

D/6

23°29.16'S
175°49.65'W
2025m

23°27.23'S
175°48.62'W
1628m

Cruise I.D: 23-84-SP
E5-83-HW

Sample Description

Sample I.D: Sta: D16-1B

Tonga Ridge

Location: Lau Basin

Size: 8x5x4cm Weight: _____

1 piece

Small Bag of broken pieces
took 1 piece

Mn crust thickness:

Total: min: _____ max: _____ ave: 4mm

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

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

Surface texture: Rough & porous - filled in w/ white
calcareous sediment

Internal structure: _____

layered: _____

laminated: _____

massive: _____

porous: _____

dendritic: _____

other: _____

Mineralogy (XRD): _____

Associated alteration, phosphorite, or hydrothermal deposits:

Fe oxide staining in crust

Substratum: _____

Rock type: siltstone

Description: Extremely disintegrated,
tan, siltstone

Mineralogy (XRD): _____

Analyses and subsamples:

analysis:

analyst:

Took 1 piece
XRD
I Mn
II siltstone

C. Daniel

Crucian parshia

Cruise I.D: 13-84-SY
15-83-HW

Sample Description

Sample I.D: Sta: D16-2

Location: Lau Basin

Size: 18x13x10cm Weight: 1.85 kg

Mn crust thickness:

Total: min: max: ave: <1mm

Inner crust: min: max: ave:

Outer crust: min: max: ave:

Surface texture: Smooth

Internal structure: N/A

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

Mineralogy (XRD):

Associated alteration, phosphorite, or hydrothermal deposits:

Small amount of white carbonate sediment on top of Mn crust

Substratum:

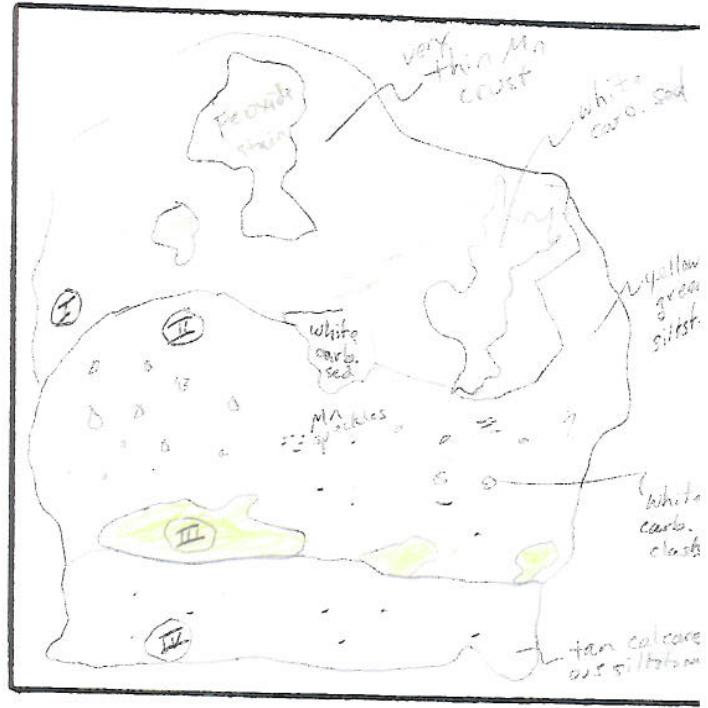
Rock type: siltstone, highly bioturbated

Description: Cream colored calcareous siltstone grading into a green-gray siltstone w/ clasts of yellow-green sandstone (~4x10cm) and white carbonate (<1-3mm); speckled with Mn grains.

burrowed

These compressional boundaries (?) that are visible in thin section

Mineralogy (XRD):



* OVER

Analyses and subsamples:

analysis:

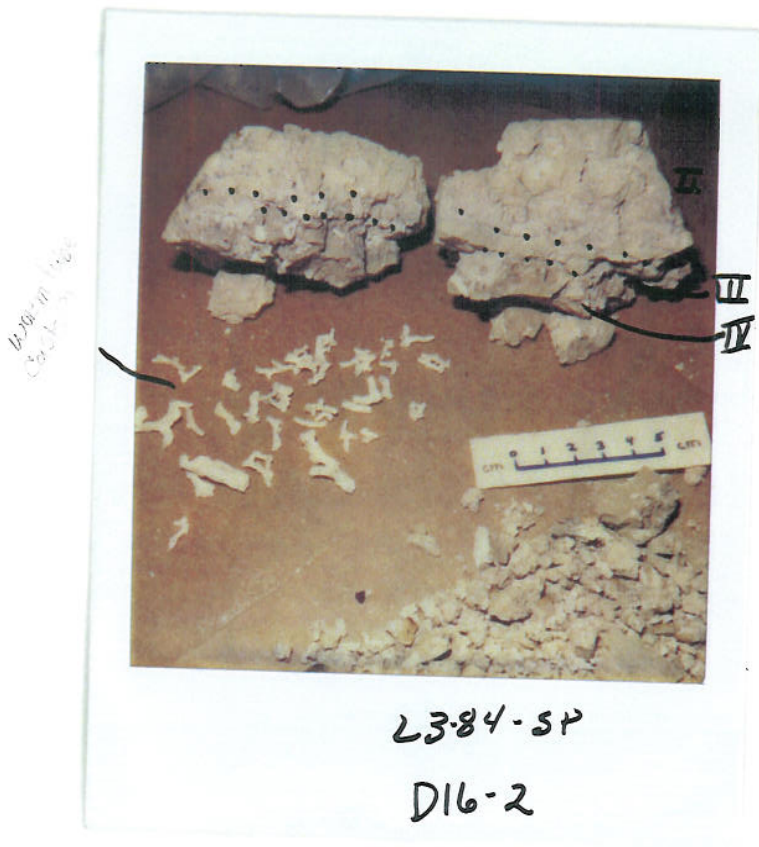
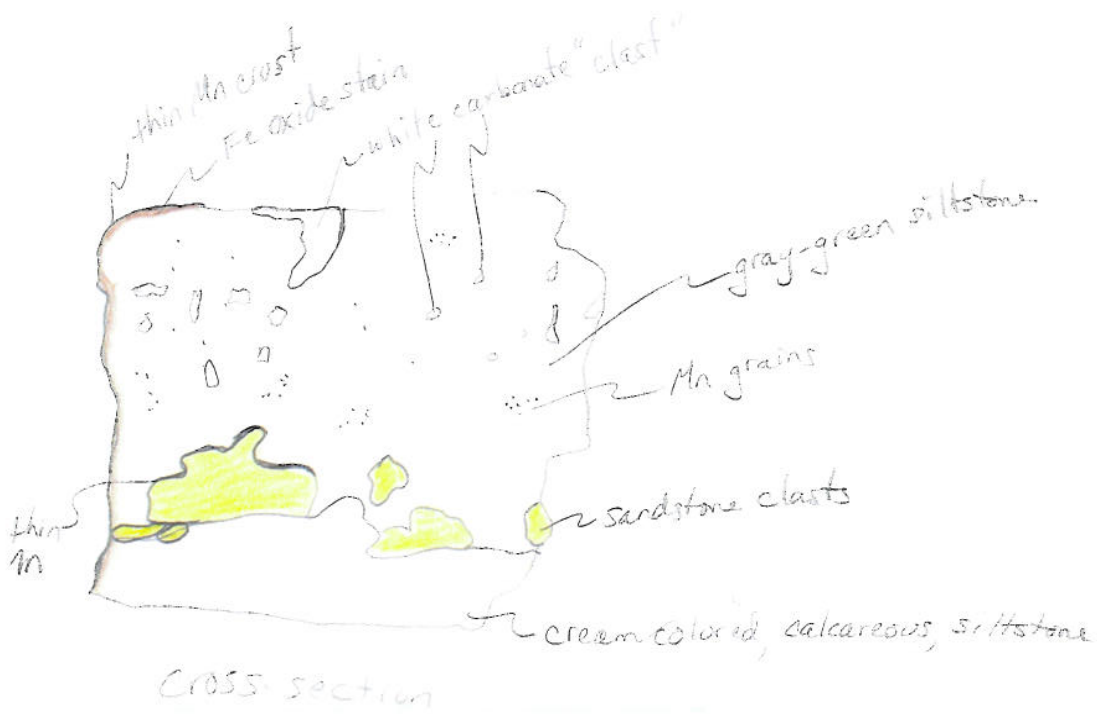
analyst:

- XRD
- I Mn crust
- II siltst
- III yellow sst
- IV siltst

I worm tube infilling

Dalmanite Sediment

Coran, Pashia



Cruise I.D: 15-83-HW

Sample Description
Sample I.D: Sta: D16-3A

Location: Lau Basin

Size: 10x7x6cm Weight: _____

Whole Sample

Mn crust thickness:

Total: min: 4mm max: 10mm ave: 7mm

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

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

Surface texture: Tiny botryoids - abraded
Smooth & large cavernous hole

Internal structure: on back side which is porous

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

Mineralogy (XRD):

Associated alteration, phosphorite, or hydrothermal deposits:

A little Fe oxide staining in crust
phosphorite veins.

Substratum:

Rock type: Tuffaceous Sandstone

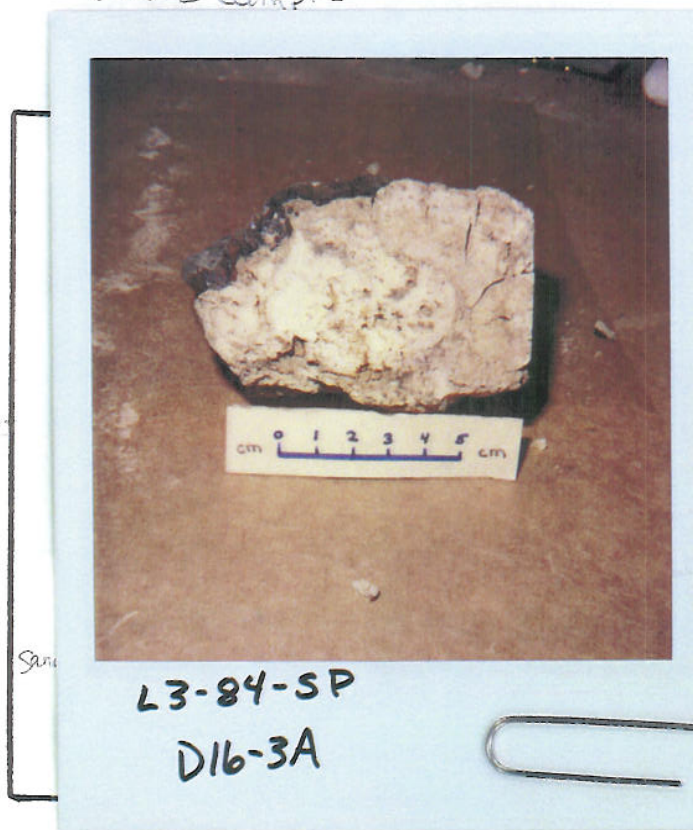
Description:

Green-brown aphanitic to fine grained sandstone with a few clasts (very large 6.5x4cm) of white pumice - the vesicles of these are filled w/ Mn. Also a few green clasts of mudstone? siltstone?

* can see some Mn & feldspar grains in the sandstone

large clast is probably altered volcanic ash - nearly 100% phillipsite

Mineralogy (XRD): looks as if it has been burrowed



Analyses and subsamples:

analysis:

analyst:

- XRD
- I. pumice (0-1cm)
- II. tuffaceous sst.
- III. pumice-Phillipsite

C. Daniel

Chem: pumice-Phillipsite

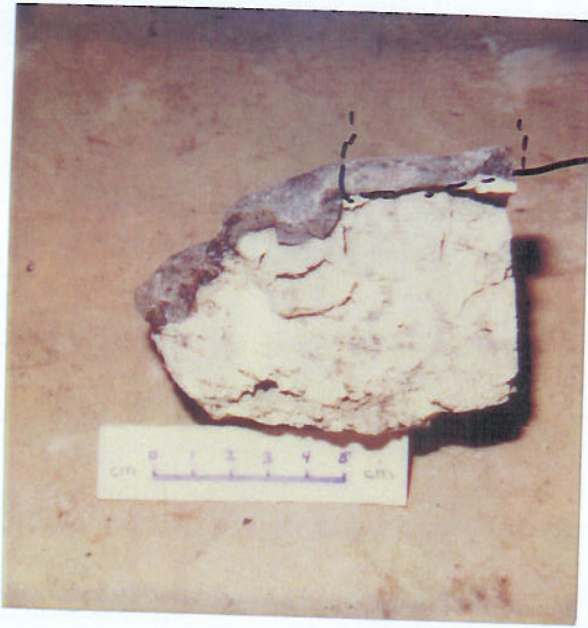
U.S.G.S. Meade Park

D16-3A - Bulk, CC, 0-10mm (see photo) 19g

Split

Be + other isotopes

O/N ions



Chemistry from this area
Some depth
inclusions
seen from
inside upper part of the
quartz

D16-3A

L3-84-SP

LAU BASIN



D16-3A

L3-84-SP



D16-3A

L3-84-SP

Cruise I.D.: L5-83-HW

Sample Description

Sample I.D.: Sta: D 16-3B

Location: Lao Basin

Size: 4x2x2cm Weight: _____

whole sample
Same as 16-3A
only no pumice clasts

Mn crust thickness:

Total: min: 5mm max: 7mm ave: 5mm

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

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

Surface texture: Thin botryoids within covering of white calcareous sediment

Internal structure: _____

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

Mineralogy (XRD): _____

Associated alteration, phosphorite, or hydrothermal deposits: _____

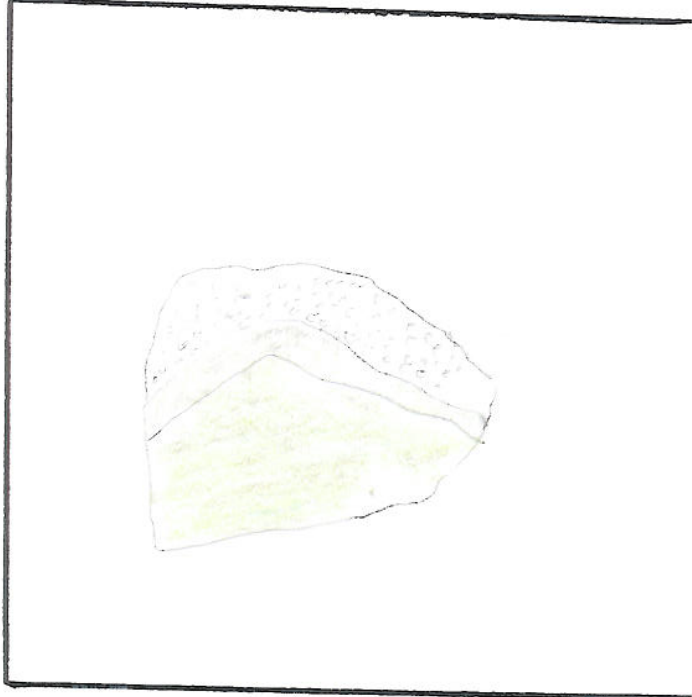
Fe oxide staining of Mn crust

Substratum: _____

Rock type: Tuffaceous sandstone

Description: Yellow-green, very fine-grained sandstone w/ a few grains of pumice?, feldspar?, glass?? Also some phosphate veins in the sandstone & between the sandstone - Mn crust contact

Mineralogy (XRD): _____



Analyses and subsamples:

analysis: _____

analyst: _____

NO XRD
DONE
RX exactly like
16-3A

Cruise I.D: 23-84-SF L5-83-HW

Sample Description

Sample I.D: Sta: D16-4

Location: Lau Basin

Size: 5x3x2cm Weight: _____

Mn crust thickness:

Total: min: 4mm max: 5mm ave: 4mm

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

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

Surface texture: Rough & porous - holes filled w/ white tan sediments

Internal structure: _____

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

Mineralogy (XRD): _____

Associated alteration, phosphorite, or hydrothermal deposits:

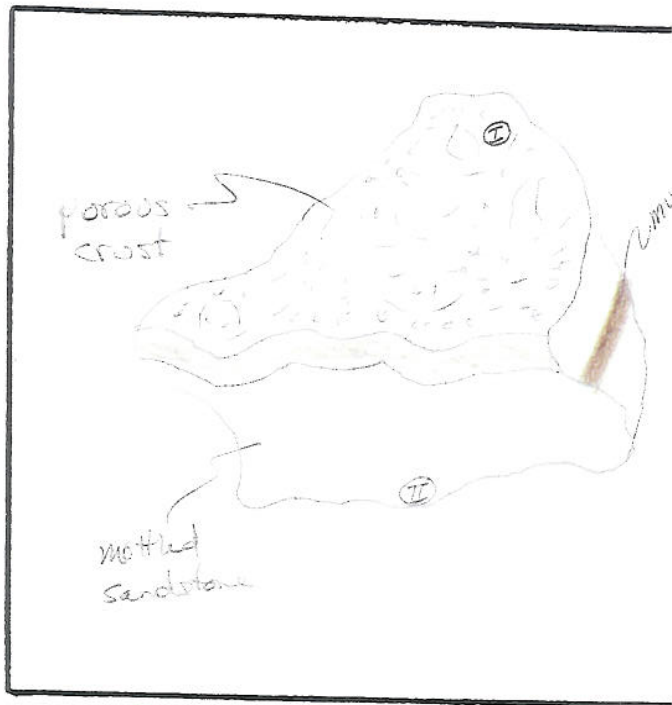
Fe Oxide staining in Mn crust

Substratum:

Rock type: Turfaceous sandstone

Description: Mottled tan & green very fine grained sandstone w/ rounded quartz? slasts which are speckled w/ Mn. Thin band of dark brown mud on one side.

Mineralogy (XRD): _____



* took whole rx

Analyses and subsamples:

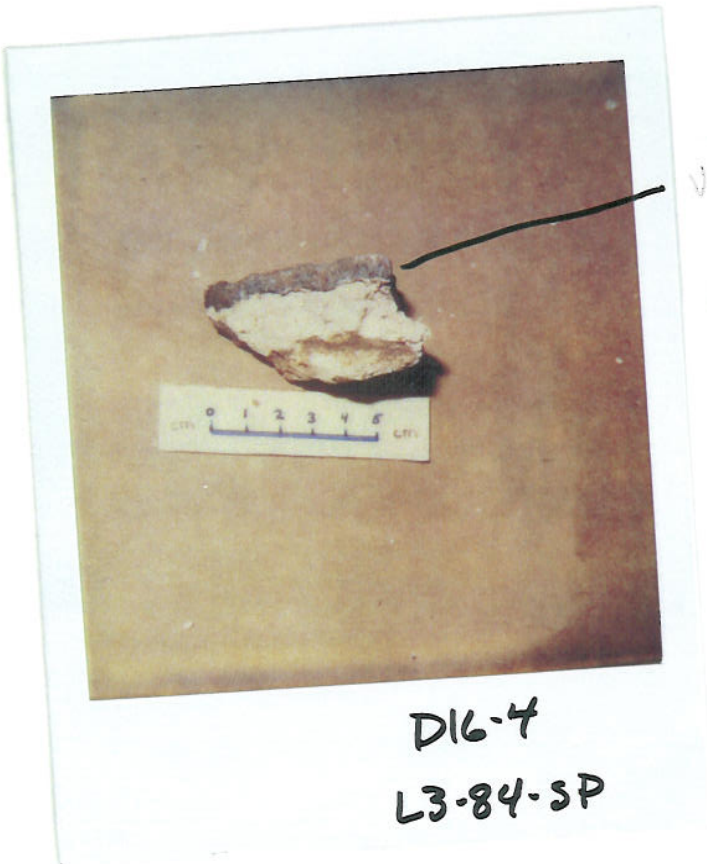
analysis:

XRD: _____
I Mn (0.5cm) _____
II SST _____

analyst:

C. Daniel

Cronan Partlan



VERTICAL COLUMN
AS TO DII

D16-7
L3-84-SP