DREDGE 44
sm Smt. NW
of Syoyo Rdg

SAMPLE ID	Mn CHEM	Pt & Au	REE	Si Chem	P.Sect.	35mm Pho	Archive	Paleo
D44-1	Bulk	Bulk	Bulk					
D44-2								
D44-3	[illegible]							
[illegible]								
[illegible]								
[illegible]								

Sample Description

Cruise I.D: ~~L5-83-HW~~ Mariana Is

Sample I.D: Sta: D44-1

Location: Ichiyo Seamount

Depth: 2250-1630m

Size: 8 pieces Weight: 737 gms total (dry)

from (largest) 11.5x8x4.5cm to (smallest) 2.5x2.5x1cm

Mn crust thickness:

Total: min: 12 max: 24 ave: 18mm

Inner crust: min: max: ave:

Outer crust: min: max: ave:

Surface texture: Smooth to slightly porous

Internal structure:

layered:

laminated:

massive: ✓ dense, shiny

porous: ✓

dendritic:

other: green mud? intermixed in lower ½ of each piece & on undersides of rx's.

Mineralogy (XRD):

Associated alteration, phosphorite, or hydrothermal deposits:

Substratum: none

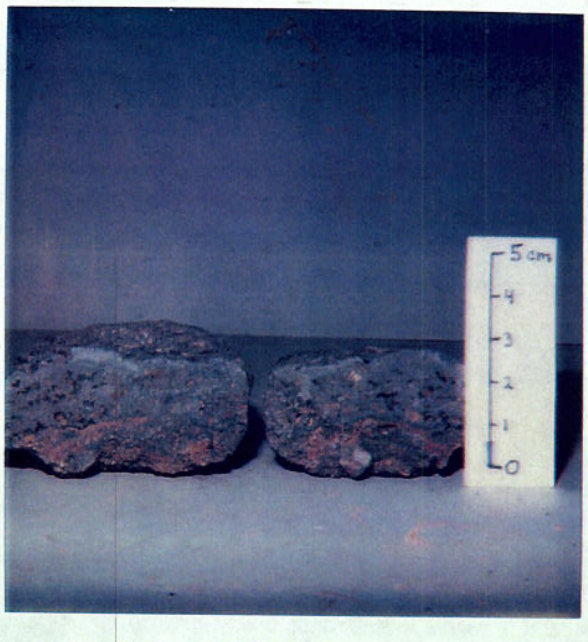
Rock type:

Description:

Mn around clasts(?) or altered clasts or hydrothermal muds

Mineralogy (XRD):

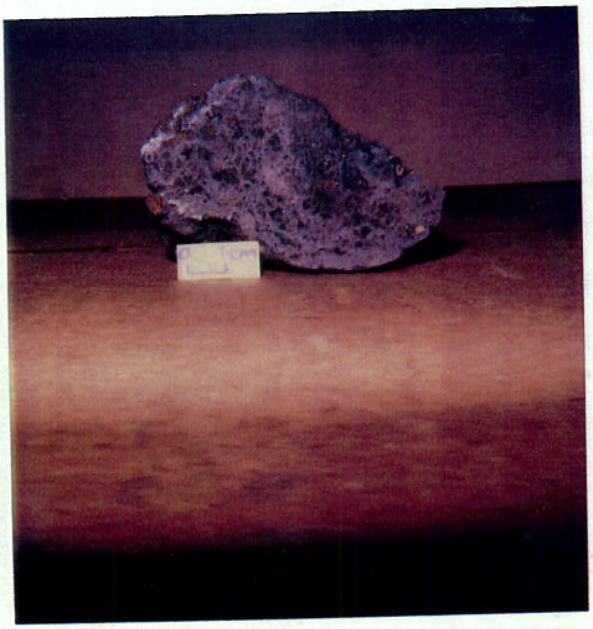
Hydrothermal



MARIANA ISLANDS
D44-1

Analyses and subsamples:

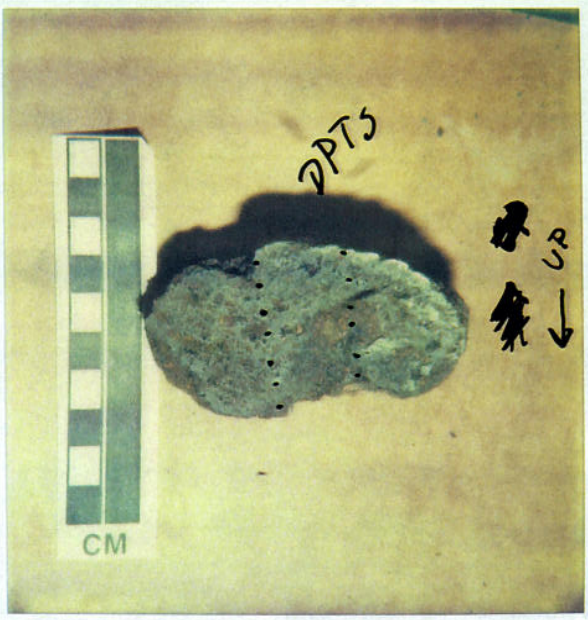
analysis:	analyst:
Chemistry: Bulk sample of largest piece for manheim pt group + Au, RCC - see photo on back	L. Morgan 7/86
XRD: of bulk sample sent for class	
Chemistry - D44-1-A 2nd piece sampled for 'manheim' pkg	6/87 [illegible]
DNS	



Mariana IS.
D44-1

Sent a slice parallel to this front face for chemistry, 7/86

TT19
D44-1



Mariana Islands

Cruise I.D: TT-192

Sample Description

Sample I.D: Sta: D 44-2

Location: Ichiyo Seaman

Depth 2250-1630m

Size: [illegible] 4-6 pieces Weight: 830 g

Mn crust thickness: thin patsy coating

Total: min: — max: — ave: —

Inner crust: min: max: ave:

Outer crust: min: max: ave:

Surface texture: —

Internal structure:

layered:
laminated:
massive:
porous:
dendritic:
other:

Mineralogy (XRD):

Associated alteration, phosphorite, or hydrothermal deposits:

Substratum:

Rock type: Basalt porphyry

Description: Gray aphanitic very vesicular basalt w/abundant plagioclase phenocrysts. Some mn infilling vesicles.

Mineralogy (XRD):

MARIANA ISLANDS
D44-2

Analyses and subsamples:

analysis:	analyst:

Mariana Islands

Cruise I.D: TT-192

Sample Description

Sample I.D: Sta: D44-3

Location: Ichiyo Seamount

Size: [illegible] Weight: [illegible]

4.5X4.5X2cm 4.5X3.5X2cm

Depth: 2250-1630m

Mn crust thickness:

Total: min: 15 max: 25 ave: 20mm

Inner crust: min: max: ave:

Outer crust: min: max: ave:

Surface texture: [illegible]

Internal structure: Hydrothermal

layered:
laminated:
massive:
porous: ✓
dendritic:
other:

Mineralogy (XRD):

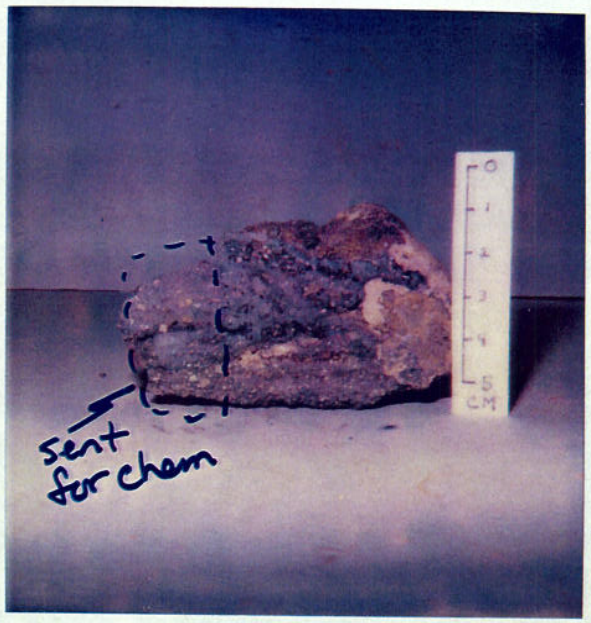
Associated alteration, phosphorite, or hydrothermal deposits:

Substratum:

Rock type: Mn-cemented breccia

Description: [illegible] Mn w/ [illegible] volcanic clasts (1-3mm) dispersed through [illegible]. The lower half is [illegible] volcanic breccia. At one end between the layers is a large [illegible] altered [illegible] clast. The 2 smaller cobbles are volcanic breccias w/ [illegible] basalt clasts in a Mn? [illegible] basalt? matrix

Mineralogy (XRD):



D44-3
MARIANA ISLANDS

Analyses and subsamples:

analysis:	analyst:
XRD	
D44-3-I - bulk Mn + breccia	C. Flechman
Chemistry	
D44-3 bulk Mn + breccia	F. Brown-Roston
35 mm	

Mariana Islands

Cruise I.D: TT-192

Sample Description

Sample I.D: Sta: D44-4

Location: Ichiyo Seamount

Depth: 2350-1630m

Size: 7x4.5x1.5cm Weight: 30g

Mn crust thickness:

Total: min: — max: — ave: —

Inner crust: min: max: ave:

Outer crust: min: max: ave:

Surface texture:

Internal structure:

layered:
laminated:
massive:
porous:
dendritic:
other:

Mineralogy (XRD):

Associated alteration, phosphorite, or hydrothermal deposits:

Substratum:

Rock type: Pumice

Description: Dark gray, light weight vesicular pumice, slightly impregnated w/ Mn

Pumice may actually be replaced by Mn? one sided sample has lighter colored (brown) pumice

Mineralogy (XRD):

D44-4
TT192

Very indistinguished samples

Analyses and subsamples:

analysis:	analyst:
XRD	
D44-4-I: bulk pumice	C. Fleishman
DPTS	

Mariana Islands

Cruise I.D: TT-192

Sample Description

Sample I.D: Sta: D 44-5

Location: Ichiyo Sm.
Depth 2250-1630m

Size: 9x8x4cm **Weight:** 185g

Similar to D44-1

Mn crust thickness:

Total: min: 30 max: 47mm ave: 38mm

Inner crust: min: 28 max: 47 ave: 35mm

Outer crust: min: 2 max: 5 ave: 3mm

Surface texture: Smooth & slightly porous

Internal structure:

layered:
laminated:
massive: ✓ Shiny outer
porous: ✓ inside
dendritic:
other: green to brown sediment interspersed throughout w/a few volc. clasts

Mineralogy (XRD):

Associated alteration, phosphorite, or hydrothermal deposits:

Substratum:

Rock type:

Description:

Mineralogy (XRD):

Analyses and subsamples:

analysis:	analyst:
33mm	

Mariana Islands

Cruise I.D: TT-192

Sample Description

Sample I.D: Sta: D 44-6

Location: Ichiye Seamount

Depth 2250-1630m

Size: 12x9x8cm Weight: 440g

Mn crust thickness: thin patches on surface

Total: min: max: ave:

Inner crust: min: max: ave:

Outer crust: min: max: ave:

Surface texture: [illegible]

Internal structure:

layered:
laminated:
massive:
porous:
dendritic:
other:

Mineralogy (XRD):

Associated alteration, phosphorite, or hydrothermal deposits:

Substratum:

Rock type: Basalt

Description: Upper layer (~2cm) of darker gray very porous [illegible] basalt lower layer (~3.5cm) of lighter gray aphanitic [illegible] basalt w/ [illegible] of plagioclase?

Mineralogy (XRD):

MARIANA ISLANDS
D44-6

Analyses and subsamples:

analysis:	analyst:
XRD:	
D44-6-I: upper layer of basalt	C. Fleischman

Mariana Islands
Cruise I.D: TT-192

Sample Description

Sample I.D: Sta: D Location:

Size: Weight:

Mn crust thickness:

Total: min: max: ave:

Inner crust: min: max: ave:

Outer crust: min: max: ave:

Surface texture:

Internal structure:

layered:
laminated:
massive:
porous:
dendritic:
other:

Mineralogy (XRD):

Associated alteration, phosphorite, or hydrothermal deposits:

Substratum:

Rock type:

Description:

Mineralogy (XRD):

Analyses and subsamples:

analysis:	analyst: