DREDGE 11
Cheref Smt.

All this implys XRD samples too

SAMPLE ID	Mn CHEM	Pt & Au	REE	Si Chem	P.Sect.	35mm Pho	Archive	Paleo	XRD
Dll-1	Bulk				DPTS			Paleo	
Dll-2									
									2 samples

Drifts [illegible]

Volcaniclastic sandstones & breccias.

[illegible] include forams and other Nannos. (?)

Clasts are subangular to angular, poorly sorted, fine to pebble sized

Clasts of vesicular porphyritic basalt, pumice, quartz, glass (?), olivine, and other volcanics

There may be a correlation between grain size and manganese morphology

Mn cement and dense submetallic to metallic layers.

Cementing textures are colloform to botryoidal; when the space between grains is sufficient for development of these features.

"Pods" or "puddles" of dense manganese on "bottom [illegible]" of samples

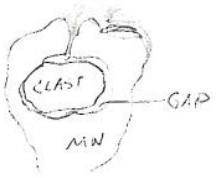
There are pores or holes [illegible] fluid pathways in the dense layers

The dense Mn through the binocular scope has nearly an iridescent specular luster.

Here of the look of a [illegible] matrix than in hand sample

No sedimentary features, some thin bedding (?) fine grained sand with coarse grained

Some larger clasts have a gap between them and the Mn



Dry Mn on basalts has dessication cracks

Mariana Islands

Sample Description

Cruise I.D: ~~I5-93-HW~~ Sample I.D: Sta: D11-1 Location: Chere Seamount

Size: 9x5x2cm (1x1x2cm) Weight: 1.86 kg

Depth 380-894 m

4-small bags

Mn crust thickness: ∅

Total: min: max: ave:

Inner crust: min: max: ave:

Outer crust: min: max: ave:

Mariana Islands
D11-1

Surface texture: Rough & porous

Internal structure:

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

Mineralogy (XRD):

Associated alteration, phosphorite, or hydrothermal deposits:

numerous foraminifera on surface

Substratum:

Rock type: Manganiferous Sandstone & basalt

Description: medium to coarse grained, sub-rounded to subangular, well compacted grains of qtz? plagioclase? olivine? Some [illegible] basalt [illegible]. These are coarse & more [illegible] D8. A couple rocks are massive black basalt w/abundant phenocrysts of plagioclase & olivine

also: some have a small hydrothermal layer

Mineralogy (XRD):

Analyses and subsamples:

analysis:	analyst:
XRD:	Charlaine
D11-1-I: bulk Mn sst	
Chemistry - Manheim pkg	F. Brown - Reston USG
D11-1-A: bulk Mn sst	
DPTS of colony w/dense layer	

Arrows point to
hydrothermal Mn

Mariana Islands

D11-1

Sample Description

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

Sample I.D: Sta: D11-2

Location: Cheref Seamount

Size: 9x6x2cm to 2x2x1cm (vary) Weight: 605g

1 bag of Mn-sst & basalt pieces - divided into 2 bags. D11-2A: Mn-sst & D11-2B: basalt

Mn crust thickness: 0

Total: min: max: ave:

Inner crust: min: max: ave:

Outer crust: min: max: ave:

Surface texture: varies smooth & granular to rough & porous

Internal structure:

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

Mineralogy (XRD):

Associated alteration, phosphorite, or hydrothermal deposits:

Substratum:

Rock type: Manganiferous Sandstone & Basalt

Description: See D11-1

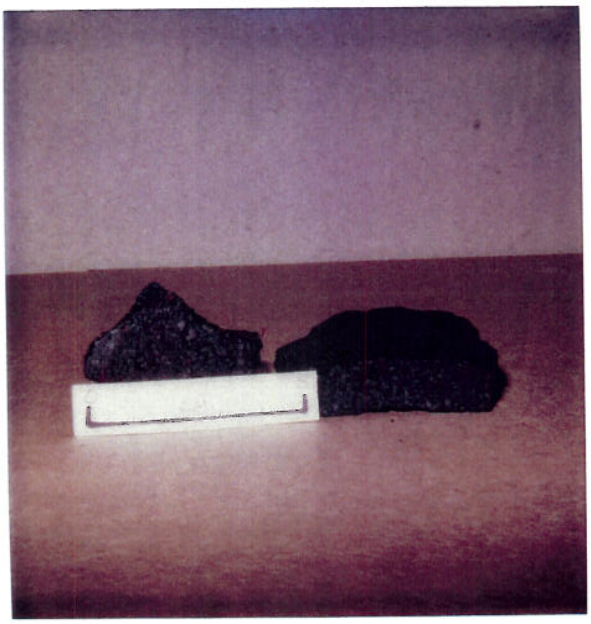
These basalt are slightly vesicular

Mineralogy (XRD):

Mariana Mn-sst
D11-2A

Analyses and subsamples:

analysis:	analyst:
Sampled for XRD:	Charlene
D11-2A-I: bulk Mn-sst	
D11-2B-I: bulk basalt	



D11-2B Marianas
Basalt