DATE: 12 August 1984
CRUISE ID: SO 33
LOC: V
AREA: C

SAMPLE: 34 DK

box dredge

	time (GMT)	LAT (N)	LON (W)	water depth (m)	wire o
ON BOTTOM =	0925	6°17.3900	162° 58.1946	2486	2680
OFF BOTTOM =	1120	6°18.0462	162° 55.6375	1409	1414
mean dredge data (corrected):		6° 17'43"	162° 57' 43"	2021 (1105 fm)	

RECOVERY WEIGHT = total: 25 kg

crust
12 kg
10 kg basalt
3 kg biota

CRUST THICKNESS = Veneer to 4 cm
1° generation (finally getting thicker)
Avg = 2.5 cm

SUBSTRATE = basalt

COMMENTS:

* 1 bio sample (plastic bag).

34 DK

34 DK

Gesamtmenge: 25 kg
20 kg Basalt & sonst.
5 kg Krusten

34 DK1 — vesicular
blasiger Basalt, oben und seitlich umkrustet mit dicker Mn-Kruste
2-4 cm Kruste → junge Krustengeneration
Oberfläche grobknotig, auf einer Seite konsodiert, lagig aufgebaut, 2-3 mm Lage

Basaltisches Substrat mit dicker Krustenbelegung 3-5 cm
⌀ 3,5 cm, grobknotige Oberfläche (bis 1 cm), teilweise seitlich konsodiert, lagiger Aufbau, 1 Krustengeneration (junge)

34 DK2 — Isolierte Mangankrustenbruchstücke, handgroß 4 cm mächtig, Oberfläche glatt bis knotig, lagiger Aufbau, dicht

34 DK 3 — Mn-Kruste s.o. darunter dünn Phosphorit dann AOB, alteriert und mit Phosphorit-Lagen durchzogen

Sample Description

Cruise I.D: SO 33

Sample I.D: Sta: 34 DK

Location: "Bola" Sm
6° 17'43"
162° 57'43"
(-) 2021 m.

Size: _____ Weight: _____

Mn crust thickness:

Total: min: _____ max: _____ ave: _____

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

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

Surface texture: _____

Internal structure: _____

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

Mineralogy (XRD): _____

Associated alteration, phosphorite, or hydrothermal deposits: _____

Substratum:

Rock type: _____

Description: _____

Mineralogy (XRD): _____

Analyses and subsamples:

analysis:	analyst:

Sample no. 303/34 DR I

Rock Type: Olivine basalt (AOB?) (Pillow lava)

Color: Pale brown 5YR5/2 – Moderate brown (5YR 3/4)

Texture: Phyric, hyalopilitic

Phenocrysts: Olivine, % varies greatly, ±1mm dia (up to 35%?)

Groundmass: Glass, Olivine, plagioclase?, clinopyroxene?, opaques? } not determined

Vesicles: % quite variable from place to place
Size quite variable from place to place (±1mm avge)
Shape: round - irregular, coalescing

Alteration: Extensive - complete (smectitization, zeolitization, iddingsitization, hydration, oxidation) all the olivine crystals have been altered to iddingsite, vesicles lined with phillipsite crystals in some pieces; glassy rind totally altered to palagonite

Remarks: fragments of pillow lavas with (in some cases) remnants of palagonitized glassy rinds adhering to upper surfaces, typical (of pillow lava fragments) segregation into bands of vesicles, phenocryst abundances; some pieces have thick (±3 cm) layers of laminated and dendritic ?, Mn-oxide on exposed surfaces.

Tuffaceous chalk (marl)

Very pale orange (10YR 8/2)

Texture pyroclastic/granular

Matrix: foraminifera?, basaltic Glass shards?, basaltic rock fragments?, Mn-micronodules? } not determined

Cement: calcite

avge grain size: ±0.25 mm

Sorting: moderately well-sorted

Grain shape: angular to rounded (Microfossil glass shards)

porosity: ±50%

permeability: ±50%

Alteration: Smectization, zeolitization, phosphorization?, oxidation

Remarks: Similar to calcareous tuff and chalk - phosphorite of 33 (5) displays some oxidized (?) zones and is crosscut by ferromanganese-oxide veinlets; serves as substrate for thm, no dose (±1mm) ferromanganese oxide coating on exposed surfaces

~~Rx: AOB(?) Hyaloclastite (Melaphyre)~~
~~Color: Yellow-brown (10YR 7/6 – 5YR 4/4)~~