

DREDGE 11  
E. Flank  
Karin Ridge

Dredge 11

on most samples in this dredge

Botryoids

to be

are very glassy

and seem

seemed to be current

influenced

or elongated

Somehow.

Some samples are thinner crusts where these glassy samples appear, perhaps they are eroding? See CD11-7, CD11-11



Some samples are thinner crusts where these glassy samples appear, perhaps they are eroding? See CD11-7, CD11-11







CD11-1

F7-86-HW  
Karin Ridge  
Johnston Is

Sample Description

Cruise I.D.

Sample I.D.: Sta: B CD11-2

Location: EAST Flank  
Karin Ridge

Size: 9x13x5cm Weight: ~ 1.5 kg

Mn crust thickness:

Total: min: 7 max: 15mm ave: 15mm

Inner crust: min: 4mm max: 11mm ave: 7.5mm

Outer crust: min: 3mm max: 6mm ave: 4mm

Surface texture: Smooth w/ microscopic botryoids

Internal structure:

- layered: ✓ 2, 2
- laminated: \_\_\_\_\_
- massive: ✓
- porous: \_\_\_\_\_
- dendritic: \_\_\_\_\_
- other: \_\_\_\_\_

Mineralogy (XRD):

Associated alteration, phosphorite, or hydrothermal deposits:

Substratum:

Rock type: Volc/Mudstone Breccia

Description: Greenish-brown subrounded  
volc/breccia material (1-40mm)  
breccia w/ volcanic & mudstone clasts  
in a light brown matrix

Mineralogy (XRD):



**CD11-2**

F7-86-HW  
Karin Ridge  
Johnston Is

Analyses and subsamples:

analysis:

- Mn Crust Chem
- CD11-2A (top layer)
- CD11-2B (bottom layer)
- CD11-2C Bulk

Silicate Chem  
CD11-2C

- XRD - Xtra samples
- CD11-2CI Highly Altered (last 18hr Alteration)
- CD11-2CII Mudstone Clast w/xtals

DPTC - crust + substrate

analyst:

0-5mm 5mm  
5-15mm 10mm  
0-15mm 15mm

KANS, May 12/88



Smooth surface w/ Lizard Skin  
Botryoids  
CD11-2

F7-86-HW  
Karin Ridge  
Johnston Is





F7-86-HW  
Karin Ridge  
Johnston Is

Sample Description

Cruise I.D:

Sample I.D: Sta: 13 CD11-5

Location: EAST Flank  
Karin Ridge

Size: 21x18x7 Weight: ~4.5 kg

Mn crust thickness:

Total: min: 15 max: 30 ave: 26 mm

Inner crust: min: \_\_\_\_\_ max: \_\_\_\_\_ ave: \_\_\_\_\_

Outer crust: min: \_\_\_\_\_ max: \_\_\_\_\_ ave: \_\_\_\_\_

Surface texture: Granular to fibrous botryoidal  
w/glassy bulbous botryoidal on one edge

Internal structure: \_\_\_\_\_  
layered: \_\_\_\_\_  
laminated: \_\_\_\_\_  
massive: \_\_\_\_\_  
porous:  \_\_\_\_\_  
dendritic: \_\_\_\_\_  
other: \_\_\_\_\_

Mineralogy (XRD): \_\_\_\_\_

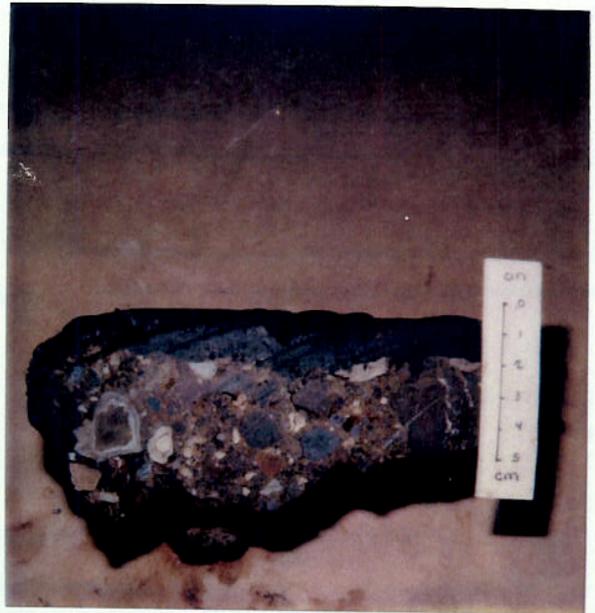
Associated alteration, phosphorite, or hydrothermal deposits: \_\_\_\_\_

Substratum: \_\_\_\_\_

Rock type: Volc/Mudcr. Breccia

Description: Darkly Sorted, with clay, phosphate  
matrix

Mineralogy (XRD): \_\_\_\_\_



CD 11-5

F7-86-HW  
Karin Ridge  
Johnston Is

Analyses and subsamples:

analysis:

analyst:

Thin Section of Substrate

XRD: crust

CD 11-5 - I (cont. mat) (A)

CD 11-5 - I (5-latt. mat) (B)

KANA (May 17/20)





CD11-6

"Botryoids very elongated  
in this area; give appearance  
of being stretched."





CO11-7

F7-86-HW  
Karin Ridge  
Johnston Is



Sample Description

Cruise I.D: F7-86-HW

Sample I.D: Sta: 13 CD11-9

Location: EAST BLANK KARIN RIDGE

Size: 4x10x8.5 cm Weight: 42.5 kg

Mn crust thickness:

Total: min: 0 max: 5 ave: 3.5mm

Inner crust: min: max: ave:

Outer crust: min: max: ave:

Surface texture: Glassy, bulbous, botryoidal

Internal structure:

- layered:
laminated:
massive:
porous: [checked]
dendritic:
other:

Mineralogy (XRD):

Associated alteration, phosphorite, or hydrothermal deposits:

Red & white ferrous on surface of Mn

Substratum:

Rock type: Muddy Sandstone

Description: See CD11-2

Mineralogy (XRD):

Given TO Halbach

Analyses and subsamples:

analysis:

analyst:

Grid of lines for recording analysis and analyst information.



Sample Description

Cruise I.D: F7-86-HW

Sample I.D: Sta: 13-CD11-11

Location: EAST Flank  
Karin Ridge

Size: 45x21x11cm Weight: ~10 kg

Mn crust thickness:

Total: min: 2mm max: 12mm ave: 7mm

Thick Side Core of Inner crust: min: 10mm max: 12mm ave: 11mm

Thin Top Outer crust: min: 2mm max: 5mm ave: 3.5mm

Surface texture: Glassy. Slow like botryoidal but

Internal structure:

- layered:
- laminated: \_\_\_\_\_
- massive:
- porous: \_\_\_\_\_
- dendritic: \_\_\_\_\_
- other: \_\_\_\_\_

Mineralogy (XRD):

Associated alteration, phosphorite, or hydrothermal deposits:

Substratum:

Rock type: Volc / Mudstone / Breccia  
or Sandstone / Breccia?

Description: see CD11-6

Mineralogy (XRD):



F7-86-HW  
Karin Ridge  
Johnston IS

CD11-11

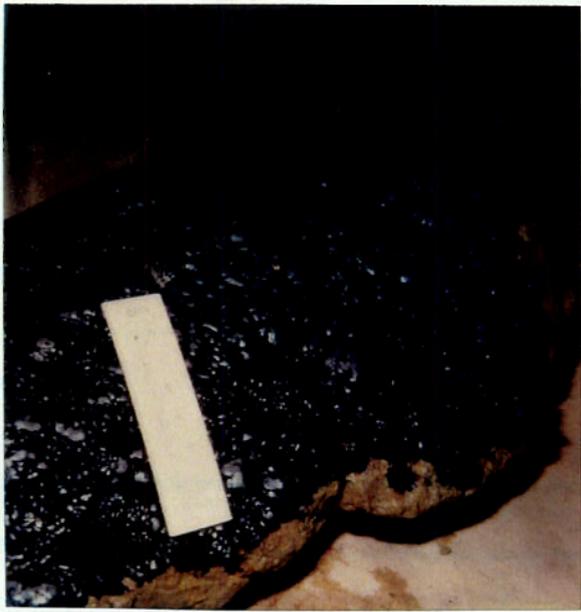
Analyses and subsamples:

analysis:

analyst:

Mn Crust Chem  
 CD11-11A (Thin Crust) Side? 0-11mm 11mm  
 CD11-11B (Thick Crust) Top? 0-3.5mm 3.5mm

Silicate Chem  
CD11-11C



CD11-11



CD11-11

Sample Description

Cruise I.D: F7-86-HW

Sample I.D: Sta: 13 CD-11-12

Location: EAST Flank  
Marie Ridge

Size: 49/24/17 cm Weight: ~20 kg

Mn crust thickness:

Total: min: 8mm max: 12mm ave: 10mm

Inner crust: min: max: ave:

Outer crust: min: max: ave:

Surface texture: large bipyridal to glaucous, yellow on one side

Internal structure:

- layered: \_\_\_\_\_
- laminated: \_\_\_\_\_
- massive: \_\_\_\_\_
- porous: \_\_\_\_\_
- dendritic: \_\_\_\_\_
- other: \_\_\_\_\_

Mineralogy (XRD):

Associated alteration, phosphorite, or hydrothermal deposits:

Substratum:

Rock type: Volcanic / Metavolcanic Breccia

Description: Breccia has many altered clasts w/ alteration rims (or zones)

Mineralogy (XRD):



CD11-12

Analyses and subsamples:

analysis: Mn Crust Chem  
CD11-12A Bulk

analyst:

10mm

Silicate Chem  
CD11-12B

XRD  
CD11-12-I (chilled)

KADG / May-17/02

DPTS: crust + substrate

D.P. Section - did not

35mm



CD11-12