DREDGE 28
S. Karin
Ridge

AMPLE ID	Mn CHEM	Pt & Au	REE	Si Chem	P.Sect.	35mm Pho	Archive	Paleo	XRD				
CD28-1	Bulk [illegible]			✓	standard TS. of substrate		✓						
28-2	Bulk [illegible]			✓	2 [illegible]	✓							
28-3													
28-4													

Sample Description

Cruise I.D: F7-86-HW
44 X 30 X 79

Sample I.D: Sta: 30 CD28-1

Location: S. Kavin Ridge

Size: _____ **Weight:** 14.3 kg

Mn crust thickness:

Total: min: 5.0 max: 9.5 ave: 6.0

Inner crust: min: 2.0 max: 5.2 ave: 2.5

middle: 1.4 2.5 1.8

Outer crust: min: 1.8 max: 2.4 ave: 2.0

Surface texture: Granular rippled To Botryoidal

Internal structure:

layered:
laminated:
massive: inner
porous: slightly-middle. Porous-outer
dendritic:
other: boundary between outer & middle porous w/ much Fe oxide staining & phosphorite

Mineralogy (XRD):

Associated alteration, phosphorite, or hydrothermal deposits:
Fe-oxide staining in layers outer & middle
Almost none in inner layer.

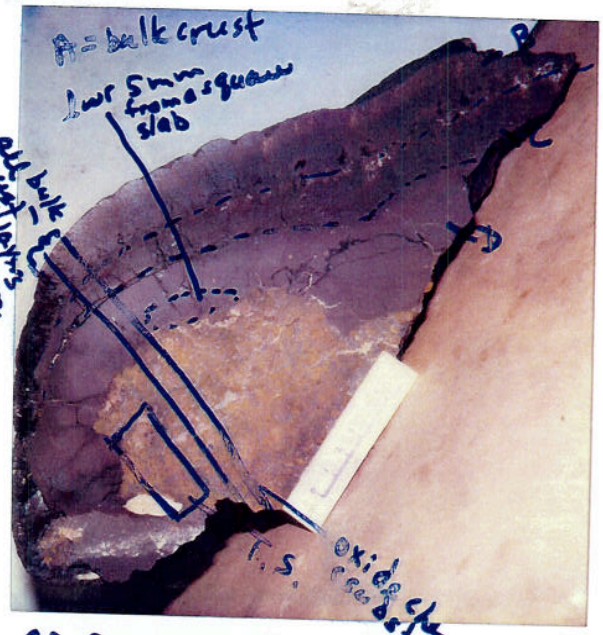
Substratum:

Rock type: Ferruginous Phosphorite

Description: Altered brownish yellowish-green clay cement, some more rare phos. as cement. Phosphorite "blebs"

Abundant encrusting Forams on Crust

Mineralogy (XRD):



CD28-1 slab3
F7-86-HW
photo 1

Analyses and subsamples:

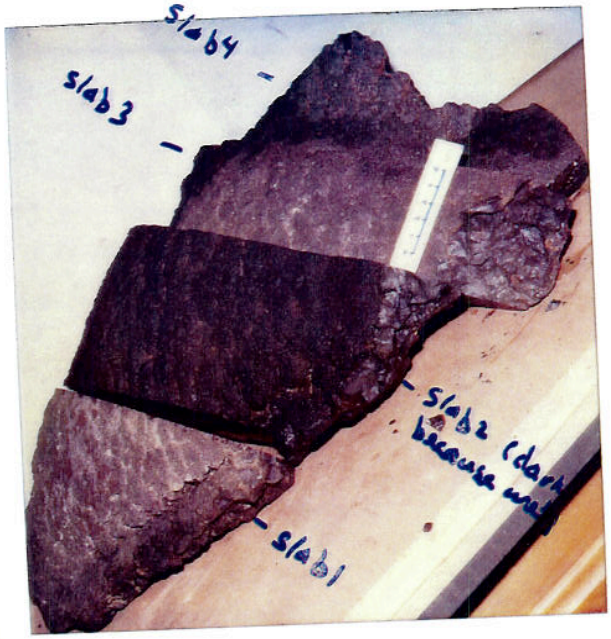
analysis:			analyst:	
CD28-1A	CC	(47.7g)	bulk crust	(0-59
CD28-1B	XRD		outer layer crust	(0-20)
	CC		(25.5g)	
CD28-1C	XRD		middle layer crust	(20-34
	CC		(13.9g)	
CD28-1D	XRD		inner layer crust	(34-65
	CC		(27.3g)	
CD28-1E	CC, XRD		inner 5mm	(8.0g)
CD28-1F	XRD		substrate	
	OC		(71.7g)	
	T.S.			
SLAB2- Archive				

All chem, T.S., XRD samples from slab3

CD28-1
F7-86-HW

Texture granular
+ botryoidal

photo 2



CD28-1
F7-86-HW

Texture granular
+ polished

photo 3

close-up of photo 2
(Before slabbing)

photo 4
CD28-1

close-up of photo 3
(Before slabbing)

CD28-1

photo 5

Sample Description

Cruise I.D: F7-86-HW 45Y27Y13

Sample I.D: Sta: 30 CD28-2

Location: S. Horizon Ridge

Size: _____ Weight: 20 kg

Mn crust thickness:

Total: min: 40mm max: 75mm ave: 45mm

Inner crust: min: _____ max: _____ ave: _____

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

OVER FOR layer Details

Surface texture: Smooth bulbous [illegible] granular & glossy [illegible] on bottom

Internal structure:

layered: 3

laminated: middle (older gen)

massive: innermost; outer 2 (young gen)

porous:

dendritic:

other:

Mineralogy (XRD):

Associated alteration, phosphorite, or hydrothermal deposits:

most major layers separated by phosphorite

Substratum:

Rock type: Phosphorite

Description: Has a texture reminiscent of a Volcanic Breccia. Maybe a breccia which has totally altered to a phosphorite.

Mineralogy (XRD):

CD28-2

CD28-2 Phos Study

Analyses and subsamples:

analysis:		analyst:
CD28-2A Bulk crust	CC	50 mm 225 gm
laminae in layer 2 has thin phosphorite		
CD28-2B lower 5 mm	CC	19 gm
this lower 5 mm is very dense, hard w/ metallic to vitreous luster (maybe diagenetically denser?) Sample of lower 5 mostly layer 3, included [illegible] contacted substrate		
CD28-2C Substrate	OC	75 gm
DDTS		
CD28-2-I (0-40 mm)		KAVG (May 12/[illegible])
CD28-2-[illegible] (40-[illegible])		"
35mm Slide		G. Smith

Sampled by JSM

	Min	Max	Ave	[illegible]
Layer 1	5mm	11mm	7mm	[illegible] layer [illegible] (<1mm [illegible])
Layer 2	30mm	40mm	35mm	Upper 5mm is porous, upper boundary is [illegible] Fracturing [illegible]
Layer 3	7mm	30mm	12mm	This layer broke off and translated by [illegible] part of [illegible] Dense but wavy [illegible] are visible

Chemistry slab

CD28-2

Sample Description

Cruise I.D: F7-86-HW Sample I.D: Sta: 30 CD28-3 Location: S. Karin Ridge

Size: Various Weight: 35kg

Misc. pieces of Crust w/out substrate (bagged together)

Mn crust thickness:

Total: min: 1.5 max: 6.0 ave: 4.0

Inner crust: min: max: ave:

Outer crust: min: max: ave:

Surface texture: Smooth, granular & botryoidal

Internal structure:

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

Mineralogy (XRD):

Associated alteration, phosphorite, or hydrothermal deposits:

Substratum:

Rock type: NONE

Description:

Mineralogy (XRD):

CD28-3
F7-86-HW
photo 1

Analyses and subsamples:

analysis:	analyst:
Extractive metallurgy	Arno Heyenstick
entire group sent	

CD 28-3
F7-86-HW

photo of 6 biggest pieces, in upr left ½ of photo 1

photo 2

Sample Description

Cruise I.D: F7-86-HW Sample I.D: Sta: 30 CD28-4 Location: S. Garin Ridge

Size: 12x10x7 Weight: <1 lb

Mn crust thickness:

Total: min: <1mm max: 3mm ave: 2.5 mm

Inner crust: min: — max: — ave: —

Outer crust: min: max: ave:

Surface texture: granular to small botryoidal

Internal structure:

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

Mineralogy (XRD):

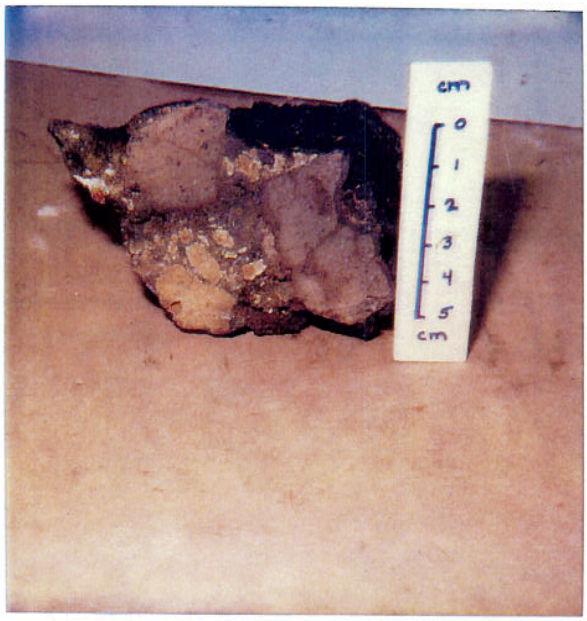
Associated alteration, phosphorite, or hydrothermal deposits:

Substratum:

Rock type: Volc. Breccia

Description: brownish-gray vesicular & yellowish-brown altered volc. Py clasts in altered volc. debris matrix.

Mineralogy (XRD):



CD28-4
F7-86-HW

Analyses and subsamples:

analysis:	analyst: