

ICELAND RESEARCH DRILLING PROJECT

Visual Core Description

Observer RHW

Depth Interval

3 2 6 3 8

cm to

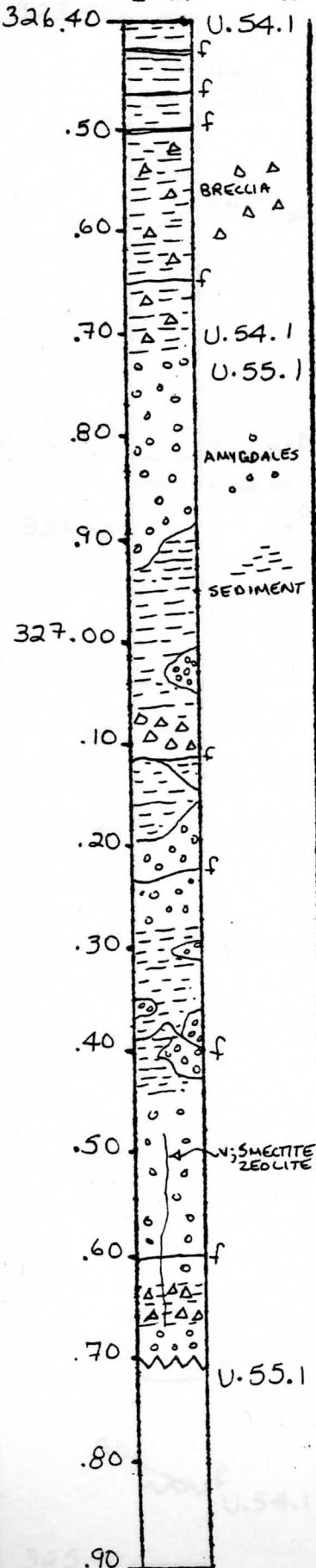
3 2 7 7 0

cm

Box 55 , Section 1

Graphic Representation

Sample Location



LITHOLOGY PETROGRAPHY - continues unit 54.1

Fine-grained, baked red sediment, small scale pore spaces (less than 1mm) in zones. Grades into red breccia with angular clasts, up to 1cm x 1cm. Clasts, varied, green (silicic?), some basaltic. Contact with underlying basalt is depositional.

326.72 Unit 55.1. Basalt is grey, amygdaloidal, fine-grained, equigranular, aphyric, holocrystalline basalt. Alternating basalt and sediment breccia and sediment.

VESICLES / AMYGDALES

326.72 Amygdales generally zeolite filled, smectite lined, perhaps minor quartz, some minor calcite. Size ranges up to 7-8mm diameter.

FRACTURES - VEINS - BRECCIA

326.38 Fractures may contain traces of green smectite lining (identification uncertain). Generally low angled (0-5°).

326.72 Fractures coated with green smectite, generally subhorizontal (0-10°). One at 60°. Veinlets hairline, smectite lined, zeolite filled.

ROCK ALTERATION

None observed.

OTHER

326.72 Contact may be interleaved basalt, blocks and sediments, perhaps formed by irregular surface. Contact point is chosen as first basalt.

STRUCTURE

326.38 - 326.50 Fine-grained red sediment (unit 54.1).

326.50 - 326.71 Red breccia (unit 54.1).

326.71 - 327.06 Unit 55.1 ; Fine-grained, equigranular, holocrystalline, aphyric, amygdaloidal basalt

327.06 - 327.11 Breccia and sediment (unit 55.1).

327.11 - 327.70 alternating sediments and amygdaloidal layers (unit 55.1).

ICELAND RESEARCH DRILLING PROJECT

Visual Core Description

Observer RHW

Depth Interval

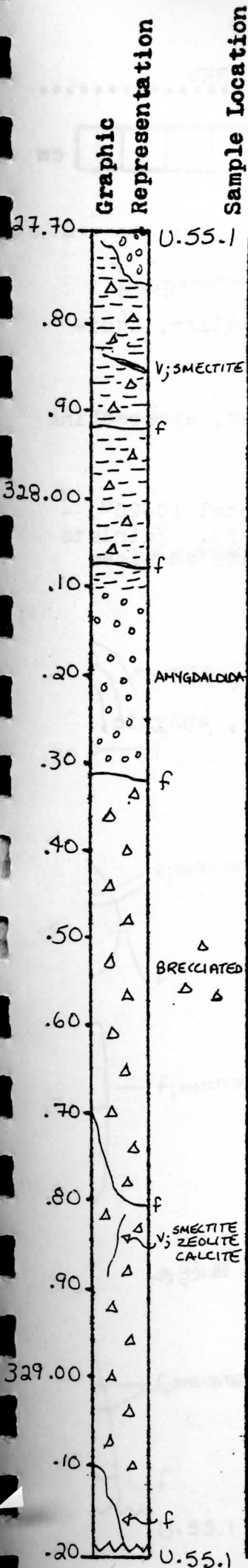
3	2	7	7	0
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 cm to

3	2	9	1	9
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 cm

Box 55 , Section 2



LITHOLOGY PETROGRAPHY continues unit 55.1

Mixed sediment, red breccia, and amygdaloidal basalt. Basalt - fine-grained, aphyric, holocrystalline, grey. Clasts in breccia, rather altered, generally rounded. groundmass reddish, partially replaced with zeolite. Sediment in upper 40cm of core, absent lower.

329.09 Fine-grained, medium grey, aphyric, holocrystalline, basalt, non-vesicular.

VESICLES/AMYGDALES

Amygdales in the basalts are predominantly zeolite (laumontite?) filled. Pores in the breccia have zeolites plus a considerable (30%) amount of calcite. Vesicles/amygdales are up to 5mm in diameter.

FRACTURES - VEINS - BRECCIA

Fractures lined with black and green smectite, subhorizontal (0-15°) or high angled (65-70°).

ROCK ALTERATION

None observed.

STRUCTURE

327.70 - 328.05 Vesicular basalt and sediment breccia (unit 55.1).

328.05 - 328.30 Amygdaloidal basalt (unit 55.1).

328.30 - 329.10 Breccia (unit 55.1).

329.10 - 329.19 Fine-grained, holocrystalline, aphyric, massive basalt (unit 55.1).

ICELAND RESEARCH DRILLING PROJECT

Visual Core Description

Observer RHW

Depth Interval

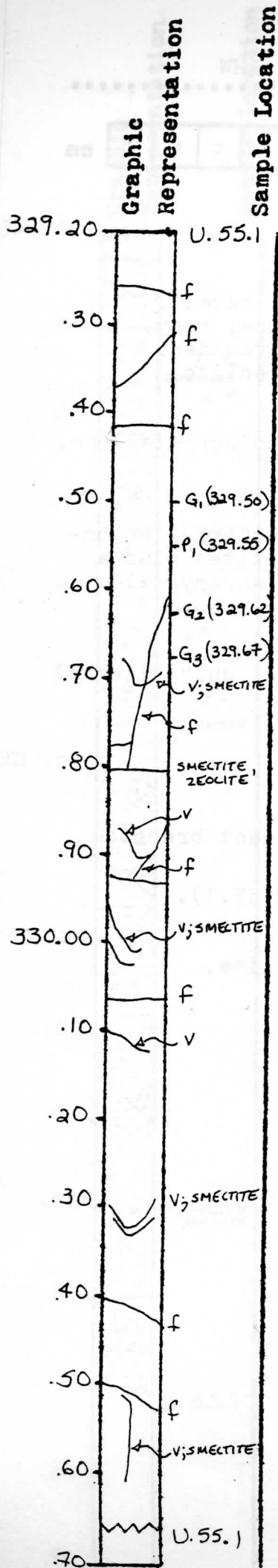
3 2 9 1 9

cm to

3 3 0 6 6

cm

Box 55 , Section 3



LITHOLOGY PETROGRAPHY - continues unit 55.1

Fine-grained, grey-green, aphyric, holocrystalline, equigranular basalt.

VESICLES/AMYGDALES

Nearly absent. Small smectite filled vesicles, approaching 1% around 330.30, then decreasing again.

FRACTURES - VEINS - BRECCIA

Fractures high angled (60-70°) and subhorizontal (0-20°) - lined with black smectite, some calcite (minor). Veinlets hairline and smectite lined, occasional calcite at wider (1mm) sections.

ROCK ALTERATION

None observed.

STRUCTURE

Fine-grained, equigranular, holocrystalline, aphyric, massive basalt (unit 55.1).

ICELAND RESEARCH DRILLING PROJECT

Visual Core Description

Observer RHW

Depth Interval

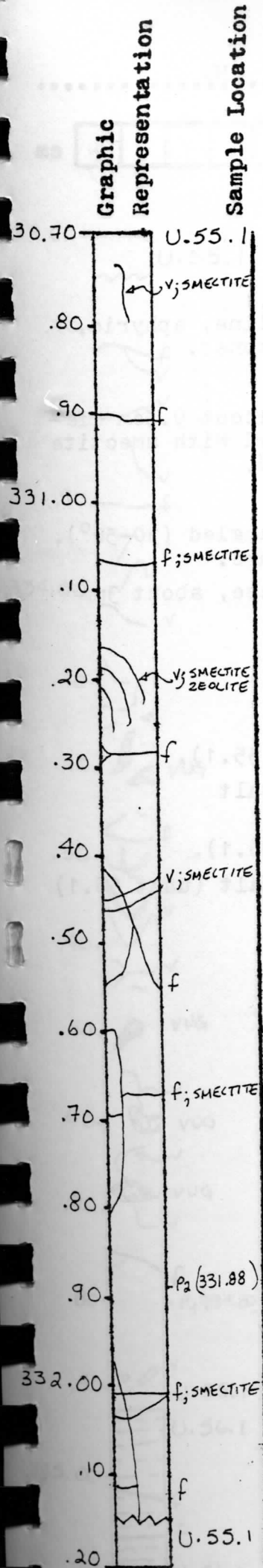
3 3 0 6 6

cm to

3 3 2 1 5

cm

Box 55 , Section 4



LITHOLOGY PETROGRAPHY - continues unit 55.1

Fine-grained, aphyric, holocrystalline, equigranular, granular, greenish-grey basalt.

VESICLES/AMYGDALES

Vesicles and amygdales rare. Small, smectite filled amygdale (1mm) vug at 330.90 contains smectite lining, quartz and laumontite.

FRACTURES - VEINS - BRECCIA

Fractures subhorizontal and subvertical. Lined with black smectite. Veinlets generally hairline and smectite filled, zeolites growing in wider parts.

ROCK ALTERATION

None observed.

STRUCTURE

Fine-grained, massive basalt (unit 55.1).

ICELAND RESEARCH DRILLING PROJECT

Visual Core Description

Observer RHW

Depth Interval

3 3 2 1 5

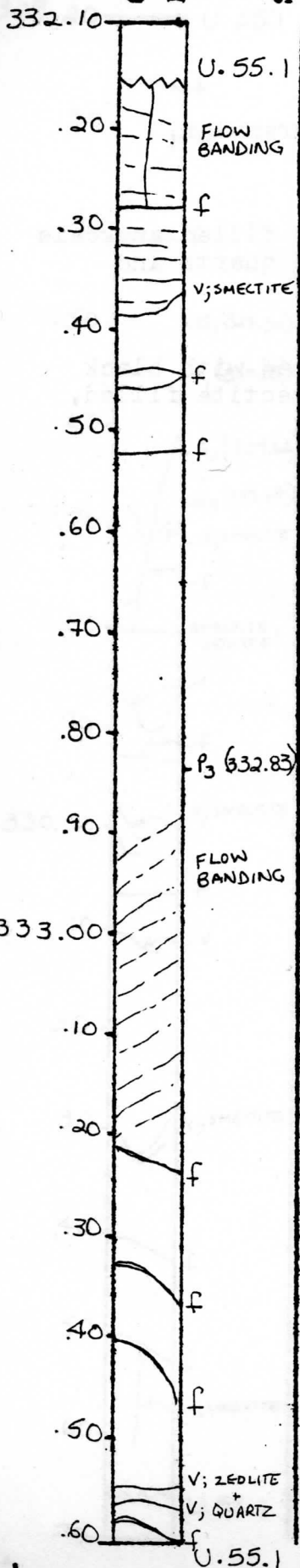
cm to

3 3 3 6 4

cm

Box 56 , Section 1

Graphic Representation
Sample Location



LITHOLOGY PETROGRAPHY

- continues unit 55.1

Fine-grained, light grey-green, holocrystalline, aphyric, granular basalt with distinct bands in two zones.

VESICLES/AMYGDALES

Extremely rare zeolite filled amygdalae of about 0.5cm diameter. Also smaller (1-2mm) amygdalae filled with smectite throughout core, but nowhere greater than 1%.

FRACTURES - VEINS - BRECCIA

Fractures subhorizontal (0-10°) and higher angled (30-50°). Green and black smectite in lining of fracture.

333.55 Zeolite and quartz filled vein at base, about 3mm thick, 2cm long.

ROCK ALTERATION

None observed.

STRUCTURE

332.15 - 332.37 Bands dipping 30°. (unit 55.1).

332.37 - 332.90 Fine-grained, massive basalt (unit 55.1).

332.90 - 333.20 Bands dipping 30° (unit 55.1).

333.20 - 333.64 Fine-grained, massive basalt (unit 55.1)

ICELAND RESEARCH DRILLING PROJECT

Visual Core Description

Observer RHW

Depth Interval

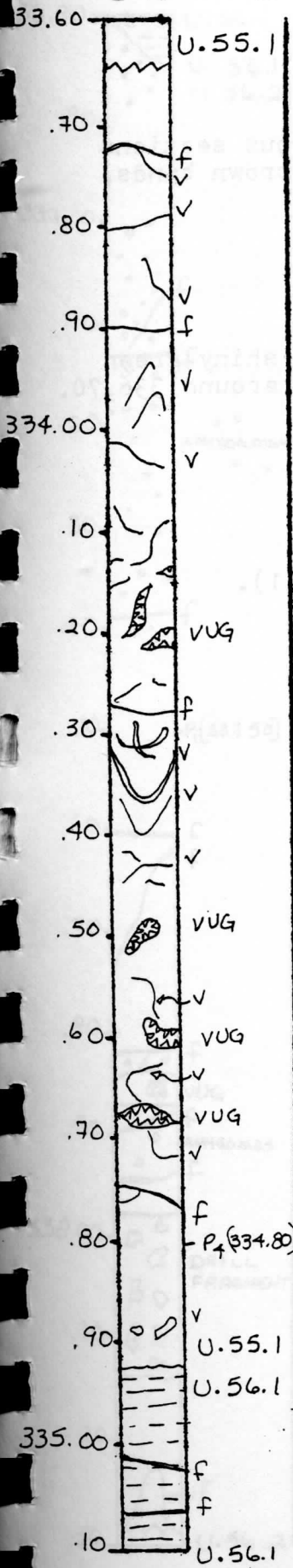
3 3 3 6 4

cm to

3 3 5 2 3

cm

Box 56 , Section 2



LITHOLOGY PETROGRAPHY - continues unit 55.1

Grey-green aphyric, granular, holocrystalline, fine-grained basalt with extensive red-orange staining in areas of extensive veining. Also existant are numerous vugs and large filled veins.

334.93 Unit 56.1. Unit abruptly goes to brick red, baked sediment, fine-grained with 2-5% porosity; small pores less than 1mm in diameter.

VESICLES/AMYGDALES

Vugs, veins and amygdales are all lined with smectite, mostly green. Where crystal forms are observable, laumontite is the probable zeolite filling, and small quartz grains are also present. Veins and vugs are also surrounded by stained (red) areas, especially close to the contact.

FRACTURES - VEINS - BRECCIA

All subhorizontal (0-100), lined with smectite and sometimes zeolite and quartz.

ROCK ALTERATION

None observed.

STRUCTURE

333.64 - 334.93 Fine-grained, massive basalt (unit 55.1)

334.93 - 335.23 Unit 56.1 ; Massive basalt.

ICELAND RESEARCH DRILLING PROJECT

Visual Core Description

Observer RHW

Depth Interval

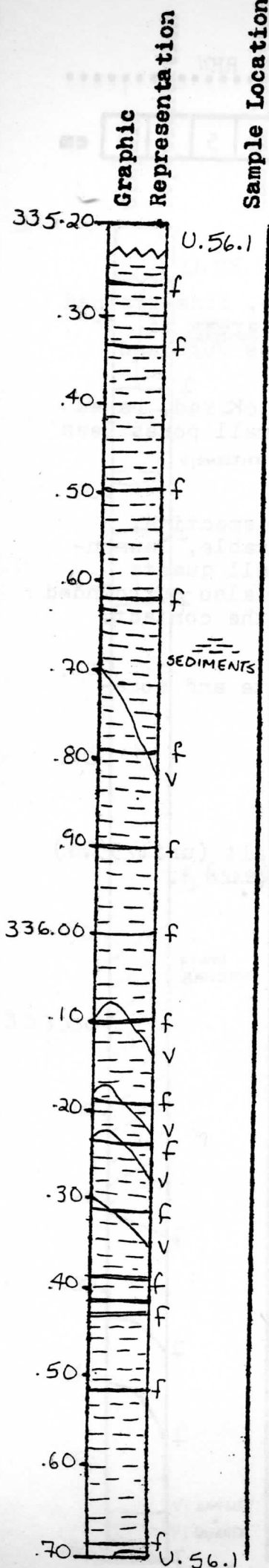
3 3 5 2 3

cm to

3 3 6 7 8

cm

Box 56 , Section 3



LITHOLOGY PETROGRAPHY - continues unit 56.1

Mixed sedimentary types, grey indistinct porous sections separated by thin (1-4cm) very fine-grained brown bands, perhaps compacted ash.

VESICLES/AMYGDALLES

None observed.

FRACTURES - VEINS - BRECCIA

Essentially horizontal to 15°, streaked with shiny green material, much like fault stria at fractures around 336.70. Others apparently unlined.

ROCK ALTERATION

None observed,

STRUCTURE

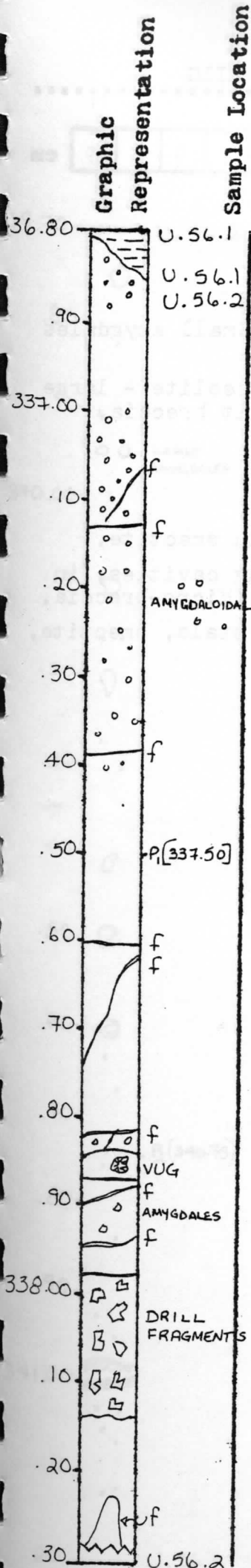
Fine-grained, laminated sediments (unit 56.1).

ICELAND RESEARCH DRILLING PROJECT

Visual Core Description Observer RHW

Depth Interval 3 3 6 7 8 cm to 3 3 8 2 8 cm

Box56 , Section 4



LITHOLOGY PETROGRAPHY -continues unit 56.1

Brick red porous sediment abruptly terminates at 40° angle with medium grey amygdaloidal, fine-grained, aphyric, holocrystalline, granular basalt. Two distinct amygdaloidal zones exist, as well as non-amygdale zones.

VESICLES/AMYGDALES

Amygdaloids range in size to 4cm vugs. Mostly irregular to elongate habit. Filling is calcite rich close to the contact, but primarily zeolite otherwise (laumontite?). Small amygdaloids scattered throughout, filled with green smectite.

FRACTURES - VEINS - BRECCIA

Fractures range from horizontal to about 45°, plus some very broken zones. Most have black and/or green smectite lining.

ROCK ALTERATION

None observed.

STRUCTURE

- 336.78 - 336.96 Laminated sediments (unit 56.1).
- 336.96 - 337.97 Unit 56.2 ; Fine-grained, massive basalt.
- 337.97 - 338.13 Drill fragments.
- 338.13 - 338.28 Fine-grained, massive basalt (unit 56.2)

ICELAND RESEARCH DRILLING PROJECT

Visual Core Description

Observer ILG

Depth Interval

3 3 8 2 8

cm to

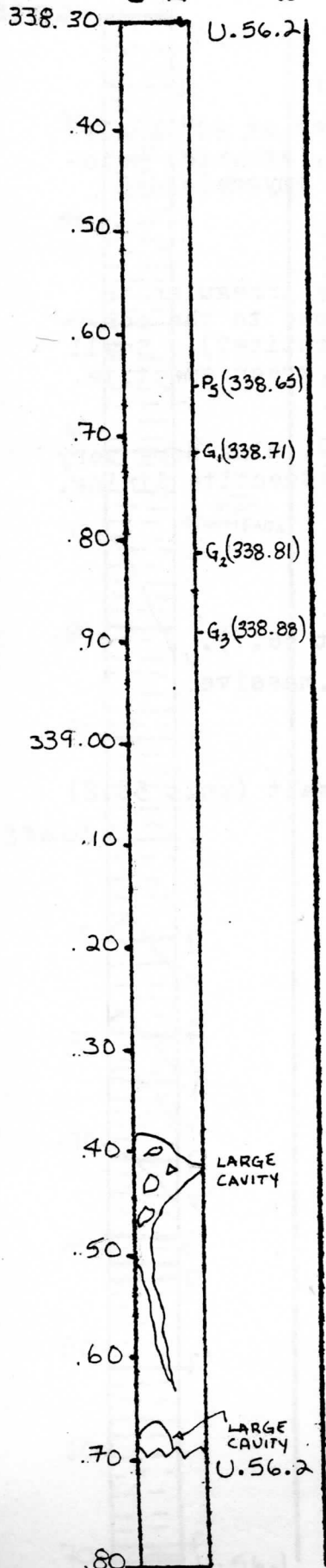
3 3 9 6 9

cm

Box 57 , Section 1

Graphic Representation

Sample Location



LITHOLOGY PETROGRAPHY - continues unit 56.2

Grey-green, aphyric basalt, fine-grained. Small amygdales filled with smectite.

339.37 Large irregular cavity filled with zeolite - large single crystals, laumontite surrounding fault breccia. Zeolite filling fractures.

339.68 Large cavity.

VESICLES/AMYGDALES

338.28 1-3mm diameter amygdales filled with smectite.

338.90 Irregular patches of zeolite filling cavities, in breccia, with smectite lining to vesicles. Micro-breccia.

339.68 Large cavity - large heulandite crystals, smectite, quartz.

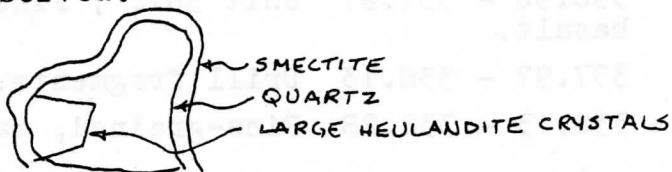
FRACTURES - VEINS - BRECCIA

None observed.

ROCK ALTERATION

None observed.

339.69
CAVITY



STRUCTURE

Fine-grained, aphyric basalt (unit 56.2).

ICELAND RESEARCH DRILLING PROJECT

Visual Core Description Observer ILG

Depth Interval

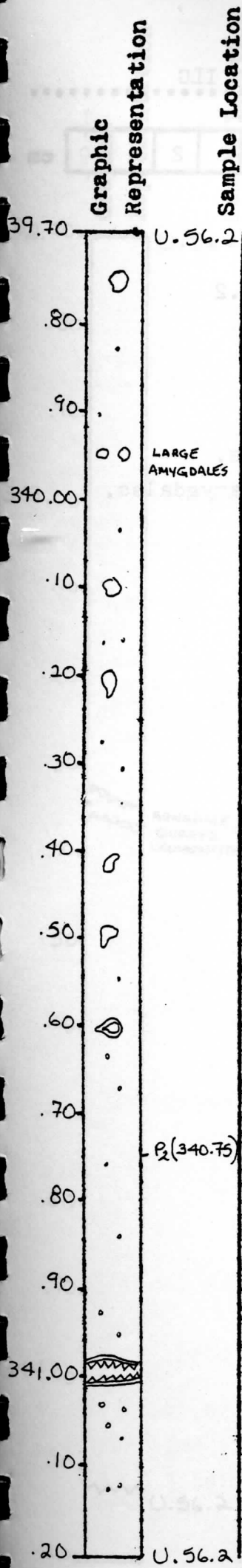
3	3	9	6	9
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 cm to

3	4	1	2	2
---	---	---	---	---

 cm

Box 57 , Section 2



LITHOLOGY PETROGRAPHY - continues unit 56.2

Grey-green aphyric basalt, fine-grained. Most amygdales filled with smectite.

VESICLES/AMYGDALES

339.69 Some large amygdales filled with quartz, zeolites and smectite - amygdales 1-3cms diameter.

340.40 Small spherical amygdales filled with smectite (up to 1cm in diameter).

FRACTURES - VEINS - BRECCIA

340.40 Irregular smectite filled fractures, which post-date amygdale filling.

ROCK ALTERATION

340.20 Pervasive smectite and zeolite.

STRUCTURE

Fine-grained, aphyric basalt (unit 56.2).