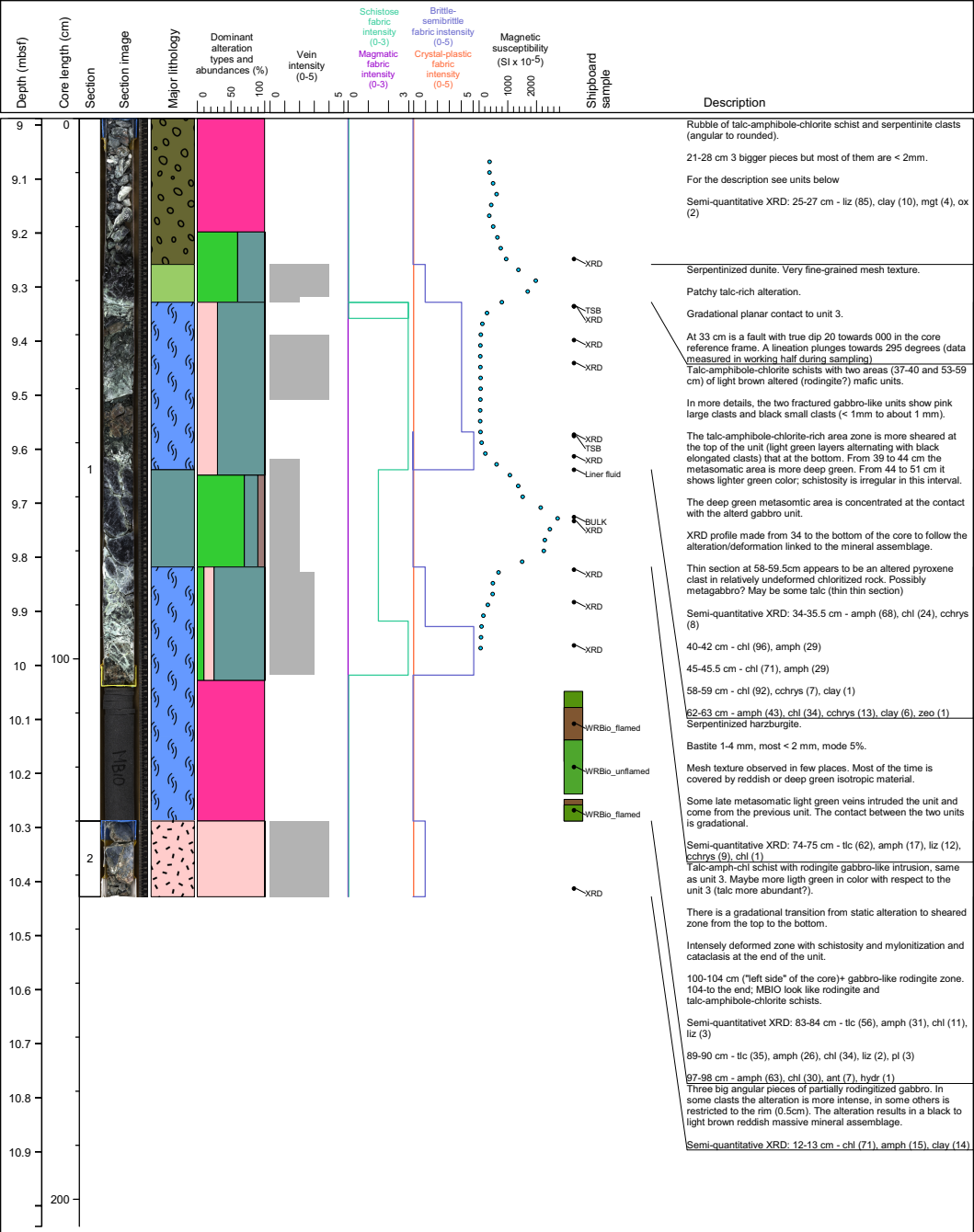
Site M0072 Hole B Core 7R Cored 8.988-10.708 mbsf



Rubble of talc-amphibole-chlorite schist and serpentinite clasts (angular to rounded).

21-28 cm 3 bigger pieces but most of them are < 2mm.

For the description see units below

Semi-quantitative XRD: 25-27 cm - liz (85), clay (10), mgt (4), ox (2)

Serpentinized dunite. Very fine-grained mesh texture.

Patchy talc-rich alteration.

Gradational planar contact to unit 3.

At 33 cm is a fault with true dip 20 towards 000 in the core reference frame. A lineation plunges towards 295 degrees (data measured in working half during sampling)

Talc-amphibole-chlorite schists with two areas (37-40 and 53-59 cm) of light brown altered (rodingite?) mafic units.

In more details, the two fractured gabbro-like units show pink large clasts and black small clasts (< 1mm to about 1 mm).

The talc-amphibole-chlorite-rich area zone is more sheared at the top of the unit (light green layers alternating with black elongated clasts) that at the bottom. From 39 to 44 cm the metasomatic area is more deep green. From 44 to 51 cm it shows lighter green color; schistosity is irregular in this interval.

The deep green metasomtic area is concentrated at the contact with the alterd gabbro unit.

XRD profile made from 34 to the bottom of the core to follow the alteration/deformation linked to the mineral assemblage.

Thin section at 58-59.5cm appears to be an altered pyroxene clast in relatively undeformed chloritized rock. Possibly metagabbro? May be some talc (thin thin section)

Semi-quantitative XRD: 34-35.5 cm - amph (68), chl (24), cchrys (8)

40-42 cm - chl (96), amph (29)

45-45.5 cm - chl (71), amph (29)

58-59 cm - chl (92), cchrys (7), clay (1)

62-63 cm - amph (43), chl (34), cchrys (13), clay (6), zeo (1)

Serpentinized harzburgite.

Bastite 1-4 mm, most < 2 mm, mode 5%.

Mesh texture observed in few places. Most of the time is covered by reddish or deep green isotropic material.

Some late metasomatic light green veins intruded the unit and come from the previous unit. The contact between the two units is gradational.

Semi-quantitative XRD: 74-75 cm - tlc (62), amph (17), liz (12), cchrys (9), chl (1)

Talc-amph-chl schist with rodingite gabbro-like intrusion, same as unit 3. Maybe more ligth green in color with respect to the unit 3 (talc more abundant?).

There is a gradational transition from static alteration to sheared zone from the top to the bottom.

Intensely deformed zone with schistosity and mylonitization and cataclasis at the end of the unit.

100-104 cm ("left side" of the core)+ gabbro-like rodingite zone. 104-to the end; MBIO look like rodingite and talc-amphibole-chlorite schists.

Semi-quantitativet XRD: 83-84 cm - tlc (56), amph (31), chl (11), liz (3)

89-90 cm - tlc (35), amph (26), chl (34), liz (2), pl (3)

97-98 cm - amph (63), chl (30), ant (7), hydr (1)

Three big angular pieces of partially rodingitized gabbro. In some clasts the alteration is more intense, in some others is restricted to the rim (0.5cm). The alteration results in a black to light brown reddish massive mineral assemblage.

Semi-quantitative XRD: 12-13 cm - chl (71), amph (15), clay (14)