DREDGE 4

S. Johnston Is.
Ridge

AMPLE ID	Mn CHEM	Pt & Au	REE	Si Chem	P.P. Sect.	35mm Pho	Archive	Paleo					
JOD4-1	Layers			V. Breccia	✓		✓						
JOD4-2	Layers				✓								
JOD4-3	Bulk	Bulk	Bulk						Alice to Age date & Chem on Basalt				

F7-86-HW
Karin Ridge
Johnston Is

Sample Description

Cruise I.D: 33X20X5

Sample I.D: Sta: 06 JOD 4-1 **Location:** S. Johnston I Ridge

Size: _____ **Weight:** 3 Kg

Mn crust thickness:

Total: min: 2.0 / 0.3 max: 2.4 / 1.0 ave: 2.0 / 0.7 Top / Bottom

Inner crust: min: — max: — ave: —

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

Surface texture: Botryoidal Top w/ microbotys. smooth to granular - irregular

Internal structure:

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

Mineralogy (XRD):

Associated alteration, phosphorite, or hydrothermal deposits:

Substratum:

Rock type: Volcanic Breccia

Description: Greenish + Cream colored altered Volcanic debris in phosphorite matrix - some Mn
Some of the [illegible] has a "[illegible]" [illegible] it; still very altered

Mineralogy (XRD):

JOD4-1

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Analyses and subsamples:

analysis:	analyst:
Mn Crust Chem & XRD	
JOD4-1A Top layer	20mm
JOD4-1B Bottom Crust	7mm
Silicate Chem & XRD	
JOD4-1C SUBSTRATE	
D.P.T.S.	mann Bldg.
35 mm	G. Smith

Slide

JOD4-1

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Sample Description

Cruise I.D: 17X13X8 **ample I.D:** Sta: 06 ~~B~~ JOD 4-2 **Location:** S. Johnston I Ridge

Size: _____ **Weight:** 2.5 kg

Mn crust thickness:

Total: min: 2.0 max: 2.8 ave: 2.5

Inner crust: min: _____ max: _____ ave: 27 mm

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

Surface texture: Botryoidal Top Smooth to Crudely Botry- Bottom

Internal structure: Nucleus of pure Mn - A Nodule ?

layered: 2
laminated:
massive: outer + Nucleus
porous: Inner w/ iron staining
dendritic:
other:

JOD4-2

F7-86-HW
Karin Ridge
Johnston Is

Mineralogy (XRD):

Associated alteration, phosphorite, or hydrothermal deposits: Paper. Thin layer of phosphorite separates inner & outer layers & marks an undulatory surface

Substratum:

Rock type: Fe-Mn Nodule -

Description: Dense metallic Fe-Mn oxide w/ thin stringers of phosphorite

Mineralogy (XRD):

Analyses and subsamples:

analysis: (OVER)	analyst:
Chemistry: "Manheim pkg" from s/ab II + III	Lisa Gein
II A = outer 2 layers	
II B = nucleus	
III = bulk	
XRD	Lisa Gein
II A = outer 2 layers	
II B = nucleus	
Polished T.S. from s/ab III	Lisa Gein → Mann

JOD4-2
slab II

F7-86-HW
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Inner and outer crust chemistry taken from "Manheim pkg"

II A = outer 2 layers. T[illegible] chem [illegible] of these sent [illegible]

II B nucleus Thickness [illegible]

JOD4-2
slab III

F7-86-HW
Karin Ridge
Johnston Is

III = bulk sample sent for chemistry, "Manheim pkg". [illegible] sent. [illegible] (see photos) sent. Outer 2 layers [illegible] 15-28 mm. Inn[illegible] 5-[illegible] nucleus = [illegible]-31 mm.

III: Rt. half (see photo) [illegible]

F7-86-HW
Karin Ridge
Johnston Is

Sample Description

Cruise I.D: 18X14X11

Sample I.D: Sta: 06 JOD 4-3

Location: S. Johnston I. Ridge

Size: _____ Weight: 4 Kg

Mn crust thickness:

Total: min: 1.0 max: 1.5 ave: 1.3

Inner crust: min: — max: — ave: —

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

Surface texture: smooth + subdued botry. Top
Smooth to granular bottom; granular sides

Internal structure:

layered:
laminated:
massive: X
porous: X inner part in places
dendritic:
other:

Mineralogy (XRD):

Associated alteration, phosphorite, or hydrothermal deposits:

Substratum:

Rock type: Basalt

Description: Fairly fresh-looking gray vesicular basalt some [illegible] large [illegible] mostly [illegible] milky white mineral [illegible] tiny qtz [illegible] phosphorite [illegible] basalt

Mineralogy (XRD):

JOD 4-3

F7-86-HW
Karin Ridge
Johnston Is

Analyses and subsamples:

analysis:	analyst:
[illegible]	Lisa Gein
[illegible]	
[illegible]	
[illegible]	Lisa Gein
[illegible]	
[illegible]	
[illegible]	
[illegible]	
[illegible]	
[illegible]	
[illegible]	
[illegible]	
[illegible]	
[illegible]	
[illegible]	
[illegible]	
[illegible]	
[illegible]	
[illegible]	
[illegible]	
[illegible]	
[illegible]	

JOD 4-3

F7-86-HW
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JOD 4-3 slab II
Dark area on basalt
is wet area

F7-86-HW
Karin Ridge
Johnston Is

II A: Bulk crust sent for "Manhum pkg"
[illegible] Thickness of
[illegible] 9.13 mm. [illegible] sent for
[illegible] 7.7g [illegible] sent for [illegible] 39.[illegible]
w breaking off crust [illegible]
[illegible] a weak area close to [illegible]
thin [illegible]

II B: Basalt [illegible]
[illegible] from slab II [illegible]
[illegible] of this slab [illegible] to Alice Davis
[illegible]