins, vein halo
STRUCTURE: Brittle, Zone of cohesive possibly magmatic derived
FABRIC INTENSITY: Moderate
Vein crosscutting
ALTERATION INTENSITY: High
**SEQUENCE: I**

**UNIT/SUBUNIT: 34a**

**ROCK NAME:** Gabbro

**CONTACT:** Intrusive

**TEXTURE:**

**IGNEOUS SUMMARY:** altered brecciated gabbro/dunite unit

**ALTERATION:** highly altered

**VEINS:** cut by white veins, vein halo

**STRUCTURE:** Brittle-

---

**SEQUENCE: I**

**UNIT/SUBUNIT: 34b**

**ROCK NAME:** Dunite

**CONTACT:** Intrusive

**TEXTURE:**

**IGNEOUS SUMMARY:** serpentinized dunite, crosscut by gabbroic and pyroxenitic dikes, few fractured

**ALTERATION:** serpentinized, oxidized

**VEINS:** white veins

**STRUCTURE:** Brittle-

---

### Core length (cm)

<table>
<thead>
<tr>
<th>Core length (cm)</th>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Depth (m CCD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>0.00</td>
<td>30</td>
<td>0.00</td>
<td>50</td>
<td>0.00</td>
</tr>
<tr>
<td>20</td>
<td>0.00</td>
<td>40</td>
<td>0.00</td>
<td>60</td>
<td>0.00</td>
</tr>
<tr>
<td>30</td>
<td>0.00</td>
<td>50</td>
<td>0.00</td>
<td>70</td>
<td>0.00</td>
</tr>
<tr>
<td>40</td>
<td>0.00</td>
<td>60</td>
<td>0.00</td>
<td>80</td>
<td>0.00</td>
</tr>
<tr>
<td>50</td>
<td>0.00</td>
<td>70</td>
<td>0.00</td>
<td>90</td>
<td>0.00</td>
</tr>
<tr>
<td>60</td>
<td>0.00</td>
<td>80</td>
<td>0.00</td>
<td>100</td>
<td>0.00</td>
</tr>
</tbody>
</table>

### Core Image

- **CT image:**
- **Stained image:**
- **Scanned image:**

### Magnetic susceptibility

- **MSCL-W MSP (SI x 10^-5):**
- **GRA (g/cm³):**

### Rock type

- **Primary mineralogy (%):**
- **Grain size:**

### Degree of deformation

- **Fracture/ Vein density (per meter):**
- **Discrete brittle features:**

### Alteration intensity

- **Alteration:**

### Vein density

- **Vein density (per meter):**

### Fabric intensity

- **Fabric intensity:**

### Structure

- **Fault zone:**
- **Mineral:**

### Degree of deformation

- **Discrete brittle features:**
- **Vein crosscutting:**
- **Alteration intensity:**

### Description

- **Description:**

### Core log data

- **Core log data:**
- **Core description:**
- **Core identification:**
**Hole BA4A-77Z Section 3, Top of Section 208.57 (m CCD)**

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Lithology</th>
<th>Magnetic susceptibility</th>
<th>MSCL-W MSP (SI x 10^-5)</th>
<th>GRA (g/cm³)</th>
<th>Sequence</th>
<th>Contact</th>
<th>Texture</th>
<th>Igneous Summary</th>
<th>Alteration</th>
<th>Veins</th>
<th>Brittle-Vein-crystall plastic</th>
<th>Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Degree of deformation</th>
<th>Alteration halos</th>
<th>Structures</th>
<th>Apparent offset</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>10</td>
<td>Dunite</td>
<td>Continuous</td>
<td>2.71</td>
<td>2.685</td>
<td>34b</td>
<td>Dunite</td>
<td>Dunite</td>
<td>Serpentinized dunite, crosscut by gabbroic and pyroxenitic dikes, few fractured</td>
<td>Serpentinized, oxidized</td>
<td>White veins</td>
<td>Brittle-Vein-crystall plastic</td>
<td>5 per 10 cm</td>
<td>100</td>
<td>Strong</td>
<td>0–10</td>
<td>Dunite</td>
<td></td>
</tr>
<tr>
<td>208.71</td>
<td>20</td>
<td>Dunite</td>
<td>Continuous</td>
<td>2.71</td>
<td>2.685</td>
<td>34b</td>
<td>Dunite</td>
<td>Dunite</td>
<td>Serpentinized dunite, crosscut by gabbroic and pyroxenitic dikes, few fractured</td>
<td>Serpentinized, oxidized</td>
<td>White veins</td>
<td>Brittle-Vein-crystall plastic</td>
<td>5 per 10 cm</td>
<td>100</td>
<td>Strong</td>
<td>0–10</td>
<td>Dunite</td>
<td></td>
</tr>
<tr>
<td>208.81</td>
<td>30</td>
<td>Dunite</td>
<td>Continuous</td>
<td>2.71</td>
<td>2.685</td>
<td>34b</td>
<td>Dunite</td>
<td>Dunite</td>
<td>Serpentinized dunite, crosscut by gabbroic and pyroxenitic dikes, few fractured</td>
<td>Serpentinized, oxidized</td>
<td>White veins</td>
<td>Brittle-Vein-crystall plastic</td>
<td>5 per 10 cm</td>
<td>100</td>
<td>Strong</td>
<td>0–10</td>
<td>Dunite</td>
<td></td>
</tr>
<tr>
<td>208.91</td>
<td>40</td>
<td>Dunite</td>
<td>Continuous</td>
<td>2.71</td>
<td>2.685</td>
<td>34b</td>
<td>Dunite</td>
<td>Dunite</td>
<td>Serpentinized dunite, crosscut by gabbroic and pyroxenitic dikes, few fractured</td>
<td>Serpentinized, oxidized</td>
<td>White veins</td>
<td>Brittle-Vein-crystall plastic</td>
<td>5 per 10 cm</td>
<td>100</td>
<td>Strong</td>
<td>0–10</td>
<td>Dunite</td>
<td></td>
</tr>
</tbody>
</table>

**Description**
- **SEQUENCE:** 34b
- **ROCK NAME:** Dunite
- **CONTACT:** Continuous
- **TEXTURE:** Dunite
- **Igneous Summary:** Serpentinized dunite, crosscut by gabbroic and pyroxenitic dikes, few fractured
- **ALTERATION:** Serpentinized, oxidized
- **VEINS:** White veins
- **STRUCTURE:** Brittle-Vein-crystall plastic
- **Fabric intensity:** 5 per 10 cm
- **Alteration intensity:** 100
- **Degree of deformation:** Strong
- **Vein density (per meter):** 5 per 10 cm

**Magnetic susceptibility**
- **GRA (g/cm³):** 2.71, 2.685, 2.66, 2.635

**Core length:** 10 cm

**Core sample:** 34b

**Vein density:** 5 per 10 cm
<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Sampled image</th>
<th>Magnetic susceptibility</th>
<th>Primary mineralogy</th>
<th>Lithology</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
</tr>
</thead>
<tbody>
<tr>
<td>209.70</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>209.80</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>209.90</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>210.00</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>210.10</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>210.20</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>210.30</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>210.40</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>210.50</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>210.60</td>
<td>90</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Hole BA4A-78Z Section 1, Top of Section 209.70 (m CCD)**

- **SEQUENCE:** I
- **UNIT/SUBUNIT:** 34c, 35a
- **ROCK NAME:** Gabbro, Dunite
- **CONTACT:** Intrusive, Tectonic
- **TEXTURE:** IGNEOUS
  - Summary: altered brecciated gabbro/dunite unit
  - Alteration: highly altered
- **VEINS:** cut by white veins, vein halo
- **STRUCTURE:** Brittle-Zone of cohesive possibly magmatic derived brecciation
  - Fabric intensity: 5
- **VEIN density (per meter):** 0 to 45 per 10 cm
- **VEIN density:** 5-15 per 10 cm
- **ALTERATION:** Complete (≥ 90%)
- **Dip:** Magnetic contact
- **Brittle Crystal plastic Veins**

**Fabric Intensity:**
- 5: Strongly foliated
- 4: Protomylonite
- 3: Mylonite
- 2: Ultramylonite
- 1: Ultracataclastite
- 0: Protogranular

**Magmatic Layering:**
- 3: Strongly foliated
- 2: Porphyroclastic
- 1: Protomylonite
- 0: Isotropic

**Primary Mineralogy:**
- Olivine
- Plagioclase
- Clinopyroxene
- Orthopyroxene
- Amphibole
- Spinel
- Sulfide

**Degree of deformation:**
- Undeformed
- Minor fracturing
- Moderate fracturing
- GS reduction and rotation
- Well-developed cataclasis
- Ultracataclastite

**Grain size:**
- Fine grained (0.2–1 mm)
- Medium grained (1–5 mm)
- Coarse grained (5–30 mm)
- Pegmatitic (>30 mm)
- Glassy
- Cryptocrystalline (<0.1 mm)
- Microcrystalline (0.1–0.2 mm)

**Magnetic susceptibility:**
- MSCL-W
- MSP
- GRA (g/cm³)

**Core length:**
- Hole BA4A-78Z Section 1, Top of Section 209.70 (m CCD)
### Hole BA4A-78Z Section 2, Top of Section 210.68 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Lithology</th>
<th>Primary mineralogy (%)</th>
<th>Grain size (µm)</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Vein density (per meter)</th>
<th>Alteration halos</th>
<th>Structures</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>210.70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>210.80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>210.90</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>211.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>211.10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>211.20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>211.30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>211.40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>211.50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>211.60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Magnetic susceptibility**
  - MSCL-W MSP (SI x 10^-5)

- **GRA (g/cm³)
  - 1.75
  - 2.15
  - 2.75
  - 3.35
  - 4.00

- **Lithology**
  - Mbio

- **Primary mineralogy**
  - Olivine
  - Plagioclase
  - Chalcopyrite

- **Grain size**
  - 35 µm
  - 50 µm
  - 75 µm
  - 100 µm

- **Degree of deformation**
  - Minor fracturing
  - Moderate fracturing

- **Alteration**
  - Fresh (<3%)
  - Slight (3–10%)
  - Moderate (11–30%)
  - Substantial (31–60%)
  - Extensive (61–90%)
  - Complete (≥ 90%)

- **Vein density (per meter)**
  - 0–1 per 10 cm
  - 1–3 per 10 cm
  - 3–5 per 10 cm
  - >20 per 10 cm
  - 5–15 per 10 cm
  - 15–20 per 10 cm

- **Structures**
  - Fault zones

- **Dip**
  - Magnetic contact
  - Brittle
  - Crystal plastic
  - Veins

- **CT image**
- **Shipboard samples**
- **Scanned image**

---

**Legend**
- **Lithology**
- **Primary mineralogy**
- **Grain size**
- **Degree of deformation**
- **Fracture/ Vein density**
- **Alteration intensity**
- **Vein density**
- **Structures**
- **Dip**

---

**Note:** The diagram includes detailed geological and mineralogical data, with various scales and legends for easier interpretation.
### Hole BA4A-79Z Section 1, Top of Section 211.70 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Lithology</th>
<th>Magnetic susceptibility</th>
<th>Degree of deformation</th>
<th>Alteration intensity</th>
<th>Dip Magnetic contact</th>
<th>литология</th>
<th>MSCL-W MSP (SI x 10^-5)</th>
<th>GRA (g/ccm²)</th>
<th>Alteration halos</th>
<th>Vein density (per meter)</th>
<th>Vein crosscutting</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>211.73</td>
<td>0</td>
<td>I 35a</td>
<td>dunite</td>
<td>fine</td>
<td>fresh (&lt;3%)</td>
<td>100</td>
<td>0 45 90</td>
<td>0.2</td>
<td>0.4</td>
<td>1 per 10 cm</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>211.83</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>211.93</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>212.03</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>212.13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>212.23</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Summary:**
- **Sequence:** I 35a
- **Rock Name:** dunite
- **Contact:** continuous
- **Texture:** igneous
- **Serpentinised dunite with gabbroic dykes
- **Alteration:** serpentinised
- **Veins:** cut by white veins as vein halos on dykes, white and dark frankenstein veins, white and brown thread veins.
- **Structure:** Brittle-Veins-Crystal plastic

**Measurements:**
- **Magnetic susceptibility:**
  - 0 to 90
- **GRA (g/ccm²):**
  - 212.23: 0.4
- **Hole BA4A-79Z Section 1, Top of Section 211.70:**
  - Depth: 211.70 m CCD
  - Core length: 10 cm

**Additional Details:***
- **Text:**...
### Hole BA4A-79Z Section 2, Top of Section 212.26 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Sampled image</th>
<th>Magnetic susceptibility</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnatic contact</th>
<th>Brittle Crystal plastic</th>
<th>Vein density (per meter)</th>
<th>Alteration halos</th>
<th>Structures</th>
<th>Shear zones</th>
<th>Fault zones</th>
<th>Alteration halos</th>
<th>Structures</th>
<th>Shear zones</th>
<th>Fault zones</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>212.29</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>212.39</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>212.49</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>212.59</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>212.69</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>212.79</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>212.89</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SEQUENCE:** I  
**UNIT/SUBUNIT:** 35a  
**ROCK NAME:** dunite  
**CONTACT:** continuous  
**TEXTURE:** IGNEOUS  
**SUMMARY:** serpentinised dunite with gabbroic dykes  
**ALTERATION:** serpentinised  
**VEINS:** cut by white veins as vein halos on dykes, white and dark frankenstein veins plus white and brown thread veins.  
**STRUCTURE:** Brittle-Crystal plastic  

**Description:**
- **Dunite:** Continuous contact, texturally homogeneous dunite with minor gabbroic dykes.
- **Veins:** Cut by white veins as vein halos on dykes, white and dark frankenstein veins plus white and brown thread veins.
- **Vein Density:** (per meter)
  - 0-10 per 10 cm
  - 10-30 per 10 cm
  - 30-50 per 10 cm
  - 50-70 per 10 cm
  - 70-90 per 10 cm
  - >90 per 10 cm

**Other Features:**
- **Magnetic susceptibility** (SI x 10^-5)
  - 1000
  - 100
  - 10
  - 1
- **Degree of deformation**
  - Undeformed
  - Minor fracturing
  - Moderate fracturing
  - GS reduction and rotation
  - Well-developed cataclasis
  - Ultracataclastite
- **Alteration intensity**
  - Fresh (<3%)
  - Slight (3–10%)
  - Moderate (11–30%)
  - Substantial (31–60%)
  - Extensive (61–90%)
  - Complete (>90%)

**Additional Notations:**
- **Core:** BA4A-79Z
- **Shipboard samples:** BA4A-79Z
- **Scanned images:** BA4A-79Z
- **Sulfide:** 90
- **Amphibole:** 45
- **Spinel:** 0
- **Orthopyroxene:** 90
- **Clinopyroxene:** 45
- **Plagioclase:** 0
- **Olivine:** 90

**Characteristics:**
- **Mineralogy:**
  - Primary: Dunite
  - Secondary: Sulfide, Amphibole, Spinel, Orthopyroxene, Clinopyroxene, Plagioclase, Olivine

**Physical Properties:**
- **GRA (g/cm³):**
  - 2.6
  - 2.1
  - 1.6
  - 1.1

**Fabric Intensity:**
- 1
- 2
- 3
- 4
- 5

**Vein Crosscutting:**
- 0
- 1
- 2
- 3
- 4
- 5

**Alteration:**
- 0
- 10
- 30
- 50
- 70
- 90
- >100

**Degree of Brittle Plasticity:**
- Undeformed
- Minor fracturing
- Moderate fracturing
- GS reduction and rotation
- Well-developed cataclasis

**Vein Density (per meter):**
- 0
- 1
- 3-5
- >20
- 5-15
- 15-20

**Structures:**
- Fault zones
- Vein crosscutting
- Vein halos
- Brittle contact
- Dip
- Magnetic contact
- Crystal plastic

**Injection:**
- Discrete brittle features
- Veins
- Fabric intensity
- Unit/subunit
- Lithology
- Primary mineralogy
- Degree of deformation
- Fracture/ Vein density (per meter)
- Alteration intensity
- Dip
- Magnatic contact
- Brittle Crystal plastic
- Vein density (per meter)
- Alteration halos
- Structures
- Shear zones
- Fault zones

**Voids:**
- Discrete brittle features
- Veins
- Fabric intensity
- Unit/subunit
- Lithology
- Primary mineralogy
- Degree of deformation
- Fracture/ Vein density (per meter)
- Alteration intensity
- Dip
- Magnatic contact
- Brittle Crystal plastic
- Vein density (per meter)
- Alteration halos
- Structures
- Shear zones
- Fault zones

**Hole Section:** 212.26 (m CCD)

**Core Length:**
- 1
- 10
- 30
- 50
- 70
- 90
- >100
Hole BA4A-80Z Section 1, Top of Section 212.70 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Sampled image</th>
<th>Magnetic susceptibility</th>
<th>Sequence</th>
<th>Lithology</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>212.70</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>212.80</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>212.90</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>213.00</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>213.10</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>213.20</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>213.30</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>213.40</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>213.50</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>213.60</td>
<td>90</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Hole BA4A-80Z Section 2, Top of Section 213.62 (m CCD)**

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnitic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>213.65</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>213.75</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>213.85</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>213.95</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**DESCRIPTION:**
- **SEQUENCE:** 35a
- **ROCK NAME:** dunite
- **CONTACT:** continuous
- **TEXTURE:**
  - **IGNEOUS:** serpentinised dunite with gabbroic dykes
- **ALTERATION:** serpentinised
- **VEINS:** cut by white veins as vein halos on dykes, white and dark frankenstein veins plus white and brown thread veins.
- **STRUCTURE:** Brittle

**VEIN DENSITY (PER METER):**
- 0
- 1 per 10 cm
- 3-5 per 10 cm
- >20 per 10 cm
- 5-15 per 10 cm
- 15-20 per 10 cm

**TEXTURE:**
- Protogranular
- Porphyroclastic
- Strongly foliated
- Protomylonite
- Mylonite
- Ultramylonite

**ALTERATION:**
- Fresh (<3%)
- Slight (3–10%)
- Moderate (11–30%)
- Substantial (31–60%)
- Extensive (61–90%)
- Complete (>90%)

**DEGREE OF DEFORMATION:**
- Undeformed
- Minor fracturing
- Moderate fracturing
- GS reduction and rotation
- Well-developed cataclasis
- Ultracataclastite

**FABRIC INTENSITY:**
- Isotropic
- Weak
- Moderate
- Strong

**GRAVITY (g/cm^3):**
- 2.72
- 2.62
- 2.52
- 2.42
- 2.32

**GRAIN SIZE:**
- Fine grained (0.2–1 mm)
- Medium grained (1–5 mm)
- Coarse grained (5–30 mm)
- Pegmatitic (>30 mm)

**ALTERATION HALOS:**
- 0
- 1 per 10 cm
- 3-5 per 10 cm
- 5-15 per 10 cm
- >20 per 10 cm

**DISCRETE BRITTLE FEATURES:**
- 1
- 2
- 3
- 4
- 5

**MAGNETIC CONTACT:**
- Brittle
- Crystal plastic
- Veins
### Hole BA4A-80Z Section 3, Top of Section 214.03 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Lithology</th>
<th>Primary mineralogy (%)</th>
<th>Grain size (μm)</th>
<th>Degree of deformation</th>
<th>Magmatic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Vein density (per meter)</th>
<th>Discrete brittle features</th>
<th>Alteration halos</th>
<th>Vein crosscutting</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Vein crosscutting</th>
<th>Structures</th>
<th>Apparent offset</th>
<th>Alteration halos</th>
</tr>
</thead>
<tbody>
<tr>
<td>214.03</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>214.05</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>214.15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>214.25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>214.35</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>214.45</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>214.55</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>214.65</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>214.75</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>214.85</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**SEQUENCE:** I
**UNIT/SUBUNIT:** 35c
**ROCK NAME:** dunite
**CONTACT:** continuous
**TEXTURE:**
**IGNEOUS SUMMARY:** serpentinised dunite with gabbroic dykes
**ALTERATION:** serpentinised
**VEINS:** brown and white thread veins, plus an array of evenly spaced dark veins, green dyke-sourced, brown/white composite veins, veins relatively sparse in this unit.

**STRUCTURE:** Brittle-Vein-Crystal plastic

---

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Sampled image</th>
<th>Magnetic susceptibility</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
</tr>
</thead>
<tbody>
<tr>
<td>214.93</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>215.03</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>215.04</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>215.06</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>215.12</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Description:** Serpentinised dunite with gabbroic dykes, serpentinised veins, brown and white thread veins, plus an array of evenly spaced dark veins.
### Hole BA4A-81Z Section 2, Top of Section 216.59 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Lithology</th>
<th>Primary mineralogy (%)</th>
<th>Degree of deformation</th>
<th>Alteration intensity</th>
</tr>
</thead>
<tbody>
<tr>
<td>216.61</td>
<td>0</td>
<td>Dunite</td>
<td>Olivine, Clinopyroxene</td>
<td>Brittleness</td>
<td>Fresh (&lt;3%)</td>
</tr>
<tr>
<td>216.71</td>
<td>10</td>
<td>Dunite</td>
<td>Orthopyroxene, Plagioclase</td>
<td>Crystal plastic</td>
<td>Undeformed</td>
</tr>
<tr>
<td>216.81</td>
<td>20</td>
<td>Dunite</td>
<td>Amphibole, Spinel</td>
<td>Fault zones</td>
<td>Minor fracturing</td>
</tr>
<tr>
<td>216.91</td>
<td>30</td>
<td>Dunite</td>
<td>Magnetic Layering</td>
<td>Structures</td>
<td>Moderate fracturing</td>
</tr>
<tr>
<td>217.01</td>
<td>40</td>
<td>Dunite</td>
<td>Protogranular</td>
<td>Veins</td>
<td>Well-developed cataclasis</td>
</tr>
<tr>
<td>217.11</td>
<td>50</td>
<td>Dunite</td>
<td>Porphyroclastic</td>
<td>Vein crosscutting</td>
<td>Ultracataclastite</td>
</tr>
</tbody>
</table>

**Description**
- **SEQUENCE:** I35c
- **ROCK NAME:** Dunite
- **CONTACT:** Continuous
- **TEXTURE:** Ignisum
- **IGNEOUS SUMMARY:** Serpentinised dunite with gabbroic dykes
- **ALTERATION:** Serpentinised
- **VEINS:** Brown and white thread veins, plus an array of evenly spaced dark veins, graded layered veins, lenticular composite veins, veins with breccia.
- **STRUCTURE:** Brittleness
- **Veins:** Crystal plastic
<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>Primary mineralogy</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Contact</th>
<th>Structures</th>
</tr>
</thead>
<tbody>
<tr>
<td>217.01</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>217.17</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SEQUENCE 1:** 35c
**ROCK NAME:** dunite
**CONTACT:** continuous

**TEXTURE:** igneous

**SUMMARY:** Serpentinised dunite with gabbroic dykes

**ALTERATION:** serpentinised

**VEINS:** Brown and white thread veins, plus an array of evenly spaced dark veins, parallel to the strike. Slightly composite veins, with minor laminations. Some veins are mineralised.

**STRUCTURES:** Brittle

**Vein crosscutting features occur**

**Vein density (per meter):**
- 0–10
- 10–30
- 30–50
- 50–70
- 70–90
- >90

**Fracture/ Vein density (per meter):**
- 0–10
- 10–30
- 30–50
- 50–70
- 70–90
- >90

**Contact:** continuous

**Structures:**
- Fault zones
- Apparent offset
- Alteration halos

**Alteration intensity:**
- Fresh (<3%)
- Slight (3–10%)
- Moderate (11–30%)
- Substantial (31–60%)
- Extensive (61–90%)
- Complete (>90%)

**Degree of deformation:**
- Undeformed
- Minor fracturing
- Moderate fracturing
- GS reduction and rotation
- Well-developed cataclasis
- Ultracataclastite

**Lithology:**
- Olivine
- Plagioclase
- Clinopyroxene

**Vein density (per meter):**
- 0–10
- 10–30
- 30–50
- 50–70
- 70–90
- >90

**Spinel**

**Orthopyroxene**

**Plagioclase**

**Olivine**

**Magnetic layering**

**Foliation**

**Protogranular**

**Porphyroclastic**

**Strongly foliated**

**Protomylonite**

**Mylonite**

**Ultramylonite**

**Isotropic**

**Weak**

**Moderate**

**Strong**

**Fine grained (0.2–1 mm)**

**Medium grained (1–5 mm)**

**Coarse grained (5–30 mm)**

**Pegmatitic (>30 mm)**

**Glassy**

**Cryptocrystalline (<0.1 mm)**

**Microcrystalline (0.1–0.2 mm)**

**GRA:**
- 2.712
- 2.692
- 2.672
- 2.652

**CT image:**
- Black
- Blue
- Green
- Red

**Description:**
- Fault zones
- Apparent offset
- Alteration halos

**Sulfide**

**Amphibole**

**Spinell**

**Orthopyroxene**

**Plagioclase**

**Olivine**

**Degree of deformation:**
- Undeformed
- Minor fracturing
- Moderate fracturing
- GS reduction and rotation
- Well-developed cataclasis
- Ultracataclastite

**Vein density (per meter):**
- 0–10
- 10–30
- 30–50
- 50–70
- 70–90
- >90

**Foliation**

**Protogranular**

**Porphyroclastic**

**Strongly foliated**

**Protomylonite**

**Mylonite**

**Ultramylonite**

**Isotropic**

**Weak**

**Moderate**

**Strong**

**Fine grained (0.2–1 mm)**

**Medium grained (1–5 mm)**

**Coarse grained (5–30 mm)**

**Pegmatitic (>30 mm)**

**Glassy**

**Cryptocrystalline (<0.1 mm)**

**Microcrystalline (0.1–0.2 mm)**

**GRA:**
- 2.712
- 2.692
- 2.672
- 2.652
Hole BA4A-81Z Section 4, Top of Section 217.93 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>CT image</th>
<th>Magnetic susceptibility</th>
<th>Lithology</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnetic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>[Sequence] 35c</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>217.97</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Dunite</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>218.07</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>218.17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>218.27</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>218.37</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>218.47</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>218.57</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>218.67</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SEQUENCE:** 35c
**UNIT/SUBUNIT:** 35c
**ROCK NAME:** dunite
**CONTACT:** continuous

**TEXTURE:** IGNEOUS
**SUMMARY:** serpentinised dunite with gabbroic dykes

**ALTERATION:** serpentinised

**VEINS:** brown and white thread veins, plus an array of evenly spaced dark veins, green dyke-sourced, brown/white composite veins, veins relatively sparse in this unit.

**STRUCTURE:** Brittle

**Description:** Discrete brittle features
### Hole BA4A-B2Z Section 1, Top of Section 218.70 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>MSCL-W MSP</th>
<th>GRA (g/cc²)</th>
<th>Sequence</th>
<th>Lithology</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnatic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>I 35d</td>
<td></td>
<td></td>
<td>I 35d</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Lithology**
- Dunite
- Olivine gabbro

**Sequence**
- I 35d

**Alteration**
- Oxidized and fractured serpentinized unite

**Veins**
- Few thin white veins

**Description**
- Continuous
- Brittle
- Crystal plastic
- Veins
<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Lithology</th>
<th>MSCL-W MSP GRA (g/cm²)</th>
<th>Magnetic susceptibility (SI x 10⁻⁵)</th>
<th>Primary mineralogy (%)</th>
<th>Grain size (µm)</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Alteration</th>
<th>Degree of deformation</th>
<th>Vein density (per meter)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>219.50</td>
<td>0</td>
<td>Dunite</td>
<td>1 10 10 10 10 10 10 10</td>
<td>10 10 10 10 10 10 10 10</td>
<td>Olivine, Plagioclase</td>
<td>35</td>
<td>Brittle</td>
<td>0</td>
<td>Fresh (&lt;3%)</td>
<td>Undeformed</td>
<td>Minor fracturing</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>219.60</td>
<td>10</td>
<td>Dunite</td>
<td>1 10 10 10 10 10 10 10</td>
<td>10 10 10 10 10 10 10 10</td>
<td>Olivine, Plagioclase</td>
<td>35</td>
<td>Brittle</td>
<td>0</td>
<td>Fresh (&lt;3%)</td>
<td>Undeformed</td>
<td>Minor fracturing</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>219.70</td>
<td>20</td>
<td>Dunite</td>
<td>1 10 10 10 10 10 10 10</td>
<td>10 10 10 10 10 10 10 10</td>
<td>Olivine, Plagioclase</td>
<td>35</td>
<td>Brittle</td>
<td>0</td>
<td>Fresh (&lt;3%)</td>
<td>Undeformed</td>
<td>Minor fracturing</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>219.80</td>
<td>30</td>
<td>Dunite</td>
<td>1 10 10 10 10 10 10 10</td>
<td>10 10 10 10 10 10 10 10</td>
<td>Olivine, Plagioclase</td>
<td>35</td>
<td>Brittle</td>
<td>0</td>
<td>Fresh (&lt;3%)</td>
<td>Undeformed</td>
<td>Minor fracturing</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>219.90</td>
<td>40</td>
<td>Dunite</td>
<td>1 10 10 10 10 10 10 10</td>
<td>10 10 10 10 10 10 10 10</td>
<td>Olivine, Plagioclase</td>
<td>35</td>
<td>Brittle</td>
<td>0</td>
<td>Fresh (&lt;3%)</td>
<td>Undeformed</td>
<td>Minor fracturing</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>220.00</td>
<td>50</td>
<td>Dunite</td>
<td>1 10 10 10 10 10 10 10</td>
<td>10 10 10 10 10 10 10 10</td>
<td>Olivine, Plagioclase</td>
<td>35</td>
<td>Brittle</td>
<td>0</td>
<td>Fresh (&lt;3%)</td>
<td>Undeformed</td>
<td>Minor fracturing</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>220.10</td>
<td>60</td>
<td>Dunite</td>
<td>1 10 10 10 10 10 10 10</td>
<td>10 10 10 10 10 10 10 10</td>
<td>Olivine, Plagioclase</td>
<td>35</td>
<td>Brittle</td>
<td>0</td>
<td>Fresh (&lt;3%)</td>
<td>Undeformed</td>
<td>Minor fracturing</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>220.20</td>
<td>70</td>
<td>Dunite</td>
<td>1 10 10 10 10 10 10 10</td>
<td>10 10 10 10 10 10 10 10</td>
<td>Olivine, Plagioclase</td>
<td>35</td>
<td>Brittle</td>
<td>0</td>
<td>Fresh (&lt;3%)</td>
<td>Undeformed</td>
<td>Minor fracturing</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>220.30</td>
<td>80</td>
<td>Dunite</td>
<td>1 10 10 10 10 10 10 10</td>
<td>10 10 10 10 10 10 10 10</td>
<td>Olivine, Plagioclase</td>
<td>35</td>
<td>Brittle</td>
<td>0</td>
<td>Fresh (&lt;3%)</td>
<td>Undeformed</td>
<td>Minor fracturing</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>220.40</td>
<td>90</td>
<td>Dunite</td>
<td>1 10 10 10 10 10 10 10</td>
<td>10 10 10 10 10 10 10 10</td>
<td>Olivine, Plagioclase</td>
<td>35</td>
<td>Brittle</td>
<td>0</td>
<td>Fresh (&lt;3%)</td>
<td>Undeformed</td>
<td>Minor fracturing</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

**Note:** The table includes various geological features and measurements, such as depth, core length, lithology, mineralogy, grain size, magnetic susceptibility, primary mineralogy, alteration intensity, and degree of deformation. The description column provides a detailed explanation of the observed features, such as veins, alteration halos, and structural features. The image shows a detailed cross-section with annotations indicating various geological phenomena.
**Hole BA4A-82Z Section 4, Top of Section 221.38 (m CCD)**

### Sequence

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Lithology</th>
<th>Degree of deformation</th>
<th>Structure</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>MAGNETIC contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>221.38</td>
<td>5</td>
<td>Dunite</td>
<td>Undeformed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Alteration

- Oxidized and fractured serpentinized unite
- Serpentinized, oxidized and fractured

### Veins

- Few thin white veins

### Texture

- Igneous summary: oxidized and fractured serpentinized unite

### Rock Name

- Dunite

### Contact

- Continuous

### Sequence

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Lithology</th>
<th>Degree of deformation</th>
<th>Structure</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>MAGNETIC contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>221.38</td>
<td>5</td>
<td>Dunite</td>
<td>Undeformed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Alteration

- Oxidized and fractured serpentinized unite
- Serpentinized, oxidized and fractured

### Veins

- Few thin white veins

### Texture

- Igneous summary: oxidized and fractured serpentinized unite

### Rock Name

- Dunite

### Contact

- Continuous

### Sequence

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Lithology</th>
<th>Degree of deformation</th>
<th>Structure</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>MAGNETIC contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>221.38</td>
<td>5</td>
<td>Dunite</td>
<td>Undeformed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Alteration

- Oxidized and fractured serpentinized unite
- Serpentinized, oxidized and fractured

### Veins

- Few thin white veins

### Texture

- Igneous summary: oxidized and fractured serpentinized unite

### Rock Name

- Dunite

### Contact

- Continuous

### Sequence

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Lithology</th>
<th>Degree of deformation</th>
<th>Structure</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>MAGNETIC contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>221.38</td>
<td>5</td>
<td>Dunite</td>
<td>Undeformed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Alteration

- Oxidized and fractured serpentinized unite
- Serpentinized, oxidized and fractured

### Veins

- Few thin white veins

### Texture

- Igneous summary: oxidized and fractured serpentinized unite

### Rock Name

- Dunite

### Contact

- Continuous

### Sequence

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Lithology</th>
<th>Degree of deformation</th>
<th>Structure</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>MAGNETIC contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>221.38</td>
<td>5</td>
<td>Dunite</td>
<td>Undeformed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Alteration

- Oxidized and fractured serpentinized unite
- Serpentinized, oxidized and fractured

### Veins

- Few thin white veins

### Texture

- Igneous summary: oxidized and fractured serpentinized unite

### Rock Name

- Dunite

### Contact

- Continuous

### Sequence

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Lithology</th>
<th>Degree of deformation</th>
<th>Structure</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>MAGNETIC contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>221.38</td>
<td>5</td>
<td>Dunite</td>
<td>Undeformed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Alteration

- Oxidized and fractured serpentinized unite
- Serpentinized, oxidized and fractured

### Veins

- Few thin white veins

### Texture

- Igneous summary: oxidized and fractured serpentinized unite

### Rock Name

- Dunite

### Contact

- Continuous

### Sequence

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Lithology</th>
<th>Degree of deformation</th>
<th>Structure</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>MAGNETIC contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>221.38</td>
<td>5</td>
<td>Dunite</td>
<td>Undeformed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Alteration

- Oxidized and fractured serpentinized unite
- Serpentinized, oxidized and fractured

### Veins

- Few thin white veins

### Texture

- Igneous summary: oxidized and fractured serpentinized unite

### Rock Name

- Dunite

### Contact

- Continuous

### Sequence

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Lithology</th>
<th>Degree of deformation</th>
<th>Structure</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>MAGNETIC contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>221.38</td>
<td>5</td>
<td>Dunite</td>
<td>Undeformed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Alteration

- Oxidized and fractured serpentinized unite
- Serpentinized, oxidized and fractured

### Veins

- Few thin white veins

### Texture

- Igneous summary: oxidized and fractured serpentinized unite

### Rock Name

- Dunite

### Contact

- Continuous

### Sequence

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Lithology</th>
<th>Degree of deformation</th>
<th>Structure</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>MAGNETIC contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>221.38</td>
<td>5</td>
<td>Dunite</td>
<td>Undeformed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Alteration

- Oxidized and fractured serpentinized unite
- Serpentinized, oxidized and fractured

### Veins

- Few thin white veins

### Texture

- Igneous summary: oxidized and fractured serpentinized unite

### Rock Name

- Dunite

### Contact

- Continuous
<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>MSCL-W</th>
<th>MSP</th>
<th>GRA (g/cm³)</th>
<th>Sequence</th>
<th>Lithology</th>
<th>Primary mineralogy (%)</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>221.70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>35d</td>
<td>Dunite</td>
<td>Olivine, Plagioclase</td>
<td>Minor fracturing</td>
<td>Discrete brittle features</td>
<td>Fresh (&lt;3%)</td>
<td></td>
</tr>
<tr>
<td>221.83</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>35d</td>
<td>Clinopyroxenite</td>
<td>Orthopyroxene, Amphibole</td>
<td>Minor fracturing</td>
<td>Discrete brittle features</td>
<td>Fresh (&lt;3%)</td>
<td></td>
</tr>
<tr>
<td>221.93</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>35d</td>
<td>Clinopyroxenite</td>
<td>Orthopyroxene, Amphibole</td>
<td>Minor fracturing</td>
<td>Discrete brittle features</td>
<td>Fresh (&lt;3%)</td>
<td></td>
</tr>
<tr>
<td>222.03</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>35d</td>
<td>Clinopyroxenite</td>
<td>Orthopyroxene, Amphibole</td>
<td>Minor fracturing</td>
<td>Discrete brittle features</td>
<td>Fresh (&lt;3%)</td>
<td></td>
</tr>
<tr>
<td>222.13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>35d</td>
<td>Clinopyroxenite</td>
<td>Orthopyroxene, Amphibole</td>
<td>Minor fracturing</td>
<td>Discrete brittle features</td>
<td>Fresh (&lt;3%)</td>
<td></td>
</tr>
<tr>
<td>222.23</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>35d</td>
<td>Clinopyroxenite</td>
<td>Orthopyroxene, Amphibole</td>
<td>Minor fracturing</td>
<td>Discrete brittle features</td>
<td>Fresh (&lt;3%)</td>
<td></td>
</tr>
<tr>
<td>222.33</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>35d</td>
<td>Clinopyroxenite</td>
<td>Orthopyroxene, Amphibole</td>
<td>Minor fracturing</td>
<td>Discrete brittle features</td>
<td>Fresh (&lt;3%)</td>
<td></td>
</tr>
<tr>
<td>222.43</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>35d</td>
<td>Clinopyroxenite</td>
<td>Orthopyroxene, Amphibole</td>
<td>Minor fracturing</td>
<td>Discrete brittle features</td>
<td>Fresh (&lt;3%)</td>
<td></td>
</tr>
<tr>
<td>222.53</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>35d</td>
<td>Clinopyroxenite</td>
<td>Orthopyroxene, Amphibole</td>
<td>Minor fracturing</td>
<td>Discrete brittle features</td>
<td>Fresh (&lt;3%)</td>
<td></td>
</tr>
</tbody>
</table>
Hole BA4A-83Z Section 2, Top of Section 222.57 (m CCD)

**Sequence:** I  
**Unit/Subunit:** 35d  
**Rock Name:** Dunite  
**Contact:** Continuous  
**Texture:** Igneous summary: serpentinized dunite  
**Alteration:** Serpentinized  
**Veins:** Few black and green veins  
**Structure:** Brittle

---

**Sequence:** I  
**Unit/Subunit:** 36a  
**Rock Name:** Harzburgite  
**Contact:** Modal  
**Texture:** Igneous summary: serpentinized harzburgite  
**Alteration:** Serpentinized  
**Veins:** Few black and green veins  
**Structure:** Brittle

---

**Fabric Intensity**

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>CT Image</th>
<th>Lithology</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip Magnetic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
</tr>
</thead>
<tbody>
<tr>
<td>222.61</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>222.71</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>222.81</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>222.91</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>223.01</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>223.11</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>223.21</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Hole BA4A-83Z Section 4, Top of Section 224.18 (m CCD)

<table>
<thead>
<tr>
<th>Sequence</th>
<th>Unit/Subunit</th>
<th>Rock Name</th>
<th>Contact</th>
<th>Texture</th>
<th>Igneous Summary</th>
<th>Alteration</th>
<th>Vein Density (per meter)</th>
<th>Vein Fracture/ Vein density (per meter)</th>
<th>Degree of Deformation</th>
<th>Magmatic Layering</th>
<th>Foliation</th>
<th>Fissility</th>
<th>Brittle Deformation</th>
<th>Brittle Contact</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>36b</td>
<td>Dunite</td>
<td>Continuous</td>
<td>Igneous</td>
<td>serpentinized dunite, with harzburgitic zones</td>
<td>Serpentinized</td>
<td>2.5</td>
<td>2.5</td>
<td>Brittle</td>
<td>Brittle</td>
<td>Protogranular</td>
<td>Porphyroclastic</td>
<td>Strongly foliated</td>
<td>Brittle</td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>36c</td>
<td>Harzburgite</td>
<td>Modal</td>
<td>Igneous</td>
<td>serpentinized harzburgite</td>
<td>Serpentinized</td>
<td>2.5</td>
<td>2.5</td>
<td>Brittle</td>
<td>Brittle</td>
<td>Strongly foliated</td>
<td>Porphyroclastic</td>
<td>Strongly foliated</td>
<td>Brittle</td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>36d</td>
<td>Dunite</td>
<td>Modal</td>
<td>Igneous</td>
<td>serpentinized dunite, with harzburgitic zones</td>
<td>Serpentinized</td>
<td>2.5</td>
<td>2.5</td>
<td>Brittle</td>
<td>Brittle</td>
<td>Strongly foliated</td>
<td>Porphyroclastic</td>
<td>Strongly foliated</td>
<td>Brittle</td>
<td></td>
</tr>
</tbody>
</table>

**Notes:**
- **Contact:** Continuous, Modal
- **Texture:** Igneous Summary: serpentinized dunite, with harzburgitic zones
- **Alteration:** Serpentinized
- **Veins:** Network of white veins
- **Structure:** Brittle

**Fabric Intensity:**
- **Vein Density:**
  - 0
  - 1 per 10 cm
  - 3-5 per 10 cm
  - >20 per 10 cm
  - 5-15 per 10 cm
  - 15-20 per 10 cm

**Degree of Deformation:**
- **Brittle Contact:**
  - Undeformed
  - Minor fracturing
  - Moderate fracturing
  - GS reduction and rotation
  - Well-developed cataclasis
  - Ultracataclastite

**Veins:**
- Pyroxene grains are rounded and slightly elongated.

**Lithology:**
- **Primary Mineralogy (%):**
  - Olivine
  - Clinopyroxene
  - Orthopyroxene
  - Spinel
  - Amphibole

**Magnetic Susceptibility (SI x 10^-5):**
- 1
- 0.9
- 0.8
- 0.7
- 0.6
- 0.5
- 0.4
- 0.3
- 0.2
- 0.1
- 0

**Dip:**
- **Magnetic contact:** Brittle
- **Brittle Contact:**
  - Protogranular
  - Porphyroclastic
  - Strongly foliated

**Veins:**
- Pyroxene grains are rounded and slightly elongated.
**Hole BA4A-84Z Section 2, Top of Section 225.10 (m CCD)**

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Lithology</th>
<th>Magnetic susceptibility</th>
<th>Alteration intensity</th>
<th>Structure</th>
<th>Vein density</th>
<th>Vein crosscutting</th>
<th>Fabric intensity</th>
<th>Grain size (%)</th>
<th>Degree of deformation</th>
<th>Vein crosscutting</th>
<th>Brittle contact</th>
<th>Dip</th>
<th>Apparent offset</th>
<th>Alteration halos</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>225.10</td>
<td>0</td>
<td>dunite</td>
<td>MSCL-W MSP (SI x 10^-5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>225.20</td>
<td>10</td>
<td>gabbro</td>
<td>GRA (g/cm³)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>225.30</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>225.40</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>225.50</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>225.60</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>225.70</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>225.80</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>225.90</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>226.00</td>
<td>90</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SEQUENCE:** I

**UNIT/SUBUNIT:** 36f

**ROCK NAME:** dunite

**CONTACT:** tectonic

**TEXTURE:**

**IGNEOUS SUMMARY:** serpentnized, midly fractured dunite with minor crosscutting gabbroic dikes

**ALTERATION:** serpentinized

**VEINS:** grey-green, black, grey

**STRUCTURE:**

**Brittle**

Veins - conjugate vein sets occur

Crystal plastic -

Veins -

Discrete brittle features

**Fabric intensity**

**Vein density (per meter)**

**Grain size (%)**

**Degree of deformation**

**Foliation**

**Magmatic layering**

**Minerals**

- Olivine
- Plagioclase
- Clinopyroxene
- Orthopyroxene
- Amphibole
- Sulfide

**Description**

- Fault zones
- Structures
- Apparent offset
- Alteration halos
- Vein crosscutting

**Magnetic contact**

**Brittle**

Crystal plastic

**Veins**

**Alteration**

- Fresh (<3%)
- Slight (3–10%)
- Moderate (11–30%)
- Substantial (31–60%)
- Extensive (61–90%)
- Complete (≥90%)

**Fracture/Vein density (per meter)**

- 0–1 per 10 cm
- 1–2 per 10 cm
- 2–3 per 10 cm
- 3–5 per 10 cm
- >5 per 10 cm

**Dip**

- 0°
- 45°
- 90°
<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>MSCL-W</th>
<th>GRA (g/cm²)</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnetic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>227.04</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>227.14</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>227.24</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>227.34</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>227.44</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>227.54</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>227.64</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>227.74</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### minespecimen

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Magnetized susceptibility</th>
<th>Magnetic susceptibility (SI x 10^{-5})</th>
<th>GRA (g/cm³)</th>
<th>Sequence</th>
<th>Lithology</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>227.70</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>227.80</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>227.90</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>228.00</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>228.10</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>228.20</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>228.30</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>228.40</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>228.50</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>228.60</td>
<td>90</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Description**

**SEQUENCE 1:** 36k
ROCK NAME: harzburgite
CONTACT: Continuous
TEXTURE:
IGNEOUS SUMMARY: fractured, serpentinized harzburgite cross-cut by gabbroic dikes
ALTERATION: serpentinized
VEINS: grey-green veins, grey veins, black veins
STRUCTURE: Brittle
Veins:
- Crystal plastic

**SEQUENCE 1:** 37a
ROCK NAME: dunite
CONTACT: modal
TEXTURE:
IGNEOUS SUMMARY: serpentinized, fractured dunite with cross-cutting gabbroic dikes
ALTERATION: serpentinized
VEINS: grey veins, grey-green veins, green veins, white veins
STRUCTURE: Brittle
Veins:
- Crystal plastic

**SEQUENCE 1:** 37a
ROCK NAME: gabbro
CONTACT: intrusive
TEXTURE:
IGNEOUS SUMMARY: gabbroic dike
ALTERATION: grey-green veins, grey veins
VEINS: grey-green veins, grey veins
STRUCTURE: Brittle
Veins:
- Crystal plastic
Hole BA4A-85Z Section 2, Top of Section 228.66 (m CCD)

**SEQUENCE: I**  
**UNIT/SUBUNIT: 37a**  
**ROCK NAME: dunite**  
**CONTACT: Continuous**  
**TEXTURE:** Igneous  
**SUMMARY:** serpentinized, fractured dunite with cross-cutting gabbroic dikes  
**ALTERATION:** serpentinized  
**VEINS:** grey veins, grey-green veins, green veins, white veins  
**STRUCTURE:** Brittle  
Veins: conjugate vein sets are common  
Crystal plastic:  
Dip:  
Magnetic contact:  
Brittle:  
Crystal plastic:  
Veins:  

<table>
<thead>
<tr>
<th>Fabric intensity</th>
<th>Vein density (per meter)</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>0</td>
<td>1</td>
<td>1.0</td>
<td>0.0</td>
</tr>
<tr>
<td>80</td>
<td>1</td>
<td>2</td>
<td>0.8</td>
<td>2.0</td>
</tr>
<tr>
<td>60</td>
<td>2</td>
<td>3</td>
<td>0.6</td>
<td>4.0</td>
</tr>
<tr>
<td>40</td>
<td>3</td>
<td>4</td>
<td>0.4</td>
<td>6.0</td>
</tr>
<tr>
<td>20</td>
<td>4</td>
<td>5</td>
<td>0.2</td>
<td>8.0</td>
</tr>
<tr>
<td>0</td>
<td>5</td>
<td></td>
<td>0.0</td>
<td>10.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Discrete brittle features</th>
<th>Alteration halos</th>
<th>Magmatic contact</th>
<th>Brittles</th>
<th>Crystal plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>30</td>
<td>10</td>
<td>20</td>
<td>50</td>
<td>70</td>
</tr>
<tr>
<td>30</td>
<td>20</td>
<td>50</td>
<td>70</td>
<td>90</td>
<td>100</td>
</tr>
</tbody>
</table>

**Depth (m CCD) | Core length (cm) | Stained image | Magnetic susceptibility | Primary mineralogy (%) | Grain size | Degree of deformation | Alteration intensity |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>228.69</td>
<td>10</td>
<td>8</td>
<td>1.0</td>
<td>0.0</td>
<td>1.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>228.79</td>
<td>15</td>
<td>10</td>
<td>1.0</td>
<td>0.0</td>
<td>1.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>228.89</td>
<td>20</td>
<td>15</td>
<td>0.5</td>
<td>0.5</td>
<td>2.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>228.99</td>
<td>25</td>
<td>20</td>
<td>0.3</td>
<td>0.3</td>
<td>3.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>229.09</td>
<td>30</td>
<td>25</td>
<td>0.1</td>
<td>0.1</td>
<td>4.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>229.19</td>
<td>35</td>
<td>30</td>
<td>0.0</td>
<td>0.0</td>
<td>5.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
SEQUENCE: I
UNIT/SUBUNIT: 37a
ROCK NAME: dunite
CONTACT: Continuous
TEXTURE:
IGNEOUS SUMMARY: serpentinized, fractured dunite with cross-cutting gabbroic dikes
ALTERATION: serpentinized
VEINS: brown veins, blakc veins, grey-green veins
STRUCTURE: Brittle-
Veins-
Crystal plastic-

SEQUENCE: I
UNIT/SUBUNIT: 37a
ROCK NAME: olivine gabbro
CONTACT: intrusive
TEXTURE:
IGNEOUS SUMMARY: olivine gabbro dike
ALTERATION:
VEINS: grey veins
STRUCTURE: Brittle-
Veins-
Crystal plastic-

SEQUENCE: I
UNIT/SUBUNIT: 37a
ROCK NAME: gabbro
CONTACT: intrusive
TEXTURE:
IGNEOUS SUMMARY: olivine gabbro dike
ALTERATION:
VEINS: black veins, grey veins
STRUCTURE: Brittle-
Veins-
Crystal plastic-

SEQUENCE: I
UNIT/SUBUNIT: 37b
ROCK NAME: gabbro
CONTACT: intrusive
TEXTURE: granular
IGNEOUS SUMMARY: fractured gabbroic dike
ALTERATION:
VEINS: grey-green veins, white veins
STRUCTURE: Brittle-
Veins-
Crystal plastic-
**Hole BA4A-86Z Section 1, Top of Section 230.70 (m CCD)**

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>MSCL-W</th>
<th>MSP</th>
<th>GRA</th>
<th>Sequence</th>
<th>Lithology</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip Magnetic contact</th>
<th>Brittle Crystal plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>230.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>37b</td>
<td>Olivine Plagioclase</td>
<td>25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>230.83</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>37c</td>
<td>Amphibole Orthopyroxene</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>230.93</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>37c</td>
<td>Plagioclase Spinel</td>
<td>25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>231.03</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>37c</td>
<td>Orthopyroxene</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>231.13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>37c</td>
<td>Sulfide</td>
<td>15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Description**

- **SEQNCE: 17 37b**
  - ROCK NAME: gabbro
  - CONTACT: intrusive
  - TEXTURE: brittle
  - MAGNETIC SUMMARY: fractured gabbroic dike
  - ALTERATION: grey-green veins, white veins
  - VEINS: grey-green veins, white veins
  - STRUCTURAL: brittle
  - Veins: Crystal plastic

- **SEQNCE: 17 37c**
  - ROCK NAME: dunite
  - CONTACT: intrusive
  - TEXTURE: brittle
  - MAGNETIC SUMMARY: fractured serpentinized dunite cross-cut by gabbroic dike
  - ALTERATION: serpentinized
  - VEINS: grey-green veins, grey veins, brown veins
  - STRUCTURAL: brittle
  - Veins: Crystal plastic

- **SEQNCE: 17 37c**
  - ROCK NAME: gabbro
  - CONTACT: intrusive
  - TEXTURE: brittle
  - MAGNETIC SUMMARY: gabbroic dike
  - ALTERATION: grey-green veins, white veins
  - VEINS: grey-green veins, white veins
  - STRUCTURAL: brittle
  - Veins: Crystal plastic

**Fabric intensity**

<table>
<thead>
<tr>
<th>Hole</th>
<th>BA4A-86Z Section 1, Top of Section 230.70 (m CCD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depth (m CCD)</td>
<td>Core length (cm)</td>
</tr>
<tr>
<td>230.73</td>
<td></td>
</tr>
<tr>
<td>230.83</td>
<td></td>
</tr>
<tr>
<td>230.93</td>
<td></td>
</tr>
<tr>
<td>231.03</td>
<td></td>
</tr>
<tr>
<td>231.13</td>
<td></td>
</tr>
</tbody>
</table>

**Description**

- **SEQNCE: 17 37b**
  - ROCK NAME: gabbro
  - CONTACT: intrusive
  - TEXTURE: brittle
  - MAGNETIC SUMMARY: fractured gabbroic dike
  - ALTERATION: grey-green veins, white veins
  - VEINS: grey-green veins, white veins
  - STRUCTURAL: brittle
  - Veins: Crystal plastic

- **SEQNCE: 17 37c**
  - ROCK NAME: dunite
  - CONTACT: intrusive
  - TEXTURE: brittle
  - MAGNETIC SUMMARY: fractured serpentinized dunite cross-cut by gabbroic dike
  - ALTERATION: serpentinized
  - VEINS: grey-green veins, grey veins, brown veins
  - STRUCTURAL: brittle
  - Veins: Crystal plastic

- **SEQNCE: 17 37c**
  - ROCK NAME: gabbro
  - CONTACT: intrusive
  - TEXTURE: brittle
  - MAGNETIC SUMMARY: gabbroic dike
  - ALTERATION: grey-green veins, white veins
  - VEINS: grey-green veins, white veins
  - STRUCTURAL: brittle
  - Veins: Crystal plastic
**SEQUENCE: I**
**UNIT/SUBUNIT: 37c**
**ROCK NAME:** dunite
**CONTACT:** Continuous
**TEXTURE:**
**IGNEOUS SUMMARY:** fractured serpentinized dunite cross-cut by gabbroic dikes
**ALTERATION:** serpentinized
**VEINS:** grey-green veins, grey veins, black veins, brown veins
**STRUCTURE:** Brittle-

---

**SEQUENCE: I**
**UNIT/SUBUNIT: 37c**
**ROCK NAME:** gabbro
**CONTACT:** intrusive
**TEXTURE:** granular
**IGNEOUS SUMMARY:** gabbroic dike
**ALTERATION:**
**VEINS:** white veins, brown veins
**STRUCTURE:** Brittle-

---

**SEQUENCE: I**
**UNIT/SUBUNIT: 37c**
**ROCK NAME:** gabbro
**CONTACT:** intrusive
**TEXTURE:** granular
**IGNEOUS SUMMARY:** gabbroic dike
**ALTERATION:**
**VEINS:** white veins, grey veins
**STRUCTURE:** Brittle-

---

**SEQUENCE: I**
**UNIT/SUBUNIT: 37c**
**ROCK NAME:** gabbro
**CONTACT:** intrusive
**TEXTURE:** granular
**IGNEOUS SUMMARY:** gabbroic dike
**ALTERATION:**
**VEINS:** black veins, grey veins
**STRUCTURE:** Brittle-

---

**SEQUENCE: I**
**UNIT/SUBUNIT: 37c**
**ROCK NAME:** gabbro
**CONTACT:** intrusive
**TEXTURE:** granular
**IGNEOUS SUMMARY:** gabbroic dike
**ALTERATION:**
**VEINS:** grey veins, black veins
**STRUCTURE:** Brittle-

---

**SEQUENCE: I**
**UNIT/SUBUNIT: 37c**
**ROCK NAME:** Clinopyroxenite
**CONTACT:** intrusive
**TEXTURE:** granular
**IGNEOUS SUMMARY:** pyroxenitic dike
**ALTERATION:**
**VEINS:** grey veins, black veins
**STRUCTURE:** Brittle-

---

**SEQUENCE: I**
**UNIT/SUBUNIT: 37c**
**ROCK NAME:** gabbro
**CONTACT:** intrusive
**TEXTURE:** granular
**IGNEOUS SUMMARY:** gabbroic dike
**ALTERATION:**
**VEINS:** black veins, white veins
**STRUCTURE:** Brittle-

---

**MAGNETIC contact**
** Brittle Crystal plastic**
**Veins**
<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>MSCL-W MSP (SI x 10^-5)</th>
<th>GRA (g/cm²)</th>
<th>Primary mineralogy (%)</th>
<th>Lithology</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magneto contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
<th>Structures</th>
<th>Alteration</th>
<th>Vein density (per meter)</th>
<th>Apparent offset</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>232.13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>232.23</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>232.33</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>232.43</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>232.53</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>232.63</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>232.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Hole BA4A-87Z Section 1, Top of Section 233.70 (m CCD)

| Depth (m CCD) | Core length (cm) | Shipboard samples | Stained image | CT image | Magnetic susceptibility | MSCL-W MSP (SI x 10^-5) | GRA (g/cm³) | Primary mineralogy (%) | Lithology | Degree of deformation | Fracture/ Vein density (per meter) | Alteration intensity | Dip | Magnetic contact | Brittle Crystal plastic | Veins | Structures | Absorption halos | Vein crosscutting | Alteration halos | Fault zones | Apparent offset | Alteration | Description |
|--------------|-----------------|------------------|---------------|----------|------------------------|--------------------------|----------------|------------------------|-----------|------------------------|-------------------------------|------------------|-----|-------------------|-------------------|--------|------------------|------------------|----------|----------------|-------------|---------------|-----------------|----------|-------------|
| 0            | 22              |                  |               |          |                        |                          |                |                        |          |                        |                               |                 |     |                  |                   |        |                |                 |           |               |             |              |               |          |             |
| 233.73       | 22              |                  |               |          |                        |                          |                |                        |          |                        |                               |                 |     |                  |                   |        |                |                 |           |               |             |              |               |          |             |
| 233.83       | 22              |                  |               |          |                        |                          |                |                        |          |                        |                               |                 |     |                  |                   |        |                |                 |           |               |             |              |               |          |             |
| 233.93       | 22              |                  |               |          |                        |                          |                |                        |          |                        |                               |                 |     |                  |                   |        |                |                 |           |               |             |              |               |          |             |
| 234.03       | 22              |                  |               |          |                        |                          |                |                        |          |                        |                               |                 |     |                  |                   |        |                |                 |           |               |             |              |               |          |             |
| 234.13       | 22              |                  |               |          |                        |                          |                |                        |          |                        |                               |                 |     |                  |                   |        |                |                 |           |               |             |              |               |          |             |
| 234.23       | 22              |                  |               |          |                        |                          |                |                        |          |                        |                               |                 |     |                  |                   |        |                |                 |           |               |             |              |               |          |             |
| 234.33       | 22              |                  |               |          |                        |                          |                |                        |          |                        |                               |                 |     |                  |                   |        |                |                 |           |               |             |              |               |          |             |
| 234.43       | 22              |                  |               |          |                        |                          |                |                        |          |                        |                               |                 |     |                  |                   |        |                |                 |           |               |             |              |               |          |             |
| 234.53       | 22              |                  |               |          |                        |                          |                |                        |          |                        |                               |                 |     |                  |                   |        |                |                 |           |               |             |              |               |          |             |

### Description
- **SEQUENCE**: 37a
- **ROCK NAME**: dunite
- **CONTACT**: Continuous
- **TEXTURE**: igneous
- **IGNEOUS SUMMARY**: fractured, serpentinized dunite crosscut by gabbroic dikes
- **ALTERATION**: serpentinized
- **VEINS**: grey veins, grey-green veins, black veins, brown veins
- **STRUCTURE**: brittle

---

**Fabric intensity**

0 1 2 3 4 5

**Vein density** (per meter)

0 1 per 10 cm 3-5 per 10 cm >20 per 10 cm 5-15 per 10 cm 15-20 per 10 cm

**Grain size**

0-1 mm 1-5 mm 5-30 mm >30 mm

**Hole BA4A-87Z Section 1, Top of Section 233.70 (m CCD)**
<table>
<thead>
<tr>
<th>Sequence</th>
<th>Unit/Subunit</th>
<th>Rock Name</th>
<th>Contact</th>
<th>Texture</th>
<th>Igneous Summary</th>
<th>Alteration</th>
<th>Veins</th>
<th>Structure</th>
<th>Alteration</th>
<th>Dip</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>37e</td>
<td>dunite</td>
<td>Continuous</td>
<td></td>
<td>Fractured, serpentinized dunite crosscut by gabbroic dikes</td>
<td>Serpentinized</td>
<td>Grey, grey-green, black, brown veins in gabbroic dikes</td>
<td>Brittle</td>
<td>Veins: grey veins, structural: Brittle-</td>
<td>Magnetic contact: Brittle, Crystal plastic: Veins:</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sequence</th>
<th>Unit/Subunit</th>
<th>Rock Name</th>
<th>Contact</th>
<th>Texture</th>
<th>Igneous Summary</th>
<th>Alteration</th>
<th>Veins</th>
<th>Structure</th>
<th>Alteration</th>
<th>Dip</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>37e</td>
<td>gabbro</td>
<td>Intrusive</td>
<td></td>
<td>Gabbroic dike</td>
<td></td>
<td>Grey veins</td>
<td>Brittle</td>
<td>Veins:</td>
<td>Magnetic contact: Brittle, Crystal plastic:</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sequence</th>
<th>Unit/Subunit</th>
<th>Rock Name</th>
<th>Contact</th>
<th>Texture</th>
<th>Igneous Summary</th>
<th>Alteration</th>
<th>Veins</th>
<th>Structure</th>
<th>Alteration</th>
<th>Dip</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>37e</td>
<td>gabbro</td>
<td>Intrusive</td>
<td></td>
<td>Gabbroic dike</td>
<td></td>
<td>Grey veins</td>
<td>Brittle</td>
<td>Veins:</td>
<td>Magnetic contact: Brittle, Crystal plastic:</td>
<td>0</td>
</tr>
<tr>
<td>Sequence</td>
<td>Unit/Subunit</td>
<td>Rock Name</td>
<td>Contact</td>
<td>Texture</td>
<td>Igneous Summary</td>
<td>Alteration</td>
<td>Vein</td>
<td>Structure</td>
<td>Dip</td>
<td>Magnetic contact</td>
<td>Vein density (per meter)</td>
</tr>
<tr>
<td>----------</td>
<td>--------------</td>
<td>-----------</td>
<td>---------</td>
<td>---------</td>
<td>-----------------</td>
<td>------------</td>
<td>------</td>
<td>-----------</td>
<td>-----</td>
<td>----------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>37a</td>
<td>37e</td>
<td>dunite</td>
<td>tectonic</td>
<td></td>
<td>fractured, serpentinized dunite crosscut by gabbroic dikes</td>
<td>serpentinized</td>
<td>grey, grey-green, black, brown veins</td>
<td>Brittle-</td>
<td>Veins- conjugate vein sets occur</td>
<td>Crystal plastic</td>
<td>0-10 per 10 cm</td>
</tr>
<tr>
<td>37e</td>
<td>37e</td>
<td>Clinopyroxenite</td>
<td>intrusive</td>
<td>granular</td>
<td>orthopyroxenite dike</td>
<td></td>
<td>black veins</td>
<td>Brittle-</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Lithology**
- Primary mineralogy (%): Olivine, Plagioclase, Clinopyroxene, Orthopyroxene, Amphibole, Sulfide
- Grain size: < 0.1 mm, 0.1-0.2 mm, 0.2-1 mm, 1-5 mm, 5-30 mm, >30 mm
- Degree of deformation: Unaffected, Minor fracturing, Moderate fracturing, GS reduction and rotation, Well-developed cataclasis
- Fracture/ Vein density (per meter): 0-10, 10-30, 30-50, 50-70, 70-90, >100
- Fracture/ Vein density (per meter): 0-10, 10-30, 30-50, 50-70, 70-90, >100
Hole BA4A-87Z Section 4, Top of Section 236.06 (m CCD)

**Lithology and Contacts**
- Rock Name: Gabbro
  - Contact: Tectonic
  - Texture: Granular
  - Igneous Summary: Gabbroic Dike

- Rock Name: Dunite
  - Contact: Intrusive
  - Texture:
  - Igneous Summary: Fractured, Serpentinized Dunite Crosscut by Gabbroic Dikes
  - Alteration: Serpentinized
  - Veins: Grey Veins, Grey-Green Veins

- Rock Name: Gabbro
  - Contact: Intrusive
  - Texture: Granular
  - Igneous Summary: Gabbroic Dike
  - Alteration:
  - Veins: Grey Veins, Green Veins

- Rock Name: Olivine Gabbro
  - Contact: Intrusive
  - Texture: Granular
  - Igneous Summary: Gabbroic Dike
  - Alteration:
  - Veins: Grey Veins

- Rock Name: Olivine Gabbro
  - Contact: Intrusive
  - Texture: Granular
  - Igneous Summary: Olivine Gabbro Dike
  - Alteration:
  - Veins: Grey-Green Veins, White Veins, Black Veins

**Fabric Intensity**
- Hole BA4A-87Z Section 4, Top of Section 236.06 (m CCD)
- Sequence: I
- Unit/Subunit: 37e
- Rock Name: Gabbro
- Contact: Tectonic
- Texture: Granular
- Igneous Summary: Gabbroic Dike
- Alteration:
- Veins: Grey Veins, Green Veins
- Structure: Brittle-Veins-Crystal Plastic

**Vein Density**
- Hole BA4A-87Z Section 4, Top of Section 236.06 (m CCD)
- Sequence: I
- Unit/Subunit: 37e
- Rock Name: Dunite
- Contact: Intrusive
- Texture: Fractured, Serpentinized
- Igneous Summary: Fractured, Serpentinized Dunite Crosscut by Gabbroic Dikes
- Alteration: Serpentinized
- Veins: Grey Veins, Grey-Green Veins
- Structure: Brittle-Veins-Crystal Plastic
| Sequence | Unit/Subunit | Rock Name     | Contact   | Texture   | Igneous Summary                                | Alteration | Veins                          | Structure       | Vein density (per meter) | Alteration intensity |
|----------|--------------|---------------|-----------|-----------|------------------------------------------------|------------|-------------------------------|-----------------|--------------------------|----------------------|                     |
| I        | 37g          | dunite        | Continuous|          | fractured, serpentinized dunite with rubbly zone |            |                               | Brittle-         |                          |                      |                     |
| I        | 37h          | olivine gabbro| Continuous|          | fractured olivine gabbro dike                     |            |                               | Brittle-Crystal plastic- |                          |                      |                     |
| I        | 37i          | dunite        | intrusive |          | fractured, serpentized dunite crosscut by gabbroic dike |            |                               | Brittle-         |                          |                      |                     |
| I        | 37i          | olivine gabbro| intrusive |          | gabbroic dike                                     |            |                               | Brittle-Crystal plastic- |                          |                      |                     |

### Fabric Intensity

- 0: Undeformed
- 1: Minor fracturing
- 2: Moderate fracturing
- 3: GS reduction and rotation
- 4: Well-developed cataclasis
- 5: Ultracataclastite

### Degree of Deformation

- 0–10%
- 11–30%
- 31–60%
- 61–90%
- ≥90%

### Magmatic Contact

- 0: Undeformed
- 1: Minor fracturing
- 2: Moderate fracturing
- 3: GS reduction and rotation
- 4: Well-developed cataclasis
- 5: Ultracataclastite

### Dip

- 0: Undeformed
- 1: Minor fracturing
- 2: Moderate fracturing
- 3: GS reduction and rotation
- 4: Well-developed cataclasis
- 5: Ultracataclastite

### Vein Crosscutting

- 0: Undeformed
- 1: Minor fracturing
- 2: Moderate fracturing
- 3: GS reduction and rotation
- 4: Well-developed cataclasis
- 5: Ultracataclastite

### Alteration Intensity

- 0: Fresh (<3%)
- 1: Slight (3–10%)
- 2: Moderate (11–30%)
- 3: Substantial (31–60%)
- 4: Extensive (61–90%)
- 5: Complete (>90%)

### Magmatic Layering

- 0: Protogranular
- 1: Porphyroclastic
- 2: Strongly foliated
- 3: Protomylonite
- 4: Mylonite
- 5: Ultramylonite

### Foliation

- 0: Isotropic
- 1: Weak
- 2: Moderate
- 3: Strong

### Grain Size

- 0: Fine grained (0.2–1 mm)
- 1: Medium grained (1–5 mm)
- 2: Coarse grained (5–30 mm)
- 3: Pegmatitic (>30 mm)
- 4: Glassy
- 5: Cryptocrystalline (<0.1 mm)
- 6: Microcrystalline (0.1–0.2 mm)

### Magnetic Susceptibility

- 0: 2.76
- 1: 2.96
- 2: 3.06
- 3: 3.16
- 4: 3.26
- 5: 3.36

### Lithology

- 0: Basalt
- 1: Basaltic andesite
- 2: Andesite
- 3: Rhyolite
- 4: Tuff
- 5: Pumice

### Primary Mineralogy

- 0: Olivine
- 1: Plagioclase
- 2: Clinopyroxene
- 3: Orthopyroxene
- 4: Amphibole
- 5: Sulfide

### Degree of Fracture/Vein

- 0: 0–10 per 10 cm
- 1: 10–30 per 10 cm
- 2: 30–50 per 10 cm
- 3: 50–70 per 10 cm
- 4: 70–90 per 10 cm
- 5: >90 per 10 cm

### Discrete brittle features

- 0: Undeformed
- 1: Minor fracturing
- 2: Moderate fracturing
- 3: GS reduction and rotation
- 4: Well-developed cataclasis
- 5: Ultracataclastite
<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Magnetic susceptibility (SI x 10^-5)</th>
<th>GRA (g/cm³)</th>
<th>Sequence</th>
<th>Lithology</th>
<th>Degree of deformation</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Grainsize</th>
<th>Degree of deformation</th>
</tr>
</thead>
<tbody>
<tr>
<td>238.49</td>
<td>0</td>
<td>1</td>
<td>1.9 ± 0.2</td>
<td>37</td>
<td>dunite</td>
<td>Brittle</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TEXT**:
- **SEQUENCE**: 37I
- **UNIT/SUBUNIT**: I
- **ROCK NAME**: dunite
- **CONTACT**: Continuous
- **TEXTURE**: I
- **IGNEOUS SUMMARY**: fractured, serpentized dunite crosscut by gabbroic dike
- **ALTERATION**: serpentinized
- **VEINS**: grey veins, black veins, brown veins, white veins
- **STRUCTURE**: Brittle

**MAGNETIC susceptibility**:
- **MSCL-W**: 1
- **MSP**: 1

**LITHOLOGY**:
- **Primary Mineralogy (%):**
  - Olivine
  - Plagioclase
  - Clinopyroxene
  - Orthopyroxene
  - Amphibole
  - Sulfide

**GRA (g/cm³)**: 1.9 ± 0.2

**Degree of deformation**:
- **Vein density (per meter)**
- **Fabric intensity**
- **Magmatic Layering**
- **Foliation**

**Alteration intensity**:
- Fresh (<3%)
- Slight (3–10%)
- Moderate (11–30%)
- Substantial (31–60%)
- Extensive (61–90%)
- Complete (≥90%)

**Description**:
- Fault zones
- Structures
- Apparent offset
- Alteration halos

**CT image**: Sulfide
- Amphibole
- Spinel
- Orthopyroxene
- Clinopyroxene
- Plagioclase
- Olivine

**Vein density (per meter)**
- 0–1 per 10 cm
- 1–3 per 10 cm
- 3–5 per 10 cm
- >20 per 10 cm

**Vein density (per meter)**
- 0–1 per 10 cm
- 1–3 per 10 cm
- 3–5 per 10 cm
- >20 per 10 cm

**Degree of deformation**:
- Protogranular
- Porphyroclastic
- Strongly foliated
- Protomylonite
- Mylonite
- Ultramylonite

**Texture**:
- Fine grained (0.2–1 mm)
- Medium grained (1–5 mm)
- Coarse grained (5–30 mm)
- Pegmatitic (>30 mm)

**Alteration halo**:
- Undertone: serpentized
- Slight: dunite, serpentinized

**MSCL-W**: 1000
- High: 10–30
- Medium: 30–50
- Low: 50–70
- Very low: 70–90
- Very high: >90

**MSP**: 1
- High: 10–30
- Medium: 30–50
- Low: 50–70
- Very low: 70–90
- Very high: >90

**GRA (g/cm³)**: 2.65
- Low: 1.9
- Medium: 2.15
- High: 2.4

**Vein density (per meter)**
- 0–1 per 10 cm
- 1–3 per 10 cm
- 3–5 per 10 cm
- >20 per 10 cm

**Degree of deformation**:
- Undeformed
- Minor fracturing
- Moderate fracturing
- GS reduction and rotation
- Well-developed cataclasis
- Ultracataclastite

**Dip**
- Magnetite
- Quartz
- Crystal plastic
- Veins

**CT image**: Sulfide
- Amphibole
- Spinel
- Orthopyroxene
- Clinopyroxene
- Plagioclase
- Olivine
**Hole BA4A-88Z Section 4, Top of Section 239.03 (m CCD)**

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Stratigraphic image</th>
<th>Magnetically susceptibility (SI x 10^-4)</th>
<th>GRA (g/cm²)</th>
<th>Sequence (per meter)</th>
<th>Lithology</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnetic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>239.03 - 239.05</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>239.05 - 239.15</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>239.15 - 239.25</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>239.25 - 239.35</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>239.35 - 239.45</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>239.45 - 239.55</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Sequence:** I

**Unit/Subunit:** 37I

**Rock Name:** dunite

**Contact:** Continuous

**IGNEOUS SUMMARY:** fractured, serpentized dunite crosscut by gabbroic dike

**Alteration:** serpentinized

**Veins:** grey veins, black veins, brown veins, white veins

**STRUCTURE:** Brittle

---

**SEQUENCE:** I

**Unit/Subunit:** 37I

**Rock Name:** gabbro

**Contact:** intrusive

**Textured:**

**IGNEOUS SUMMARY:** altered gabbroic dike

**Alteration:**

**Veins:** grey veins, white veins, green veins

**STRUCTURE:** Brittle

---

**Sequence:** I

**Unit/Subunit:** 37I

**Rock Name:** gabbro

**Contact:** intrusive

**Texture:**

**IGNEOUS SUMMARY:** altered gabbroic dike

**Alteration:**

**Veins:** grey veins, white veins, green veins

**Structure:** Brittle

---

**Sequence:** I

**Unit/Subunit:** 37I

**Rock Name:** dunite

**Contact:** Continuous

**Textured:**

**IGNEOUS SUMMARY:** fractured, serpentized dunite crosscut by gabbroic dike

**Alteration:** serpentinized

**Veins:** grey veins, black veins, brown veins, white veins

**Structure:** Brittle
Hole BA4A-89Z Section 1, Top of Section 239.70 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>Magnetic susceptibility (SI x 10^-5)</th>
<th>Lithology</th>
<th>Primary mineralogy (%)</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnetic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>239.70</td>
<td></td>
<td></td>
<td></td>
<td>2.592</td>
<td>MBIO</td>
<td>Olivine</td>
<td>Strong</td>
<td>0–10 per 10 cm</td>
<td>0–10%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>239.83</td>
<td></td>
<td></td>
<td></td>
<td>2.572</td>
<td></td>
<td>Plagioclase</td>
<td>Moderate</td>
<td>10–30 per 10 cm</td>
<td>10–30%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>239.93</td>
<td></td>
<td></td>
<td></td>
<td>2.552</td>
<td></td>
<td>Clinopyroxene</td>
<td>Substantial</td>
<td>30–50 per 10 cm</td>
<td>30–50%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>240.03</td>
<td></td>
<td></td>
<td></td>
<td>2.532</td>
<td></td>
<td>Amphibole</td>
<td>Extensive</td>
<td>50–70 per 10 cm</td>
<td>50–70%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>240.13</td>
<td></td>
<td></td>
<td></td>
<td>2.512</td>
<td></td>
<td>Spinel</td>
<td>Complete</td>
<td>&gt;70 per 10 cm</td>
<td>&gt;70%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>240.23</td>
<td></td>
<td></td>
<td></td>
<td>2.492</td>
<td></td>
<td>Orthopyroxene</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>240.33</td>
<td></td>
<td></td>
<td></td>
<td>2.472</td>
<td></td>
<td>Sulfide</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>240.43</td>
<td></td>
<td></td>
<td></td>
<td>2.452</td>
<td></td>
<td>Fresh (&lt;3%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SEQUENCE:** 371
**ROCK NAME:** dunite
**CONTACT:** intrusive
**TEXTURE:** IGNEOUS
**SUMMARY:** fractured, serpentized dunite crosscut by gabbroic dike

**ALTERATION:** serpentinized

**VEINS:** grey veins, black veins, brown veins, white veins

**STRUCTURE:** Brittle - Veins - Crystal plastic

**FABRIC INTENSITY:** 5

**VEIN DENSITY:** 1 per 10 cm

**ALTERATION INTENSITY:** 0–10%
SEQUENCE: 37I
UNIT/SUBUNIT: 37I
ROCK NAME: dunite
CONTACT: Continuous
TEXTURE:
IGNEOUS
SUMMARY: fractured, serpentized dunite crosscut by gabbroic dike
ALTERATION: serpentinized
VEINS: grey veins, black veins, brown veins, white veins
STRUCTURE: Brittle-Veins- conjugate vein sets occur
Crystal plastic-Fabric intensity

Hole BA4A-89Z Section 2, Top of Section 240.49 (m CCD)

Depth (m CCD) Core length (cm) Shipboard samples Stained image 

Magnetic susceptibility MSCL-W MSP (SI x 10^5) GRA (g/cm²) 

Primary mineralogy (%) 
Olivine Plagioclase Clinopyroxene Orthopyroxene Amphibole Spinel Sulfide 

Grain size 
< 5 5-10 10-30 30-100 100+ 

Discrete brittle features 
Fracture/ Vein (per meter) 
Vein density (per meter) 
Alteration intensity 
Dip Magnatic contact Brittle Crystal plastic Veins Voids 

Lithology 
Fresh (<3%) Slight (3–10%) Moderate (11–30%) Substantial (31–60%) Extensive (61–90%) Complete (≥90%) 

Magmatic Layering Foliation 
Foliation 
3 2 1 0 

Degree of deformation 
Ultramylonite Mylonite Ultramylonite 

Structures 
Fault zones 
Apparent offset 

Degree of deformation 
GS reduction and rotation Well-developed cataclasis Ultracataclastite 

Degree of deformation 
Protomylonite Mylonite 

Degree of deformation 
Protogranular Porphyroclastic Strongly foliated 

Degree of deformation 
Isotropic Weak Moderate Strong 

Degree of deformation 
Fine grained (0.2–1 mm) Medium grained (1–5 mm) Coarse grained (5–30 mm) Pegmatitic (>30 mm) 

Degree of deformation 
Glassy Cryptocrystalline (0.1–0.2 mm) Microcrystalline (0.1–0.2 mm) 

Degree of deformation 
0–10 10–30 30–50 50–70 70–90 >100 

Magnetic contact 
Brittle Crystal plastic Veins Voids

Description

SEQUENCE: 37I
ROCK NAME: dunite
CONTACT: Continuous
TEXTURE:
IGNEOUS
SUMMARY: fractured, serpentized dunite crosscut by gabbroic dike
ALTERATION: serpentinized
VEINS: grey veins, black veins, brown veins, white veins
STRUCTURE: Brittle-Veins- conjugate vein sets occur
Crystal plastic-
**Hole BA4A-89Z Section 4, Top of Section 242.08 (m CCD)**

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>Primary mineralogy</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>242.09</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>242.19</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>242.29</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>242.39</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>242.49</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>242.59</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>242.69</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>242.79</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Sequence 1**: 38a  
**Unit/Subunit**: 38a  
**Rock Name**: Harzburgite  
**Contact**: Continuous  
**Texture**: Igneous_summary: slightly fractured, serpentinized harzburgite with minor dunitic zones cross-cut by minor gabbroic dikes  
**Alteration**: Serpentinized  
**Veins**: Black veins, grey veins  
**Structure**: Brittle-crystal plastic, pyroxene grains are rounded and slightly elongated.
SEQUENCE: I
UNIT/SUBUNIT: 38b
ROCK NAME: Harzburgite
CONTACT: Continuous
TEXTURE:
IGNEOUS
SUMMARY: serpentinized harzburgite with dunitic patches, crosscut by gabbroic and pyroxenitic dikes, weakly fractured
ALTERATION: serpentinized
VEINS: green, white veins usually crosscut fractures and dikes
STRUCTURE: Brittle-
Veins-
Crystal plastic- Pyroxene grains are rounded and slightly elongated.

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fabric intensity</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnatic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>243.90</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>35</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>243.95</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>35</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>244.00</td>
<td>90</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>35</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>244.05</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>35</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>244.10</td>
<td>110</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>35</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>244.15</td>
<td>120</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>35</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>244.20</td>
<td>130</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>35</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>244.25</td>
<td>140</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>35</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>244.30</td>
<td>150</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>35</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>244.35</td>
<td>160</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>35</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>244.40</td>
<td>170</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>35</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>244.45</td>
<td>180</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>35</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>244.50</td>
<td>190</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>35</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Hole BA4A-90Z Section 1, Top of Section 242.70 (m CCD)

Description:
- Sequence: I
- Unit/Subunit: 38b
- Rock Name: Harzburgite
- Contact: Continuous
- Textural Summary: Serpentinized harzburgite with dunitic patches, crosscut by gabbroic and pyroxenitic dikes, weakly fractured
- Alteration: Serpentinized
- Veins: Green, white veins usually crosscut fractures and dikes
- Structure: Brittle-Veins-Crystal plastic: Pyroxene grains are rounded and slightly elongated.
SEQUENCE: 38b
UNIT/SUBUNIT: Harzburgite
ROCK NAME: Continuous
TEXTURE:
IGNEOUS
SUMMARY: Serpentinized harzburgite with dunitic patches, crosscut by gabbroic and pyroxenitic dikes, weakly fractured
ALTERATION: Serpentinized
VEINS: Green, white veins usually crosscut fractures and dikes
STRUCTURE: Brittle-Veins-Crystal plastic-Pyroxene grains are moderately elongated.

Vein crosscutting Alteration intensity

Fracture/ Vein density (per meter)

0-10 10-30 30-50 50-70 70-90 90-100 >100

74-77

Alteration halos

0-10 10-30 30-50 50-70 70-90 90-100 >100

0 Degree of deformation

Vein density (per meter)

0 1 per 10 cm 3-5 per 10 cm >20 per 10 cm 5-15 per 10 cm 15-20 per 10 cm

Discrete brittle features

Vein fracture

Fabric intensity

5 4 3 2 1 0

Degree of deformation

Farbe intensity

5 4 3 2 1 0

0-10 10-30 30-50 50-70 70-90 90-100 >100

5 Magnetic contact Brittle Crystal plastic Veins

Veins: Crystal plastic-Pyroxene grains are moderately elongated.
### Hole BA4A-90Z Section 3, Top of Section 244.51 (m CCD)

<table>
<thead>
<tr>
<th>Core</th>
<th>Lithology</th>
<th>Primary Mineralogy (%)</th>
<th>Degree of Deformation</th>
<th>Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Fabric intensity</th>
</tr>
</thead>
<tbody>
<tr>
<td>244.53</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**Sequences and Subunits**

**SEQUENCE: I, UNIT/SUBUNIT: 38b**
- **ROCK NAME:** Harzburgite
- **CONTACT:** Continuous
- **TEXTURE:** Igneous
- **SUMMARY:** Serpentinized harzburgite with dunitic patches, crosscut by gabbroic and pyroxenitic dikes, weakly fractured
- **ALTERATION:** Serpentinized
- **VEINS:** Green, white veins usually crosscut fractures and dikes
- **STRUCTURE:** Brittle

**SEQUENCE: I, UNIT/SUBUNIT: 38b**
- **ROCK NAME:** Olivine gabbro
- **CONTACT:** Intrusive
- **TEXTURE:** Granular
- **SUMMARY:** Crosscut by white orthogonally to the margin, pretty pull-apart fracture in middle of fine grain size area
- **ALTERATION:** Altered
- **VEINS:** White veins
- **STRUCTURE:** Brittle

**SEQUENCE: I, UNIT/SUBUNIT: 39a**
- **ROCK NAME:** Dunite
- **CONTACT:** Intrusive
- **TEXTURE:** Highly serpentinized dunite, altered with dunitic patches, crosscut by gabbroic and pyroxenitic dikes often branched out, moderately fractured
- **ALTERATION:** Serpentinized, locally oxidized
- **VEINS:** Black, green, white veins
- **STRUCTURE:** Brittle

---

**Core Length (cm)**

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>244.53</td>
<td>-</td>
</tr>
<tr>
<td>244.63</td>
<td>-</td>
</tr>
<tr>
<td>244.73</td>
<td>-</td>
</tr>
<tr>
<td>244.83</td>
<td>-</td>
</tr>
<tr>
<td>244.93</td>
<td>-</td>
</tr>
<tr>
<td>245.03</td>
<td>-</td>
</tr>
<tr>
<td>245.13</td>
<td>-</td>
</tr>
<tr>
<td>245.23</td>
<td>-</td>
</tr>
</tbody>
</table>

**Depth (m CCD)**

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>244.53</td>
<td>-</td>
</tr>
<tr>
<td>244.63</td>
<td>-</td>
</tr>
<tr>
<td>244.73</td>
<td>-</td>
</tr>
<tr>
<td>244.83</td>
<td>-</td>
</tr>
<tr>
<td>244.93</td>
<td>-</td>
</tr>
<tr>
<td>245.03</td>
<td>-</td>
</tr>
<tr>
<td>245.13</td>
<td>-</td>
</tr>
<tr>
<td>245.23</td>
<td>-</td>
</tr>
</tbody>
</table>
**Hole BA4A-90Z Section 4, Top of Section 245.25 (m CCD)**

<table>
<thead>
<tr>
<th>Sequence</th>
<th>Unit/Subunit</th>
<th>Rock Name</th>
<th>Contact</th>
<th>Texture</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>39a</td>
<td>Dunite</td>
<td>Intrusive</td>
<td>Igneous summary: highly serpentinized dunite, altered with dunitic patches, crosscut by gabbroic and pyroxenitic dikes often branched out, moderately fractured</td>
</tr>
</tbody>
</table>

**Alteration:** serpentinized, locally oxidized

**Veins:** black, green, white veins

**Structure:** Brittle- limited brecciation from magmatic impregnation

**Vein density (per meter):**
- 0
- 1 per 10 cm
- 3-5 per 10 cm
- >20 per 10 cm
- 5-15 per 10 cm
- 15-20 per 10 cm

**Degree of deformation:**
- Undeformed
- Minor fracturing
- Moderate fracturing
- GS reduction and rotation
- Well-developed cataclasis
- Ultracataclastite

**Magmatic Layering:**
- Protogranular
- Porphyroclastic
- Strongly foliated
- Protomylonite
- Mylonite
- Ultramylonite

**Foliation/Fabric intensity:**
- Isotropic
- Weak
- Moderate
- Strong

**Magmatic contact:**
- Brittle
- Crystal plastic

**Dip:**
- 0
- 45
- 90

**Description:**
- Sequence: I
- Unit/Subunit: 39a
- Rock Name: Dunite
- Contact: Intrusive
- Igneous summary: highly serpentinized dunite, altered with dunitic patches, crosscut by gabbroic and pyroxenitic dikes often branched out, moderately fractured
- Alteration: serpentinized, locally oxidized
- Veins: black, green, white veins
- Structure: Brittle- limited brecciation from magmatic impregnation

**Magnetic susceptibility (SI x 10^-5):**
- 1000
- 100
- 10
- 1

**Magnetic contact:**
- Brittle
- Crystal plastic

**Dip:**
- 0
- 45
- 90

**Degree of deformation:**
- Undeformed
- Minor fracturing
- Moderate fracturing
- GS reduction and rotation
- Well-developed cataclasis
- Ultracataclastite

**Magmatic Layering:**
- Protogranular
- Porphyroclastic
- Strongly foliated
- Protomylonite
- Mylonite
- Ultramylonite

**Foliation/Fabric intensity:**
- Isotropic
- Weak
- Moderate
- Strong

**Magmatic contact:**
- Brittle
- Crystal plastic

**Dip:**
- 0
- 45
- 90

**Description:**
- Sequence: I
- Unit/Subunit: 39a
- Rock Name: Dunite
- Contact: Intrusive
- Igneous summary: highly serpentinized dunite, altered with dunitic patches, crosscut by gabbroic and pyroxenitic dikes often branched out, moderately fractured
- Alteration: serpentinized, locally oxidized
- Veins: black, green, white veins
- Structure: Brittle- limited brecciation from magmatic impregnation

**Vein density (per meter):**
- 0
- 1 per 10 cm
- 3-5 per 10 cm
- >20 per 10 cm
- 5-15 per 10 cm
- 15-20 per 10 cm

**Degree of deformation:**
- Undeformed
- Minor fracturing
- Moderate fracturing
- GS reduction and rotation
- Well-developed cataclasis
- Ultracataclastite

**Magmatic Layering:**
- Protogranular
- Porphyroclastic
- Strongly foliated
- Protomylonite
- Mylonite
- Ultramylonite

**Foliation/Fabric intensity:**
- Isotropic
- Weak
- Moderate
- Strong

**Magmatic contact:**
- Brittle
- Crystal plastic

**Dip:**
- 0
- 45
- 90

**Description:**
- Sequence: I
- Unit/Subunit: 39a
- Rock Name: Dunite
- Contact: Intrusive
- Igneous summary: highly serpentinized dunite, altered with dunitic patches, crosscut by gabbroic and pyroxenitic dikes often branched out, moderately fractured
- Alteration: serpentinized, locally oxidized
- Veins: black, green, white veins
- Structure: Brittle- limited brecciation from magmatic impregnation

**Vein density (per meter):**
- 0
- 1 per 10 cm
- 3-5 per 10 cm
- >20 per 10 cm
- 5-15 per 10 cm
- 15-20 per 10 cm

**Degree of deformation:**
- Undeformed
- Minor fracturing
- Moderate fracturing
- GS reduction and rotation
- Well-developed cataclasis
- Ultracataclastite

**Magmatic Layering:**
- Protogranular
- Porphyroclastic
- Strongly foliated
- Protomylonite
- Mylonite
- Ultramylonite

**Foliation/Fabric intensity:**
- Isotropic
- Weak
- Moderate
- Strong

**Magmatic contact:**
- Brittle
- Crystal plastic

**Dip:**
- 0
- 45
- 90

**Description:**
- Sequence: I
- Unit/Subunit: 39a
- Rock Name: Dunite
- Contact: Intrusive
- Igneous summary: highly serpentinized dunite, altered with dunitic patches, crosscut by gabbroic and pyroxenitic dikes often branched out, moderately fractured
- Alteration: serpentinized, locally oxidized
- Veins: black, green, white veins
- Structure: Brittle- limited brecciation from magmatic impregnation

**Vein density (per meter):**
- 0
- 1 per 10 cm
- 3-5 per 10 cm
- >20 per 10 cm
- 5-15 per 10 cm
- 15-20 per 10 cm

**Degree of deformation:**
- Undeformed
- Minor fracturing
- Moderate fracturing
- GS reduction and rotation
- Well-developed cataclasis
- Ultracataclastite

**Magmatic Layering:**
- Protogranular
- Porphyroclastic
- Strongly foliated
- Protomylonite
- Mylonite
- Ultramylonite

**Foliation/Fabric intensity:**
- Isotropic
- Weak
- Moderate
- Strong
**SEQUENCE:** 39a
**UNIT/SUBUNIT:** 39a
**ROCK NAME:** Dunite
**CONTACT:** Continuous
**TEXTURE:** IGNEOUS
**SUMMARY:** highly serpentinized dunite, altered with dunitic patches, crosscut by gabbroic and pyroxenitic dikes often branched out, moderately fractured

**ALTERATION:** serpentinized, locally oxidized

**VEINS:** black, green, white veins

**STRUCTURE:** Brittle- Minor faulting
**Vein-**
**Crystal plastic-**

**Fabric intensity**
0 1 2 3 4 5

**Vein density (per meter)**
0 1 2 3 4 5 6

**Granite size**
0 1 2 3 4 5 6 7

**Magnetic susceptibility**
1000 100 10 1

**Lithology**

**Primary mineralogy (%)**
100

**Magmatic contact**

**Layering**

**Foliation**

**Discrete brittle features**
0 1 2 3 4 5

**Degree of deformation**

**Fracture/ Vein density (per meter)**

**Alteration intensity**

**Dip**

**Magnetic contact** Brittle Crystal plastic Veins

**Hole BA4A-91Z Section 1, Top of Section 245.70 (m CCD)**

Core length (cm)
245.70 245.80 245.90 246.00 246.10 246.20 246.30 246.40 246.50 246.60

Depth (m CCD)
0 10 20 30 40 50 60 70 80 90

CT image

Magnetic susceptibility (SI 10^-5)

MSCL-W MSP GRA (g/cm^3)

Core length (cm)

Lithology

Sequence

Primary mineralogy

Olivine Plagioclase Clinopyroxene Orthopyroxene Amphibole Sulfide

Grain size

Degree of deformation

Fabric intensity

Fracture/ Vein density (per meter)

Alteration intensity

Dip

Magnetic contact Brittle Crystal plastic Veins

Sequence: I

Unit/subunit: 39a

Rock Name: Dunite

Contact: Continuous

Textured: Igneous

Summary: Highly serpentinized dunite, altered with dunitic patches, crosscut by gabbroic and pyroxenitic dikes often branched out, moderately fractured

Alteration: Serpentinized, locally oxidized

Veins: Black, green, white veins

Structure: Brittle- Minor faulting

Vein- Crystal plastic

Fabric intensity: 0 1 2 3 4 5

Vein density (per meter): 0 1 2 3 4 5 6

Granite size: 0 1 2 3 4 5 6 7

Magnetic susceptibility: 1000 100 10 1

Lithology

Primary mineralogy (%): 100

Magmatic contact

Layering

Foliation

Discrete brittle features: 0 1 2 3 4 5

Degree of deformation

Fracture/ Vein density (per meter)

Alteration intensity

Dip

Magnetic contact Brittle Crystal plastic Veins

Hole BA4A-91Z Section 1, Top of Section 245.70 (m CCD)
**Sequence:** I  
**Unit/Subunit:** 39a  
**Rock Name:** Dunite  
**Contact:** Intrusive  
**Texture:** Igneous  
**Summary:** Highly serpentinized dunite, altered with dunitic patches, crosscut by gabbroic and pyroxenitic dikes often branched out, moderately fractured  
**Alteration:** Serpentinized, locally oxidized  
**Veins:** Black, green, white veins  
**Structure:** Brittle - Single fault plane offsets dike and runs down most of section  

**Sequence:** I  
**Unit/Subunit:** 39b  
**Rock Name:** Harzburgite  
**Contact:** Modal  
**Texture:** Granular  
**Igneous Summary:** Serpentinized harzburgite with dunitic vertical corridor, crosscut by pyroxenitic dikes  
**Alteration:** Serpentinized  
**Veins:** Black vertical veins  
**Structure:** Brittle - Veins - Crystal plastic - Pyroxene grains are moderately elongated.
SEQUENCE I
UNIT/SUBUNIT: 39a
ROCK NAME: Harzburgite
CONTACT: Continuous
TEXTURE: Granular
IGNEOUS SUMMARY: serpentinized harzburgite with dunitic vertical corridor, crosscut by pyroxenitic dikes
ALTERATION: serpentinized
VEINS: black vertical veins
STRUCTURE: Brittle-
Veins- conjugate vein sets occur
Crystal plastic- Pyroxene grains are rounded and slightly elongated.

SEQUENCE I
UNIT/SUBUNIT: 39b
ROCK NAME: Clinopyroxenite
CONTACT: Intrusive
TEXTURE: Granular
IGNEOUS SUMMARY: offset
ALTERATION: highly altered
VEINS:
STRUCTURE: Brittle-
Veins- conjugate vein sets occur
Crystal plastic- Pyroxene grains are rounded and slightly elongated.
<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Lithology</th>
<th>Primary mineralogy (%)</th>
<th>Grain size (mm)</th>
<th>Degree of deformation</th>
<th>Discrete brittle features</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Structures</th>
<th>Alteration halos</th>
<th>Vein density (per meter)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>248.70</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>248.80</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>248.90</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>248.99</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>249.00</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>249.10</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>249.20</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>249.30</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>249.40</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>249.50</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>249.60</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
SEQUENCE: I
UNIT/SUBUNIT: 39c
ROCK NAME: harzburgite
CONTACT: Continuous
TEXTURE: IGNEOUS
SUMMARY: highly serpentinized harzburgite crosscut by gabbroic and pyroxenitic offeset dikes, moderately fractured
ALTERATION: highly altered, serpentinized, locally oxidized
VEINS: black, green, white veins
STRUCTURE: Brittle-
Veins-
Crystal plastic-

---

SEQUENCE: II
UNIT/SUBUNIT: 39c
ROCK NAME: Clinopyroxenite
CONTACT: Intrusive
TEXTURE: Granular
IGNEOUS SUMMARY: offset
ALTERATION: highly altered
VEINS: green veins
STRUCTURE: Brittle-
Veins-
Crystal plastic-

---

Magnetic susceptibility
MSCL-W MSP
(SI x 10^-5)
GRA (g/cm²)
Sequence
Lithology
Primary mineralogy (%)
Olivine
Plagioclase
Clinopyroxene
Orthopyroxene
Amphibole
Spinel
Sulfide
Grain size
≤ 3
15 30 50 100
> 15
Degree of deformation
Fracture/ Vein density (per meter)
Fabric intensity
Discrete brittle features

Alteration intensity
Vein density (per meter)

Description
Fault zones
Structures
Apparent offset
Alteration halos

---

Veins:
Magnetic contact
Brittle
Crystal plastic

---

Hole BA4A-92Z Section 2, Top of Section 249.67 (m CCD)
| Depth (m CCD) | Core length (cm) | Shipboard samples | Stained image | Magnetic susceptibility (SI \(10^{-5}\)) MSP | GRA (g/cm³) | Sequence | Lithology | Primary mineralogy (%) | Grain size | Degree of deformation | Fracture/ Vein density (per meter) | Alteration intensity | Dip | Alteration halos | Vein density (per meter) | Alteration halos | Structures | Fracture/ Vein density (per meter) | Fracture/ Vein density (per meter) | Fracture/ Vein density (per meter) | Fracture/ Vein density (per meter) | Fracture/ Vein density (per meter) |
|--------------|-----------------|-------------------|--------------|---------------------------------------------|------------|---------|-----------|---------------------------------|-----------|----------------------------|---------------------------------|----------------------|-----|----------------|--------------------------|----------------------|------------|------------------|--------------------------|--------------------------|------------------|------------------|--------------------------|
| 250.53       | 0               |                   |              |                                             |            |         |           |                                |           |                             |                                  |                      |     |                |                          |                      |            |                  |                          |                          |                  |                  |                          |                          |
| 250.63       | 10              |                   |              |                                             |            |         |           |                                |           |                             |                                  |                      |     |                |                          |                      |            |                  |                          |                          |                  |                  |                          |                          |
| 250.73       | 20              |                   |              |                                             |            |         |           |                                |           |                             |                                  |                      |     |                |                          |                      |            |                  |                          |                          |                  |                  |                          |                          |
| 250.83       | 30              |                   |              |                                             |            |         |           |                                |           |                             |                                  |                      |     |                |                          |                      |            |                  |                          |                          |                  |                  |                          |                          |
| 250.93       | 40              |                   |              |                                             |            |         |           |                                |           |                             |                                  |                      |     |                |                          |                      |            |                  |                          |                          |                  |                  |                          |                          |

**Hole BA4A-92Z Section 3, Top of Section 250.51 (m CCD)**

**Description**
**Hole BA4A-93Z Section 1, Top of Section 251.70 (m CCD)**

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
</tr>
</thead>
<tbody>
<tr>
<td>251.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>251.83</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>251.93</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>252.03</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>252.13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>252.23</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>252.33</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Description**

- **Sequence**: 40b
- **Unit/Subunit**: 40b
- **Rock Name**: Dunite
- **Contact**: Continuous

**TEXTURE:**

**IGNEOUS SUMMARY:** Serpentinized opx-bearing dunite

**ALTERATION**: serpentinized

**VEINS**: black veins

**STRUCTURE**: Brittle-

**Vein density (per meter)**

- 0–10
- 10–30
- 30–50
- 50–70
- 70–90
- >100

**Vein crosscutting**

- Magmatic
- Contact

**Alteration intensity**

- Fresh (<3%)
- Slight (3–10%)
- Moderate (11–30%)
- Substantial (31–60%)
- Extensive (61–90%)
- Complete (≥90%)

**Dip**

- Magnetic contact
- Brittle
- Crystal plastic
- Veins

**Magnetic susceptability (SI x 10^-5)**

- MSCL-W
- MSP

**GRA (g/cm³)**

- 2.77
- 2.72
- 2.67
- 2.62

**Magmatic Layering**

- Protogranular
- Porphyroclastic
- Strongly foliated

**Foliation**

- Protomylonite
- Mylonite
- Ultramylonite

**Texture**

- Isotropic
- Weak
- Moderate
- Strong

**Magmatic Brittle Contact**

- Dip

**Fracture/ Vein density (per meter)**

- 0–10
- 10–30
- 30–50
- 50–70
- 70–90
- >100

**Fabric intensity**

- 0
- 1
- 2
- 3
- 4
- 5

**Fracture/ Vein**

- Crosscutting

**Alteration halos**

- 0
- 20
- 40
- 60
- 80
- 100

**Degree of deformation**

- Undeformed
- Minor fracturing
- Moderate fracturing
- GS reduction and rotation
- Well-developed cataclasis
- Ultracataclastite

**Magmatic Layering**

- Protogranular
- Porphyroclastic
- Strongly foliated

**Texture**

- Isotropic
- Weak
- Moderate
- Strong

**Magmatic Brittle Contact**

- Dip

**Fracture/ Vein density (per meter)**

- 0–10
- 10–30
- 30–50
- 50–70
- 70–90
- >100

**Fabric intensity**

- 0
- 1
- 2
- 3
- 4
- 5

**Fracture/ Vein**

- Crosscutting

**Alteration halos**

- 0
- 20
- 40
- 60
- 80
- 100

**Degree of deformation**

- Undeformed
- Minor fracturing
- Moderate fracturing
- GS reduction and rotation
- Well-developed cataclasis
- Ultracataclastite

**Magmatic Layering**

- Protogranular
- Porphyroclastic
- Strongly foliated

**Texture**

- Isotropic
- Weak
- Moderate
- Strong

**Magmatic Brittle Contact**

- Dip
**Sequence:** I  
**Unit/Subunit:** 40c  
**Rock Name:** Harzburgite  
**Contact:** Continuous  
**Texture:** Granular  
**Igneous Summary:** Serpentinized harzburgite with dunitic patches, crosscut by gabbroic pyroxenitic and wehrlitic dikes, weakly fractured  
**Alteration:** Serpentinized, oxidized in dunitic zones  
**Veins:** White veins  
**Structure:** Brittle-Veins- Conjugate vein sets occur  
Crystal plastic- Pyroxene grains are rounded and slightly elongated.  

**Sequence:** I  
**Unit/Subunit:** 40c  
**Rock Name:** Clinopyroxenite  
**Contact:** Intrusive  
**Texture:** Granular  
**Igneous Summary:** Rubble zone  
**Alteration:** Highly altered  
**Veins:** Green, white veins  
**Structure:** Brittle-Veins- Vein crosscutting  
Crystal plastic- Pyroxene grains are rounded and slightly elongated.  

---  

**Description**

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Lithology</th>
<th>Primary mineralogy (%)</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Magnetic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>252.37</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>252.47</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>252.57</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>252.67</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>252.77</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>252.87</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>252.97</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>253.07</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>253.17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Hole BA4A-93Z Section 3, Top of Section 253.23 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Lithology</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Degree of alteration</th>
<th>Vein density (per meter)</th>
<th>Discrete brittle features</th>
<th>Structures</th>
<th>Alteration intensity</th>
<th>Magnetic susceptibility</th>
<th>Magnetic contact</th>
<th>Dip</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>253.25</td>
<td>1</td>
<td>Harzburgite</td>
<td>Olivine, Plagioclase, Amphibole, Orthopyroxene</td>
<td>Fine (0.2–1 mm)</td>
<td>Undeformed</td>
<td>Fresh (&lt;3%)</td>
<td>0–10 per 10 cm</td>
<td>Microcracks, brittle features</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>253.25</td>
<td>2</td>
<td>Wehrlite</td>
<td>Amphibole, Clinopyroxene, Spinel, Pyroxene</td>
<td>Medium (1–5 mm)</td>
<td>Minor fracturing</td>
<td>Slight (3–10%)</td>
<td>5–15 per 10 cm</td>
<td>Microcracks, brittle features</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>253.25</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td>Moderate fracturing</td>
<td>Moderate (11–30%)</td>
<td>15–20 per 10 cm</td>
<td>Microcracks, brittle features</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>253.25</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td>Well-developed cataclasis</td>
<td>Substantial (31–60%)</td>
<td>&gt;20 per 10 cm</td>
<td>Microcracks, brittle features</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>253.25</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td>Ultra-mylonite</td>
<td>Extensive (61–90%)</td>
<td></td>
<td>Microcracks, brittle features</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>253.25</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td>Ultramylonite</td>
<td>Complete (≥90%)</td>
<td></td>
<td>Microcracks, brittle features</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Description**: Crystal plastic. Pyroxene grains are rounded and slightly elongated.
| Depth (m CCD) | Core length (cm) | Shipboard samples | Stained image | CT image | Magnetic susceptibility MSCL-W MSP (SI x 10^-5) | GRA (g/cm²) | Sequence | Lithology | Primary mineralogy (%) | Grain size | Magmatic layering | Fabric intensity | Magmatic foliation | Discrete brittle features | Fissure/crystal plastic | Vein density (per meter) | Alteration intensity | Dip | Magnetic contact | Brittle crystal plastic | Structures | Drilling offset | Absent/visible/offset | Vein density (per meter) | Fracture/vein density (per meter) |
|--------------|----------------|------------------|-------------|----------|-----------------------------------------------|------------|---------|----------|-----------------------|-----------|----------------------|-----------------|---------------------|----------------------|----------------------|------------------|----------------|----------------------|---------------------|----------------|-------------------------|----------------|-------------------|----------------------|----------------------|----------------------|
| 254.00       |                |                  |             |          |                                               |            |         |          |          |                      |           |                     |                  |                     |                   |                     |                 |                  |                    |                     |                 |                         |                  |                   |                        |                     |                     |
| 254.10       |                |                  |             |          |                                               |            |         |          |          |                      |           |                     |                  |                     |                   |                     |                 |                  |                    |                     |                 |                         |                  |                   |                        |                     |                     |
| 254.20       |                |                  |             |          |                                               |            |         |          |          |                      |           |                     |                  |                     |                   |                     |                 |                  |                    |                     |                 |                         |                  |                   |                        |                     |                     |
| 254.30       |                |                  |             |          |                                               |            |         |          |          |                      |           |                     |                  |                     |                   |                     |                 |                  |                    |                     |                 |                         |                  |                   |                        |                     |                     |
| 254.40       |                |                  |             |          |                                               |            |         |          |          |                      |           |                     |                  |                     |                   |                     |                 |                  |                    |                     |                 |                         |                  |                   |                        |                     |                     |
| 254.50       |                |                  |             |          |                                               |            |         |          |          |                      |           |                     |                  |                     |                   |                     |                 |                  |                    |                     |                 |                         |                  |                   |                        |                     |                     |
| 254.60       |                |                  |             |          |                                               |            |         |          |          |                      |           |                     |                  |                     |                   |                     |                 |                  |                    |                     |                 |                         |                  |                   |                        |                     |                     |
| 254.70       |                |                  |             |          |                                               |            |         |          |          |                      |           |                     |                  |                     |                   |                     |                 |                  |                    |                     |                 |                         |                  |                   |                        |                     |                     |
| 254.80       |                |                  |             |          |                                               |            |         |          |          |                      |           |                     |                  |                     |                   |                     |                 |                  |                    |                     |                 |                         |                  |                   |                        |                     |                     |
### Hole BA4A-94Z Section 1, Top of Section 254.70 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Lithology</th>
<th>Degree of deformation</th>
<th>Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Structures</th>
</tr>
</thead>
<tbody>
<tr>
<td>254.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>254.83</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>254.93</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>255.03</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>255.13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>255.23</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>255.33</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>255.43</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>255.53</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Primary mineralogy
- Olivine
- Plagioclase
- Clinopyroxene
- Orthopyroxene
- Amphibole
- Spinel
- Sulfide

#### Degree of deformation
- Fracture/ Vein density (per meter)

#### Magnetic susceptibility
- MSCL-W
- MSP (SI x 10^-5)
- GRA (g/cm^3)

#### Texture
- Protomylonite
- Mylonite
- Ultramylonite
- Porphyroclastic
- Strongly foliated

#### Fracture/Vein density
- Fresh (<3%)
- Slight (3–10%)
- Moderate (11–30%)
- Substantial (31–60%)
- Extensive (61–90%)
- Complete (≥90%)

#### Dip
- Magnetic contact
- Brittle
- Crystal plastic

#### Vegetation
- Protogranular
- Layering
- Foliation

#### Degree of alteration
- Fresh (<3%)
- Slight (3–10%)
- Moderate (11–30%)
- Substantial (31–60%)
- Extensive (61–90%)
- Complete (>90%)

#### Veins
- Cut by green/orange composite frankenstein veins, dark veins and white thread veins

#### Vein density
- 0–10 per 10 cm
- 10–30 per 10 cm
- 30–50 per 10 cm
- 50–70 per 10 cm
- 70–90 per 10 cm
- >90 per 10 cm

#### Structures
- Fault zones
- Magmatic contact
- Brittle
- Crystal plastic

#### Vectors
- Protogranular
- Layering
- Foliation

#### Magmatic contact
- Dip
- Brittle
- Crystal plastic

#### Fabric intensity
- 0
- 1
- 2
- 3
- 4
- 5

#### Vein density
- 0
- 5
- 10
- 15
- 20
- 25
- 30
- 35
- 40
- 45
- 50
- 55
- 60
- 65
- 70
- 75
- 80
- 85
- 90
- 95
- 100

#### Alteration intensity
- 0
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10

#### Discrete brittle features
- Brittle
- Crystal plastic

#### Vein crosscutting
- Brittle
- Crystal plastic

#### Alteration halos
- Fresh (<3%)
- Slight (3–10%)
- Moderate (11–30%)
- Substantial (31–60%)
- Extensive (61–90%)
- Complete (≥90%)

#### Degree of deformation
- Undeformed
- Minor fracturing
- Moderate fracturing
- GS reduction and rotation
- Well-developed cataclasis
- Ultracataclastite

#### Rock Name:
- Dunite
- Harzburgite

#### Sequence:
- I
- 40d
- 40e

#### Unit/Subunit:
- 40d
- 40e

#### Rock Texture:
- Granular

#### Igneous Summary:
- Serpentinized dunite patches, crosscut by pyroxenitic and wehrlitic dikes, weakly fractured
- Serpentinized harzburgite with gabbro dykes

#### Alteration:
- Serpentinized

#### Veins:
- White veins
- Cut by green/orange composite frankenstein veins, dark veins and white thread veins

#### Structure:
- Brittle
- Veins
- Crystal plastic
- Pyroxene grains are strongly elongated.
**SEQUENCE:** 40f  
**UNIT/SUBUNIT:** 40f  
**ROCK NAME:** harzburgite  
**CONTACT:** continuous  
**TEXTURE:** Granular  
**IGNEOUS SUMMARY:** serpentinised harzburgite with gabbro dykes  
**ALTERATION:** serpentinised  

**VEINS:** cut by green/white composite frankenstein veins, black white composite frankenstein veins, dark veins and white thread veins

**STRUCTURE:** Brittle-Vein-Crystal plastic-Pyroxene grains are moderately elongated.
### Hole BA4A-94Z Section 4, Top of Section 257.29 (m CCD)

<table>
<thead>
<tr>
<th>Sequence</th>
<th>Unit/Subunit</th>
<th>Lithology</th>
<th>Primary Mineralogy (%)</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Alteration halos</th>
<th>Structures</th>
<th>Width (cm)</th>
<th>Dip-contact alteration</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>40f</td>
<td>harzburgite</td>
<td>Olivine, Plagioclase, Clinopyroxene, Orthopyroxene, Amphibole, Sulfide</td>
<td>Granular</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>olivine gabbro</td>
<td>Olivine, Plagioclase, Orthopyroxene, Amphibole, Sulfide</td>
<td>Granular</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Lithology:**
- Primary mineralogy: Olivine, Plagioclase, Clinopyroxene, Orthopyroxene, Amphibole, Sulfide.

**Degree of deformation:**
- Granular

**Fracture/ Vein density (per meter):**
- | 0 | 1 | 2 | 3 | 4 |
  - 0: 0–10 per 10 cm
  - 1: 10–30 per 10 cm
  - 2: 30–50 per 10 cm
  - 3: 50–70 per 10 cm
  - 4: 70–90 per 10 cm
  - 5: >90 per 10 cm

**Alteration intensity:**
- Fresh (<3%)
- Slight (3–10%)
- Moderate (11–30%)
- Substantial (31–60%)
- Extensive (61–90%)
- Complete (≥90%)

**Structures:**
- Brittle Veins
- Crystal plastic
- Veins

**Dip-contact alteration:**
- Magnetic contact

**Description:**
- Crystalline: Pyroxene grains are rounded and slightly elongated.
Hole BA4A-95Z Section 1, Top of Section 257.70 (m CCD)

<table>
<thead>
<tr>
<th>Lithology</th>
<th>Primary mineralogy (%)</th>
<th>Degree of deformation</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Structures</th>
</tr>
</thead>
<tbody>
<tr>
<td>harzburgite</td>
<td>olivine, clinopyroxene, orthopyroxene</td>
<td>Fabric intensity</td>
<td>Vein density (per meter)</td>
<td>Alteration intensity</td>
<td>Vein density (per meter)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>gabbro</td>
<td>plagioclase, amphibole, spinel</td>
<td>Vein crosscutting</td>
<td>Alteration intensity</td>
<td>Vein density (per meter)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>harzburgite</td>
<td>olivine, clinopyroxene, orthopyroxene</td>
<td>Vein crosscutting</td>
<td>Alteration intensity</td>
<td>Vein density (per meter)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>gabbro</td>
<td>plagioclase, amphibole, spinel</td>
<td>Vein crosscutting</td>
<td>Alteration intensity</td>
<td>Vein density (per meter)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Lithology**
- harzburgite
- gabbro
- harzburgite
- gabbro

**Primary Mineralogy (%)**
- olivine, clinopyroxene, orthopyroxene
- plagioclase, amphibole, spinel
- olivine, clinopyroxene, orthopyroxene
- plagioclase, amphibole, spinel

**Degree of Deformation**
- Fabric intensity
- Vein density (per meter)
- Alteration intensity
- Vein density (per meter)

**Alteration intensity**

**Dip**
- Magnetic contact
- Brittle
- Crystal plastic
- Veins

**Sequence**
- I
- I
- I
- I

**Unit/Subunit**
- 40f
- 40g
- 40h
- 40h

**Rock Name**
- harzburgite
- gabbro
- harzburgite
- gabbro

**Contact**
- continuous
- intrusive
- intrusive
- intrusive

**Texture**
- Granular
- Granular
- Granular
- Granular

**Igneous Summary**
- serpentinised harzburgite with gabbro dykes
- altered gabbro dyke
- highly serpentinised harzburgite
- altered gabbro dyke

**Alteration**
- serpentinised
- altered and pseudomorphed
- serpentinised
- altered and pseudomorphed

**Veins**
- cut by green/white composite frankenstein veins, black white composite frankenstein veins, dark veins and white thread veins
- white
- white thread veins, dyke halo white veins, and white veins parallel to dyke in 1 cm black zone adjacent to dyke
- white

**Structure**
- Brittle-Veins-Crystal plastic-Pyroxene grains are rounded and slightly elongated.
Hole BA4A-95Z Section 2, Top of Section 258.53 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>CT image</th>
<th>Magnetic susceptibility</th>
<th>MSCL-W MSP (SI x 10^5)</th>
<th>GRA (g/cm²)</th>
<th>Primary mineralogy</th>
<th>Grain size</th>
<th>Degree of deformation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Lithology**
- **Primary mineralogy (%):**
  - Olivine
  - Plagioclase
  - Clinopyroxene
  - Orthopyroxene
  - Amphibole
  - Sulfide

**Degree of deformation**
- Fracture/ Vein density (per meter)
- Alteration intensity

**Structures**
- Vein crosscutting
- Alteration halos
- Fault zones

**Fabrics**
- **Fabric intensity**
- **Vein density (per meter)**
- **Fracture/ Vein density (per meter)**
- **Alteration intensity**

**Veins**
- **Vein**
- **Crystalline)**
- **Dip Magnetic contact**
- **Brittle**
- **Crystal plastic**

**Alteration intensity**
- Fresh (<3%)
- Slight (3–10%)
- Moderate (11–30%)
- Substantial (31–60%)
- Extensive (61–90%)
- Complete (≥90%)

**Degree of deformation**
- Undeformed
- Minor fracturing
- Moderate fracturing
- GS reduction and rotation
- Well-developed cataclasis
- Ultracataclastite

**Protogranular**
- Porphyroclastic
- Strongly foliated
- Protomylonite
- Mylonite
- Ultramylonite

**Isotropic**
- Weak
- Moderate
- Strong

**Grain size**
- Fine grained (0.2–1 mm)
- Medium grained (1–5 mm)
- Coarse grained (5–30 mm)
- Pegmatitic (>30 mm)

**Hole BA4A-95Z Section 2, Top of Section 258.53 (m CCD)**
Hole BA4A-95Z Section 3, Top of Section 259.07 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnatic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>259.09</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>259.19</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>259.29</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>259.39</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>259.49</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>259.59</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>259.69</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>259.79</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>259.89</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SEQUENCE: I
UNIT/SUBUNIT: 41b
ROCK NAME: harzburgite
CONTACT: continuous
TEXTURE: Granular
IGNEOUS SUMMARY: serpentinised harzburgite mixed with gabbroic melton cm scale
ALTERATION: serpentinised
VEINS: white thread veins, dark veins
STRUCTURE: Brittle- Brecciation from magmatic impregnation

SEQUENCE: I
UNIT/SUBUNIT: 41b
ROCK NAME: olivine gabbro
CONTACT: intrusive
TEXTURE: Protogranular
IGNEOUS SUMMARY: highly altered gabbro dyke
ALTERATION: massive replacement of dyke minerals
VEINS: white veins cut dyke
STRUCTURE: Brittle- Brittle-Crystal plastic

Magnetic susceptibility (SI x 10^-5)

Sample ID: 41b

Lithology:
- Olivine
- Plagioclase
- amphibole
- orthopyroxene
- spinel
- sulfide

Primary mineralogy

Hole BA4A-95Z Section 3, Top of Section 259.07 (m CCD)

Depth (m CCD)
Core length (cm)
Shipboard samples
Stained image
Magnetic susceptibility
(10^-5)
GRA (g/cm^3)
Sequence
Unit/Subunit
Lithology
Primary mineralogy
Degree of deformation
Fracture/ Vein density (per meter)
Alteration intensity
Dip
Magnetic contact
Brittle
Crystal plastic
Veins

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnatic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>259.09</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>259.19</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>259.29</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>259.39</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>259.49</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>259.59</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>259.69</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>259.79</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>259.89</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SEQUENCE: I
UNIT/SUBUNIT: 41b
ROCK NAME: harzburgite
CONTACT: continuous
TEXTURE: Granular
IGNEOUS SUMMARY: serpentinised harzburgite mixed with gabbroic melton cm scale
ALTERATION: serpentinised
VEINS: white thread veins, dark veins
STRUCTURE: Brittle- Brecciation from magmatic impregnation

SEQUENCE: I
UNIT/SUBUNIT: 41b
ROCK NAME: olivine gabbro
CONTACT: intrusive
TEXTURE: Protogranular
IGNEOUS SUMMARY: highly altered gabbro dyke
ALTERATION: massive replacement of dyke minerals
VEINS: white veins cut dyke
STRUCTURE: Brittle- Brittle-Crystal plastic

Magnetic susceptibility (SI x 10^-5)

Sample ID: 41b

Lithology:
- Olivine
- Plagioclase
- amphibole
- orthopyroxene
- spinel
- sulfide

Primary mineralogy

Hole BA4A-95Z Section 3, Top of Section 259.07 (m CCD)

Depth (m CCD)
Core length (cm)
Shipboard samples
Stained image
Magnetic susceptibility
(10^-5)
GRA (g/cm^3)
Sequence
Unit/Subunit
Lithology
Primary mineralogy
Degree of deformation
Fracture/ Vein density (per meter)
Alteration intensity
Dip
Magnetic contact
Brittle
Crystal plastic
Veins

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnatic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>259.09</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>259.19</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>259.29</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>259.39</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>259.49</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>259.59</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>259.69</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>259.79</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>259.89</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SEQUENCE: I
UNIT/SUBUNIT: 41b
ROCK NAME: harzburgite
CONTACT: continuous
TEXTURE: Granular
IGNEOUS SUMMARY: serpentinised harzburgite mixed with gabbroic melton cm scale
ALTERATION: serpentinised
VEINS: white thread veins, dark veins
STRUCTURE: Brittle- Brecciation from magmatic impregnation

SEQUENCE: I
UNIT/SUBUNIT: 41b
ROCK NAME: olivine gabbro
CONTACT: intrusive
TEXTURE: Protogranular
IGNEOUS SUMMARY: highly altered gabbro dyke
ALTERATION: massive replacement of dyke minerals
VEINS: white veins cut dyke
STRUCTURE: Brittle- Brittle-Crystal plastic

Magnetic susceptibility (SI x 10^-5)

Sample ID: 41b

Lithology:
- Olivine
- Plagioclase
- amphibole
- orthopyroxene
- spinel
- sulfide

Primary mineralogy

Hole BA4A-95Z Section 3, Top of Section 259.07 (m CCD)

Depth (m CCD)
Core length (cm)
Shipboard samples
Stained image
Magnetic susceptibility
(10^-5)
GRA (g/cm^3)
Sequence
Unit/Subunit
Lithology
Primary mineralogy
Degree of deformation
Fracture/ Vein density (per meter)
**Hole BA4A-95Z Section 4, Top of Section 259.93 (m CCD)**

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>Depth (m CCD)</th>
<th>Magnetic susceptibility (SI)</th>
<th>MSCL-W MSP (SI x 10^-2)</th>
<th>GRA (g/cm²)</th>
<th>Sequence</th>
<th>Lithology</th>
<th>Unit/subunit</th>
<th>Contact</th>
<th>Texture</th>
<th>Igneous Summary</th>
<th>Alteration</th>
<th>Veins</th>
<th>Structure</th>
<th>Alteration intensity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>259.97</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>259.97</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>260.07</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>260.07</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>260.17</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>260.17</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>260.27</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>260.27</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>260.37</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>260.37</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>260.47</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>260.47</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>260.57</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>260.57</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>260.67</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>260.67</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
</tr>
</tbody>
</table>

**Primary mineralogy (%)**
- Olivine
- Plagioclase
- Clinopyroxene
- Orthopyroxene
- Amphibole
- Sulfide

**Degree of deformation**
- Fracture/ Vein density (per meter)

**Magnetic susceptibility**
- MSCL-W
- MSP

**Fabric intensity**
- Discrete brittle features

**Vein density** (per meter)
- 0
- 1
- 2
- 3
- 4
- 5

**Alteration intensity**
- Fresh (<3%)
- Slight (3–10%)
- Moderate (11–30%)
- Substantial (31–60%)
- Extensive (61–90%)
- Complete (>90%)

**Structure**
- Brittle
- Veins
- Crystal plastic

**Description**
- **SEQUENCE: I**
- **41b**
- **42a**
- **ROCK NAME:** olivine gabbro
- **CONTACT:** continuous
- **TEXTURE:** IGNEOUS
- **SUMMARY:** highly altered gabbro dyke
- **ALTERATION:** massive replacement of dyke minerals
- **VEINS:** white veins cut dyke
- **STRUCTURE:** Brittle, shear zone at base of altered dike

**Vein**
- Crystal plastic
- Pyroxene grains are moderately elongated.

---

**Sequence: II**
- **43b**
- **ROCK NAME:** harzburgite
- **CONTACT:** intrusive
- **TEXTURE:** Granular
- **IGNEOUS SUMMARY:** serpentinised harzburgite with thin gabbro veins, varying degrees of opx destruction and dunitic patches
- **ALTERATION:** serpentinised
- **VEINS:** dark network veins, white/brown thread veins, plus pale green veins associated with thin gabbroic dykes
- **STRUCTURE:** Brittle, veins, crystal plastic

---

**Sequence: III**
- **44b**
- **ROCK NAME:** dunite
- **CONTACT:** contact
- **TEXTURE:** Foliated
- **IGNEOUS SUMMARY:** dunite
- **ALTERATION:** none
- **VEINS:** none
- **STRUCTURE:** None

---

**Sequence: IV**
- **45b**
- **ROCK NAME:** peridotite
- **CONTACT:** contact
- **TEXTURE:** Porphyroclastic
- **IGNEOUS SUMMARY:** peridotite
- **ALTERATION:** none
- **VEINS:** none
- **STRUCTURE:** None
### Hole BA4A-96Z Section 1, Top of Section 260.70 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>MSCL-W</th>
<th>GRA (g/cm³)</th>
<th>Primary mineralogy (%)</th>
<th>Gold (%)</th>
<th>Plagioclase</th>
<th>Amphibole</th>
<th>Sulfide</th>
<th>Fabric intensity</th>
<th>Discrete brittle features</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnatic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
<th>Structures</th>
<th>Scanned image</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>260.70</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>260.80</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>75</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>260.90</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>261.00</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>261.10</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depth (m CCD)</td>
<td>Core length (cm)</td>
<td>Shipboard samples</td>
<td>Stained image</td>
<td>Magnetic susceptibility</td>
<td>Primary mineralogy</td>
<td>Degree of deformation</td>
<td>Fracture/ Vein density (per meter)</td>
<td>Alteration intensity</td>
<td>Vein density (per meter)</td>
<td>Alteration</td>
<td>Dip</td>
<td>Magnetic contact</td>
<td>Brittle</td>
<td>Crystal plastic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------</td>
<td>-----------------</td>
<td>-------------------</td>
<td>---------------</td>
<td>------------------------</td>
<td>------------------</td>
<td>---------------------</td>
<td>-------------------------------</td>
<td>---------------------</td>
<td>------------------------</td>
<td>------------</td>
<td>-----</td>
<td>-----------------</td>
<td>---------</td>
<td>----------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>261.15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>261.25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>261.35</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>261.45</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>261.55</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>261.65</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>261.75</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>261.85</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>261.95</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>262.05</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Description**

**SEQUENCE 1**

**UNIT/SUBUNIT:** 42a

**ROCK NAME:** olivine gabbro

**CONTACT:** modal

**TEXTURE:** porphyroclastic

**IGNEOUS SUMMARY:** altered harzburgite with thin gabbroic veins and dunitic patches

**ALTERATION:** serpentinised

**VEINS:** dark network veins, white/brown thread veins, plus pale green veins

**STRUCTURE:** Brittle

**Veins:** Crystal plastic - Pyroxene grains are rounded and slightly elongated

**Depositional Unit Name:**

**Subunit Name:**

**Core Length:**

**Stained Image:**

**Magnetic Susceptibility:**

**Primary Mineralogy:**

**Degree of Deformation:**

**Fracture/ Vein Density:**

**Alteration Intensity:**

**Vein Density:**

**Dip:**

**Magnetic Contact:**

**Brittle:**

**Crystal Plastic:**

**Voids:**

**Fault Zones:**

**Apparent Offset:**
SEQUENCE: I
UNIT/SUBUNIT: 42c
ROCK NAME: harzburgite
CONTACT: continuous
TEXTURE: granular
IGNEOUS SUMMARY: opx-poor harzburgite with patchy alteration and dunitic patches
ALTERATION: serpentinised
VEINS: dark network, white thread, white-brown composite, horrible green on fractures with black selvage
STRUCTURE: Brittle- Semicohezive cataclastic fault zone
Veins-
Crystal plastic- Pyroxene grains are moderately elongated.

Hole BA4A-96Z Section 3, Top of Section 262.11 (m CCD)
<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>CT image</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dile</th>
<th>Magnatic contact</th>
<th>Brittle Contact</th>
<th>Crystal plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>263.01</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>263.11</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>263.21</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>263.31</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>263.41</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>263.51</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>263.61</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>263.71</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Sequence:** I

**Unit/Subunit:** 42c

**Rock Name:** Harzburgite

**Contact:** Continuous

**Texture:** Granular

**Igneous Summary:** Opx-poor harzburgite with patchy alteration and dunitic patches

**Alteration:** Serpentinised

**Veins:** Dark network, white thread, white-brown composite, horrible green on fractures with black selvage

**Structure:** Brittle-Fine black fracture network with offset

---

**Sequence:** I

**Unit/Subunit:** 42c

**Rock Name:** Olivine Gabbro

**Contact:** Intrusive

**Texture:** Granular

**Igneous Summary:** Altered olivine gabbro dyke

**Alteration:** Altered and pseudomorphed

**Veins:** White veins form a complex network around dyke

**Structure:** Brittle-Crystal plastic-Veins

---

**Shipboard samples**

**Scanned image**

**Magnetic susceptibility (MSCL-w)**

**GRA (g/cm³)**

**Primary mineralogy**

**Degree of deformation**

**Fabric intensity**

**Discrete brittle features**

**Fracture/ Vein density (per meter)**

**Alteration intensity**

**Dile**

**Magnetic contact**

**Brittle Contact**

**Crystal plastic**

**Veins**  

---

**Depth (m CCD)**

**Core length (cm)**

**Stained image**

**Magnetic susceptibility (MSCL-w)**

**GRA (g/cm³)**

**Primary mineralogy (%)**

**Grain size**

**Degree of deformation**

**Fracture/ Vein density (per meter)**

**Alteration intensity**

**Dile**

**Magnetic contact**

**Brittle Contact**

**Crystal plastic**

**Veins**

---

**Fabric intensity**

**Discrete brittle features**

**Fracture/ Vein density (per meter)**

**Alteration intensity**

**Dile**

**Magnetic contact**

**Brittle Contact**

**Crystal plastic**

**Veins**

---

**Fabric intensity**

**Discrete brittle features**

**Fracture/ Vein density (per meter)**

**Alteration intensity**

**Dile**

**Magnetic contact**

**Brittle Contact**

**Crystal plastic**

**Veins**
**SEQUENCE: I**

**UNIT/SUBUNIT: 42c**
**ROCK NAME: Harzburgite**
**CONTACT: Continuous**
**TEXTURE:**
**IGNEOUS SUMMARY:** opx-poor harzburgite with patchy alteration and dunitic patches
**ALTERATION:** serpentinised
**VEINS:** dark network, white thread, white-brown composite, horrible green on fractures with black selvage
**STRUCTURE:** Brittle-

**SEQUENCE: I**

**UNIT/SUBUNIT: 42c**
**ROCK NAME: Olivine gabbro**
**CONTACT: Intrusive**
**TEXTURE:**
**IGNEOUS SUMMARY:** highly altered olivine gabbro
**ALTERATION:** highly altered
**VEINS:** fine white veins
**STRUCTURE:** Brittle-

**SEQUENCE: I**

**UNIT/SUBUNIT: 42d**
**ROCK NAME: Dunite**
**CONTACT: Modal**
**TEXTURE:**
**IGNEOUS SUMMARY:** serpentinized dunite
**ALTERATION:** serpentinized
**VEINS:** network of fine white and green veins
**STRUCTURE:** Brittle-

**SEQUENCE: I**

**UNIT/SUBUNIT: 42e**
**ROCK NAME: Harzburgite**
**CONTACT: Modal**
**TEXTURE:**
**IGNEOUS SUMMARY:** serpentinized harzburgite
**ALTERATION:** serpentinized
**VEINS:** few black veins
**STRUCTURE:** Brittle-

**SEQUENCE: I**

**UNIT/SUBUNIT: 42e**
**ROCK NAME: Olivine gabbro**
**CONTACT: Intrusive**
**TEXTURE:**
**IGNEOUS SUMMARY:** highly altered olivine gabbro
**ALTERATION:** highly altered
**VEINS:** fine white veins
**STRUCTURE:** Brittle-
### Hole BA4A-97Z Section 2, Top of Section 264.56 (m CCD)

<table>
<thead>
<tr>
<th>Sequence</th>
<th>Unit/Subunit</th>
<th>Rock Name</th>
<th>Contact</th>
<th>Textural Summary</th>
<th>Alteration</th>
<th>Veins</th>
<th>Structure</th>
<th>Alteration Intensity</th>
<th>Vein Density (per meter)</th>
<th>Vein Crosscutting</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>42e</td>
<td>Harzburgite</td>
<td>Continuous</td>
<td>Serpentinized harzburgite</td>
<td>Serpentinized</td>
<td>Few black and white veins</td>
<td>Brittle-Plastic</td>
<td>0-10</td>
<td>0-100</td>
<td>Minor fracturing</td>
<td>Crystal-plastic: Pyroxene grains are strongly elongated.</td>
</tr>
<tr>
<td>I</td>
<td>42f</td>
<td>Olivine gabbro</td>
<td>Intrusive</td>
<td>Highly altered olivine gabbro</td>
<td>Highly altered</td>
<td>Network of millimetric white veins</td>
<td>Brittle-Plastic</td>
<td>10-30</td>
<td>0-100</td>
<td>Moderate fracturing</td>
<td>Crystal-plastic: Pyroxene grains are moderately elongated.</td>
</tr>
<tr>
<td>I</td>
<td>42g</td>
<td>Harzburgite</td>
<td>Intrusive</td>
<td>Serpentinized harzburgite, dunitic zone</td>
<td>Serpentinized</td>
<td>Few black and white veins</td>
<td>Brittle-Plastic</td>
<td>0-10</td>
<td>0-100</td>
<td>Minor fracturing</td>
<td>Crystal-plastic: Pyroxene grains are strongly elongated.</td>
</tr>
</tbody>
</table>

### Fabric Intensity

- 5: Strongly foliated
- 4: Moderately foliated
- 3: Weakly foliated
- 2: Isotropic
- 1: Weak
- 0: Strong

### Grain Size

- Fine grained (<0.2 mm)
- Medium grained (0.2–1 mm)
- Coarse grained (1–5 mm)
- Pegmatitic (>5 mm)

### Vein Density

- 0: None
- 1: 1-5 per 10 cm
- 2: 5-15 per 10 cm
- 3: 15-20 per 10 cm
- 4: >20 per 10 cm

### Dips

- Magnetic contact
- Brittle
- Crystal plastic

### Core Length (cm)

- 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 110 | 120 | 130 | 140 | 150 | 160 | 170 | 180 | 190 | 200 | 210 | 220 | 230 | 240 | 250 | 260 | 270 | 280 | 290 | 300 |

### Table

<table>
<thead>
<tr>
<th>Sequence</th>
<th>Unit/Subunit</th>
<th>Lithology</th>
<th>Primary Mineralogy (%)</th>
<th>Degree of deformation</th>
<th>Grain size</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>42a</td>
<td>Harzburgite</td>
<td>Olivine, Plagioclase, Clinopyroxene, Orthopyroxene, Spinel, Sulfide</td>
<td>Brittle-Plastic</td>
<td>Fine-Grained</td>
<td>Low density</td>
<td>No alteration</td>
<td>Crystal-plastic: Pyroxene grains are strongly elongated.</td>
</tr>
<tr>
<td>I</td>
<td>42b</td>
<td>Olivine gabbro</td>
<td>Olivine, Plagioclase, Clinopyroxene, Orthopyroxene, Amphibole, Sulfide</td>
<td>Brittle-Plastic</td>
<td>Medium-Grained</td>
<td>High density</td>
<td>Moderate alteration</td>
<td>Crystal-plastic: Pyroxene grains are moderately elongated.</td>
</tr>
</tbody>
</table>

---

**Notes:**
- Sequence and Unit/Subunit are assigned to help track variations in rock properties.
- Textural Summary describes the overall texture of the rock.
- Alteration intensity is quantified with a scale from 0 (undamaged) to 100 (complete).
- Vein density is measured per 10 cm, with a range from 0 (none) to >20 (high density).
| Depth (m CCD) | Core length (cm) | Lithology | Primary mineralogy (wt %) | Degree of deformation | Fracture/ Vein density (per meter) | Alteration intensity | Dip | Magnetic contact | Brittle Crystal plastic | Veins | Structures | Vein density (per meter) | Alteration halos | Apparent offset | Alteration halos | Magnetic contact | Brittle Crystal plastic | Veins | Structures | Vein density (per meter) | Alteration halos | Apparent offset |
|---------------|------------------|-----------|---------------------------|-----------------------|-----------------------------------|---------------------|-----|------------------|---------------------|-------|-------------|------------------------|----------------|---------------|---------------------|----------------|------------------|---------------------|----------------|---------------|
| 265.49        |                  |           |                           |                       |                                   |                     |     |                  |                     |       |             |                        |                |               |                     |                |                 |                     |                |                 |
| 265.59        |                  |           |                           |                       |                                   |                     |     |                  |                     |       |             |                        |                |               |                     |                |                 |                     |                |                 |
| 265.69        |                  |           |                           |                       |                                   |                     |     |                  |                     |       |             |                        |                |               |                     |                |                 |                     |                |                 |
| 265.79        |                  |           |                           |                       |                                   |                     |     |                  |                     |       |             |                        |                |               |                     |                |                 |                     |                |                 |
| 265.89        |                  |           |                           |                       |                                   |                     |     |                  |                     |       |             |                        |                |               |                     |                |                 |                     |                |                 |

**Hole BA4A-97Z Section 3, Top of Section 265.45 (m CCD)**

**Fabric intensity**

1. 0
2. 1
3. 2
4. 3
5. 4
6. 5

**Vein density**

1. 0
2. 1
3. 2
4. 5
5. 10
6. 30
7. 50
8. 70
9. 90
10. 100

**Core length**

1. 10
2. 20
3. 30
4. 40
5. 50

**Grain size**

1. 0.2–1 mm
2. 1–5 mm
3. 5–30 mm
4. >30 mm
5. Pegmatitic

**Degree of deformation**

1. Undeformed
2. Minor fracturing
3. Moderate fracturing
4. GS reduction and rotation
5. Well-developed cataclasis
6. Ultracataclastite

**Unit/subunit**

1. 42g
2. 43g
3. 44g

**Alteration intensity**

1. Fresh (<3%)
2. Slight (3–10%)
3. Moderate (11–30%)
4. Substantial (31–60%)
5. Extensive (61–90%)
6. Complete (>90%)

**Primary mineralogy**

1. Olivine
2. Plagioclase
3. Clinopyroxene
4. Orthopyroxene
5. Amphibole
6. Sulfide

**Contact**

1. Continuous
2. Intrusive

**Magmatic layering**

1. Discrete
2. Brittle
3. Magmatic contact

**Foliation**

1. Protogranular
2. Porphyroclastic
3. Strongly foliated
4. Protomylonite
5. Mylonite
6. Ultramylonite

**Magnetic susceptibility**

1. MSCL-W
2. MSP
3. GRA
(10^-5)

**Magmatic Layering Foliation**

1. Ultradeformational
2. Fabric intensity
3. Vein crosscutting

**Description**

- **SEQUENCE: 1**
  - **UNIT/SUBUNIT: 42g**
  - **ROCK NAME: Harzburgite**
  - **CONTACT: Continuous**
  - **TEXTURE: Igneous**
  - **SUMMARY: Serpentinized harzburgite, dunitic zone**
  - **ALTERATION: Serpentinized**
  - **VEINS: Few black and white veins**
  - **STRUCTURE: Brittle-Crystal plastic-Veins-**
  - **Crystal plastic-Pyroxene grains are moderately elongated.**

- **SEQUENCE: 1**
  - **UNIT/SUBUNIT: 43g**
  - **ROCK NAME: Clinopyroxenite**
  - **CONTACT: Intrusive**
  - **TEXTURE: Igneous**
  - **SUMMARY: Highly altered fine grained olivine bearing clinopyroxenite**
  - **ALTERATION: Highly altered**
  - **VEINS: Few thin white veins**
  - **STRUCTURE: Brittle-Crystal plastic-Veins-**
  - **Crystal plastic-Pyroxene grains are moderately elongated.**

- **SEQUENCE: 1**
  - **UNIT/SUBUNIT: 44g**
  - **ROCK NAME: Clinopyroxenite**
  - **CONTACT: Intrusive**
  - **TEXTURE: Igneous**
  - **SUMMARY: Highly altered coarse grained olivine bearing clinopyroxenite**
  - **ALTERATION: Highly altered**
  - **VEINS: Few thin white veins**
  - **STRUCTURE: Brittle-Crystal plastic-Veins-**
  - **Crystal plastic-Pyroxene grains are moderately elongated.**
### Sequence: I
#### Unit/Subunit: 42g
**Rock Name:** Harzburgite
**Contact:** Continuous
**Texture:** Igneous Summary: serpentinized harzburgite, dunitic zone
**Alteration:** Serpentinized
**Veins:** Few black and white veins
**Structure:** Brittle-

#### Unit/Subunit: 42h
**Rock Name:** Clinopyroxenite
**Contact:** Intrusive
**Texture:** Igneous Summary: highly altered olivine bearing clinopyroxenite
**Alteration:** Highly altered
**Veins:** Network of milimetric white veins
**Structure:** Brittle-

#### Unit/Subunit: 42h
**Rock Name:** Clinopyroxenite
**Contact:** Intrusive
**Texture:** Igneous Summary: Highly altered and dissaminated olivine bearing clinopyroxenite
**Alteration:** Highly altered
**Veins:** Few fine white veins
**Structure:** Brittle-

#### Unit/Subunit: 42i
**Rock Name:** Harzburgite
**Contact:** Intrusive
**Texture:** Igneous Summary: Serpentinized harzburgite
**Alteration:** Serpentinized
**Veins:** Few fine white veins and black veins
**Structure:** Brittle-

---

**Fabric intensity**

<table>
<thead>
<tr>
<th>Value</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>0–10</td>
<td>10–30</td>
<td>30–50</td>
<td>50–70</td>
<td>70–90</td>
<td>&gt;100</td>
</tr>
</tbody>
</table>

**Vein density (per meter)**

<table>
<thead>
<tr>
<th>Value</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>0 per 10 cm</td>
<td>1 per 10 cm</td>
<td>3-5 per 10 cm</td>
<td>&gt;20 per 10 cm</td>
<td>5-15 per 10 cm</td>
<td>15-20 per 10 cm</td>
</tr>
</tbody>
</table>

**Magnetic contact**

<table>
<thead>
<tr>
<th>Value</th>
<th>0</th>
<th>45</th>
<th>90</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>0 per 10 cm</td>
<td>1 per 10 cm</td>
<td>3-5 per 10 cm</td>
</tr>
</tbody>
</table>

**Crystal plastic Veins**

<table>
<thead>
<tr>
<th>Value</th>
<th>0</th>
<th>45</th>
<th>90</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>0 per 10 cm</td>
<td>1 per 10 cm</td>
<td>3-5 per 10 cm</td>
</tr>
</tbody>
</table>

---

**Core length (cm)**

<table>
<thead>
<tr>
<th>Value</th>
<th>100</th>
<th>150</th>
<th>200</th>
<th>250</th>
<th>300</th>
<th>350</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>0 per 10 cm</td>
<td>1 per 10 cm</td>
<td>3-5 per 10 cm</td>
<td>&gt;20 per 10 cm</td>
<td>5-15 per 10 cm</td>
<td>15-20 per 10 cm</td>
</tr>
</tbody>
</table>

---

**Dip**

<table>
<thead>
<tr>
<th>Value</th>
<th>0</th>
<th>45</th>
<th>90</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>0 per 10 cm</td>
<td>1 per 10 cm</td>
<td>3-5 per 10 cm</td>
</tr>
</tbody>
</table>

---

**Alternation intensity**

<table>
<thead>
<tr>
<th>Value</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>0–10</td>
<td>10–30</td>
<td>30–50</td>
<td>50–70</td>
<td>70–90</td>
<td>&gt;100</td>
</tr>
</tbody>
</table>

---

**Fracture/ Vein density (per meter)**

<table>
<thead>
<tr>
<th>Value</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>0 per 10 cm</td>
<td>1 per 10 cm</td>
<td>3-5 per 10 cm</td>
<td>&gt;20 per 10 cm</td>
<td>5-15 per 10 cm</td>
<td>15-20 per 10 cm</td>
</tr>
<tr>
<td>Depth (m CCD)</td>
<td>Core length (cm)</td>
<td>Stained image</td>
<td>Magnetic susceptibility</td>
<td>Primary mineralogy</td>
<td>Grain size</td>
<td>Degree of deformation</td>
</tr>
<tr>
<td>--------------</td>
<td>-----------------</td>
<td>---------------</td>
<td>------------------------</td>
<td>-------------------</td>
<td>-----------</td>
<td>----------------------</td>
</tr>
<tr>
<td>267.61</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>267.71</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>267.81</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Rock Name:** Olivine gabbro

**Contact:** Continuous

**Texture:**

**Igneous Summary:** Highly altered olivine gabbro

**Alteration:** Highly altered olivine gabbro

**Veins:** White veins

**Structure:** Brittle

---

**Rock Name:** Harzburgite

**Contact:** Intrusive

**Texture:**

**Igneous Summary:** Serpentinized harzburgite with patches of dunite

**Alteration:** Serpentinized harzburgite with patches of dunite

**Veins:** Network of fine white veins

**Structure:** Brittle

---

**Rock Name:** Clinopyroxenite

**Contact:** Intrusive

**Texture:**

**Igneous Summary:** Highly altered and dissaminated olivine bearing clinopyroxenite

**Alteration:** Highly altered and dissaminated olivine bearing clinopyroxenite

**Veins:** No veins

**Structure:** Brittle
### Hole BA4A-98Z Section 3, Top of Section 267.88 (m CCD)

| Depth (m CCD) | Core length (cm) | Shipboard samples | Stained image | CT image | Magnetic susceptibility | MSCL-W | MSP (SI x 10^-6) | GRA (g/cm^3) | Sequence | Unit/subunit | Lithology | Degree of deformation | Fracture/ Vein density (per meter) | Alteration intensity | Dip | Magnatic contact | Brittle | Crystal plastic | Veins | Structures | Abnormal heating | Vein crosscutting | Alteration halos | Apparent offset | Fault zones | Alteration halos | Description |
|--------------|------------------|-------------------|---------------|-----------|------------------------|-------|-------------------|-------------|----------|----------------|-----------|------------------|-----------------------|------------------|-----|----------------|--------|------------------|------|------------|-----------|---------------|--------|-----------|-------------|----------------|
| 267.90       |                  |                   |               |           |                        |       |                   |             |          |                |           |                  |                       |                 |     |               |        |                  |       |            |            |               |         |           |             |               |
| 268.00       |                  |                   |               |           |                        |       |                   |             |          |                |           |                  |                       |                 |     |               |        |                  |       |            |            |               |         |           |             |               |
| 268.10       |                  |                   |               |           |                        |       |                   |             |          |                |           |                  |                       |                 |     |               |        |                  |       |            |            |               |         |           |             |               |
| 268.20       |                  |                   |               |           |                        |       |                   |             |          |                |           |                  |                       |                 |     |               |        |                  |       |            |            |               |         |           |             |               |
| 268.30       |                  |                   |               |           |                        |       |                   |             |          |                |           |                  |                       |                 |     |               |        |                  |       |            |            |               |         |           |             |               |
| 268.40       |                  |                   |               |           |                        |       |                   |             |          |                |           |                  |                       |                 |     |               |        |                  |       |            |            |               |         |           |             |               |
| 268.50       |                  |                   |               |           |                        |       |                   |             |          |                |           |                  |                       |                 |     |               |        |                  |       |            |            |               |         |           |             |               |
| 268.60       |                  |                   |               |           |                        |       |                   |             |          |                |           |                  |                       |                 |     |               |        |                  |       |            |            |               |         |           |             |               |
| 268.70       |                  |                   |               |           |                        |       |                   |             |          |                |           |                  |                       |                 |     |               |        |                  |       |            |            |               |         |           |             |               |

**SEQUECE 1:** 42k
- **ROCK NAME:** Harzburgite
- **CONTACT:** Continuous
- **KOREAUS SUMMARY:** Serpentinized harzburgite with patches of dunite
- **ALTERATION:** Serpentinized harzburgite with patches of dunite
- **VESi:** Network of fine white veins
- **STRUCTURE:** Brittle-vein

**SEQUECE 2:** 43a
- **ROCK NAME:** Olivine gabbro
- **CONTACT:** Intrusive
- **KOREAUS SUMMARY:** Highly altered olivine gabbro
- **ALTERATION:** Highly altered olivine gabbro
- **VESi:** Few fine white veins
- **STRUCTURE:** Brittle-crystal plastic

**SEQUECE 3:** 43a
- **ROCK NAME:** Dunite
- **CONTACT:** Modal
- **KOREAUS SUMMARY:** Serpentinized highly fractured dunite
- **ALTERATION:** Serpentinized highly fractured dunite
- **VESi:** Few fine white veins, brown veins, gray veins
- **STRUCTURE:** Brittle-crystal plastic

**VEINS:** Network of fine white veins occur in crystal plastic.
**SEQUENCE:** 43a  
**ROCK NAME:** Dunite  
**CONTACT:** Continuous  

**TEXTURE:** Igneous  
**SUMMARY:** Serpentinized highly fractured dunite  

**ALTERATION:** Serpentinized highly fractured dunite  

**VEINS:** Few fine white veins, brown veins, grey veins  

**STRUCTURE:** Brittle- Wide fault zone of significant fracturing with planar fabric  
**Veins- Crystal plastic-**  

**Fabric intensity:** 5  
**Vein density (per meter):** 10  

**Degree of deformation:** 5  
**Fracture/ Vein density (per meter):** 10  

**Vein crosscutting:** 5  
**Alteration intensity:** 100  

**MSCL-W MSP (SI × 10^−5):** 1000  
**MSP:** 100  

**Depth (m CCD):** 268.80  
**Core length (cm):** 10  
**Sampled section:** 4

**Magmatic contact:**  
** Brittle:**  
**Crystal plastic:**  
**Veins:**  

**Description:**  

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Sampled section</th>
<th>Magmatic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
<th>Alteration intensity</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Vein crosscutting</th>
<th>Magmatic contact (SI × 10^−5)</th>
<th>Alteration intensity (SI × 10^−5)</th>
<th>Core length (cm)</th>
<th>Sampled section</th>
<th>Magmatic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
<th>Alteration intensity</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Vein crosscutting</th>
<th>Magmatic contact (SI × 10^−5)</th>
<th>Alteration intensity (SI × 10^−5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>268.80</td>
<td>10</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depth (m CCD)</td>
<td>Core length (cm)</td>
<td>Lithology</td>
<td>Magmatic contact</td>
<td>Discrete brittle features</td>
<td>Alteration intensity</td>
<td>Dip</td>
<td>Vein density (per meter)</td>
<td>Vein crosscutting</td>
<td>Alteration halos</td>
<td>Structures</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------</td>
<td>-----------------</td>
<td>-----------</td>
<td>-----------------</td>
<td>--------------------------</td>
<td>--------------------</td>
<td>-----</td>
<td>-------------------------</td>
<td>-----------------</td>
<td>----------------</td>
<td>-----------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>10</td>
<td>Olivine gabbro</td>
<td>Intrusive</td>
<td>100</td>
<td>Complete (≥ 90%)</td>
<td>0</td>
<td>15-20 per 10 cm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>20</td>
<td>Olivine gabbro</td>
<td>Intrusive</td>
<td>100</td>
<td>Complete (≥ 90%)</td>
<td>0</td>
<td>15-20 per 10 cm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>30</td>
<td>Olivine gabbro</td>
<td>Intrusive</td>
<td>100</td>
<td>Complete (≥ 90%)</td>
<td>0</td>
<td>15-20 per 10 cm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>40</td>
<td>Olivine gabbro</td>
<td>Intrusive</td>
<td>100</td>
<td>Complete (≥ 90%)</td>
<td>0</td>
<td>15-20 per 10 cm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50</td>
<td>50</td>
<td>Olivine gabbro</td>
<td>Intrusive</td>
<td>100</td>
<td>Complete (≥ 90%)</td>
<td>0</td>
<td>15-20 per 10 cm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60</td>
<td>60</td>
<td>Olivine gabbro</td>
<td>Intrusive</td>
<td>100</td>
<td>Complete (≥ 90%)</td>
<td>0</td>
<td>15-20 per 10 cm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>70</td>
<td>70</td>
<td>Olivine gabbro</td>
<td>Intrusive</td>
<td>100</td>
<td>Complete (≥ 90%)</td>
<td>0</td>
<td>15-20 per 10 cm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>80</td>
<td>80</td>
<td>Olivine gabbro</td>
<td>Intrusive</td>
<td>100</td>
<td>Complete (≥ 90%)</td>
<td>0</td>
<td>15-20 per 10 cm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note:** The table and diagram provide detailed information on the lithology, alteration, vein density, and other geological features of the sequence 1, unit/subunit 43a rock intervals. The sequence includes various rock types such as Dunite, Olivine gabbro, and features like contact, texture, igneous summary, alteration, veins, and structure. The diagram illustrates the CT image, magnetic susceptibility, and other geological parameters.
# Hole BA4A-99Z Section 2, Top of Section 270.53 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnitic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
<th>Structures</th>
<th>Apparent offset</th>
<th>Alteration halos</th>
<th>Vein density (per meter)</th>
<th>Core length (cm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>270.53</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>270.67</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>270.77</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>270.97</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>271.17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Description**

**SEQUENCE:** 43a  
**ROCK NAME:** Dunite  
**CONTACT:** Continuous  
**TEXTURE:** IGNEOUS SUMMARY: serpentinized highly fracture dunite

**SEQUENCE:** 43a  
**ROCK NAME:** Clinopyroxenite  
**CONTACT:** Intrusive  
**TEXTURE:** IGNEOUS SUMMARY: highly altered and dissaminated olivine bearing clinopyroxenite

**Magnetic contact**
- ** Brittle**
- **Crystal plastic**
- **Veins**
- **Structures**
- **Apparent offset**
- **Alteration halos**
- **Vein density (per meter)**
- **Core length (cm)**

**Depth (m CCD)**
- 0
- 15
- 30
- 45
- 60
- 75
- 90
- 105
- 120
- 135
- 150
- 165
- 180
- 195
- 210
- 225
- 240
- 255
- 270

**Magmatic contact**
- **Brittle**
- **Crystal plastic**
- **Veins**
- **Structures**
- **Apparent offset**
- **Alteration halos**
- **Vein density (per meter)**
- **Core length (cm)**
| Depth (m CCD) | Core length (cm) | Shipboard samples | Stained image | CT image | Magnetic susceptibility | MSCL-W | MSP (SI x 10^5) | GRA (g/cm³) | Sequence | Lithology | Unit/subunit | Degree of deformation | Fracture/ Vein density (per meter) | Alteration intensity | Dip | Magnetic contact | Brittle | Crystal plastic | Vents |
|--------------|------------------|-------------------|---------------|---------|--------------------------|--------|--------------------|------------|----------|-----------|-------------|-----------------------|-----------------------|----------|-----------------|---------|----------------|------|
| 272.25       |                  |                   |               |         |                          |        |                    |            |          | I         | 44a         |                       |                       |          |                 |         |                |      |

**ROCK NAME:** gabbro

**CONTACT:** intrusive

**TEXTURE:**

**IGNEOUS SUMMARY:** fractured gabbroic dike

**ALTERATION:** serpentinized

**VEINS:** grey veins, grey-green veins, white veins

**STRUCTURE:**

---

| Depth (m CCD) | Core length (cm) | Shipboard samples | Stained image | CT image | Magnetic susceptibility | MSCL-W | MSP (SI x 10^5) | GRA (g/cm³) | Sequence | Lithology | Unit/subunit | Degree of deformation | Fracture/ Vein density (per meter) | Alteration intensity | Dip | Magnetic contact | Brittle | Crystal plastic | Vents |
|--------------|------------------|-------------------|---------------|---------|--------------------------|--------|--------------------|------------|----------|-----------|-------------|-----------------------|-----------------------|----------|-----------------|---------|----------------|------|
| 272.35       |                  |                   |               |         |                          |        |                    |            |          | I         | 44a         |                       |                       |          |                 |         |                |      |

**ROCK NAME:** harzburgite

**CONTACT:** intrusive

**TEXTURE:**

**IGNEOUS SUMMARY:** serpentinized harzburgite crosscut by sheared olivine gabbro and gabbro dikes

**ALTERATION:** serpentinized

**VEINS:** white veins, brown veins, black veins

**STRUCTURE:**

---

| Depth (m CCD) | Core length (cm) | Shipboard samples | Stained image | CT image | Magnetic susceptibility | MSCL-W | MSP (SI x 10^5) | GRA (g/cm³) | Sequence | Lithology | Unit/subunit | Degree of deformation | Fracture/ Vein density (per meter) | Alteration intensity | Dip | Magnetic contact | Brittle | Crystal plastic | Vents |
|--------------|------------------|-------------------|---------------|---------|--------------------------|--------|--------------------|------------|----------|-----------|-------------|-----------------------|-----------------------|----------|-----------------|---------|----------------|------|
| 272.45       |                  |                   |               |         |                          |        |                    |            |          | I         | 44a         |                       |                       |          |                 |         |                |      |

**ROCK NAME:** gabbro

**CONTACT:** intrusive

**TEXTURE:** granular

**IGNEOUS SUMMARY:** sheared gabbroic dike

**ALTERATION:**

---

**VEINS:** grey veins, grey-green veins, white veins

**STRUCTURE:**

---

| Depth (m CCD) | Core length (cm) | Shipboard samples | Stained image | CT image | Magnetic susceptibility | MSCL-W | MSP (SI x 10^5) | GRA (g/cm³) | Sequence | Lithology | Unit/subunit | Degree of deformation | Fracture/ Vein density (per meter) | Alteration intensity | Dip | Magnetic contact | Brittle | Crystal plastic | Vents |
|--------------|------------------|-------------------|---------------|---------|--------------------------|--------|--------------------|------------|----------|-----------|-------------|-----------------------|-----------------------|----------|-----------------|---------|----------------|------|
| 272.55       |                  |                   |               |         |                          |        |                    |            |          | I         | 44a         |                       |                       |          |                 |         |                |      |

---

| Depth (m CCD) | Core length (cm) | Shipboard samples | Stained image | CT image | Magnetic susceptibility | MSCL-W | MSP (SI x 10^5) | GRA (g/cm³) | Sequence | Lithology | Unit/subunit | Degree of deformation | Fracture/ Vein density (per meter) | Alteration intensity | Dip | Magnetic contact | Brittle | Crystal plastic | Vents |
|--------------|------------------|-------------------|---------------|---------|--------------------------|--------|--------------------|------------|----------|-----------|-------------|-----------------------|-----------------------|----------|-----------------|---------|----------------|------|
| 272.65       |                  |                   |               |         |                          |        |                    |            |          | I         | 44a         |                       |                       |          |                 |         |                |      |

---

| Depth (m CCD) | Core length (cm) | Shipboard samples | Stained image | CT image | Magnetic susceptibility | MSCL-W | MSP (SI x 10^5) | GRA (g/cm³) | Sequence | Lithology | Unit/subunit | Degree of deformation | Fracture/ Vein density (per meter) | Alteration intensity | Dip | Magnetic contact | Brittle | Crystal plastic | Vents |
|--------------|------------------|-------------------|---------------|---------|--------------------------|--------|--------------------|------------|----------|-----------|-------------|-----------------------|-----------------------|----------|-----------------|---------|----------------|------|
| 272.75       |                  |                   |               |         |                          |        |                    |            |          | I         | 44a         |                       |                       |          |                 |         |                |      |

---

**Sequence:** 1

**Unit/Subunit:** 44a

**Rock Name:** gabbro

**Contact:** intrusive

**Texture:** granular

**Igneous Summary:** sheared gabbroic dike

**Alteration:**

---

**Veins:** grey veins, grey-green veins, white veins

**Structure:**

---
**Hole BA4A-100Z Section 1, Top of Section 272.70 (m CCD)**

**SEQUENCE: I**
**UNIT/SUBUNIT: 44a**
**ROCK NAME: harzburgite**
**CONTACT: Continuous**
**TEXTURE:**
**IGNEOUS SUMMARY:** serpentinized harzburgite crosscut by sheared olivine gabro and gabbro dikes
**ALTERATION:** serpentinized
**VEINS:** white veins, brown veins, black veins
**STRUCTURE:** Brittle-
**Veins-
**Crystal plastic-**

---

**SEQUENCE: I**
**UNIT/SUBUNIT: 44a**
**ROCK NAME: gabbro**
**CONTACT: intrusive**
**TEXTURE:**
**IGNEOUS SUMMARY:** gabbroic dike
**ALTERATION:**
**VEINS:** GREY VEINS, WHITE VEINS
**STRUCTURE:** Brittle-
Veins-
Crystal plastic-

---

**Depth (m CCD)**
**Core length (cm)**
**Shipboard samples**
**Stained image**
**Magnetic susceptibility**
**MSCL-W**
**MSP**
**(SI \times 10^{-5})**
**GRA (g/cm²)**
**Sequence**
**Lithology**
**Unit/subunit**
**Primary mineralogy (%):**
- Olivine
- Plagioclase
- Clinopyroxene
- Orthopyroxene
- Amphibole
- Sulfide
**Degree of deformation:**
- Fabric intensity
  - 5
  - 4
  - 3
  - 2
  - 1
  - 0
- Vein crosscutting
- Alteration intensity
  - 100
  - 80
  - 60
  - 40
  - 20
  - 0
**Vein density (per meter):**
- 6
  - 5
  - 4
  - 3
  - 2
  - 1
  - 0
**Grain size:**
- 6
  - 5
  - 4
  - 3
  - 2
  - 1
  - 0
**Hole BA4A-100Z Section 1, Top of Section 272.70 (m CCD)**

**Description**
- Magnetic contact
- Brittle
- Crystal plastic
- Veins

---

**Magmatic layering**
- Discrete
  - Brittle
  - Magmatic
**Contact**
- Dip
  - Magnetic
  - Contact
**Dip**
- 45°
- 90°

---

**Fault zones**
**Structures**
**Apparent offset**
**Alteration halos**

---

**CT image**
**Sulfide**
- Amphibole
- Spinel
- Orthopyroxene
- Clinopyroxene
- Plagioclase
- Olivine

---

**Degree of deformation**
- Fracture/
Vein density (per meter)
- Fresh (<3%)
- Slight (3–10%)
- Moderate (11–30%)
- Substantial (31–60%)
- Extensive (61–90%)
- Complete (>90%)

---

**Magmatic layering**
- Protogranular
- Porphyroclastic
- Strongly foliated
- Protomylonite
- Mylonite
- Ultramylonite

---

**Contact**
- Dip
- Crystal plastic
- Veins

---

**Vein crosscutting**
- Alteration intensity
- Fresh (<3%)
- Slight (3–10%)
- Moderate (11–30%)
- Substantial (31–60%)
- Extensive (61–90%)
- Complete (>90%)

---

**Vein density (per meter):**
- 0–10
- 10–30
- 30–50
- 50–70
- 70–90
- >100

---

**Degree of deformation**
- Fracture/
Vein density (per meter)
- Undeformed
- Minor fracturing
- Moderate fracturing
- GS reduction and rotation
- Well-developed cataclasis
- Ultracataclastite

---

**Degree of deformation**
- Protogranular
- Porphyroclastic
- Strongly foliated
- Protomylonite
- Mylonite
- Ultramylonite

---

**Degree of deformation**
- Fine grained (0.2–1 mm)
- Medium grained (1–5 mm)
- Coarse grained (5–30 mm)
- Pegmatitic (>30 mm)

---

**Degree of deformation**
- Glassy
- Cryptocrystalline (<0.1 mm)
- Microcrystalline (0.1–0.2 mm)

---

**Degree of deformation**
- Isotropic
- Weak
- Moderate
- Strong

---

**Degree of deformation**
- 0–10
- 10–30
- 30–50
- 50–70
- 70–90
- >100
<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Lithology</th>
<th>Primary mineralogy</th>
<th>Grain size (%)</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnetic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>273.00</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>273.16</td>
<td>50</td>
<td>Sequence 1: I 44a</td>
<td>ROCK NAME: harzburgite</td>
<td>CONTACT: Continuous</td>
<td>KINEMATIC SUMMARY: serpentinized harzburgite crosscut by sheared dunite dikes and gabbro dikes</td>
<td>ALTERATION: VEINS: black veins, grey veins, white veins</td>
<td>STRUCTURE: Brittle</td>
<td></td>
<td>Crystal plastic</td>
<td>Veins: Crystal plastic</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sequence 4: I 45a</td>
<td>ROCK NAME: olivine gabbro</td>
<td>CONTACT: intrusive</td>
<td>KINEMATIC SUMMARY: olivine gabbro dike</td>
<td>ALTERATION: VEINS: grey veins, black veins</td>
<td>STRUCTURE: Brittle</td>
<td></td>
<td>Crystal plastic</td>
<td>Veins: Crystal plastic</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sequence 5: I 45a</td>
<td>ROCK NAME: dunite</td>
<td>CONTACT: modal Contact</td>
<td>KINEMATIC SUMMARY: mildly fractured, serpentinized dunite with minor hand specimen core and cross-cutting gabbro dikes</td>
<td>ALTERATION: serpentinization</td>
<td>VEINS: grey veins, black veins</td>
<td>STRUCTURE: Brittle</td>
<td>Crystal plastic</td>
<td>Veins: Crystal plastic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depth (m CCD)</td>
<td>Core length (cm)</td>
<td>Shipboard samples</td>
<td>Stained image</td>
<td>Magnetic susceptibility</td>
<td>MSCL-W MSP (SI x 10^-5)</td>
<td>GRA (g/cm^2)</td>
<td>Lithology</td>
<td>Primary mineralogy (%)</td>
<td>Degree of deformation</td>
<td>Alteration intensity</td>
<td>Dip</td>
<td>Magnetic contact</td>
</tr>
<tr>
<td>--------------</td>
<td>------------------</td>
<td>-------------------</td>
<td>--------------</td>
<td>------------------------</td>
<td>--------------------------</td>
<td>----------------</td>
<td>-----------</td>
<td>-------------------------</td>
<td>----------------------</td>
<td>-------------------</td>
<td>-----</td>
<td>-------------------</td>
</tr>
<tr>
<td>274.00</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>274.10</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>274.20</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>274.30</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>274.40</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>274.50</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>274.60</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>274.70</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>274.80</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Hole BA4A-100Z Section 4, Top of Section 274.87 (m CCD)

**Sequence:** I
**Unit/Subunit:** 45a
**Rock Name:** dunite
**Contact:** tectonic
**Texture:**
**Igneous Summary:** mildly fractured, serpentinized dunite with minor harzburgitic zones and cross-cutting gabbroic dikes
**Alteration:** serpentinized
**Veins:** grey veins, brown veins, white veins
**Structure:** Brittle-

**Sequence:** I
**Unit/Subunit:** 45a
**Rock Name:** gabbro
**Contact:** intrusive
**Texture:** granular
**Igneous Summary:** fractured gabbroic dike
**Alteration:**
**Veins:** white veins, grey veins
**Structure:** Brittle-

**Fabric Intensity**
- 5
- 4
- 3
- 2
- 1
- 0

**Vein Density** (per meter)
- 6
- 5
- 4
- 3
- 2
- 1
- 0

**Grain Size**
- 6
- 5
- 4
- 3
- 2
- 1
- 0

**Magnetic susceptibility**
- MSCL-W
- (SI x 10^-5)
- GRA
- (g/cm^2)

**Core Length (cm)**

**Depth (m CCD)**

**Core Samples**

**Shipboard Samples**

**Scanned Image**

**Description**

- **Fault zones**
- **Stratigraphic units**
- **Layering**
- **Foliation**
- **Discrete brittle features**
- **Degree of deformation**
- **Vein crosscutting**
- **Alteration intensity**
- **Magnetic contact**
- **Brittle**
- **Crystal plastic**
- **Spots**
### Hole BA4A-101Z Section 1, Top of Section 275.70 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Lithology</th>
<th>Primary mineralogy (%)</th>
<th>Grain size (%)</th>
<th>Degree of deformation</th>
<th>Alteration intensity</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td>45a</td>
<td>100</td>
<td>45a</td>
<td>5</td>
<td>0-100</td>
</tr>
<tr>
<td>275.73</td>
<td></td>
<td>dunite</td>
<td>75</td>
<td>10</td>
<td>3</td>
<td>0-100</td>
</tr>
<tr>
<td>275.83</td>
<td></td>
<td>olivine gabbro</td>
<td>50</td>
<td>15</td>
<td>2</td>
<td>0-100</td>
</tr>
<tr>
<td>275.93</td>
<td></td>
<td>olivine gabbro</td>
<td>25</td>
<td>5</td>
<td>1</td>
<td>0-100</td>
</tr>
<tr>
<td>276.03</td>
<td></td>
<td>olivine gabbro</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0-100</td>
</tr>
</tbody>
</table>

### Fabric intensity and Vein density

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Vein density</th>
</tr>
</thead>
<tbody>
<tr>
<td>275.73</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>275.83</td>
<td></td>
<td>3-5</td>
</tr>
<tr>
<td>275.93</td>
<td></td>
<td>&gt;20</td>
</tr>
</tbody>
</table>

### Magnetic susceptibility

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Magnetic susceptibility (SI 10^-5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>275.73</td>
<td></td>
<td>0-10</td>
</tr>
<tr>
<td>275.83</td>
<td></td>
<td>0-10</td>
</tr>
<tr>
<td>275.93</td>
<td></td>
<td>0-10</td>
</tr>
<tr>
<td>276.03</td>
<td></td>
<td>0-10</td>
</tr>
<tr>
<td>276.13</td>
<td></td>
<td>0-10</td>
</tr>
<tr>
<td>276.23</td>
<td></td>
<td>0-10</td>
</tr>
<tr>
<td>276.33</td>
<td></td>
<td>0-10</td>
</tr>
<tr>
<td>276.43</td>
<td></td>
<td>0-10</td>
</tr>
<tr>
<td>276.53</td>
<td></td>
<td>0-10</td>
</tr>
</tbody>
</table>

### Degree of deformation

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Degree of deformation</th>
</tr>
</thead>
<tbody>
<tr>
<td>275.73</td>
<td></td>
<td>Undeformed</td>
</tr>
<tr>
<td>275.83</td>
<td></td>
<td>Minor fracturing</td>
</tr>
<tr>
<td>275.93</td>
<td></td>
<td>Moderate fracturing</td>
</tr>
<tr>
<td>276.03</td>
<td></td>
<td>GS reduction and rotation</td>
</tr>
<tr>
<td>276.13</td>
<td></td>
<td>Well-developed cataclasis</td>
</tr>
<tr>
<td>276.23</td>
<td></td>
<td>Ultracataclastite</td>
</tr>
<tr>
<td>276.33</td>
<td></td>
<td>Protogranular</td>
</tr>
<tr>
<td>276.43</td>
<td></td>
<td>Porphyroclastic</td>
</tr>
<tr>
<td>276.53</td>
<td></td>
<td>Strongly foliated</td>
</tr>
</tbody>
</table>

### Structure

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Structure</th>
</tr>
</thead>
<tbody>
<tr>
<td>275.73</td>
<td></td>
<td>Brittle</td>
</tr>
<tr>
<td>275.83</td>
<td></td>
<td>Brittle</td>
</tr>
<tr>
<td>275.93</td>
<td></td>
<td>Brittle</td>
</tr>
<tr>
<td>276.03</td>
<td></td>
<td>Brittle</td>
</tr>
<tr>
<td>276.13</td>
<td></td>
<td>Brittle</td>
</tr>
<tr>
<td>276.23</td>
<td></td>
<td>Brittle</td>
</tr>
<tr>
<td>276.33</td>
<td></td>
<td>Brittle</td>
</tr>
<tr>
<td>276.43</td>
<td></td>
<td>Brittle</td>
</tr>
<tr>
<td>276.53</td>
<td></td>
<td>Brittle</td>
</tr>
</tbody>
</table>

### Sulfides

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Sulfide</th>
</tr>
</thead>
<tbody>
<tr>
<td>275.73</td>
<td></td>
<td></td>
</tr>
<tr>
<td>275.83</td>
<td></td>
<td></td>
</tr>
<tr>
<td>275.93</td>
<td></td>
<td></td>
</tr>
<tr>
<td>276.03</td>
<td></td>
<td></td>
</tr>
<tr>
<td>276.13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>276.23</td>
<td></td>
<td></td>
</tr>
<tr>
<td>276.33</td>
<td></td>
<td></td>
</tr>
<tr>
<td>276.43</td>
<td></td>
<td></td>
</tr>
<tr>
<td>276.53</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Alteration

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Alteration</th>
</tr>
</thead>
<tbody>
<tr>
<td>275.73</td>
<td></td>
<td>Fresh (&lt;3%)</td>
</tr>
<tr>
<td>275.83</td>
<td></td>
<td>Slight (3–10%)</td>
</tr>
<tr>
<td>275.93</td>
<td></td>
<td>Moderate (11–30%)</td>
</tr>
<tr>
<td>276.03</td>
<td></td>
<td>Substantial (31–60%)</td>
</tr>
<tr>
<td>276.13</td>
<td></td>
<td>Extensive (61–90%)</td>
</tr>
<tr>
<td>276.23</td>
<td></td>
<td>Complete (≥90%)</td>
</tr>
</tbody>
</table>

### Other properties

- **GRA (g/cm³)**: 2.82, 2.72, 2.62, 2.52
- **Degree of deformation**: Brittle, Magmatic contact, Dip
<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Lithology</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Vein density (per meter)</th>
<th>Alteration</th>
<th>Degree of deformation</th>
<th>Dip</th>
</tr>
</thead>
<tbody>
<tr>
<td>277.44</td>
<td>0</td>
<td>Pulv 46e</td>
<td>Olivine</td>
<td>100</td>
<td>Undeformed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Plagioclase</td>
<td>75</td>
<td>Undeformed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Clinopyroxene</td>
<td>50</td>
<td>Undeformed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Amphibole</td>
<td>25</td>
<td>Undeformed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Sulfide</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
</tr>
<tr>
<td>277.54</td>
<td>10</td>
<td>Pulv 46d</td>
<td>Olivine</td>
<td>100</td>
<td>Undeformed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Plagioclase</td>
<td>75</td>
<td>Undeformed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Clinopyroxene</td>
<td>50</td>
<td>Undeformed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Amphibole</td>
<td>25</td>
<td>Undeformed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Sulfide</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
</tr>
<tr>
<td>277.64</td>
<td>20</td>
<td>Pulv 46e</td>
<td>Olivine</td>
<td>100</td>
<td>Undeformed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Plagioclase</td>
<td>75</td>
<td>Undeformed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Clinopyroxene</td>
<td>50</td>
<td>Undeformed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Amphibole</td>
<td>25</td>
<td>Undeformed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Sulfide</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
</tr>
<tr>
<td>277.74</td>
<td>30</td>
<td>Pulv 46e</td>
<td>Olivine</td>
<td>100</td>
<td>Undeformed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Plagioclase</td>
<td>75</td>
<td>Undeformed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Clinopyroxene</td>
<td>50</td>
<td>Undeformed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Amphibole</td>
<td>25</td>
<td>Undeformed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Sulfide</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
</tr>
<tr>
<td>277.84</td>
<td>40</td>
<td>Pulv 46e</td>
<td>Olivine</td>
<td>100</td>
<td>Undeformed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Plagioclase</td>
<td>75</td>
<td>Undeformed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Clinopyroxene</td>
<td>50</td>
<td>Undeformed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Amphibole</td>
<td>25</td>
<td>Undeformed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Sulfide</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
</tr>
<tr>
<td>277.94</td>
<td>50</td>
<td>Pulv 46e</td>
<td>Olivine</td>
<td>100</td>
<td>Undeformed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Plagioclase</td>
<td>75</td>
<td>Undeformed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Clinopyroxene</td>
<td>50</td>
<td>Undeformed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Amphibole</td>
<td>25</td>
<td>Undeformed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Sulfide</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
</tr>
<tr>
<td>278.04</td>
<td>60</td>
<td>Pulv 46e</td>
<td>Olivine</td>
<td>100</td>
<td>Undeformed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Plagioclase</td>
<td>75</td>
<td>Undeformed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Clinopyroxene</td>
<td>50</td>
<td>Undeformed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Amphibole</td>
<td>25</td>
<td>Undeformed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Sulfide</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
</tr>
<tr>
<td>278.14</td>
<td>70</td>
<td>Pulv 46e</td>
<td>Olivine</td>
<td>100</td>
<td>Undeformed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Plagioclase</td>
<td>75</td>
<td>Undeformed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Clinopyroxene</td>
<td>50</td>
<td>Undeformed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Amphibole</td>
<td>25</td>
<td>Undeformed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Sulfide</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>Undeformed</td>
<td>0</td>
</tr>
</tbody>
</table>

**Sequences:**
- 46c: Serpentinitized harzburgite cross-cut by gabbroic dikes.
- 46d: Serpentinitized olivine gabbro dike.
- 46e: Serpentinitized harzburgite with black veins.

**Contact:**
- Continuous
- Intrusive

**Texture:**
- Granular
- Brittle

**Igneous Summary:**
- Serpentinitized harzburgite
- Fractured olivine gabbro dike
- Fresh fractured serpentized harzburgite

**Alteration:**
- Serpentinized
- Fresh

**Veins:**
- Grey veins
- Black veins
- White veins
- Grey-green veins

**Structure:**
- Brittle features
- Crystal plastic features
- Pyroxene grains are moderately elongated.

**Description:**
- Crystal plastic features are present in the rock.
- Pyroxene grains are rounded and slightly elongated.
SEQNCE: I
UNIT/SUBUNIT: 46e
ROCK NAME: harzburgite
CONTACT: Continuous
TEXTURE:
IGNEOUS SUMMARY: relatively fresh fractured serpentized harzburgite
ALTERATION: serpentinized
VEINS: black veins, white veins
STRUCTURE: Brittle-
Veins-
Crystal plastic- Pyroxene grains are rounded and slightly elongated.
<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Lithology</th>
<th>MSCL-W</th>
<th>GRA (g/m²)</th>
<th>Primary mineralogy (%)</th>
<th>Degree of deformation</th>
<th>Fabric intensity</th>
<th>Alteration intensity</th>
<th>Dip (°)</th>
<th>Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Magneto</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Vents</th>
</tr>
</thead>
<tbody>
<tr>
<td>279.41</td>
<td></td>
<td></td>
<td></td>
<td>1.3</td>
<td>1.1</td>
<td>1.8</td>
<td>1.3</td>
<td>1</td>
<td>1.8</td>
<td>1.8</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>279.51</td>
<td></td>
<td></td>
<td></td>
<td>2.4</td>
<td>1.2</td>
<td>1.9</td>
<td>1.4</td>
<td>1</td>
<td>1.6</td>
<td>1.6</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>279.61</td>
<td></td>
<td></td>
<td></td>
<td>2.4</td>
<td>1.2</td>
<td>1.9</td>
<td>1.4</td>
<td>1</td>
<td>1.6</td>
<td>1.6</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>279.71</td>
<td></td>
<td></td>
<td></td>
<td>2.4</td>
<td>1.2</td>
<td>1.9</td>
<td>1.4</td>
<td>1</td>
<td>1.6</td>
<td>1.6</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>279.81</td>
<td></td>
<td></td>
<td></td>
<td>2.4</td>
<td>1.2</td>
<td>1.9</td>
<td>1.4</td>
<td>1</td>
<td>1.6</td>
<td>1.6</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>279.91</td>
<td></td>
<td></td>
<td></td>
<td>2.4</td>
<td>1.2</td>
<td>1.9</td>
<td>1.4</td>
<td>1</td>
<td>1.6</td>
<td>1.6</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>280.01</td>
<td></td>
<td></td>
<td></td>
<td>2.4</td>
<td>1.2</td>
<td>1.9</td>
<td>1.4</td>
<td>1</td>
<td>1.6</td>
<td>1.6</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Description**

- **Sequences**
  - **I**
  - **Lithology**
    - **Unit/SUBUNIT:** 47a
    - **Rock Name:** dunite
    - **Contact:** Continuous
    - **Texture:** Igneous
      - **Summary:** Serpentinized, fractured dunite with an ear-harzburgitic zone and cross-cutting olivine gabbro dikes
    - **Alteration:** Serpentinized
    - **Veins:** Brown veins, grey-green veins, black veins
    - **Structure:** Brittle-Narrow cataclastic fault zone

- **Sequences**
  - **I**
  - **Lithology**
    - **Unit/SUBUNIT:** 47a
    - **Rock Name:** olivine gabbro
    - **Contact:** Intrusive
    - **Texture:** Granular
    - **Igneous Summary:** Dark olivine gabbro dike
    - **Alteration:**
    - **Veins:** Black veins
    - **Structure:** Brittle

- **Sequences**
  - **I**
  - **Lithology**
    - **Unit/SUBUNIT:** 47a
    - **Rock Name:** olivine gabbro
    - **Contact:** Intrusive
    - **Texture:** Granular
    - **Igneous Summary:** Dark olivine gabbro dike
    - **Alteration:**
    - **Veins:** Black veins, Grey veins
    - **Structure:** Brittle

- **Sequences**
  - **I**
  - **Lithology**
    - **Unit/SUBUNIT:** 47a
    - **Rock Name:** gabbro
    - **Contact:** Intrusive
    - **Texture:** Granular
    - **Igneous Summary:** Olivine gabbro dike
    - **Alteration:**
    - **Veins:** Grey veins, Grey-green veins
    - **Structure:** Brittle

---

**Fabric Intensity**

<table>
<thead>
<tr>
<th>Degree of deformation</th>
<th>Fabric intensity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fracture/ Vein density (per meter)</td>
<td></td>
</tr>
</tbody>
</table>

**Vein Crosscutting**

- **Alteration Halos**
  - **Intensity:** Complete (≥90%), Substantial (31–60%), Extensive (61–90%), Moderate (11–30%), Slight (3–10%), Fresh (<3%)

**Discrete brittle features**

- **Density:** 0–1 per 10 cm, 1–3 per 10 cm, 3–5 per 10 cm, >20 per 10 cm, 5–15 per 10 cm, 15–20 per 10 cm

**Degree of deformation**

- **Structures**
  - **Alteration:** Serpentinized, Fractured
  - **Veins:** Brown, Grey-green
  - **Veins:** Black, Grey
  - **Veins:** Black, Grey-green

**Vein Crosscutting**

- **Density:** 0–1 per 10 cm, 1–3 per 10 cm, 3–5 per 10 cm, >20 per 10 cm, 5–15 per 10 cm, 15–20 per 10 cm

**Brittle**

- **Magmatic contact**
  - **Density:** 0–1 per 10 cm, 1–3 per 10 cm, 3–5 per 10 cm, >20 per 10 cm, 5–15 per 10 cm, 15–20 per 10 cm

**Crystal plastic**

- **Density:** 0–1 per 10 cm, 1–3 per 10 cm, 3–5 per 10 cm, >20 per 10 cm, 5–15 per 10 cm, 15–20 per 10 cm

**Vents**

- **Density:** 0–1 per 10 cm, 1–3 per 10 cm, 3–5 per 10 cm, >20 per 10 cm, 5–15 per 10 cm, 15–20 per 10 cm
| Depth (m CCD) | Core length (cm) | Shipboard samples | Stained image | Magnetic susceptibility | MSCL-W MSP (SI x 10^-5) | GRA (g/cm³) | Sequence | Unit/subunit | Lithology | Primary mineralogy (%) | Magmatic layering | Foliation | Fabric intensity | Discrete brittle features | Fracture/ Vein density (per meter) | Vein density (per meter) | Alteration intensity | Dip | Magnetic contact | Brittle | Crystal plastic | Vents |
|--------------|-----------------|-------------------|--------------|-----------------------|--------------------------|----------------|----------|-------------|-----------|-----------------------|----------------|-----------|----------------|--------------------------|-------------------|---------------------|------|-----------------|--------|--------------|-------|
| 280.00       | 0               |                    |              |                       |                          |                |          |             |           |                      |                |           |               |                          |                   |                     |      |                 |        |              |       |
|              |                 |                    |              |                       |                          |                |          |             |           |                      |                |           |               |                          |                   |                     |      |                 |        |              |       |
| 280.05       | 0               |                    |              |                       |                          |                |          |             |           |                      |                |           |               |                          |                   |                     |      |                 |        |              |       |
|              |                 |                    |              |                       |                          |                |          |             |           |                      |                |           |               |                          |                   |                     |      |                 |        |              |       |
| 280.10       | 0               |                    |              |                       |                          |                |          |             |           |                      |                |           |               |                          |                   |                     |      |                 |        |              |       |
|              |                 |                    |              |                       |                          |                |          |             |           |                      |                |           |               |                          |                   |                     |      |                 |        |              |       |
| 280.15       | 0               |                    |              |                       |                          |                |          |             |           |                      |                |           |               |                          |                   |                     |      |                 |        |              |       |
|              |                 |                    |              |                       |                          |                |          |             |           |                      |                |           |               |                          |                   |                     |      |                 |        |              |       |
| 280.20       | 0               |                    |              |                       |                          |                |          |             |           |                      |                |           |               |                          |                   |                     |      |                 |        |              |       |
|              |                 |                    |              |                       |                          |                |          |             |           |                      |                |           |               |                          |                   |                     |      |                 |        |              |       |
| 280.25       | 0               |                    |              |                       |                          |                |          |             |           |                      |                |           |               |                          |                   |                     |      |                 |        |              |       |
|              |                 |                    |              |                       |                          |                |          |             |           |                      |                |           |               |                          |                   |                     |      |                 |        |              |       |
| 280.30       | 0               |                    |              |                       |                          |                |          |             |           |                      |                |           |               |                          |                   |                     |      |                 |        |              |       |
|              |                 |                    |              |                       |                          |                |          |             |           |                      |                |           |               |                          |                   |                     |      |                 |        |              |       |
| 280.35       | 0               |                    |              |                       |                          |                |          |             |           |                      |                |           |               |                          |                   |                     |      |                 |        |              |       |
|              |                 |                    |              |                       |                          |                |          |             |           |                      |                |           |               |                          |                   |                     |      |                 |        |              |       |
| 280.40       | 0               |                    |              |                       |                          |                |          |             |           |                      |                |           |               |                          |                   |                     |      |                 |        |              |       |
|              |                 |                    |              |                       |                          |                |          |             |           |                      |                |           |               |                          |                   |                     |      |                 |        |              |       |
| 280.45       | 0               |                    |              |                       |                          |                |          |             |           |                      |                |           |               |                          |                   |                     |      |                 |        |              |       |
|              |                 |                    |              |                       |                          |                |          |             |           |                      |                |           |               |                          |                   |                     |      |                 |        |              |       |
| 280.50       | 0               |                    |              |                       |                          |                |          |             |           |                      |                |           |               |                          |                   |                     |      |                 |        |              |       |
|              |                 |                    |              |                       |                          |                |          |             |           |                      |                |           |               |                          |                   |                     |      |                 |        |              |       |
| 280.55       | 0               |                    |              |                       |                          |                |          |             |           |                      |                |           |               |                          |                   |                     |      |                 |        |              |       |
|              |                 |                    |              |                       |                          |                |          |             |           |                      |                |           |               |                          |                   |                     |      |                 |        |              |       |
| 280.60       | 0               |                    |              |                       |                          |                |          |             |           |                      |                |           |               |                          |                   |                     |      |                 |        |              |       |
|              |                 |                    |              |                       |                          |                |          |             |           |                      |                |           |               |                          |                   |                     |      |                 |        |              |       |
| 280.65       | 0               |                    |              |                       |                          |                |          |             |           |                      |                |           |               |                          |                   |                     |      |                 |        |              |       |
|              |                 |                    |              |                       |                          |                |          |             |           |                      |                |           |               |                          |                   |                     |      |                 |        |              |       |
| 280.70       | 0               |                    |              |                       |                          |                |          |             |           |                      |                |           |               |                          |                   |                     |      |                 |        |              |       |
|              |                 |                    |              |                       |                          |                |          |             |           |                      |                |           |               |                          |                   |                     |      |                 |        |              |       |
| 280.75       | 0               |                    |              |                       |                          |                |          |             |           |                      |                |           |               |                          |                   |                     |      |                 |        |              |       |
|              |                 |                    |              |                       |                          |                |          |             |           |                      |                |           |               |                          |                   |                     |      |                 |        |              |       |
| 280.80       | 0               |                    |              |                       |                          |                |          |             |           |                      |                |           |               |                          |                   |                     |      |                 |        |              |       |
|              |                 |                    |              |                       |                          |                |          |             |           |                      |                |           |               |                          |                   |                     |      |                 |        |              |       |
| 280.85       | 0               |                    |              |                       |                          |                |          |             |           |                      |                |           |               |                          |                   |                     |      |                 |        |              |       |
|              |                 |                    |              |                       |                          |                |          |             |           |                      |                |           |               |                          |                   |                     |      |                 |        |              |       |
| 280.90       | 0               |                    |              |                       |                          |                |          |             |           |                      |                |           |               |                          |                   |                     |      |                 |        |              |       |
|              |                 |                    |              |                       |                          |                |          |             |           |                      |                |           |               |                          |                   |                     |      |                 |        |              |       |
| 280.95       | 0               |                    |              |                       |                          |                |          |             |           |                      |                |           |               |                          |                   |                     |      |                 |        |              |       |
### Hole BA4A-102Z Section 4, Top of Section 280.97 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Lithology</th>
<th>Primary Mineralogy (%)</th>
<th>Grain Size</th>
<th>Degree of Deformation</th>
<th>Alteration</th>
<th>Vein Density (per meter)</th>
<th>Structures</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>281.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>281.10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>281.20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>281.30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>281.40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>281.50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>281.60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>281.70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>281.80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>281.90</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Fabric Intensity**

- 0
- 1
- 2
- 3
- 4
- 5

**Vein Density**

- 0–1
- 1–3
- 3–5
- >5

**Dip**

- 0
- 45
- 90

**Degree of Deformation**

- Undeformed
- Minor fracturing
- Moderate fracturing
- GS reduction and rotation
- Well-developed cataclasis
- Ultracataclastite

**Alteration**

- Fresh (<3%)
- Slight (3–10%)
- Moderate (11–30%)
- Substantial (31–60%)
- Extensive (61–90%)
- Complete (>90%)

**Core Processing**

- Sequence: I, 47c
- Rock Name: dunite
- Contact: tectonic
- Texture: igneous
- Summary: serpentinized dunite, crosscut by gabbroic and pyroxenitic dikes, moderately fractured
- Alteration: serpentinized and high oxidation
- Veins: green, white, vertical black veins
- Structure: Brittle-Crystal plastic
- Dip: Magnetic contact
- Brittle-Crystal plastic

**Lithology**

- Gabbro
- Dunite

**Primary Mineralogy**

- Olivine
- Plagioclase
- Clinopyroxene
- Orthopyroxene
- Amphibole
- Sulfide

**Grain Size**

- 0.2–1 mm
- 1–5 mm
- 5–30 mm
- >30 mm

**Degree of Deformation**

- Fracture/ Vein density (per meter)

- Fabric intensity

**Vein Density**

- 0–1 per 10 cm
- 1–3 per 10 cm
- >5 per 10 cm
- 3–5 per 10 cm
- 5–15 per 10 cm
- 15–20 per 10 cm
- >20 per 10 cm

**Structures**

- Fault zones
- Veins
- Discrete brittle features

**Alteration Halos**

- 0–10
- 10–30
- 30–50
- 50–70
- 70–90
- >90

**Degree of Deformation**

- 0–1
- 1–3
- 3–5
- >5

**Structures**

- Breccia
- Alteration halos
- Veins
- Fault zones

**Core Processing**

- Sequence: I, 47c
- Rock Name: dunite
- Contact: tectonic
- Texture: igneous
- Summary: serpentinized dunite, crosscut by gabbroic and pyroxenitic dikes, moderately fractured
- Alteration: serpentinized and high oxidation
- Veins: green, white, vertical black veins
- Structure: Brittle-Crystal plastic
- Dip: Magnetic contact
- Brittle-Crystal plastic
### Hole BA4A-103Z Section 1, Top of Section 281.70 (m CCD)

#### Sequence: I
#### Unit/Subunit: 47c
#### Rock Name: dunite
#### Contact: Continuous
#### Texture: Igneous
Summary: Serpentinized dunite, crosscut by gabbroic and pyroxenitic dikes, moderately fractured
#### Alteration: Serpentinized and high oxidation
#### Veins: Green, white, vertical black veins
#### Structure: Brittle-

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>Magnetic susceptibility (SI 10^-5)</th>
<th>Primary mineralogy (%)</th>
<th>Grain size (µm)</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnetic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>281.73</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>281.83</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>281.93</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>282.03</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>282.13</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Description**
- **Vein crosscut:**
- **Alteration:** Serpentinized and high oxidation
- **Veins:** Green, white, vertical black veins
- **Structure:** Brittle-

**Note:** The table and diagram provide a detailed view of the rock characteristics and their spatial distribution along the section.
### Sequence I: 47c
- **Rock Name:** dunite
- **Contact:** Continuous
- **Texture:** igneous
- **Summary:** Serpentinized dunite, crosscut by gabbroic and pyroxenitic dikes, moderately fractured
- **Alteration:** Serpentinized and high oxidation
- **Veins:** Green, white, vertical black veins
- **Structure:** Brittle, Veins, conjugate vein sets occur

### Sequence I: 47c
- **Rock Name:** gabbro
- **Contact:** Intrusive
- **Texture:** igneous
- **Summary:** Fractured gabbroic dike
- **Alteration:**
- **Veins:** Grey veins, white veins
- **Structure:** Brittle, Veins

### Sequence I: 47c
- **Rock Name:** Olivine gabbro
- **Contact:** Intrusive
- **Texture:** Granular
- **Summary:** Olivine gabbro dike
- **Alteration:**
- **Veins:** Grey-green veins, white veins, grey veins
- **Structure:** Brittle

### Fabric Intensity

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>0</th>
<th>10</th>
<th>20</th>
<th>30</th>
<th>40</th>
<th>50</th>
<th>60</th>
<th>70</th>
<th>80</th>
<th>90</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Core length (cm)</th>
<th>10</th>
<th>20</th>
<th>30</th>
<th>40</th>
<th>50</th>
<th>60</th>
<th>70</th>
<th>80</th>
<th>90</th>
</tr>
</thead>
</table>

### MAGNETIC SUSCEPTIBILITY
- **MSCL-W (SI x 10^-5):**
  - 1 x 10^-5
  - 2 x 10^-5
  - 3 x 10^-5
  - 4 x 10^-5
  - 5 x 10^-5

### GRA (g/cm^3)
- **Depth (m CCD):**
  - 0.00
  - 0.05
  - 0.10
  - 0.15
  - 0.20

### Primary Mineralogy
- **Olivine**
- **Plagioclase**
- **Orthopyroxene**
- **Amphibole**
- **Sulfide**

### Degree of Deformation
- **Fracture/ Vein density (per meter):**
  - 0
  - 1
  - 2
  - 3
  - 4
  - 5

### Alteration Intensity
- **Veins:**
  - Green, white, vertical black veins

### Structure
- **Brittle, Veins:**
  - Conjugate vein sets occur

### Description
- **Fault zones:**
  - Brittle plastic features

### Lithology
- **Primary Mineralogy (%):**
  - 100%
  - 75%
  - 50%
  - 25%
  - 0%

### Text
- **Unit/Subunit:**
  - 47c

### Alteration
- **Intensity:**
  - Fresh (<3%)
  - Slight (3–10%)
  - Moderate (11–30%)
  - Substantial (31–60%)
  - Extensive (61–90%)
  - Complete (> 90%)

### Degree of Deformation
- **Veins:**
  - Conjugate vein sets occur

### Vein Features
- **Density:**
  - 0–10 per 10 cm
  - 10–30 per 10 cm
  - 30–50 per 10 cm
  - 50–70 per 10 cm
  - 70–90 per 10 cm
  - >100 per 10 cm
**SEQUENCE:** 47c  
**UNIT/SUBUNIT:** 47c  
**ROCK NAME:** Dunite  
**CONTACT:** Continuous  
**TEXTURE:** Igneous  
**SUMMARY:** serpentinized dunite, crosscut by gabbroic and pyroxenitic dikes, moderately fractured  
**ALTERATION:** serpentinized and high oxidation  
**VEINS:** green, white, vertical black veins  
**STRUCTURE:** Brittle-Veins- conjugate vein sets are common  
**Crystal plastic-Fabric intensity:** 5  
**Vein density (per meter):** 3-5 per 10 cm  
**Grain size:***

**Hole BA4A-103Z Section 3, Top of Section 283.15 (m CCD)**

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>CT image</th>
<th>Magnetic susceptibility</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnetic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
<th>Structures</th>
<th>Alteration halos</th>
<th>Fault zones</th>
<th>Apparent offset</th>
<th>Description</th>
</tr>
</thead>
</table>
**Hole BA4A-103Z Section 4, Top of Section 283.99 (m CCD)**

**SEQUENCE:** 47c

**UNIT/SUBUNIT:** 47c

**ROCK NAME:** Dunite

**CONTACT:** Continuous

**TEXTURE:**

**IGNEOUS SUMMARY:** serpentinitized dunite, crosscut by gabbroic and pyroxenitic dikes, moderately fractured

**ALTERATION:** serpentinitized and high oxidation

**VEINS:** green, white, vertical black veins

**STRUCTURE:** Glassy

---

**Depth (m CCD)** | **Core length (cm)** | **Shipboard samples** | **Stained image** | **Magnetic susceptibility** (SI x 10^-5) | **MSCL-W** | **GRA (g/cm^2)** | **Sequence** | **Unit/subunit** | ** PRIMARY MINERALOGY (%)** | **Degree of deformation** | **Fracture/Vein density (per meter)** | **Alteration intensity** | **Dip** | **Magnetic contact** |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>284.01</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>284.11</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>284.21</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>284.31</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>284.41</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>284.51</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>284.61</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>284.71</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Description**

- **Vein density (per meter):**
  - Fresh (<3%)
  - Slight (3–10%)
  - Moderate (11–30%)
  - Substantial (31–60%)
  - Extensive (61–90%)
  - Complete (≥90%)

- **Fracture/Vein density (per meter):**
  - 0
  - 0–10
  - 10–30
  - 30–50
  - 50–70
  - 70–90
  - >100

- **Alteration intensity:**
  - Undeformed
  - Minor fracturing
  - Moderate fracturing
  - GS reduction and rotation
  - Well-developed cataclasis
  - Ultracataclastite

- **Structures**
  - Fault zones
  - Vein crosscutting

- **Degree of deformation**
  - Protomylonite
  - Mylonite
  - Ultramylonite

- **Lithology**
  - Magnetite
  - Oxidation
  - Foliation

- **Grain size**
  - 0–10
  - 10–30
  - 30–50
  - 50–70
  - 70–90
  - >100

- **Texture**
  - Protogranular
  - Porphyroclastic
  - Strongly foliated

- **Alteration halos**
  - Fresh (<3%)
  - Slight (3–10%)
  - Moderate (11–30%)
  - Substantial (31–60%)
  - Extensive (61–90%)
  - Complete (≥90%)

- **Magmatic contact**
  - Brittle
  - Crystal plastic

- **Crystal plasticity**
  - Glassy
  - Cryptocrystalline (<0.1 mm)
  - Microcrystalline (0.1–0.2 mm)

- **Granulite (g/cm^3):**
  - 2.3
  - 1.8

- **Mineralogy**
  - Olivine
  - Plagioclase
  - Clinopyroxene
  - Orthopyroxene
  - Amphibole
  - Sulfide
SEQUENCE: I
UNIT/SUBUNIT: 47c
ROCK NAME: Dunite
CONTACT: Continuous
TEXTURE:
IGNEOUS SUMMARY: Serpentinized dunite, crosscut by gabbroic and pyroxenitic dikes, moderately fractured
ALTERATION: Serpentinized and high oxidation
VEINS: Green, white, vertical black veins
STRUCTURE: Brittle Brecciation from magmatic impregnation
Vein crosscutting

Depth (m CCD) | Core length (cm) | Shipboard samples | Stained image | Magnetic susceptibility (SI) | MSCL-W | MSP (SI x 10^-5) | GRA (g/cm^3) |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>284.70</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>284.80</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>284.90</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>285.00</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>285.10</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>285.20</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>285.30</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>285.40</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>285.50</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Description:
- SEQUENCE: I
- UNIT/SUBUNIT: 47c
- ROCK NAME: Dunite
- CONTACT: Continuous
- TEXTURE:
- IGNEOUS SUMMARY: Serpentinized dunite, crosscut by gabbroic and pyroxenitic dikes, moderately fractured
- ALTERATION: Serpentinized and high oxidation
- VEINS: Green, white, vertical black veins
- STRUCTURE: Brittle Brecciation from magmatic impregnation
Vein crosscutting
### Hole BA4A-104Z Section 2, Top of Section 285.59 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnatic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
<th>Structures</th>
<th>Alteration halos</th>
<th>Vein crosscutting</th>
</tr>
</thead>
<tbody>
<tr>
<td>285.63</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>285.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>285.83</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>285.93</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Sequence:** I 47c

**Unit/Subunit:** 47c

**Rock Name:** Dunite

**Contact:** Continuous

**Texture:**

**Igneous Summary:** serpentinized dunite, crosscut by gabbroic and pyroxenitic dikes, moderately fractured

**Alteration:** serpentinized and high oxidation

**Veins:** green, white, vertical black veins

**Structure:** Brittle-

---

**Sequence:** I 48a

**Unit/Subunit:** 48a

**Rock Name:** Olivine gabbro

**Contact:** Intrusive

**Texture:**

**Igneous Summary:** rodingitised

**Alteration:** highly altered

**Veins:**

**Structure:** Brittle- Crystal plastic or semi-brittle deformation mostly contained within dike, with several anastamosing brittle slip planes

---

**Sequence:** I 48a

**Unit/Subunit:** 48a

**Rock Name:** Harzburgite

**Contact:** Intrusive

**Texture:** Granular

**Igneous Summary:** serpentinized harzburgite, crosscut by gabbroic and pyroxenitic dikes, moderately fractured, dunitic zones

**Alteration:** serpentinized

**Veins:** white veins

**Structure:** Brittle-

---

**Fabric intensity**

1.0

2.0

3.0

4.0

5.0

6.0

7.0

8.0

9.0

0

**Vein density (per meter)**

1 per 10 cm

3-5 per 10 cm

>20 per 10 cm

5-15 per 10 cm

15-20 per 10 cm

**Degree of deformation**

**Vein crosscutting**

**Alteration intensity**

**Dip**

**Magnetic contact**

**Brittle**

**Crystal plastic**

**Veins**

**Structures**

**Altered halos**

**Fault zones**

**Magmatic contact**

**Brittle**

**Crystal plastic**

**Veins**

**Description**
Hole BA4A-104Z Section 3, Top of Section 285.96 (m CCD)

**Sequence:** 1

**Unit/Subunit:** 48a

**Rock Name:** Harzburgite

**Contact:** Intrusive

**Texture:** Granular

**Igneous Summary:** Serpentinized harzburgite, crosscut by gabbroic and pyroxenitic dikes, moderately fractured, dunitic zones

**Alteration:** Serpentinized

**Veins:** White veins

**Structure:** Brittle-

**Crystal plastic:** Pyroxene grains are rounded and slightly elongated.

**Fabric intensity:**

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Serginson image</th>
<th>Magnetic susceptibility</th>
<th>Primary mineralogy</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>286.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>286.10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>286.20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>286.30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>286.40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>286.50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>286.60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>286.70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>286.80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>286.90</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depth (m CCD)</td>
<td>Core length (cm)</td>
<td>Shipboard samples</td>
<td>Stained image</td>
<td>CT image</td>
<td>Magnetic susceptibility</td>
<td>Primary mineralogy (%)</td>
<td>Grain size</td>
<td>Degree of deformation</td>
<td>Fracture/ Vein density (per meter)</td>
</tr>
<tr>
<td>-------------</td>
<td>-----------------</td>
<td>------------------</td>
<td>---------------</td>
<td>----------</td>
<td>------------------------</td>
<td>----------------------</td>
<td>-----------</td>
<td>----------------------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>287.73</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>287.83</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>287.93</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>288.03</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>288.13</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>288.23</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>288.33</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Hole BA4A-105Z Section 1, Top of Section 287.70 (m CCD)
<table>
<thead>
<tr>
<th>Sequence</th>
<th>Unit/Subunit</th>
<th>Rock Name</th>
<th>Contact</th>
<th>Texture</th>
<th>Igneous Summary</th>
<th>Alteration</th>
<th>Veins</th>
<th>Fabric Intensity</th>
<th>Vein Density (per meter)</th>
<th>Degree of Deformation</th>
<th>Fault Zones</th>
<th>Adjacent Lithology</th>
</tr>
</thead>
<tbody>
<tr>
<td>48d</td>
<td></td>
<td>Harzburgite</td>
<td>Continuous</td>
<td>Granular</td>
<td>serpentinized harzburgite, crosscut by gabbroic and pyroxenitic dikes from thick to thin</td>
<td>Serpentinized</td>
<td>Black, White</td>
<td>5</td>
<td>6</td>
<td>Brittle</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Magnetic Susceptibility**

- Hole BA4A-105Z Section 3, Top of Section 289.05 (m CCD)

**Lithology**

- MBIO

**Primary Mineralogy**

- Olivine
- Plagioclase
- Clinopyroxene
- Orthopyroxene
- Amphibole
- Sulfide

**Grain Size**

- Small (S)
- Medium (M)
- Large (L)

**Degree of Deformation**

- Undeformed
- Minor fracturing
- Moderate fracturing
- GS reduction and rotation
- Well-developed cataclasis
- Ultracataclastite

**Vein Crosscutting**

- Protogranular
- Porphyroclastic
- Strongly foliated
- Protomylonite
- Mylonite
- Ultramylonite

**Alteration Intensity**

- Fresh (<3%)
- Slight (3–10%)
- Moderate (11–30%)
- Substantial (31–60%)
- Extensive (61–90%)
- Complete (≥90%)

**Structures**

- Fault zones
- Discrete brittle features

**Vein Density (per meter)**

- 0
- 1–10 per 10 cm
- 10–30 per 10 cm
- 30–50 per 10 cm
- 50–70 per 10 cm
- 70–90 per 10 cm
- >90 per 10 cm

**Core Length (cm)**

- 80

**Measurements**

- Magnetic susceptibility (SI × 10⁻⁵)
- GRA (g/cm³)
- Fabric intensity
- Vein density (per meter)
- Degree of deformation

**Note:** Crystal plastic: Pyroxene grains are rounded and slightly elongated.
**Hole BA4A-105Z Section 4, Top of Section 289.89 (m CCD)**

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Sequence</th>
<th>Unit/subunit</th>
<th>Rock Name</th>
<th>Contact</th>
<th>Texture</th>
<th>Igneous Summary</th>
<th>Alteration</th>
<th>Veins</th>
<th>Structure</th>
<th>Brittle Fracture</th>
<th>Vein Crosscutting</th>
<th>Alteration Intensity</th>
<th>Vein Density (per meter)</th>
<th>Dip</th>
<th>Magnetic Contact</th>
<th>Brittle</th>
<th>Crystal Plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>289.93</td>
<td></td>
<td>1</td>
<td>48d</td>
<td>Harzburgite</td>
<td>Continuous</td>
<td>Granular</td>
<td>Serpentinized harzburgite, crosscut by gabbroic and pyroxenitic dikes from thick to thin</td>
<td>Serpentinized</td>
<td>Black, white veins</td>
<td>Brittle- Brecciation from magmatic impregnation</td>
<td>Veins-</td>
<td>Crystal plastic-</td>
<td>Pyroxene grains are rounded and slightly elongated,</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>289.03</td>
<td></td>
<td>1</td>
<td>48d</td>
<td>Harzburgite</td>
<td>Continuous</td>
<td>Granular</td>
<td>Serpentinized harzburgite, crosscut by gabbroic and pyroxenitic dikes from thick to thin</td>
<td>Serpentinized</td>
<td>Black, white veins</td>
<td>Brittle- Brecciation from magmatic impregnation</td>
<td>Veins-</td>
<td>Crystal plastic-</td>
<td>Pyroxene grains are rounded and slightly elongated,</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>289.13</td>
<td></td>
<td>1</td>
<td>48d</td>
<td>Harzburgite</td>
<td>Continuous</td>
<td>Granular</td>
<td>Serpentinized harzburgite, crosscut by gabbroic and pyroxenitic dikes from thick to thin</td>
<td>Serpentinized</td>
<td>Black, white veins</td>
<td>Brittle- Brecciation from magmatic impregnation</td>
<td>Veins-</td>
<td>Crystal plastic-</td>
<td>Pyroxene grains are rounded and slightly elongated,</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>289.23</td>
<td></td>
<td>1</td>
<td>48d</td>
<td>Harzburgite</td>
<td>Continuous</td>
<td>Granular</td>
<td>Serpentinized harzburgite, crosscut by gabbroic and pyroxenitic dikes from thick to thin</td>
<td>Serpentinized</td>
<td>Black, white veins</td>
<td>Brittle- Brecciation from magmatic impregnation</td>
<td>Veins-</td>
<td>Crystal plastic-</td>
<td>Pyroxene grains are rounded and slightly elongated,</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>289.33</td>
<td></td>
<td>1</td>
<td>48d</td>
<td>Harzburgite</td>
<td>Continuous</td>
<td>Granular</td>
<td>Serpentinized harzburgite, crosscut by gabbroic and pyroxenitic dikes from thick to thin</td>
<td>Serpentinized</td>
<td>Black, white veins</td>
<td>Brittle- Brecciation from magmatic impregnation</td>
<td>Veins-</td>
<td>Crystal plastic-</td>
<td>Pyroxene grains are rounded and slightly elongated,</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>289.43</td>
<td></td>
<td>1</td>
<td>48d</td>
<td>Harzburgite</td>
<td>Continuous</td>
<td>Granular</td>
<td>Serpentinized harzburgite, crosscut by gabbroic and pyroxenitic dikes from thick to thin</td>
<td>Serpentinized</td>
<td>Black, white veins</td>
<td>Brittle- Brecciation from magmatic impregnation</td>
<td>Veins-</td>
<td>Crystal plastic-</td>
<td>Pyroxene grains are rounded and slightly elongated,</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>289.53</td>
<td></td>
<td>1</td>
<td>48d</td>
<td>Harzburgite</td>
<td>Continuous</td>
<td>Granular</td>
<td>Serpentinized harzburgite, crosscut by gabbroic and pyroxenitic dikes from thick to thin</td>
<td>Serpentinized</td>
<td>Black, white veins</td>
<td>Brittle- Brecciation from magmatic impregnation</td>
<td>Veins-</td>
<td>Crystal plastic-</td>
<td>Pyroxene grains are rounded and slightly elongated,</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>289.63</td>
<td></td>
<td>1</td>
<td>48d</td>
<td>Harzburgite</td>
<td>Continuous</td>
<td>Granular</td>
<td>Serpentinized harzburgite, crosscut by gabbroic and pyroxenitic dikes from thick to thin</td>
<td>Serpentinized</td>
<td>Black, white veins</td>
<td>Brittle- Brecciation from magmatic impregnation</td>
<td>Veins-</td>
<td>Crystal plastic-</td>
<td>Pyroxene grains are rounded and slightly elongated,</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>289.73</td>
<td></td>
<td>1</td>
<td>48d</td>
<td>Harzburgite</td>
<td>Continuous</td>
<td>Granular</td>
<td>Serpentinized harzburgite, crosscut by gabbroic and pyroxenitic dikes from thick to thin</td>
<td>Serpentinized</td>
<td>Black, white veins</td>
<td>Brittle- Brecciation from magmatic impregnation</td>
<td>Veins-</td>
<td>Crystal plastic-</td>
<td>Pyroxene grains are rounded and slightly elongated,</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Hole BA4A-106Z Section 1, Top of Section 290.70 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Lithology</th>
<th>Primary mineralogy (%</th>
<th>Magnetic susceptibility (SI x 10^-5)</th>
<th>Vein density (per meter)</th>
<th>Degree of deformation</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Structures</th>
</tr>
</thead>
<tbody>
<tr>
<td>290.70</td>
<td></td>
<td>Sequence</td>
<td>Unit/substrate: I</td>
<td>48d</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>290.83</td>
<td></td>
<td>Sequence</td>
<td>Unit/substrate: 48d</td>
<td>49a</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Lithology:**
- **Rock Name:** Harzburgite
- **Contact:** Continuous
- **Texture:** Granular
- **Igneous Summary:** Serpentinized harzburgite, crosscut by gabbroic and pyroxenitic dikes from thick to thin
- **Alteration:** Serpentinized
- **Veins:** Black, white veins
- **Structure:** Brittle

**Vein Crosscutting Features:**
- **Vein Density:**
  - 0–1 per 10 cm
  - 1 per 10 cm
  - 2–5 per 10 cm
  - >20 per 10 cm
- **Vein Width:**
  - 0–1 per 10 cm
  - 1 per 10 cm

**Discrete Brittle Features:**
- **Fabric Intensity:**
  - 0–1 per 10 cm
  - 1 per 10 cm
  - 2–5 per 10 cm
  - >20 per 10 cm
- **Fracture/发育密度 (per meter):**
  - 0–1 per 10 cm
  - 1 per 10 cm
  - 2–5 per 10 cm
  - >20 per 10 cm

**Alteration Intensity:**
- **Alteration Halos:**
  - Fresh (<3%)
  - Slight (3–10%)
  - Moderate (11–30%)
  - Substantial (31–60%)
  - Extensive (61–90%)
  - Complete (>90%)

**Degree of Deformation:**
- **Magmatic Layering:**
  - Undeformed
  - Minor fracturing
  - Moderate fracturing
  - GS Reduction and Rotation
  - Well-Developed Cataclasis
- **Foliation:**
  - Protomylonite
  - Mylonite
  - Ultramylonite
- **Protogranular:**
  - Strongly Foliated
- **Porphyroclastic:**
  - Isotropic
  - Weak
  - Moderate
  - Strong
- **Ropey:**
  - Coarse Grained (5–30 mm)
  - Fine Grained (0.2–1 mm)
  - Pegmatitic (>30 mm)
- **Glassy:**
  - Cryptocrystalline (<0.1 mm)
  - Microcrystalline (0.1–0.2 mm)

**Magnetic Susceptibility:**
- **MSCL-W MSP:**
  - (SI x 10^-5)
**SEQUENCE:** I  
**UNIT/SUBUNIT:** 49a  
**ROCK NAME:** Dunite  
**CONTACT:** Continuous  
**TEXTURE:**  
**IGNEOUS SUMMARY:** Highly serpentinized dunite, harzburgitic patches, crosscut by gabboric and pyroxenitic dikes, several thick fractured filled by green mineral  
**ALTERATION:** Serpentinized and high oxidation  
**VEINS:** Green, white veins  
**STRUCTURE:** Brittle- Brecciation from magmatic impregnation - Veins- Crystal plastic-  

<table>
<thead>
<tr>
<th>Fabric intensity</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vein density (per meter)</td>
<td>0</td>
<td>1 per 10 cm</td>
<td>3-5 per 10 cm</td>
<td>&gt;20 per 10 cm</td>
<td>5-15 per 10 cm</td>
<td>15-20 per 10 cm</td>
<td>20-25 per 10 cm</td>
<td>25-30 per 10 cm</td>
<td>30-40 per 10 cm</td>
<td>40-50 per 10 cm</td>
<td>50-60 per 10 cm</td>
</tr>
</tbody>
</table>

**GRA:** (g/cm³)  
- 3.04  
- 2.84  
- 2.64  
- 2.44  

**Magnetic susceptibility** (SI x 10⁻⁵)  
- 1000  
- 100  
- 10  
- 1  

**Magnetic contact**  
- Brittle  
- Crystal plastic  
- Veins  

**Discrete brittle features**  
- 0-10  
- 10-30  
- 30-50  
- 50-70  
- 70-90  
- >90  

**Vein density (per meter)**  
- 0  
- 1 per 10 cm  
- 3-5 per 10 cm  
- >20 per 10 cm  
- 5-15 per 10 cm  
- 15-20 per 10 cm  

**Alteration intensity**  
- 0-10  
- 10-30  
- 30-50  
- 50-70  
- 70-90  
- >90  

**Degree of deformation**  
- Undeformed  
- Minor fracturing  
- Moderate fracturing  
- GS reduction and rotation  
- Well-developed cataclasis  
- Ultracataclastite  

**Lithology**  
- Primary mineralogy (%)  
  - 100  
  - 75  
  - 50  
  - 25  
  - 0  

**Magmatic layering**  
- Protogranular  
- Porphyroclastic  
- Strongly foliated  
- Protomylonite  
- Mylonite  
- Ultramylonite  

**Texture**  
- Isotropic  
- Weak  
- Moderate  
- Strong  

**Grain size**  
- Fine grained (0.2–1 mm)  
- Medium grained (1–5 mm)  
- Coarse grained (5–30 mm)  
- Pegmatitic (>30 mm)  

**Hole BA4A-106Z Section 2, Top of Section 291.34 (m CCD)**

**Description**  
- Fault zones
- Structures
- Alteration halos
- Sulfide
- Amphibole
- Spinel
- Orthopyroxene
- Clinopyroxene
- Plagioclase
- Olivine
**Hole BA4A-106Z Section 4, Top of Section 293.11 (m CCD)**

**Description**

- **SEQUENCE**: I 50a
- **ROCK NAME**: Harzburgite
- **CONTACT**: Continuous
- **TEXTURE**: Granular
- **IGNEOUS SUMMARY**: Serpentinised harzburgite with gabbroic dykes and patchy opx destruction
- **ALTERATION**: Serpentinised
- **VEINS**: Cut by white veins, green veins, dark vein networks, white-brown composite thread veins, horrible green veins on highly altered dykes, white veins on less altered dykes, en-echelon veins, ladder veins on faults that offset dykes, complex white-green and frankenstein veins
- **STRUCTURE**: Brittle-Veins-Crystal plastic
- **Crystal plastic**: Pyroxene grains are rounded and slightly elongated

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Lithology</th>
<th>Primary mineralogy (%)</th>
<th>Degree of deformation</th>
<th>Discrete brittle features</th>
<th>Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>293.13</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>0-10</td>
<td></td>
</tr>
<tr>
<td>293.23</td>
<td>15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>10-30</td>
<td></td>
</tr>
<tr>
<td>293.33</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>30-50</td>
<td></td>
</tr>
<tr>
<td>293.43</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>50-70</td>
<td></td>
</tr>
<tr>
<td>293.53</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>70-90</td>
<td></td>
</tr>
<tr>
<td>293.63</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>90-100</td>
<td></td>
</tr>
<tr>
<td>293.73</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>&gt;100</td>
<td></td>
</tr>
</tbody>
</table>

**Magnetic susceptibility (MSCL-W)**

- **GRA (g/cm³)**:
  - 0.2
  - 0.4
  - 0.6
  - 0.8
  - 1.0

**Degree of deformation**

- **Vein crosscutting**
  - 0
  - 1
  - 2
  - 3
  - 4
  - 5

**Alteration intensity**

- **Sulfide**: Fresh (<3%)
- **Amphibole**: Slight (3–10%)
- **Spinel**: Moderate (11–30%)
- **Orthopyroxene**: Substantial (31–60%)
- **Clinopyroxene**: Extensive (61–90%)
- **Plagioclase**: Complete (>90%)

**Grain size**

- **Coarse grained (5–30 mm)**
- **Medium grained (1–5 mm)**
- **Fine grained (0.2–1 mm)**
- **Pegmatitic (>30 mm)**

**Fabric intensity**

- **Isotropic**: 0
- **Weak**: 1
- **Moderate**: 2
- **Strong**: 3

**Mineralogy**

- **Olivine**
- **Plagioclase**
- **Orthopyroxene**
- **Spinel**
- **Sulfide**

**Dip**

- **Contact angle**: 0°
- **Biotite**: 45°
- **Crystal plastic**: 90°
**SEQUENCE:** I
**UNIT/SUBUNIT:** 50a
**ROCK NAME:** harzburgite
**CONTACT:** continuous
**TEXTURE:** Granular

**IGNEOUS SUMMARY:** serpentinised harzburgite with gabbroic dykes and patchy opx destruction

**ALTERATION:** serpentinised

**VEINS:** cut by white veins, green veins, dark vein networks, white-brown composite thread veins, horrible green veins on highly altered dykes, white veins on less altered dykes, en-echelon veins, ladder veins on faults that offset dykes, complex white-green and frankenstein veins

**STRUCTURE:** Brittle-

**Veins:** conjugate vein sets occur
**Crystal plastic:** Pyroxene grains are strongly elongated.

---

**Hole BA4A-107Z Section 1, Top of Section 293.70 (m CCD)**

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Sampled image</th>
<th>Magnetic susceptibility (SI × 10^{-5})</th>
<th>GRA (g/cm³)</th>
<th>Sequence</th>
<th>Lithology</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnetic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>293.70</td>
<td>0</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>293.80</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>293.90</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>294.00</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>294.10</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>294.20</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>294.30</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>294.40</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>294.50</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>294.60</td>
<td>90</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Core:**
- **Core image:**
- **MSCL-W MSP:**
- **GRA:**
- **GRA:**

**Crust:**
- **GRA:**
- **GRA:**

**Fabric intensity:**
- **Granular:**
- **Granular:**

**Structure:**
- **Brittle:**
- **Brittle:**

**Veins:**
- **Veins:**
- **Veins:**

**Alteration:**
- **Alteration:**
- **Alteration:**

**Degree of deformation:**
- **Degree of deformation:**
- **Degree of deformation:**

**Fracture/ Vein density:**
- **Fracture/ Vein density:**
- **Fracture/ Vein density:**

**Vein density:**
- **Vein density:**
- **Vein density:**

**Alteration intensity:**
- **Alteration intensity:**
- **Alteration intensity:**

**Dip:**
- **Dip:**
- **Dip:**

**Magnetic contact:**
- **Magnetic contact:**
- **Magnetic contact:**

**Brittle:**
- **Brittle:**
- **Brittle:**

**Crystal plastic:**
- **Crystal plastic:**
- **Crystal plastic:**

**Veins:**
- **Veins:**
- **Veins:**
**Hole BA4A-107Z Section 2, Top of Section 294.67 (m CCD)**

<table>
<thead>
<tr>
<th>Sequence</th>
<th>Unit/Subunit</th>
<th>Rock Name</th>
<th>Contact</th>
<th>Texture</th>
<th>Igneous Summary</th>
<th>Alteration</th>
<th>Vein density (per meter)</th>
<th>Alteration halos</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Dip Magnetic contact Brittle Crystal plastic</th>
<th>Veins</th>
<th>(\text{Depth (m CCD)})</th>
<th>Core length (cm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>50a</td>
<td>continuous</td>
<td>Granular</td>
<td>altered and pseudomorphed</td>
<td>altered and pseudomorphed</td>
<td>dense white veins cut dyke</td>
<td>not logged</td>
<td>not logged</td>
<td>0.45-0.90</td>
<td>0</td>
<td>294.70-294.80</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>1</td>
<td>50a</td>
<td>modal</td>
<td>Granular</td>
<td>altered and pseudomorphed</td>
<td>altered and pseudomorphed</td>
<td>dark veins cut dyke</td>
<td>not logged</td>
<td>not logged</td>
<td>0.45-0.90</td>
<td>0</td>
<td>294.90-295.00</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>1</td>
<td>50b</td>
<td>intrusive</td>
<td>Granular</td>
<td>altered and pseudomorphed</td>
<td>altered and pseudomorphed</td>
<td>dark veins cut dyke</td>
<td>not logged</td>
<td>not logged</td>
<td>0.45-0.90</td>
<td>0</td>
<td>295.10-295.20</td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>1</td>
<td>50b</td>
<td>intrusive</td>
<td>Granular</td>
<td>altered and pseudomorphed</td>
<td>altered and pseudomorphed</td>
<td>dark veins cut dyke</td>
<td>not logged</td>
<td>not logged</td>
<td>0.45-0.90</td>
<td>0</td>
<td>295.30-295.40</td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>1</td>
<td>50c</td>
<td>intrusive</td>
<td>Granular</td>
<td>altered and pseudomorphed</td>
<td>altered and pseudomorphed</td>
<td>dark veins cut dyke</td>
<td>not logged</td>
<td>not logged</td>
<td>0.45-0.90</td>
<td>0</td>
<td>295.50-295.60</td>
<td></td>
</tr>
<tr>
<td>50</td>
<td>1</td>
<td>50d</td>
<td>modal</td>
<td>Granular</td>
<td>altered and pseudomorphed</td>
<td>altered and pseudomorphed</td>
<td>dark veins cut dyke</td>
<td>not logged</td>
<td>not logged</td>
<td>0.45-0.90</td>
<td>0</td>
<td>295.70-295.80</td>
<td></td>
</tr>
</tbody>
</table>

**Description**

- **ROCK NAME**: harzburgite
- **CONTACT**: continuous
- **TEXTURE**: Granular
- **IGNEOUS SUMMARY**: serpentinised harzburgite with gabbroic dykes and patchy opx destruction
- **ALTERATION**: serpentinised
- **VEINS**: cut by white veins, green veins, dark vein networks, white-brown composite thread veins, horrible green veins on highly altered dykes, white veins in less altered dykes, en-echelon veins, ladder veins on faults that either cut, complex white-green and hornfelsen vein
- **STRUCTURE**: Brittle
- **Crystal plastic**: Pyroxene grains are rounded and slightly elongated.

...
### Hole BA4A-107Z Section 3, Top of Section 295.65 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Alteration intensity</th>
<th>Vein density (per meter)</th>
<th>Structure</th>
<th>Alteration halos</th>
<th>Vein crosscutting</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>295.69</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>295.79</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>295.89</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>295.99</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>296.09</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>296.19</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>296.29</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Description**

SEQUENCE: I  Unit
ROCK NAME: dunite
CONTACT: continuous
TEXTURE: Granular
IGNEOUS SUMMARY: serpentinised dunite with gabbroic dykes
ALTERATION: serpentinised
VEINS: cut by white veins, green veins, dark vein networks, white-brown composite thread veins, horrible green veins on highly altered dykes, white veins on less altered dykes, en-echelon veins, ladder veins on faults that offset dykes, complex white-green and frankenstein veins
STRUCTURE: Brittle

...
### Hole BA4A-108Z Section 1, Top of Section 296.70 (m CCD)

| Depth (m CCD) | Core length (cm) | Shipboard samples | Stained image | Magnetic susceptibility | MSCL-W MSP (SI x 10^-5) | GRA (g/cm²) | Sequence | Lithology | Degree of deformation | Fracture/ Vein density (per meter) | Alteration intensity | Dip | Magnetic contact | Brittle | Crystal plastic | Veins | Structures | Alteration halos | Vein density (per meter) | Description |
|---------------|------------------|-------------------|---------------|------------------------|--------------------------|-------------|----------|-----------|-----------------------|-------------------------------|-------------------|-----|----------------|---------|----------------|-------|------------|--------|------------|----------------|-----------------|-------------|
| 296.73        |                  |                   |               |                        |                          |             |          |           |                      |                               |                   |     |               |         |               |       |            |        |            |                 |                 |            |
| 296.83        |                  |                   |               |                        |                          |             |          |           |                      |                               |                   |     |               |         |               |       |            |        |            |                 |                 |            |
| 296.93        |                  |                   |               |                        |                          |             |          |           |                      |                               |                   |     |               |         |               |       |            |        |            |                 |                 |            |
| 297.03        |                  |                   |               |                        |                          |             |          |           |                      |                               |                   |     |               |         |               |       |            |        |            |                 |                 |            |
| 297.13        |                  |                   |               |                        |                          |             |          |           |                      |                               |                   |     |               |         |               |       |            |        |            |                 |                 |            |
| 297.23        |                  |                   |               |                        |                          |             |          |           |                      |                               |                   |     |               |         |               |       |            |        |            |                 |                 |            |
| 297.33        |                  |                   |               |                        |                          |             |          |           |                      |                               |                   |     |               |         |               |       |            |        |            |                 |                 |            |
| 297.43        |                  |                   |               |                        |                          |             |          |           |                      |                               |                   |     |               |         |               |       |            |        |            |                 |                 |            |

**Sequence:** 1

**Rock Name:** dunite

**Contact:** continuous

**Texture:** Granular

**Igneous Summary:** serpentinised dunite with gabbroic dykes

**Alteration:** serpentinised

**Veins:** cut by white veins, green veins, dark vein networks, white-brown composite thread veins, horrible green veins on highly altered dykes, white veins on less altered dykes, en-echelon veins, ladder veins on faults that offset dykes, complex white-green and hematite vein veins

**Structure:** Brittle

**Veins:** Complex white-green and hematite vein veins

**Vein density:** (per meter)

- 0
- 1 per 10 cm
- 2–5 per 10 cm
- >20 per 10 cm
- 15–20 per 10 cm
- 5–15 per 10 cm
- 3–5 per 10 cm
- >100 per 10 cm

**Degree of deformation:**

- Undeformed
- Minor fracturing
- Moderate fracturing
- GS reduction and rotation
- Well-developed cataclasis
- Ultracataclastite

**Lithology:**

- Plagioclase
- Amphibole

**Primary mineralogy:**

- Olivine
- Plagioclase
- Clinopyroxene

**Other minerals:**

- Orthopyroxene
- Sulfide
- Spinel
- Orthopyroxene
- Clinopyroxene
- Plagioclase
- Olivine
- Sulfide
- Spinel
- Orthopyroxene
- Clinopyroxene
- Plagioclase
- Olivine

**Alteration intensity:**

- Fresh (<3%)
- Slight (3–10%)
- Moderate (11–30%)
- Substantial (31–60%)
- Extensive (61–90%)
- Complete (>90%)

**Degree of deformation:**

- Undeformed
- Minor fracturing
- Moderate fracturing
- GS reduction and rotation
- Well-developed cataclasis
- Ultracataclastite

**Sequence:** 1

**Alteration:** serpentinised

**Veins:** cut by white veins, green veins, dark vein networks, white-brown composite thread veins, horrible green veins on highly altered dykes

**Structure:** Brittle

**Veins:** Complex white-green and hematite vein veins

**Vein density:** (per meter)

- 0
- 1 per 10 cm
- 2–5 per 10 cm
- >20 per 10 cm
- 15–20 per 10 cm
- 5–15 per 10 cm
- 3–5 per 10 cm
- >100 per 10 cm
<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>GRA (g/cm²)</th>
<th>MSCL-W (SI x 10⁻⁵)</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Vein density (per meter)</th>
<th>Alteration halos</th>
<th>Structures</th>
<th>Vein crosscutting</th>
<th>Alteration</th>
<th>Fault zones</th>
<th>Apparent offset</th>
</tr>
</thead>
</table>
**Hole BA4A-108Z Section 3, Top of Section 298.13 (m CCD)**

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>Primary mineralogy</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Alteration</th>
<th>Dip</th>
<th>Contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1.0</td>
<td></td>
<td></td>
<td>1.0</td>
<td>1.0</td>
<td>1.0</td>
<td>1.0</td>
<td>1.0</td>
<td>1.0</td>
<td>1.0</td>
<td>1.0</td>
<td>1.0</td>
<td>1.0</td>
<td>1.0</td>
<td>1.0</td>
</tr>
<tr>
<td>298.17</td>
<td>10.0</td>
<td></td>
<td></td>
<td>298.17</td>
<td>298.17</td>
<td>298.17</td>
<td>298.17</td>
<td>298.17</td>
<td>298.17</td>
<td>298.17</td>
<td>298.17</td>
<td>298.17</td>
<td>298.17</td>
<td>298.17</td>
<td>298.17</td>
</tr>
<tr>
<td>298.27</td>
<td>20.0</td>
<td></td>
<td></td>
<td>298.27</td>
<td>298.27</td>
<td>298.27</td>
<td>298.27</td>
<td>298.27</td>
<td>298.27</td>
<td>298.27</td>
<td>298.27</td>
<td>298.27</td>
<td>298.27</td>
<td>298.27</td>
<td>298.27</td>
</tr>
<tr>
<td>298.37</td>
<td>30.0</td>
<td></td>
<td></td>
<td>298.37</td>
<td>298.37</td>
<td>298.37</td>
<td>298.37</td>
<td>298.37</td>
<td>298.37</td>
<td>298.37</td>
<td>298.37</td>
<td>298.37</td>
<td>298.37</td>
<td>298.37</td>
<td>298.37</td>
</tr>
<tr>
<td>298.47</td>
<td>40.0</td>
<td></td>
<td></td>
<td>298.47</td>
<td>298.47</td>
<td>298.47</td>
<td>298.47</td>
<td>298.47</td>
<td>298.47</td>
<td>298.47</td>
<td>298.47</td>
<td>298.47</td>
<td>298.47</td>
<td>298.47</td>
<td>298.47</td>
</tr>
<tr>
<td>298.57</td>
<td>50.0</td>
<td></td>
<td></td>
<td>298.57</td>
<td>298.57</td>
<td>298.57</td>
<td>298.57</td>
<td>298.57</td>
<td>298.57</td>
<td>298.57</td>
<td>298.57</td>
<td>298.57</td>
<td>298.57</td>
<td>298.57</td>
<td>298.57</td>
</tr>
<tr>
<td>298.67</td>
<td>60.0</td>
<td></td>
<td></td>
<td>298.67</td>
<td>298.67</td>
<td>298.67</td>
<td>298.67</td>
<td>298.67</td>
<td>298.67</td>
<td>298.67</td>
<td>298.67</td>
<td>298.67</td>
<td>298.67</td>
<td>298.67</td>
<td>298.67</td>
</tr>
<tr>
<td>298.77</td>
<td>70.0</td>
<td></td>
<td></td>
<td>298.77</td>
<td>298.77</td>
<td>298.77</td>
<td>298.77</td>
<td>298.77</td>
<td>298.77</td>
<td>298.77</td>
<td>298.77</td>
<td>298.77</td>
<td>298.77</td>
<td>298.77</td>
<td>298.77</td>
</tr>
</tbody>
</table>

**Description**

- **SEQUENCE:** I
- **UNIT/SUBUNIT:** 50d
- **ROCK NAME:** dunite
- **CONTACT:** intrusive
- **TEXTURE:** Granular
- **IGNEOUS SUMMARY:** serpentinised dunite with gabbroic dykes
- **ALTERATION:** serpentinised
- **VEINS:** cut by white veins, green veins, dark vein networks, white-brown composite thread veins, horrible green veins on highly altered dykes, white veins on less altered dykes, en-echelon veins, ladder veins on faults that offset dykes, complex white-green and frankenstein veins
- **STRUCTURE:** Brittle
- **Vein crosscutting:** conjugate vein sets are common

- **SEQUENCE:** I
- **UNIT/SUBUNIT:** 50d
- **ROCK NAME:** olivine gabbro
- **CONTACT:** intrusive
- **TEXTURE:** Granular
- **IGNEOUS SUMMARY:** altered olivine gabbro dyke
- **ALTERATION:** altered and pseudomorphed
- **VEINS:**
- **STRUCTURE:** Brittle

- **SEQUENCE:** I
- **UNIT/SUBUNIT:** 50e
- **ROCK NAME:** dunite
- **CONTACT:** intrusive
- **TEXTURE:**
- **IGNEOUS SUMMARY:** serpentinised dunite
- **ALTERATION:** serpentinised
- **VEINS:** white, white/brown composite, plus pale green with selvage veins are common
- **STRUCTURE:** Brittle
- **Vein crosscutting:** conjugate vein sets are common

---

**Table Notes**

- **Magnetic contact:** Brittle
- **Crystal plastic:** Veins

**Vein density (per meter):**

- 0
- 1 per 10 cm
- 3-5 per 10 cm
- >20 per 10 cm
- 5-15 per 10 cm
- 15-20 per 10 cm

**Alteration intensity:**

- Fresh (<3%)
- Slight (3–10%)
- Moderate (11–30%)
- Substantial (31–60%)
- Extensive (61–90%)
- Complete (≥90%)
| Depth (m CCD) | Core length (cm) | Lithology | Contact | Texture | Igneous Summary | Alteration | Vein Name | Vein density (per meter) | Vein intensity | Vein density (per meter) | Vein intensity | Structures | Vein contexts | Vein cutting | Vein cutting | Vein cutting | Vein cutting | Vein cutting | Vein cutting | Description |
|--------------|-----------------|-----------|---------|---------|-----------------|------------|-----------|-------------------|---------------|-------------------|---------------|------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|
| 298.93       | 0               | dunite    | intrusive | Granular| Serpentinised dunite | Serpentinised | White, white/brown composite, plus pale green with selvage veins | Undeformed | Brittle-Veins | ≥20 per 10 cm | 60% | Brittle | Veins cut dyke | Brittle | Brittle | Brittle | Brittle | Brittle | Brittle | Serpentinite |
| 299.03       | 10              | Clinopyroxenite | intrusive | Porphyroclastic | Altered and recrystallised clinopyroxene dyke | Recrystallised | White veins cut dyke | Brittle | Brittle-Veins | ≥3-5 per 10 cm | 30% | Brittle | Brittle cut dyke | Brittle | Brittle | Brittle | Brittle | Brittle | Brittle | Clinopyroxene |
| 299.13       | 20              | dunite    | intrusive | Granular | Serpentinised dunite, highly fractured and veined | Serpentinised | White, white/brown and dark veins | Brittle | Brittle-Veins | ≥3-5 per 10 cm | 50% | Brittle | Brittle cut dyke | Brittle | Brittle | Brittle | Brittle | Brittle | Brittle | Dunite |
| 299.23       | 30              | dunite    | intrusive | Granular | Serpentinised dunite, highly fractured and veined | Serpentinised | White, white/brown and dark veins | Brittle | Brittle-Veins | ≥3-5 per 10 cm | 50% | Brittle | Brittle cut dyke | Brittle | Brittle | Brittle | Brittle | Brittle | Brittle | Dunite |
| 299.33       | 40              | gabbro    | intrusive | Granular | Altered gabbro dyke | Original textures and mineralogy completely destroyed | White and pale green veins cut dyke | Brittle | Brittle-Veins | ≥3-5 per 10 cm | 50% | Brittle | Brittle cut dyke | Brittle | Brittle | Brittle | Brittle | Brittle | Brittle | Gabbro |
| 299.43       | 50              | gabbro    | intrusive | Granular | Altered gabbro dyke | Original textures and mineralogy completely destroyed | White and pale green veins cut dyke | Brittle | Brittle-Veins | ≥3-5 per 10 cm | 50% | Brittle | Brittle cut dyke | Brittle | Brittle | Brittle | Brittle | Brittle | Brittle | Gabbro |
| 299.53       | 60              | gabbro    | intrusive | Granular | Altered gabbro dyke | Original textures and mineralogy completely destroyed | White and pale green veins cut dyke | Brittle | Brittle-Veins | ≥3-5 per 10 cm | 50% | Brittle | Brittle cut dyke | Brittle | Brittle | Brittle | Brittle | Brittle | Brittle | Gabbro |
| 299.63       | 70              | gabbro    | intrusive | Granular | Altered gabbro dyke | Altered and pseudomorphed olivine gabbro | Dark veins cut dyke | Brittle | Brittle-Veins | ≥3-5 per 10 cm | 50% | Brittle | Brittle cut dyke | Brittle | Brittle | Brittle | Brittle | Brittle | Brittle | Gabbro |
| 299.73       | 80              | olivine gabbro | intrusive | Granular | Altered olivine gabbro dyke | Altered gabbro dyke | Network of narrow fault planes cut several dikes | Brittle | Brittle-Veins | ≥3-5 per 10 cm | 50% | Brittle | Brittle cut dyke | Brittle | Brittle | Brittle | Brittle | Brittle | Brittle | Gabbro |

**Description:**
- **Sequence I:** Unit Subunit 50e
  - Rock Name: dunite
  - Contact: continuous
  - Texture: Granular
  - Igneous Summary: Serpentinised dunite
  - Alteration: Serpentinised
  - Veins: White, white/brown composite, plus pale green with selvage veins
  - Structure: Brittle

- **Sequence I:** Unit Subunit 50f
  - Rock Name: Clinopyroxenite
  - Contact: Intrusive
  - Texture: Porphyroclastic
  - Igneous Summary: Altered and recrystallised clinopyroxene dyke
  - Alteration: Recrystallised
  - Veins: White veins cut dyke
  - Structure: Brittle

- **Sequence I:** Unit Subunit 50g
  - Rock Name: Dunite
  - Contact: Intrusive
  - Texture: Granular
  - Igneous Summary: Serpentinised dunite, highly fractured and veined
  - Alteration: Serpentinised
  - Veins: White, white/brown and dark veins
  - Structure: Brittle

- **Sequence I:** Unit Subunit 50h
  - Rock Name: Gabbro
  - Contact: Intrusive
  - Texture: Granular
  - Igneous Summary: Altered gabbro dyke
  - Alteration: Original textures and mineralogy completely destroyed
  - Veins: White and pale green veins cut dyke
  - Structure: Brittle

- **Sequence I:** Unit Subunit 50i
  - Rock Name: Gabbro
  - Contact: Intrusive
  - Texture: Granular
  - Igneous Summary: Altered gabbro dyke
  - Alteration: Original textures and mineralogy completely destroyed
  - Veins: White and pale green veins cut dyke
  - Structure: Brittle

- **Sequence I:** Unit Subunit 50j
  - Rock Name: Gabbro
  - Contact: Intrusive
  - Texture: Granular
  - Igneous Summary: Altered gabbro dyke
  - Alteration: Original textures and mineralogy completely destroyed
  - Veins: White and pale green veins cut dyke
  - Structure: Brittle
<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnetic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Voins</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>299.70</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>299.80</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>299.90</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>300.00</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>300.10</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Hole BA4A-109Z Section 1, Top of Section 299.70 (m CCD)**

**Sequencing**

- **SEQUENCE 1:** 50g
- **SEQUENCE 2:** 70g

**Unit/Subunit:** 50g

**Lithology:**
- dunite
- olivine gabbro

**CONTACT:**
- continuous
- intrusive

**Texture:**
- Granular

**Igneous Summary:**
- serpentinised dunite, highly fractured and veined
- altered olivine gabbro dyke

**Alteration:**
- serpentinised
- altered and pseudomorphed
- altered and pseudomorphed, texture obliterated in places

**Veins:**
- white, white/brown and dark veins
- green veins cut dyke
- dark veins cut dyke

**Structure:**
- Brittle
- Brittle-
- Crystal plastic

**Fabric intensity**

**Vein density**

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip</th>
<th>Magnetic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Voins</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>299.70</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>299.80</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>299.90</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>300.00</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>300.10</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Hole BA4A-109Z Section 2, Top of Section 300.14 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Dip Magnitic contact</th>
<th>Brittle</th>
<th>Crystal plastic</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>300.17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>300.27</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>300.37</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>300.47</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>300.57</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>300.67</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>300.77</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>300.87</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Description**

- **SEQUENCE I**: 50g
  - **ROCK NAME**: dunite
  - **CONTACT**: intrusive
  - **TEXTURE**: granular
  - **IGNEOUS SUMMARY**: serpentinised dunite, highly fractured and veined
  - **ALTERATION**: serpentinised
  - **VEINS**: white, white/brown and dark veins
  - **STRUCTURE**: Brittle- Significant fracturing on vertical shear planes

- **SEQUENCE II**: 50h
  - **ROCK NAME**: dunite
  - **CONTACT**: intrusive
  - **TEXTURE**: granular
  - **IGNEOUS SUMMARY**: serpentinised dunite
  - **ALTERATION**: serpentinised
  - **VEINS**: cut by white, white/brown, dark, and pale green veins
  - **STRUCTURE**: Brittle- Significant fracturing on vertical shear planes

- **SEQUENCE III**: 50i
  - **ROCK NAME**: dunite
  - **CONTACT**: intrusive
  - **TEXTURE**: granular
  - **IGNEOUS SUMMARY**: dunite
  - **ALTERATION**: serpentinised
  - **VEINS**: white, pale green, and dark veins
  - **STRUCTURE**: Brittle- Significant fracturing on vertical shear planes

---

### Additional Data

- **Fabric intensity**: 5
- **Vein density (per meter)**: 6
- **Grain size**: 6
- **Hole BA4A-109Z Section 2, Top of Section 300.14 (m CCD)**
- **Core length (cm)**
- **Stained image**
- **Magnetic susceptibility**
- **Primary mineralogy (%)**
- **Grain size**
- **Degree of deformation**
- **Fracture/ Vein density (per meter)**
- **Alteration intensity**
- **Dip Magnitic contact**
- **Brittle**
- **Crystal plastic**
- **Veins**
<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shiptboard samples</th>
<th>Stained image</th>
<th>Magnetic susceptibility</th>
<th>MSCL-W MSP (SI x 10^-5)</th>
<th>GRA (g/cm^3)</th>
<th>Sequence</th>
<th>Lithology</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture/ Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Alteration</th>
<th>Dip</th>
<th>Structures</th>
<th>Vein density (per meter)</th>
<th>Alteration halos</th>
<th>Abnormal heating</th>
<th>Veins</th>
<th>Vein crosscutting</th>
<th>Alteration halos</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>300.95</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>300.15</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>300.25</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>300.35</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>300.45</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>300.55</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>300.65</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>300.75</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Sequence:** I
**Unit/Subunit:** 50i
**Rock Name:** dunite
**Contact:** continuous
**Texture:** granular
**Igneous Summary:** serpentinised dunite
**Alteration:** serpentinised
**Veins:** cut by white, white/brown, dark, and pale green veins
**Structure:** Brittle

---

**Sequence:** I
**Unit/Subunit:** 51a
**Rock Name:** harzburgite
**Contact:** tectonic
**Texture:** granular
**Igneous Summary:** serpentinised harzburgite
**Alteration:** serpentinised
**Veins:** cut by dark and white veins
**Structure:** Brittle-Semi brittle shearing and possible melt impregnation

---

**Fabric intensity**

<table>
<thead>
<tr>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>15</td>
<td>30</td>
<td>45</td>
<td>60</td>
<td>75</td>
</tr>
</tbody>
</table>

**Vein density**

<table>
<thead>
<tr>
<th>6</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>10</td>
<td>20</td>
<td>30</td>
<td>40</td>
<td>50</td>
<td>60</td>
</tr>
</tbody>
</table>

**Degree of deformation**

<table>
<thead>
<tr>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>10</td>
<td>20</td>
<td>30</td>
<td>40</td>
<td>50</td>
</tr>
</tbody>
</table>

**Alteration intensity**

<table>
<thead>
<tr>
<th>100</th>
<th>80</th>
<th>60</th>
<th>40</th>
<th>20</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>10</td>
<td>20</td>
<td>30</td>
<td>40</td>
<td>50</td>
</tr>
</tbody>
</table>

**Magmatic contact**

**Brittle Crystal plastic**

**Voros**

---

**Description**

- **Fault zones:** Discrete brittle features
- **Structures:** Brittle, Crystal plastic
- **Veins:** Cut by white, white/brown, dark, and pale green veins
- **Textural features:** Brittle, Crystal plastic
- **Hole BA4A-109Z Section 3, Top of Section 300.93 (m CCD)**

---

**Surface properties**

- **Magnetic susceptibility:** MSCL-W MSP (SI x 10^-5)
- **Grain size:** GRA (g/cm^3)
- **Sequence:** I
- **Lithology:** Dunite
- **Primary mineralogy:** Olivine, Plagioclase, Clinopyroxene, Orthopyroxene, Amphibole, Sulfide
- **Degree of deformation:** Brittle
- **Fabric intensity:** 5
- **Vein density (per meter):** 6
- **Core length (cm):** 10
- **Shiptboard samples:** 1
- **Stained image:** 2
- **Depth (m CCD):** 300.95
- **CT image:** 4
- **Magnetic contact:** Brittle, Crystal plastic
- **Surface properties:** Voros

---

**Alteration halos**

- **Superficial alteration:** Fresh (<3%)
- **Moderate alteration:** Slight (3–10%)
- **Substantial alteration:** Moderate (11–30%)
- **Extensive alteration:** Substantial (31–60%)
- **Complete alteration:** Extensive (61–90%)
- **Ultracataclastite:** Complete (>90%)

---

**Magmatic contact detonation**

- **Brittle Crystal plastic**
- **Voros**

---

**Textural features**

- **Brittle:** Brittle, Crystal plastic
- **Magmatic contact:** Brittle, Crystal plastic
- **Dip:** 0-45°
- **Voros:** Crystal plastic
### Hole BA4A-109Z Section 4, Top of Section 301.83 (m CCD)

<table>
<thead>
<tr>
<th>Depth (m CCD)</th>
<th>Core length (cm)</th>
<th>Shipboard samples</th>
<th>Stained image</th>
<th>CT image</th>
<th>Magnetic susceptibility</th>
<th>MSCL-W MSP (SI x 10^-5)</th>
<th>GRA (g/cm^3)</th>
<th>Unaffected</th>
<th>Lithology</th>
<th>Primary mineralogy (%)</th>
<th>Grain size</th>
<th>Degree of deformation</th>
<th>Fracture Vein density (per meter)</th>
<th>Alteration intensity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>301.85</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>301.95</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>302.05</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>302.15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>302.25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>302.35</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>302.45</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>302.55</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>302.65</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>302.75</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Description:**
- **SEQUENCE:** 1
- **UNIT/SUBUNIT:** 1a
- **ROCK NAME:** olivine gabbro
- **CONTACT:** intrusive
- **TEXTURE:** granular
- **ANOMALOUS FEATURES:** serpentinised gabbro dyke
- **ALTERATION:** altered and pseudomorphed
- **VEINS:** cut by white and dark veins
- **STRUCTURE:** Brittle

*CRYSTAL PLASTIC: M-1033-2*