DATE: 24 August 1984 SAMPLE: 69 DK
CRUISE ID: SO 33
LOC: VIII
AREA: F

	time (GMT)	LAT (N)	LON (W)	water depth (m)	wire o
ON BOTTOM =	1545	20° 08.00	170° 40.85	1476	1650
(uncorrected) OFF BOTTOM =	1812	20° 08.05	170° 40.78	1463	147
mean dredge data (corrected):		20° 07'54"	170° 41'27"	1496 (818 fm)	

RECOVERY WEIGHT = total 21 kg crust 20 kg

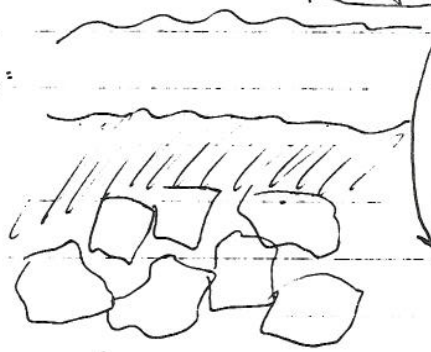
CRUST THICKNESS = 3-6 cm 4 cm = Avg

2 generations → { 0.5 cm shiney brittle Mn
3.0 cm porous Mn
1.5 cm shiney brittle Mn

Very Good!

SUBSTRATE = phosphorite, basaltic breccia (shark tooth w/in the breccia!) (who got it???)

COMMENTS:



69 DK

69 DK

(Totalsample)
Gesamtmenge: 21 kg
(of that ?) davon 20 kg Krusten

Substrat: Phosphorit, Basalt, Hyaloklastit

- sehr dicke Mn-Kruste

(dome-shaped (?))
69 DK1 Kuppelförmige Mn-Kruste auf Phosphorit
25 x 20 cm Größe
mit 6 cm mächtiger Mn-Kruste, nach außen auskeilend
3 Generationen: junge Kruste 2,5 cm lagig dicht
mittl. Kruste 2 cm porös, Phosphorit eingelagert
alte Kruste 1,5 cm dicht - Phosphorit linsen
Substrat - dendritisch durchwachsener Phosphorit
Krustenoberfläche knotig, Strömungsstruktur seitlich korrodiert

(corroded)
69 DK2 45 x 30 cm 6-7 cm Mn-Kruste auf dichtem Pillow Basalt, sehr frischer dichter Basalt
→ Altersdatierung: Stücke an BGR und Menlo Park
3 Wachstumsgenerationen: junge Kruste 3 cm
mittlere Kruste 2,5 cm Phosphorit imprägniert, alte Kruste 2 cm dicht, alte Kruste Phosphorit imprägniert
Unterseite teilweise mit Mn-Kruste 0,4 cm mächtig überzogen.

69 DK3 5 isolierte Mn-Krusten Bruchstücke Dezimeter Größe, knotige Oberfläche überwiegend junge Krustengenerationen (2-4 cm mächtig), alte Krustengenerationen fragmentarisch vorhanden, Gefüge dicht, lagig
1 Stück knotig oben und unten überkrustet (pancake Knolle), Substratkerne - Smektit, mit Hohlräume durchsetzt.
(room-size hollow passages (?))

Sample Description

Cruise I.D: S0 33

Sample I.D: Sta: 69 DK

Location: Mid-Pac Mt (Area F)
20° 13' 25" N
170° 41' 27" W
(-) 1496 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:

1

Rock Type: More likely alkalic ~~Tholeiitic~~ (?) Basalt (Flow breccia) Aa

Color: Dark gray (N3)

Texture: Aphanic, hyalopilitic-intersertal

Phenocrysts: Plagioclase <<1%, ± 2 mm
Clinopyroxene <<1%, ± 2 mm
glomerophyric

Groundmass: Plagioclase
Clinopyroxene
Olivine ?
Glass ?
Opaques
(not determined)

Vesicles: absent (main part of flow)
(incorporates fragments of vesicular to scoriaceous basalt).

Alteration: superficial (main part of flow) to moderate (incorporated pieces)
(oxidation, hydration, smectitization)

Remarks: large rounded, irregular, flattened piece - may have been shed by moving lava flow; probably subaerial eruption and flow; serves as substrate for deposition of very thick (± 5 cm) laminar ferromanganese oxide encrustation (knobby, warty, stalactitic topography); basalt apparently served as "nucleus" for giant manganese "nodule", as the encrustation covered the entire piece before cutting; surface of the rock coated with thin layer (<<1 mm) of hematite(?)

2

~~Basaltic Hyaloclastite~~

— no description —

(No Samples given!)