

D11

22° 35.74' S
175° 27.60' W
2310 m

22° 34.69' S
175° 28.40' W
1995 m

Cruise I.D: L5-83-HW

Sample I.D: Sta: D 11-3A

Location: Tonga Ridge
L5-83-HW

Size: 5x2.5x1cm Weight: _____ Small bag of pieces

Mn crust thickness:

Total: min: _____ max: _____ ave: 1cm

Inner crust: min: _____ max: _____ ave: _____

Outer crust: min: _____ max: _____ ave: _____

Surface texture: Tiny botryoids

Internal structure:

- layered: VERTICALLY!
- laminated: _____
- massive: _____
- porous: _____
- dendritic: _____
- other: _____

Mineralogy (XRD):

Associated alteration, phosphorite, or hydrothermal deposits:

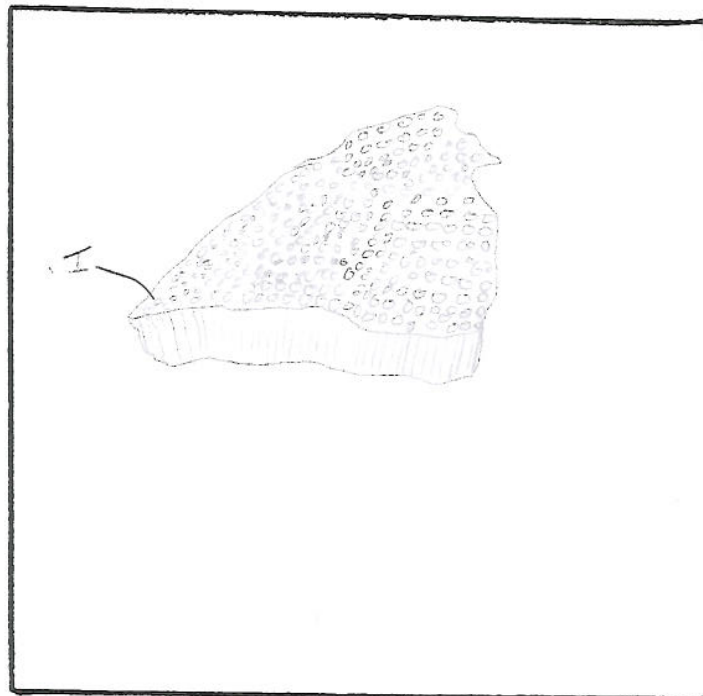
Fe oxide staining in between columns

Substratum: none - a little tan sediment

Rock type: Mn crust

Description: Top surface is covered w/ tiny botryoids - each one appears to continue down vertically (like columnar jointing) so side view looks like row of tiny (<1mm) columns. Tan sediment (thin) in depressions of botryoidal surface.

Mineralogy(XRD):



*took whole bag

Analyses and subsamples:

analysis:

analyst:

XRD: _____
I: Mn crust

C. Daniel

Chem - bulk, D11-3A

U.S. G.S. Menlo Park

also submitted more sample for Manheim pkg of gray REE - D11-3A

SEM of columns

D11-3A1 resubmitted for Hg Chem

Crocari parvula

Split Be + other isotopes

O'Nions



L3-84-5P

D11-3

Pieces of crust
sitting on
Pieces of substrate
Note the vertical "columns"