RESET06 Cruise AT15-6 **Sample Description**

Sample Number _4207 -_3A Xeno_____ Size (Cm x cm x cm) varies from 5mm

also 3B

Sample wt. (Kg. approx)

Macroscopic: Pillow Lobate –? Sheet Other

Hydrothermal/Biological on sample:
Macrobio? Microbial?
Coatings

Top Glass: Fresh Altered Thickness (cm) _____
Features:

3A xenos found just below the top glass
3B - in mesocrystallic part of rock

Bottom Features:
Glass: Fresh Altered Thickness (cm)_____
NO GLASS
Features:

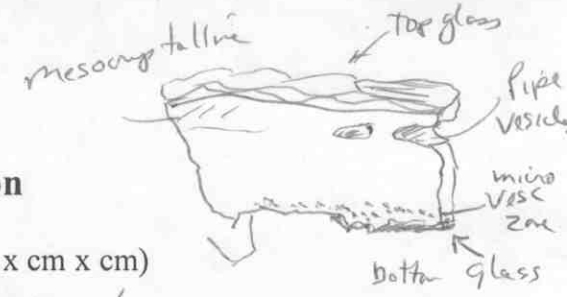
Microscopic:
~~Interior Texture~~: Xenolith –
Crystallinity: Holocrystalline Mesocrystalline Glassy
Vesicularity – but also has glass interstitially
lg mm-size ~~crystals~~ attached to crystals
Mineralogy: Phenocrysts: Plagioclase + Olivine Cpx

plag rich - < mm
ol < plag - but variable

Other:
Xenocrysts
Crystal clots?

Sample Distribution
Probe – in probe container
ICP
U/Th
Rock in bucket
Other

General or specific or vague comments looks very similar to the 1991 xenolith we studied.



RESET06 Cruise AT15-6 **Sample Description**

Sample Number _4207 - _3A_____ Size (Cm x cm x cm) 20 x 12 x 6 cm

Sample wt. (Kg. approx) 5 Kg.

Macroscopic: Pillow (Lobate)? Sheet Other

Hydrothermal/Biological on sample:
(Macrobio?) (Microbial?)
Coatings – white, thick extrusive

Top Glass: (Fresh) Altered Thickness (cm) – ≤ 1 cm (max)
Features: but with white coating
Some fine remains – but most fell off

Bottom Features:
Glass: (Fresh) Altered Thickness (cm)_____
NO GLASS Some –
Features: Very variable – varies from quite glassy to non-glassy, microvesicular

Microscopic:
Interior Texture:
Crystallinity: Holocrystalline ← (Mesocrystalline) Glassy
Vesicularity – Low – rare round ~1mm generally associated with phenocrysts or xenocrysts

Mineralogy: Phenocrysts: (Plagioclase) (Olivine) Cpx
may be xenocrysts
a few % – looks like 1991 flow.

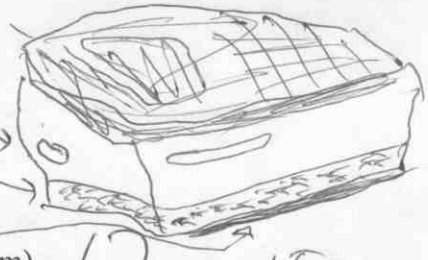
Other:
Xenocrysts ✓
Crystal clots? → yes and a few nice plag-rich + ol xenoliths look very similar to the 1991 xenolith we studied

Troctolite gabbro – mostly plag with maybe 20-30% ol and glass in its matrix. also common to have small vesicles attached.

Sample Distribution
Probe ✓
ICP ✓
U/Th X-no
Rock in bucket ✓
✓ Other – Sample of bottom Adam – with small xeno
✓ Also – extra glass w/ rock
General or specific or vague comments

xenos in with prox glass

Looked for more xenoliths – there are many small "clots" but none large than ~5mm



RESET06 Cruise AT15-6 **Sample Description**

Sample Number _4207 - _3B_____ Size (Cm x cm x cm) (7cm x 15cm x 8 cm

Sample wt. (Kg. approx) 5

Macroscopic: Pillow Lobate ? Sheet Other

Hydrothermal/Biological on sample:
Macrobio? Microbial? — white scum
Coatings → worms - ternia orange & white coatings on interior glass surfaces after

Top Glass: Fresh Altered Thickness (cm) 0.5
Features: Fine glass but some white scum

Bottom Features:
Glass: Fresh Altered Thickness (cm)_____
NO GLASS
Features: uneven coating of glass over highly vesicular zone.

Microscopic:
Interior Texture:
Crystallinity: Holocrystalline Mesocrystalline Glassy
Vesicularity ~ 20% in 2cm Thick sheet base
also, large pipe vesicles near flow top
Mineralogy: Phenocrysts: Plagioclase Olivine Cpx
→ 1%

Other:
Xenocrysts
Crystal clots? yes plag + ol, plag

Sample Distribution
Probe ✓
ICP ✓
U/Th ✓
Rock in bucket ✓
Other → xenolith piece in small bag ✓ in w/ TR probe samples
→ glass piece w/ bubbles. ✓

General or specific or vague comments

not sure if it is new flow or not