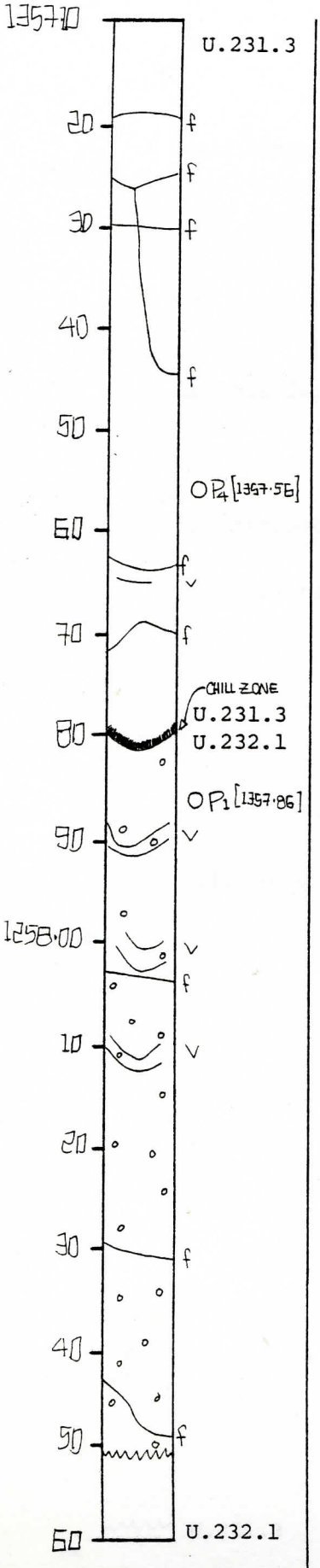
Visual Core Description Observer RHW

Depth Interval 135710 cm to 135851 cm

Box 232, Section 4



LITHOLOGY-PETROGRAPHY

Continuing Unit 231.3

Fine grained, aphyric, holocrystalline, greenish gray basalt, which fines rapidly within 15 cm of the contact with 232.1

231.3 is intruded into 232.1

U.232.1 Mottled (or ophitic) medium-grained flow lava. Aphyric, holocrystalline, gray basalt.
Perhaps the flow for flow top unit 231.2.

STRUCTURE

U.231.3 Massive

U.232.1 Amygdaloidal

VESICLES/AMYGDALES

U.231.3 Absent, save for some small, disseminated chlorite or smectite blebs, < .1 mm.

U.232.1 Elongate calcite filled amygdules, 2 mm wide x 3 cm long maximum, most 1 mm x 5 mm.

FRACTURES - VEINS - BRECCIA

U.231.3 Fractures lined with chlorite, veinlets with calcite (.1 mm wide).

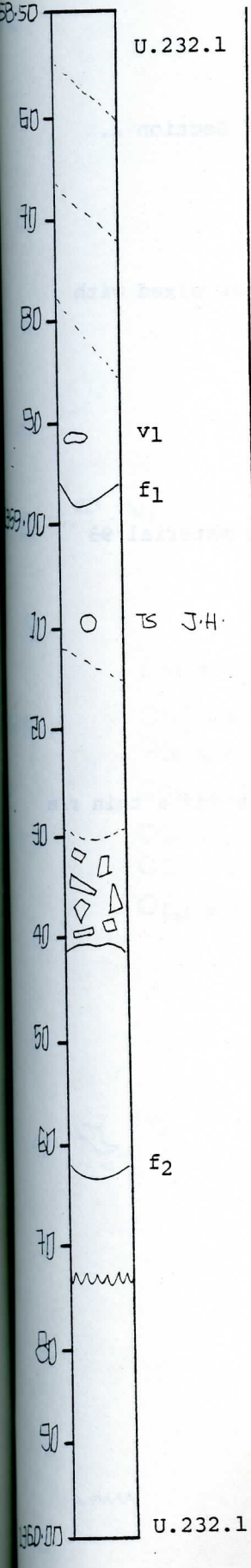
U.232.1 Fractures subhorizontal (0-10°) or ∿ 65°, chlorite lined. Veins at ∿ 65°, calcite + chlorite filling, .1 mm wide.

Visual Core Description Observer J. Helgason

Depth Interval 1358.50 cm to 1359.73 cm

Box 233, Section 1

Graphic Representation | Sample



LITHOLOGY-PETROGRAPHY

Unit 232.1 - continues from Box 232.

Coarse-grained, aphyric, homogeneous unit, flow structures absent. Grain size indicative of olivine basalt according to field classification.

STRUCTURE

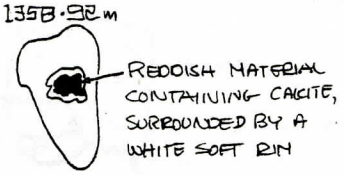
f_1 - core to fracture angle = 60°

f_2 - core to " " = 10°

VESICLES/AMYGDALES

Sparse vesicles, 3-4 mm in size, dominantly of rounded shape. Mostly filled with black smectite.

1358.92 m v_1



FRACTURES - VEINS - BRECCIA

f_1 - Width of fracture 2-3 mm. Homogeneous filling material of black smectite.

f_2 - Fracture 1 mm wide, contains black smectite.

ROCK ALTERATION

This unit looks fresh compared to material at this depth interval. Thin section made to check an alteration state. Sampled at 1359.10 m.

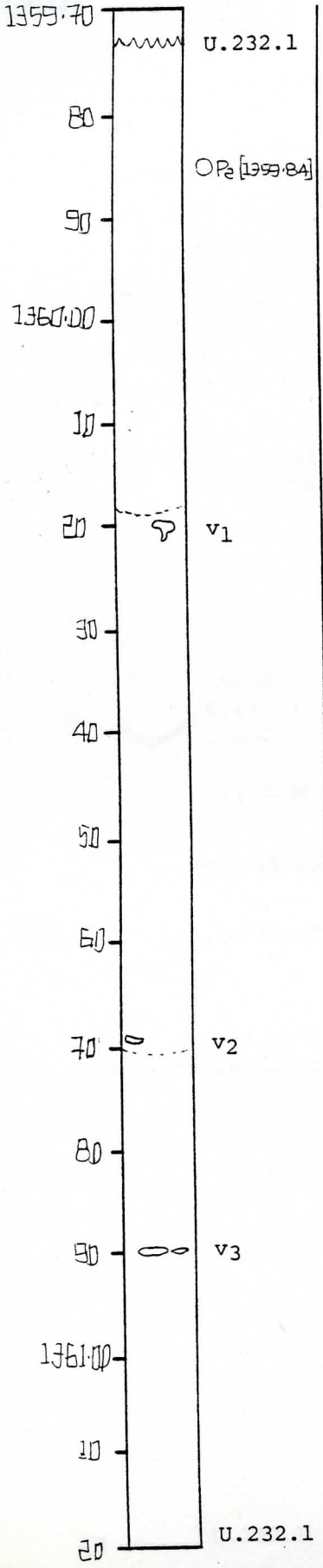
Visual Core Description

Observer J. Helgason

Depth Interval 1359.73 cm to 1361.28 cm

Box 233, Section 2

Graphic Representation Sample



LITHOLOGY-PETROGRAPHY

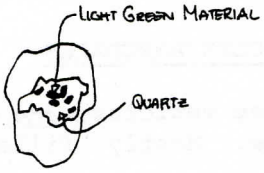
U.232.1 Continuing unit

This unit is an identical continuation of Section 1.

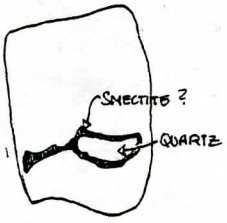
VESICLES/AMYGDALES

Very sparse vesicles.

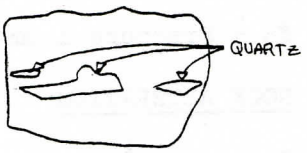
v_1 - filled with quartz, 10 x 10 mm in size mixed with light green material.



v_2 - amygdale, 15 x 8 mm in size, filling material ~~93~~ rimmed with smectite?



v_3 - elongated vesicles filled with quartz and a thin rim of smectite.



FRACTURES - VEINS - BRECCIA

None

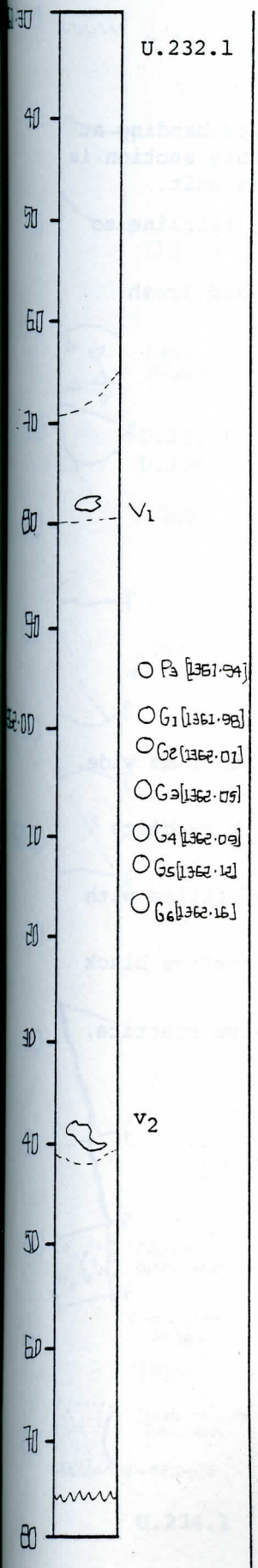
Visual Core Description Observer ...J. Helgason.....

Depth Interval 1 3 6 1 2 8 cm to 1 3 6 2 7 6 cm

Box 233, Section 3

Graphic Representation

Sample



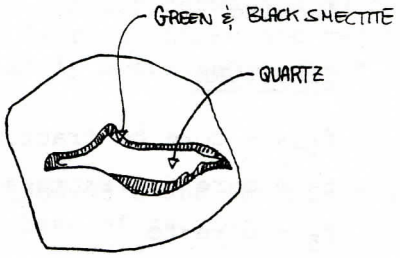
LITHOLOGY-PETROGRAPHY

U.232.1 Continuing unit.

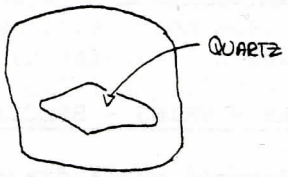
Medium-grained, aphyric without flow structures. Almost free of vesicles.

VESICLES/AMYGDALES

v_1 - vesicle, 10 x 5 mm in size filled with homogeneous quartz.



v_2 - vesicle, 30 x 5 mm in size, filled with quartz which is rimmed with a mixture green and black smectite.



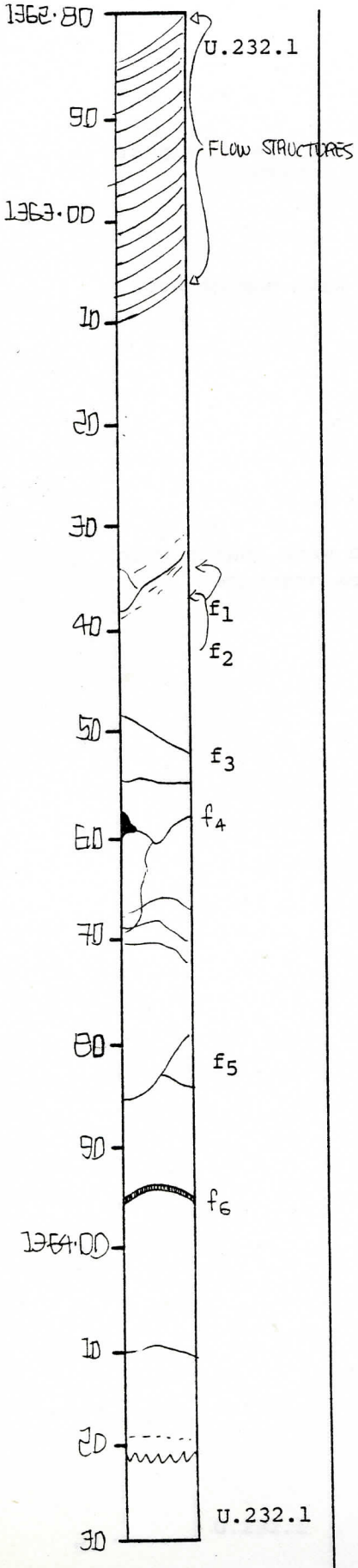
FRACTURES - VEINS - BRECCIA

None

Visual Core Description Observer J. Helgason

Depth Interval 136276 cm to 136421 cm

Box 233, Section 4



LITHOLOGY-PETROGRAPHY

Continuing unit 232.1

Medium grained aphyric unit with minor flow banding at interval 1362.80 - 1363.10. In general this section is more fractured than previous parts of this unit.

1363.50-1364.10 - there are 33 fractures, hairline to 3 mm wide.

1364.11-1364.17 Definitely fine-grained and fresh looking.

STRUCTURE

f_{1-2} - core to fracture angle = 65°

f_3 - core to fracture angle = 45°

f_5 - core to " " = 75°

f_6 - core to " " = 50°

VESICLES/AMYGDALES

None

FRACTURES - VEINS - BRECCIA

f_{1-2} - Several small fractures, hairline to 1 mm wide, filled with smectite.

f_3 - Width of fracture 1-2 mm, filled with smectite and some calcite.

f_4 - Almost vertical fracture, 2 mm wide, filled with calcite.

f_5 - Irregular fracture, 2 mm wide with massive black smectite.

f_6 - 3 mm wide fracture filled with massive smectite, somewhat mixed with calcite.

ROCK ALTERATION

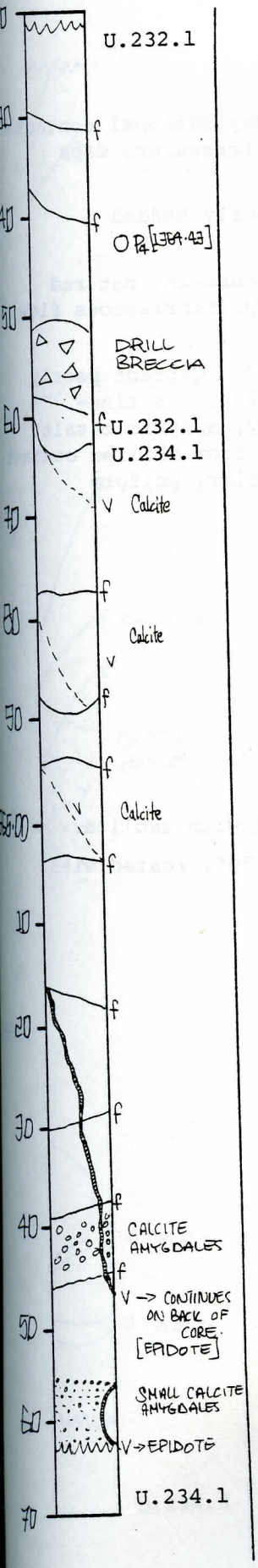
Parts of this section look very fresh.

Visual Core Description Observer ..PTR.....

Depth Interval 1 3 6 4 2 1 cm to 1 3 6 5 6 3 cm

Box 234, Section 1

Graphic Representation Sample



LITHOLOGY-PETROGRAPHY

Continuing Unit 232.1

Upper 3.5 cm core grayish-green, fine-grained, holocrystalline, aphyric basalt, or ∿ 1364.55 m. This passes into reddish-gray, slightly brecciated, slightly scoriaceous basalt, which continues to base of section.

U.234.1 Sharp contact of fine-grained basalt against underlying scoriaceous clastic basalt reinterpreted as contact between flow base and flow top. Although flow is thin, there are two other "rubble" flows in the immediately overlying section. HUS 8/6/78

STRUCTURE

Massive to ∿ 1364.55 m and incipiently brecciated below this level to base of section.

VESICLES/AMYGDALES

∿ 1% in upper 30 cm, ∿ 1 mm, round, filled with smectite. Lower part of section more vesicular ∿ 3%, 2-3 mm, irregular, filled with calcite. A few zones of larger and more abundant vesicles filled with calcite occur near base of section.

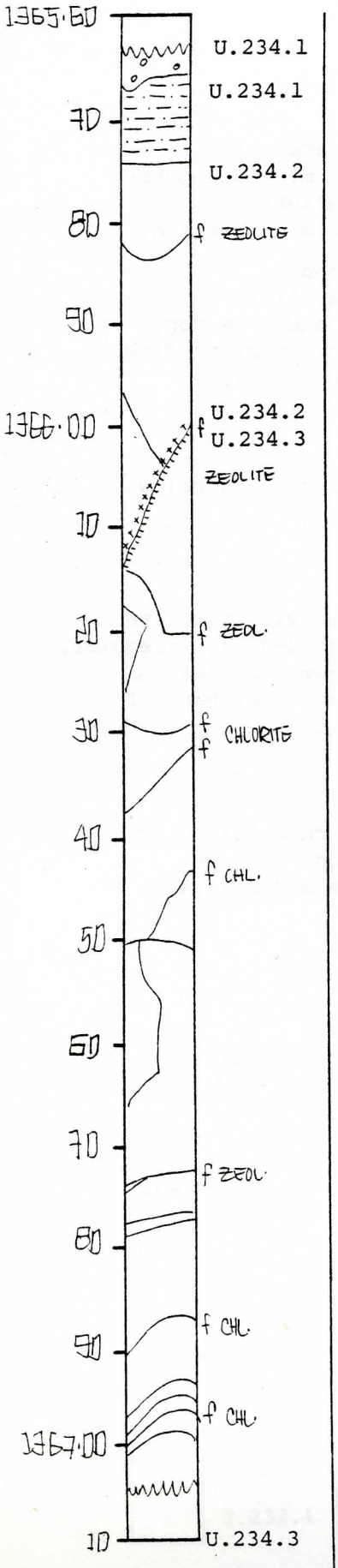
FRACTURES - VEINS - BRECCIA

Primary fractures dip ∿ 60°, coated with chlorite. A few veinlets of calcite dip ∿ 70° and one vein of epidote, 1-2 cm wide starts @ 1365.18 m and continues to base of section.

Visual Core Description Observer PTR

Depth Interval 136563 cm to 136705 cm

Box 234, Section 2



LITHOLOGY-PETROGRAPHY

Continues Unit 232.2

Slightly brecciated, gray basalt, in depositional contact with sediment. No chilling. Contact irregular, dips ∿ 30°.

1365.68-1365.74 Red, fine-grained, poorly bedded siltstone and sandstone.

U.234.2 Unit 234.1 exact contact not certain, but red sediment overlies slightly reddish-gray, scoriaceous flow breccia.

U.234.3 Chilled contact dips about 70°. Contact poorly preserved and difficult to see. Unit 234.2 is fine-grained, holocrystalline, greenish-gray, aphyric basalt. Grain size increases slightly downward from chilled contact. This unit is a dike based on non-vesicular, uniform character and chilled contact.

STRUCTURE

1365.68-1365.74 Bedded

VESICLES/AMYGDALES

U.234.3 None

FRACTURES - VEINS - BRECCIA

U.234.2 A few fractures 60-70°, coated with zeolite.

U.234.3 Many fractures, mostly dip 50-70°, coated with chlorite.

ROCK ALTERATION

U.234.3 Relatively fresh.

ICELAND RESEARCH DRILLING PROJECT - REYDARFJORDUR 1978

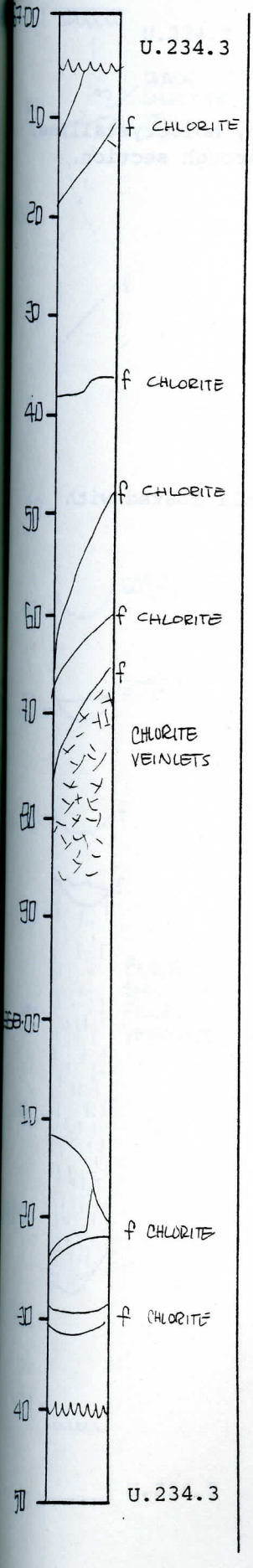
Visual Core Description Observer PTR .....

Depth Interval 1 3 6 7 0 5 cm to 1 3 6 8 4 0 cm

Box 234, Section 3

Graphic Representation

Sample



LITHOLOGY-PETROGRAPHY

Continues Unit 232.3

Greenish-gray, fine-grained, holocrystalline, equigranular, aphyric basalt.

STRUCTURE

Massive

VESICLES/AMYGDALES

None

FRACTURES - VEINS - BRECCIA

Fractures common most dip 50-70°, a few at 80°, coated with smectite. Some chlorite veinlets, often parallel to fractures.

ROCK ALTERATION

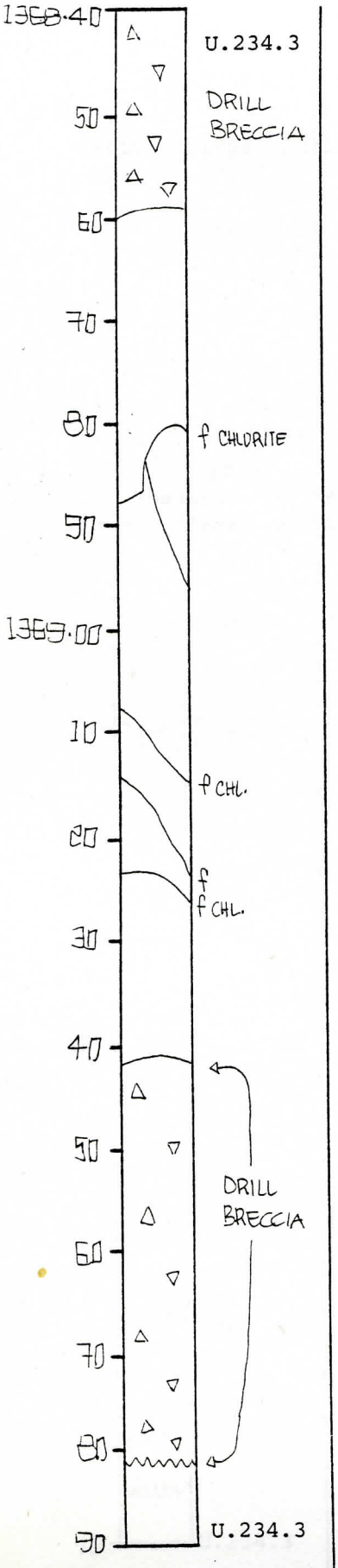
Relatively fresh.

Visual Core Description Observer ..PTR.....

Depth Interval 1368.40 cm to 1369.81 cm

Box 234, Section 4

Graphic Representation Sample



LITHOLOGY-PETROGRAPHY

U.234.3 Continues.

Greenish-gray, fine-grained, very uniform, holocrystalline aphyric basalt. Grain size is uniform through section. No contacts.

STRUCTURE

Massive

VESICLES/AMYGDALES

None

FRACTURES - VEINS - BRECCIA

Numerous fractures, most dipping ∿ 70°, all coated with chlorite.

A few hairline veinlets of chlorite.

ROCK ALTERATION

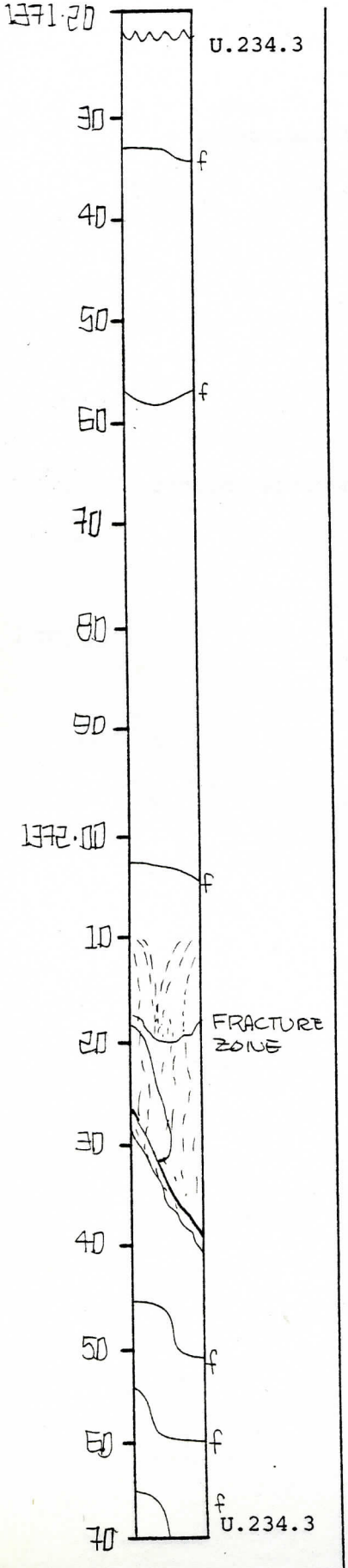
Relatively fresh.

Visual Core Description Observer JM/RHW

Depth Interval 1371.27 m to 1372.00 m

Box 235, Section 2

Graphic Representation Sample



LITHOLOGY-PETROGRAPHY

Continues U.234.3

Greenish-gray, fine-grained, holocrystalline, aphyric basalt.

STRUCTURE

Massive

VESICLES/AMYGDALES

Rare, irregular, vesicles filled predominantly with black smectite and minor amounts of white zeolite (laumontite).

FRACTURES - VEINS - BRECCIA

Green smectite, white zeolite (laumontite) filling, fracture and vein system. Fractures semi-parallel with 60° dip. Minor calcite also occurs as vein filling.

ICELAND RESEARCH DRILLING PROJECT - REYDARFJORDUR 1978

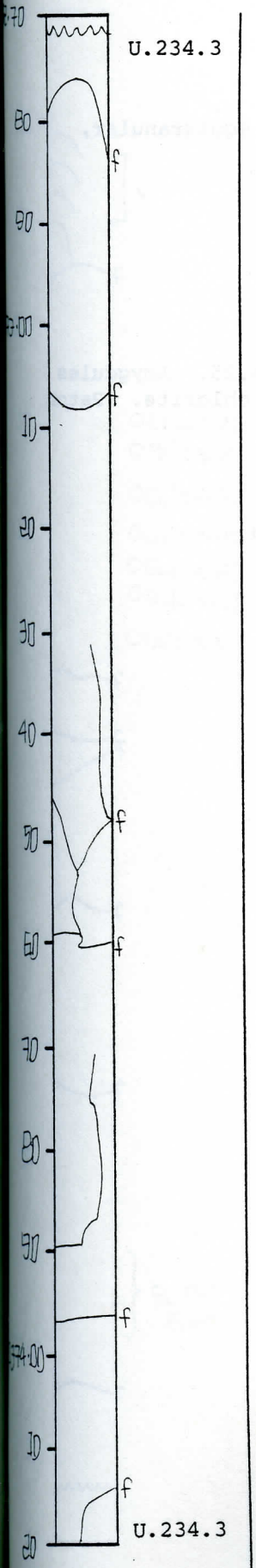
Visual Core Description Observer ..RHW.....

Depth Interval 1371 cm to 13742 0 cm

Box 235, Section 3

Graphic Representation

Sample



LITHOLOGY-PETROGRAPHY

Continuing unit 234.3

Fine-grained, aphyric, holocrystalline, equigranular, greenish gray basalt.

STRUCTURE

Massive

VESICLES/AMYGDALES

Absent

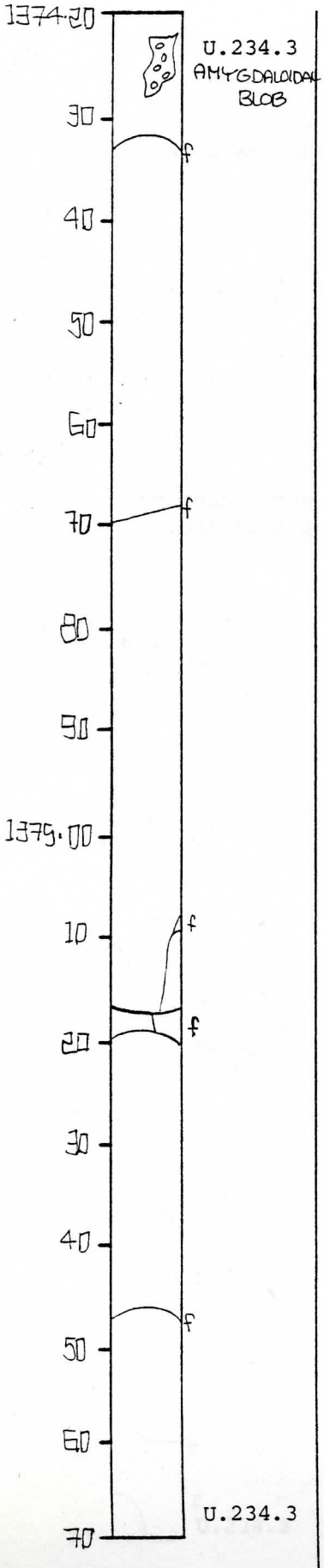
FRACTURES - VEINS - BRECCIA

Fractures either 0-10° or 75-90°. Lined with smectite/chlorite. Small veinlets, high angles, same lining, hairline.

Visual Core Description Observer RHW

Depth Interval 1374.20 cm to 1375.72 cm

Box 235, Section 4



LITHOLOGY-PETROGRAPHY

Continuing Unit 234.3

Fine-grained, aphyric, holocrystalline, equigranular, greenish-gray basalt.

STRUCTURE

Massive

VESICLES/AMYGDALES

Absent, except for amygdaloidal bleb 1374.25. Amygdules 1 cm x .5 cm, calcite + zeolite filled, chlorite. Patch about 5 cm x 2 cm.

FRACTURES - VEINS - BRECCIA

Fractures 0-20°, smectite/chlorite lined.

ICELAND RESEARCH DRILLING PROJECT - REYDARFJORDUR 1978

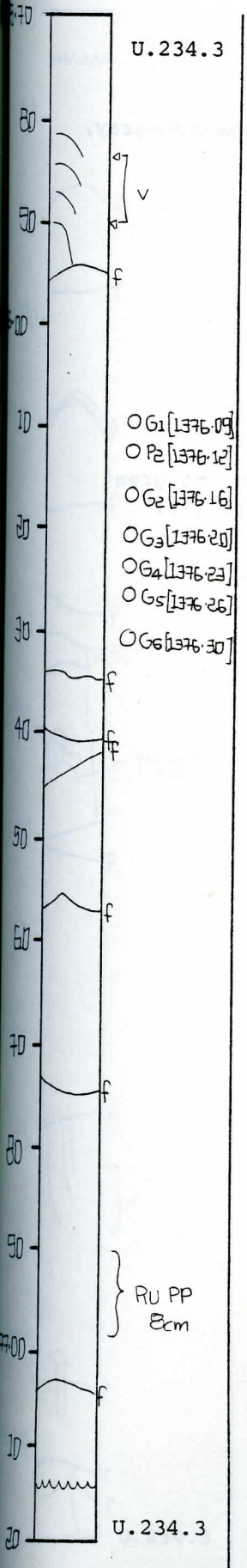
Visual Core Description Observer RHW .....

Depth Interval 1 3 7 5 7 0 cm to 1 3 7 7 1 4 cm

Box 236, Section 1

Graphic Representation

Sample



LITHOLOGY-PETROGRAPHY

Continuing Unit 234.3

Fine-grained, aphyric, holocrystalline, greenish-gray, equigranular basalt.

STRUCTURE

Massive

VESICLES/AMYGDALES

Absent

FRACTURES - VEINS - BRECCIA

Fractures sub-horizontal (0-15°) lined with smectite or chlorite.

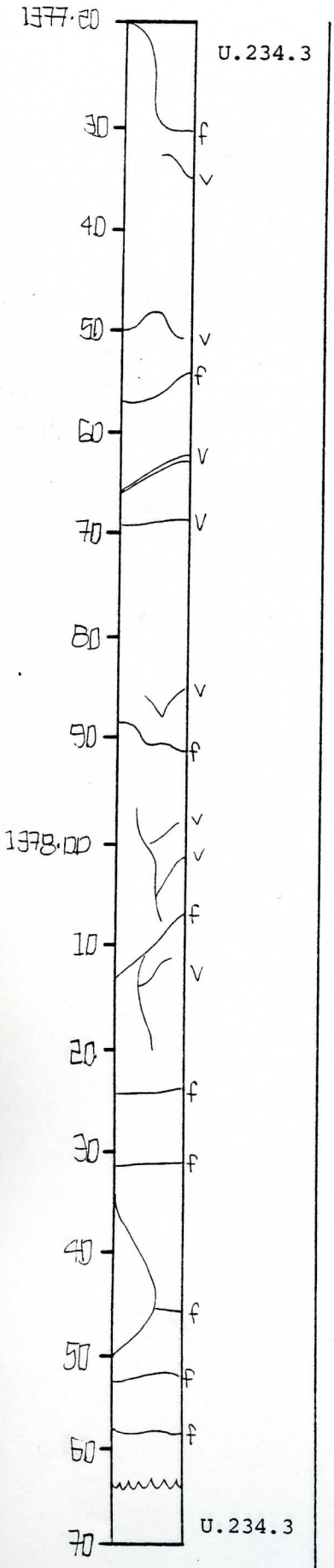
Veins smectite/chlorite lined.

Visual Core Description Observer RHW

Depth Interval 1377.19 cm to 1378.64 cm

Box 236, Section 2

Graphic Representation Sample



LITHOLOGY-PETROGRAPHY

Continuing Unit 234.3

Fine grained, aphyric, holocrystalline, greenish-gray, equigranular basalt.

STRUCTURE

Massive

VESICLES/AMYGDALES

Absent

FRACTURES - VEINS - BRECCIA

Fractures and veins in diverse orientation, no great trends. Lining either smectite or chlorite (?).

ICELAND RESEARCH DRILLING PROJECT - REYDARFJORDUR 1978

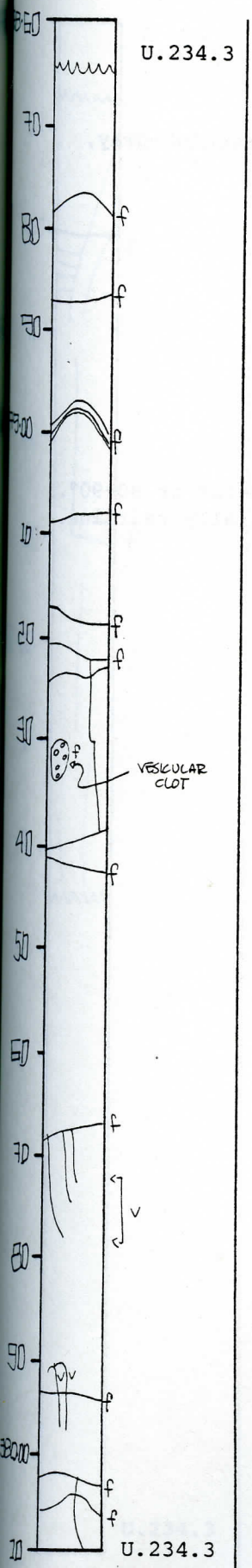
Visual Core Description Observer RHW

Depth Interval 1378 64 cm to 1380 11 cm

Box 236, Section 3

Graphic Representation

Sample



LITHOLOGY-PETROGRAPHY

Continuation of Unit 234.3

Fine-grained, aphyric, holocrystalline, greenish-gray, equigranular basalt.

STRUCTURE

Massive

VESICLES/AMYGDALES

Absent, except for vesicular clot, 3 cm x 2 cm, with zeolite + calcite filled amygdules, 1-5 mm diameter and some smectite/chlorite.

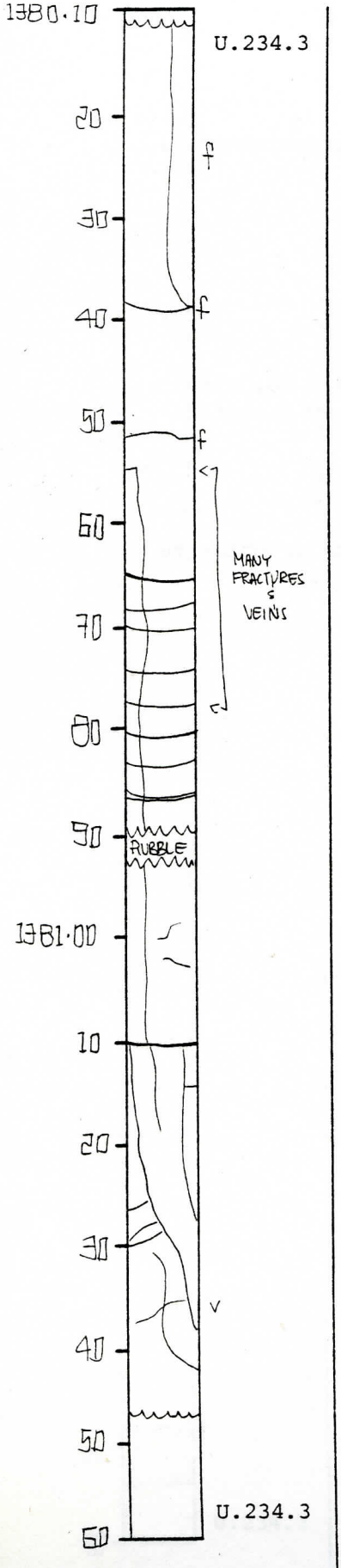
FRACTURES - VEINS - BRECCIA

Fractures at varying orientation, smectite or chlorite lined. Veins the same, hairline in general.

Visual Core Description Observer RHW

Depth Interval 1380.11 cm to 1381.47 cm

Box 236, Section 4



LITHOLOGY-PETROGRAPHY

Continuing U.234.3

Fine-grained, aphyric, holocrystalline, greenish-gray, equigranular basalt.

STRUCTURE

Massive

VESICLES/AMYGDALES

Absent

FRACTURES - VEINS - BRECCIA

Many fractures and veins, mostly either 0-10° or 80-90°. Lined with smectite/chlorite. Veins generally hairline.

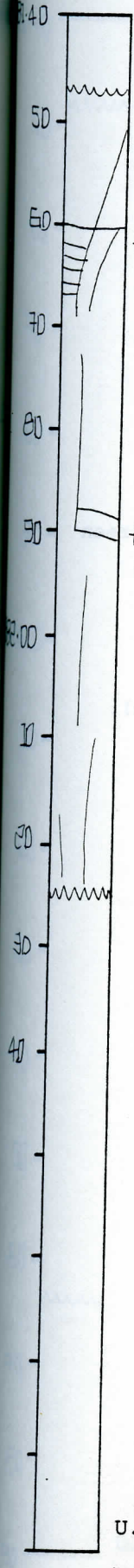
ICELAND RESEARCH DRILLING PROJECT - REYDARFJORDUR 1978

Visual Core Description Observer K. Hattori

Depth Interval 138147 cm to 138225 cm

Box 237, Section 1

Graphic Representation | Sample



LITHOLOGY-PETROGRAPHY

Continuing U.234.3

Greenish-gray basalt dyke. Very fine-grained, aphyric

Rare plagioclase phenocrysts (ϕ < 1 mm).

Very homogeneous.

STRUCTURE

Massive

VESICLES/AMYGDALES

None

FRACTURES - VEINS - BRECCIA

Many steep vertical fractures.

Fault planes; green clay minerals.

Very thin green clay veinlets irregular.

ROCK ALTERATION

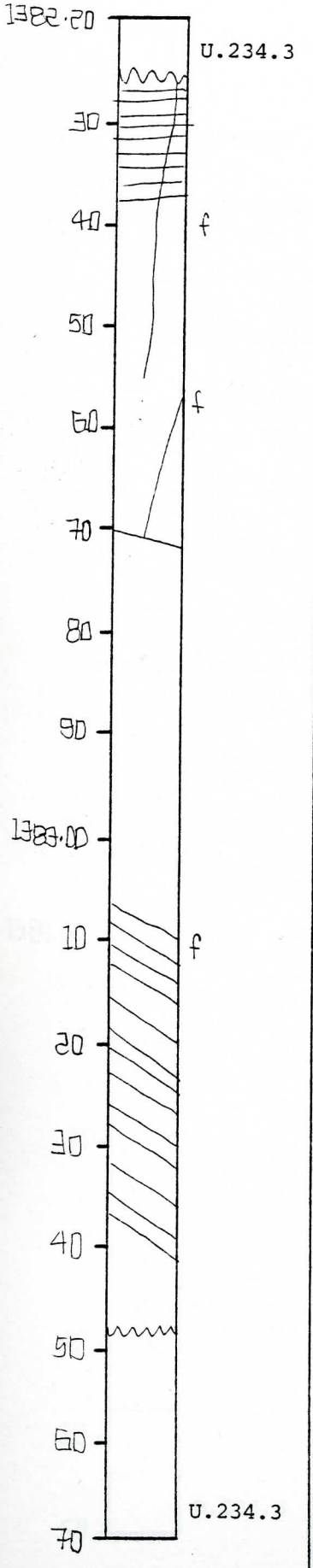
Pyrite is disseminated.

Visual Core Description Observer K. Hattori

Depth Interval 1 3 8 2 2 5 cm to 1 3 8 3 4 8 cm

Box 237, Section 2

Graphic Representation Sample



LITHOLOGY-PETROGRAPHY

Continuing U.234.3

Greenish-gray , very fine-grained, aphyric basalt dyke.

Very homogeneous

STRUCTURE

Massive

VESICLES/AMYGDALES

None

FRACTURES - VEINS - BRECCIA

Many irregular faults. Fractures are covered with green clay.

ROCK ALTERATION

Green clay is disseminated.

Pyrite is disseminated throughout the core (< 1 mm). The amount is not so large.

ICELAND RESEARCH DRILLING PROJECT - REYDARFJORDUR 1978

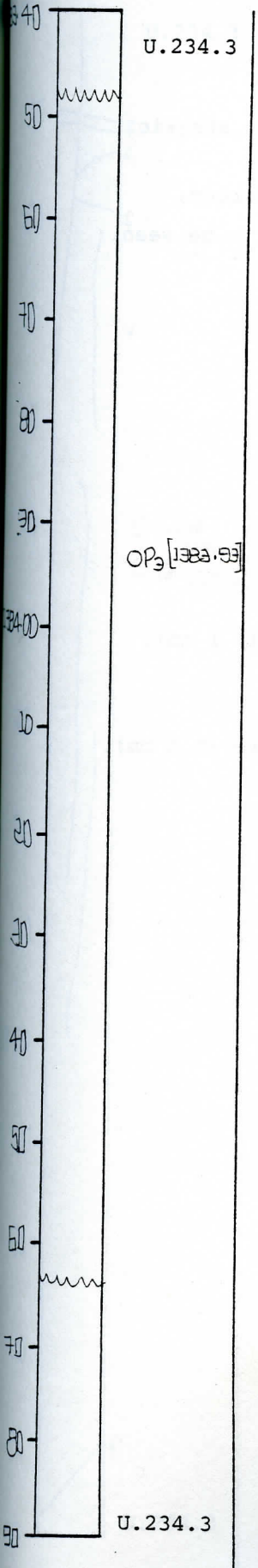
Visual Core Description Observer K. Hattori

Depth Interval 1383.48 cm to 1384.63 cm

Box 237, Section 3

Graphic Representation

Sample



U.234.3

OP3 [1383.93]

U.234.3

LITHOLOGY-PETROGRAPHY

Continuing U.234.3

Greenish-gray, very fine-grained, aphyric basalt dyke.

Very homogeneous.

STRUCTURE

Massive

VESICLES/AMYGDALES

None

FRACTURES - VEINS - BRECCIA

Many irregular fractures. Fractures are covered with green clay.

ROCK ALTERATION

Fairly fresh.

Only along fractures green clay is pervasive.

Scattered pyrite (<1mm)