Sample Description

Cruise I.D: L5-83-HW Sample I.D: Sta: D25 Location: S Flank Summit

Size: 21x18x7cm Weight: ~2 kg

Mn crust thickness:

Total: min: ½" max: 1mm ave: Patina

Inner crust: min: ____ max: ____ ave: ____

Outer crust: min: ____ max: ____ ave: ____

Surface texture: not developed

Internal structure: ____

layered: ____
laminated: ____
massive: ____
porous: ____
dendritic: ____
other: Patina

Mineralogy (XRD): ____

Associated alteration, phosphorite, or hydrothermal deposits: ____

Substratum:

Rock type: carbonate mud w/ volcaniclasts

Description: carbonate mud supporting very coarse sand to pebble sized fresh & altered volcanic clasts. Clasts are rounded.

Mineralogy (XRD): ____

L5-83-HW

D25

Analyses and subsamples:

analysis:	analyst:

D25

Sample Description

Cruise I.D: L5-83-HW

Sample I.D: Sta: D25-10

Location: S P Las Guyot

Size: 0.5x5x4.5cm (largest)

Weight:

Mn crust thickness: After sampling

Total: min: 1mm max: 1mm ave: 1mm

Inner crust: min: max: ave:

Outer crust: min: max: ave:

Surface texture: botryoidal

Internal structure:

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

Mineralogy (XRD):

Associated alteration, phosphorite, or hydrothermal deposits:

Substratum:

Rock type: Volcanic breccia in limestone Matrix

Description: Matrix supported, angular to subrounded pebble to cobble sized basalt clasts

Mineralogy (XRD):

L5-83-HW

[redacted]

42-D25-10

Analyses and subsamples:

analysis:	analyst:
Chemistry-bulk substrate	

SAMPLE DESCRIPTION

'ise Id: L5-83-HW Size: after sampling 13.5 x 11 x 6cm Location: S. P. Lee Guyot

Sample Id: D25-11 Weight: _____ Depth: 1600m

Mn Crust Description

Surface Texture: Not developed

Mn Crust Thickness:

Min: _____ Max: _____ Ave: Patina

Layers (Outer to Inner):

	Min	Max	Ave	Texture
1.				
2.				
3.				
4.				
5.				
6.				

'ments and XRD Mineralogy:

ANAL

Subsample & Type	Analysis	Weight

Substrate Description

Rock Type: Volcaniclastic carbonate mud.

Description:

clasts are rounded to subrounded

Described By: Subsampled By:

SAMPLE DESCRIPTION

Cruise Id: L5-83-HW Size: 14 x 7 x 9 cm Location: SP Lee Guyot

Sample Id: D25 - A1 Weight: < 1 kg Depth: 1600m

Mn Crust Description

Surface Texture: Crust surface texture not developed, simply coating substrate

Mn Crust Thickness:

Min: patina Max: 1mm Ave: _____

Layers (Outer to Inner):

	Min	Max	Ave	Texture
1.				
2.				
3.				
4.				
5.				
6.				

ments and XRD Mineralogy:

ANALYSES

Subsample & Type	Analysis	Weight

Substrate Description

Rock Type: Volcaniclastic Breccia; clasts ranges from altered to fresh and from angular to subrounded. Matrix is a carbonate

Description: Aged

Described By: J. Schulz Subsampled By:

SAMPLE DESCRIPTION

ise Id: L5-83-HW Size: 14x8x4 cm Location: S.P. Lee Guyot

Sample Id: D25 - A 2 Weight: <1 kg Depth: 1600m

Mn Crust Description

Surface Texture: patina of Mn

Mn Crust Thickness:

Min:_____ Max:_____ Ave:_____

Layers (Outer to Inner):

	Min	Max	Ave	Texture
1.				
2.				
3.				
4.				
5.				
6.				

L5-83-HW

D25-A2

ments and XRD Mineralogy:

ANALYSES

Subsample & Type	Analysis	Weight

Substrate Description

Rock Type: Volcaniclastic breccia with calcareous mud as cont

Same as D25-A1

Description:

Described By: J. Schn[illegible] Subsampled By:

SAMPLE DESCRIPTION

Cruise Id: L5-83-HW Size: (larger piece =) 8.5 x 7 x 4 cm Location: S.P. Lee Guyot

Sample Id: D25-A3 Weight: 0.25 Kg Depth: 1600 m

L5-83-HW

D25-A3

Mn Crust Description

Surface Texture: botryoidal-granular

Mn Crust Thickness:

Min: – Max: 1 mm Ave:

Layers (Outer to Inner):

	Min	Max	Ave	Texture
1.				
2.				
3.				
4.				
5.				
6.				

Comments and XRD Mineralogy:

ANALYSES

Subsample & Type	Analysis	Weight
Bulk Mn crust	GC (Boston)	6g 6/88 Job# 87 [illegible]
		(from submitted sheet)

Substrate Description

Rock Type: volcaniclastic breccia with phosphorite matrix

Description:

Clasts are mostly pebble sized, subrounded to rounded. Matrix supported. Clasts are altered basalt.

Described By: Jung-Kang Kang 6/88 Submitted By: Jung-Kang Kang [illegible]

SAMPLE DESCRIPTION

Dise Id: L5-83-HW Size: 9x6.5x3 cm Location: S.P Lee Guyot

Sample Id: D25 - A4 Weight: <1 kg Depth: 1600

Mn Crust Description

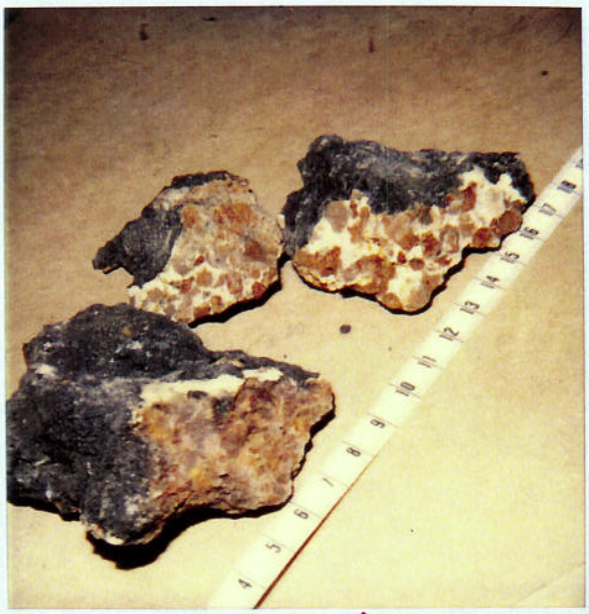
Surface Texture: botryoidal to granular

Mn Crust Thickness:

Min: patina Max: 2mm Ave: _____

Layers (Outer to Inner):

	Min	Max	Ave	Texture
1.				
2.				
3.				
4.				
5.				
6.				



ments and XRD Mineralogy:

ANALYSES

Subsample & Type	Analysis	Weight

Substrate Description

Rock Type: Volcaniclastic breccia w/ Ca-Mn mineralized phosphate cement

Description:

clasts are highly altered similar to D25-10

Described By: J. Schulz Subsampled By:

SAMPLE DESCRIPTION

Cruise Id: L5-83-HW Size: 17.5x13x11cm Location: S.P. Lee Outpost

Sample Id: D25 B-1 Weight: ~3Kg Depth: 1600m

Mn Crust Description

Surface Texture: Smooth

Mn Crust Thickness:

Min:____ Max:____ Ave: Patina

Layers (Outer to Inner):

	Min	Max	Ave	Texture
1.				
2.				
3.				
4.				
5.				
6.				

Comments and XRD Mineralogy:

Substrate Description

Rock Type: Porphyritic basalt, altered olivines & semi-fresh pyroxenes?

Description:

ANALYSES

Subsample & Type	Analysis	Weight

Described By: Subsampled By:

SAMPLE DESCRIPTION

Cruise Id: L5-83-HW Size: _____ Location: S. P. Lee Guyot

Sample Id: D25-B2 Weight: 2 kg Depth: _____

Mn Crust Description

Surface Texture: Smooth

Mn Crust Thickness:

Min: [illegible] Max: 5mm Ave: [illegible]

Layers (Outer to Inner):

	Min	Max	Ave	Texture
1.				
2.				
3.				
4.				
5.				
6.				

L5-83-HW

D25-B2

Comments and XRD Mineralogy:

ANALYSES

Subsample & Type	Analysis	Weight
Bulk new crust	CC (Peaton)	9g 6/88 Job # BZ89 (from subcritical sheet

Substrate Description

Rock Type: Porphyritic Basalt w/ [illegible] pyroxene(?) phenocrysts.

Description: phosphate layer between basalt and [illegible]

J. Schulz

Described By: Jung-Keuk Kang 6/88 Subsampled By: Jung-Keuk Kang 6/88

SAMPLE DESCRIPTION

ise Id: LS-83-HW Size: 18.5×9.5×3.5 Location: S.P. Lee Dayot

ample Id: D25 B-3 Weight: 0.69 Kg Depth: _____

Mn Crust Description

Surface Texture: smooth

Mn Crust Thickness:

Min: Patina Max: 2mm Ave: 1mm

Layers (Outer to Inner):

	Min	Max	Ave	Texture
1.				
2.				
3.				
4.				
5.				
6.				

ments and XRD Mineralogy:

ANALY

Substrate Description

Rock Type: basalt

Description:

porphyritic with altered olivines and semi-altered pyroxenes?

Subsample & Type	Analysis	Weight

Described By: Subsampled By:

SAMPLE DESCRIPTION

ise Id: LS-83-HW Size: 19x23x14.5cm Location: S.P. Lee Guyot

Sample Id: D25-D Weight: _____ Depth: 1600 m

Mn Crust Description

Surface Texture: Not developed

Mn Crust Thickness:

Min: _____ Max: _____ Ave: Patinen

Layers (Outer to Inner):

	Min	Max	Ave	Texture
1.				
2.				
3.				
4.				
5.				
6.				

LS-83-HW

D25-D

ments and XRD Mineralogy:

ANALY

Subsample & Type	Analysis	Weight
	XRD	C. Daniel
	I: substrate	
	Chemistry - bulk substrate	

Substrate Description

Rock Type: Carbonate mud containing pebble-sized clasts of volcanics

Description:

Volcaniclasts are both fresh + altered, rounded to subrounded.

Described By:

Subsampled By: