DREDGE
7

Adam Seamount 3880 - 3310 m

SAMPLE ID	*Mn CHEM	Pt & Au*	REE *	Si Chem*	P.Sect.	35mm Pho	Archive	Paleo	XRD				
D7-1				mudstone				X					
D7-2	Bulk							X X	X X				
D7-3													
D7-4													
D7-5	Bulk				D P T S								
D7-6													
D7-7													
D7-8	Bulk	Bulk	Bulk										

* All chemistry samples have XRD mineralogy done also.

SAMPLE DESCRIPTION

Cruise Id: F7-87-SC Size: ~100 x 70 x 50 Location: Adam Seamount

Sample Id: D7-1 Weight: 50 kg Depth: 3280-3310

↳ 5 kg kept

Mn Crust Description

Surface Texture: NONE

granular in some boring

Mn Crust Thickness:

Min:_____ Max:_____ Ave:_____

Layers (Outer to Inner):

	Min	Max	Ave	Texture
1.				
2.				
3.				
4.				
5.				
6.				

Comments and XRD Mineralogy:

Substrate Description

Rock Type: greenish-brown poorly indurated mudstone w/ some borings

Description:

Described By: D.J.

Subsampled By: D.J.

ANALYSES

Subsample & Type	Analysis	Weight
D7-1	XRD	Bulk
"	Rock	
"	Silicate Chem.	

SAMPLE DESCRIPTION

Cruise Id: F7-87-SC Size: 45x34x18cm Location: Adam Seamount

Sample Id: D7 - 2 Weight: 27 kg Depth: 3880 - 3310

Mn Crust Description

Surface Texture: Botryoidal; granular + botryoidal - [illegible]

botryoidal; granular + □
botryoidal _____?_____

Mn Crust Thickness:

Min: 5 Max: 28 Ave: 10 Top -
5 15 8 Bottom

Layers (Outer to Inner):

	Min	Max	Ave	Texture
1.				
2.				
3.				
4.				
5.				
6.				

D7-2

Comments and XRD Mineralogy:

Encrusting forams + worm tubes□
hold fast of several silica sponges--

[illegible] scalloped to pillar structure in Top Crust - transitional contact w/ Host RX; Black massive crust on bottom w/ m porous outer layer - sharp contact w/ host RX - Many borings lined w/ mn Mn dendrites in Host RX

Substrate Description

Rock Type: Phosphorite or Altered ash

Description:

Ash is soft - poorly indurated + off white to yellowish white - Ash is bored + borings filled w/ Mn + undithified brown mud - some small greenish grains - altered Basalt (?) fragments

ANALYSES

Subsample & Type	Analysis	Weight
D7-2A	Paleo	off white host RX
	XRD	
D7-2B	Paleo	Brown mud filling
	XRD	Borings
D7-2C	CC	0-10 mm top Crust
	XRD	26 g

Described By: D.J. Subsampled By:

A
B - all burrow fills

SAMPLE DESCRIPTION

Cruise Id: F7-87-SC Size: 15x10x7 Location: Adam Seamount

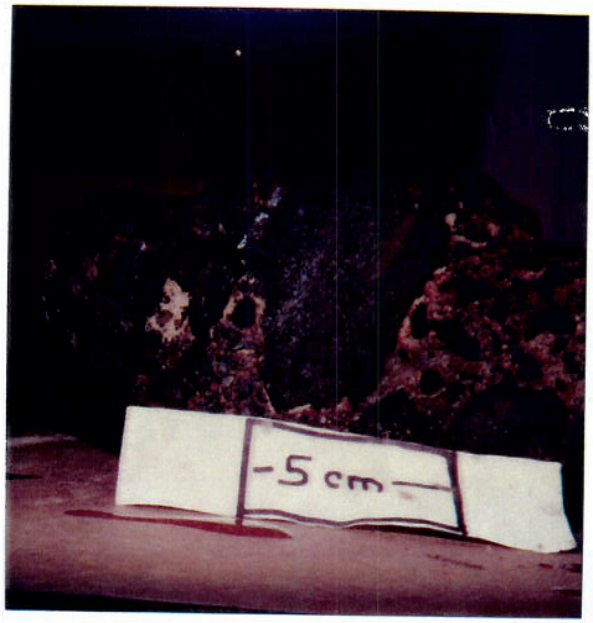
Sample Id: D7-3 Weight: ~2 kg Depth: 3880-3310

Mn Crust Description

Surface Texture: smooth

Mn Crust Thickness: Variable - fills holes

Min: 1 Max: 20 Ave: 8?



Layers (Outer to Inner):

	Min	Max	Ave	Texture
1.				laminated to
2.				massive
3.				
4.				
5.				
6.				

Comments and XRD Mineralogy:

this brown crust - yellow-brown in plocem - tiny basalt frags. w/ yellow iron oxide ring included

Substrate Description

Rock Type: Volcanic Breccia

Description:

Phosphorite cement, poorly sorted dk gray vesicular basalt clasts some coated w/ Fe oxide or Mn Fe oxide rims

Sampled for glass

ANALYSES

Subsample & Type	Analysis	Weight
D7-3A		probe (A.D.)
D7-3B		
D7-3C		

Described By: D.J. Subsampled By:

Late Substrate

SAMPLE DESCRIPTION

Cruise Id: F7-87-SC Size: 6 x 6 x 6 Location: Adam Seamount

Sample Id: D7-4 Weight: 0.5 Depth: 3880 - 3310

Mn Crust Description

Surface Texture: Smooth

Mn Crust Thickness:

Min: 1 Max: 3 Ave: 2

Layers (Outer to Inner):

	Min	Max	Ave	Texture
1.				Massive
2.				
3.				
4.				
5.				
6.				

Comments and XRD Mineralogy:

Substrate Description

Rock Type: Trachyte

Description:

V. Thin Crust but Rx maybe datable

Initial sample for T.S. [illegible] (XRD)

Erratic?

ANALYSES

Subsample & Type	Analysis	Weight

Described By: D J. Subsampled By:

SAMPLE DESCRIPTION

Cruise Id: F7-87-SC Size: 9 x 7 x 6 Location: Adam Seamount

Sample Id: D7-5 Weight: 0.5 kg Depth: 3880 - 3310

Mn Crust Description

Surface Texture: irregular granular coated cobble

Mn Crust Thickness:
Min: 1 Max: 30 Ave: 15

Layers (Outer to Inner):

	Min	Max	Ave	Texture
1.				
2.				
3.				
4.				
5.				
6.				

Comments and XRD Mineralogy:

A Nodule

ANALYSES

Subsample & Type	Analysis	Weight
bulk crust from top of sample	dpts CC	15 mm Thick

Substrate Description

Rock Type: Basalt

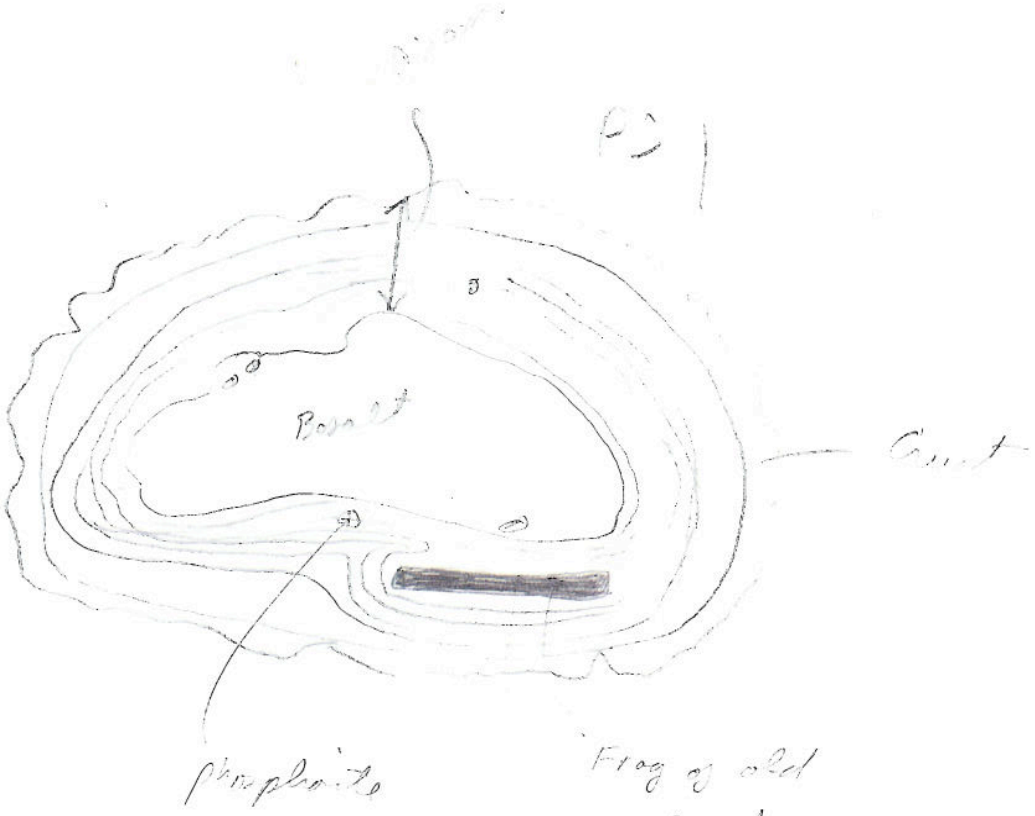
Description:

mostly vesicular
few blebs of phosphorite

2.5 x 5 cm in section

Described By: DJ

Subsampled By: I


Basalt
Phosphorite
Fragmental crust

SAMPLE DESCRIPTION

Cruise Id: F7-87-SC Size: Location: Adam Seamount

Sample Id: D7-6 Weight: 0.25 kg Depth: 3884 - 3310

Mn Crust Description

Surface Texture: Granular

Mn Crust Thickness:

Min: Max: Ave: < 2 mm

Layers (Outer to Inner):

	Min	Max	Ave	Texture
1.				
2.				
3.				
4.				
5.				
6.				

Comments and XRD Mineralogy:

granular Mn-Fe oxides

ANALYSES

Subsample & Type	Analysis	Weight

Substrate Description

Rock Type: yellow green brown mudstone

Description:

Described By: DS Subsampled By:

SAMPLE DESCRIPTION

Cruise Id: F7-87-SC Size: 9x8x7 Location: Adam Seamount

Sample Id: D7-7 Weight: 0.5 kg Depth: 5880 - 5540

Mn Crust Description

Surface Texture: Botryoidal + granular

Mn Crust Thickness:

Min: 5 Max: ~~10~~ Ave: 8

Layers (Outer to Inner):

	Min	Max	Ave	Texture
1.	7	13	10	laminated botryoidal
2.				
3.				
4.				
5.				
6.				

Comments and XRD Mineralogy:

Recrystallized Mn cemented breccia

2 generation Mn cemented breccia

ANALYSES

Subsample & Type	Analysis	Weight

Substrate Description

Rock Type: Amygdaloidal Basalt

Amrgdaloidal basalt

Description:

Described By: D.J.

Subsampled By:

0.49

-5 cm-

SAMPLE DESCRIPTION

Cruise Id: F7-87-SC Size: variable Location: Adam Seamount

Sample Id: D7-8 Weight: .75 kg Depth: 3880-5310

Mn Crust Description

Surface Texture: Smooth to botryoidal

smooth to botryoidal

Mn Crust Thickness:

Min: 11 Max: 28 Ave: 20

Layers (Outer to Inner):

	Min	Max	Ave	Texture
1.				massive
2.				
3.				
4.				
5.				
6.				

Used for CC, REE, Pt-group, 44 El.

Comments and XRD Mineralogy:

Assorted crusts w/out substrate

assorted crusts w/ out substrate

ANALYSES

Subsample & Type	Analysis	Weight
D7-8	CC	24 mm
"	Pt-group + Au	400g
"	REE	~100g
"	44 element	50g
	Semiquant	
"	XRD	
Crust		

Substrate Description

Rock Type: NONE

Description: Crust chemistry!

Crust w/ cleaned + granulated to homogeneous ~600g - inner massive layer looked black but w/ red-brown when powdered - outer part massive to laminated - thickness = 28 mm avg 24 mm smooth surface granular edge - glassy bottom where was attached to substrate

crust chemistry! crust w/ cleaned + granulated to homogeneous ~600g - inner massive layer looked black but w/ red-brown when powdered- thickness = 28mm avg 24mm smooth surface granular edge glassy bottom where was attached to substrate

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