PREDGE 15
Johnston Is. Ridge

CD15

AMPLE ID	Mn CHEM	Pt & Au	REE	Si Chem	DP.Sect.	35mm Pho	Archive	Paleo					
CD15-1	Bulk			✓	✓	DO	✓	✓					
CD15-2	Layers			✓				mudstone	Alice has piece of substrate				

Sample Description

Cruise I.D: F7-86-HW Sample I.D: Sta: 17 CD15-1 Location: S. Johnston I. Ridge

Size: 21 x 12 x 8 Weight: 2.5 kg

Mn crust thickness:

Total: min: 1.3 max: 2.5 ave: 1.8

Inner crust: min: 0.3 max: 1.4 ave: 1.1

Outer crust: min: 0.7 max: 1.9 ave: 1.0

Surface texture: Botryoidal

Internal structure:

layered: 2
laminated: inner glassy + brittle
massive: outer
porous:
dendritic:
other:

Mineralogy (XRD):

Associated alteration, phosphorite, or hydrothermal deposits:

Substratum:

Rock type: Siltstone - mudstone

Description: Greenish - gray Tuffaceous siltst. Reddish near top. Much sedimentary texture. X-bedding lined w/ mm, burrowing, possible ripple marks

Mineralogy (XRD):

CD 15-1
archive slab

F7-86-HW
Karin Ridge
Johnston Is

Analyses and subsamples:

~~analysis~~ sample (thickness sent):	analysis (wt. sent):
A= bulk crust (13-20 mm)	Mn crust chem (25.6g); XRD
B= lwr 5 mm of crust	" " " ([illegible]); "
C= green substrate only (no mm, no red part)	silicate chem (10 major st FeO + 44 alem ICP) (14.1 g); XRD
D= bulk substrate	Paleo (Paula Q)
bulk sample	DPTS (of crust on little subs)
" "	Archive

CD 15-1
Top surface of archive slab

F7-86-HW
Karin Ridge
Johnston Is

SAMPLE DESCRIPTION

Cruise Id: F7-86-HW Size: Boulder Location: S. Johnston Island Ridge

Sample Id: CD15-2 Weight: 80 kg just a small piece kept Depth:

Mn Crust Description

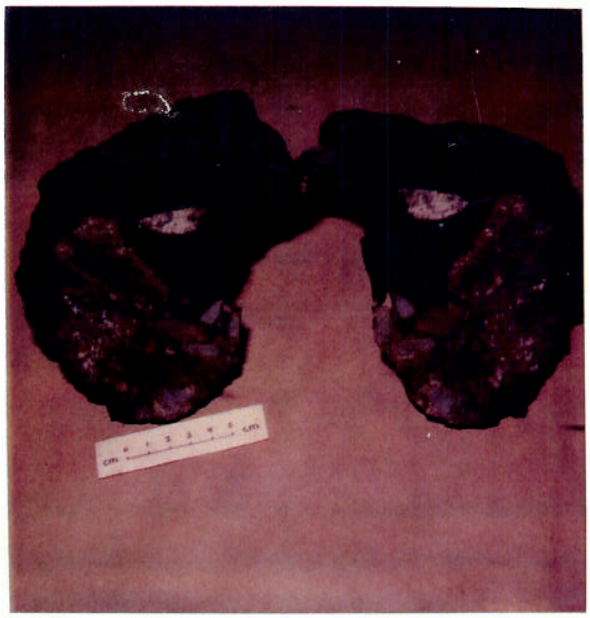
Surface Texture: botryoidal w/ granular in lows

Mn Crust Thickness:

Min: 25mm Max: 70mm Ave: 47mm

Layers (Outer to Inner):

	Min	Max	Ave	Texture
1.	8mm	13mm	10.5mm	massive resinous
2.	10mm	12mm	11mm	thin discontinuous layers
3.	missing	45mm	22.5	massive, fractured
4.				
5.				
6.				



CD 15-2 F7-86-HW

Comments and XRD Mineralogy:

Phosphorite layers between layers of crust. crust has thin shale-like layering in layers 1 & 2

Chemistry [illegible] layer 1 & 2 as described above sampled as one layer (per J. Hein)

Some speculation on which layer is discontinuous is it 2 or 3?

Substrate Description

Rock Type: Volcaniclastic Breccia

Description:

Basalt clasts w/some phosphorite cement

Calcite and/or zeolites in vugs (dark [illegible] HCL so is calcite

Greenish mudstone clast is floating in crust between layers 2 and 3

Phosphorite cement

ANALYSES

Subsample & Type	Analysis	Weight
Alice has piece of substrate		
CD15-2A		
Layers 1 & 2 20mm	CC	37gm
CD15-2B INNER Layer	CC	22 mm 25gm
CD15-2C INNER 5mm	CC	6.62gm
CD15-2D SUBSTRATE	OC	55gm
CD15-2E Mud clast	Paleo - on greenish mudst clast.	
XRD shows CD15-2 as pure calcite		

Described By: [illegible]