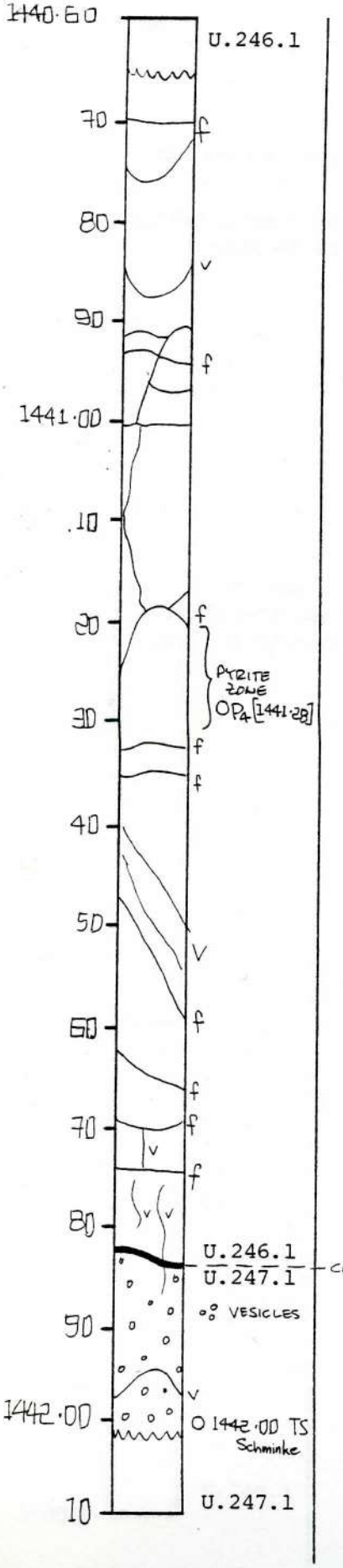
Visual Core Description Observer RHW

Depth Interval 144065 cm to 144201 cm

Box 247, Section 2



LITHOLOGY-PETROGRAPHY

Continuing Unit 246.1

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

1441.20-1441.30. Zone of pyrite patches, up to .5mm diameter.

1441.40-U.247.1 Grain size begins to fine

U.247.1 Crystal vitric tuff. 8/6/78 HUS

STRUCTURE

Massive

VESICLES/AMYGDALES

U.246.1 Absent

U.247.1 Fine scale vesicularity (5%) zeolite or smectite filled, (vesicles to .2 mm).

FRACTURES - VEINS - BRECCIA

Fractures at varying angles, 60° and 45° the most common. Lined with calcite.

Veins up to 1 mm thick, calcite and zeolite filling, smectite (minor).

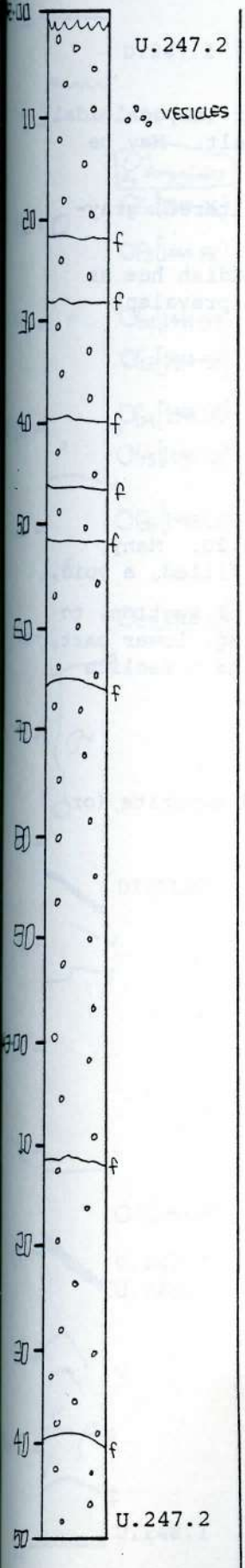
Visual Core Description Observer RHW

Depth Interval 144201 cm to 144353 cm

Box 247, Section 3

Graphic Representation

Sample



LITHOLOGY-PETROGRAPHY

Continuing unit 247.2

Pistachio green, vesicular, aphyric, holocrystalline, fine-grained basalt. May actually be a scoriatious flow top that has been altered and healed extensively.

Color goes to gray green towards the base of the section.

STRUCTURE

Massive

VESICLES/AMYGDALES

Small (.2 mm) vesicles throughout (5%). Some smectite filled.

1442.20-1442.70 Epidote filling in many of the larger vesicles, especially prevalent 1442.20-1442.70.

1443.00 Amygdules begin to appear, up to 1 cm x 1-2 mm, irregular shape, zeolite and calcite and epidote filling.

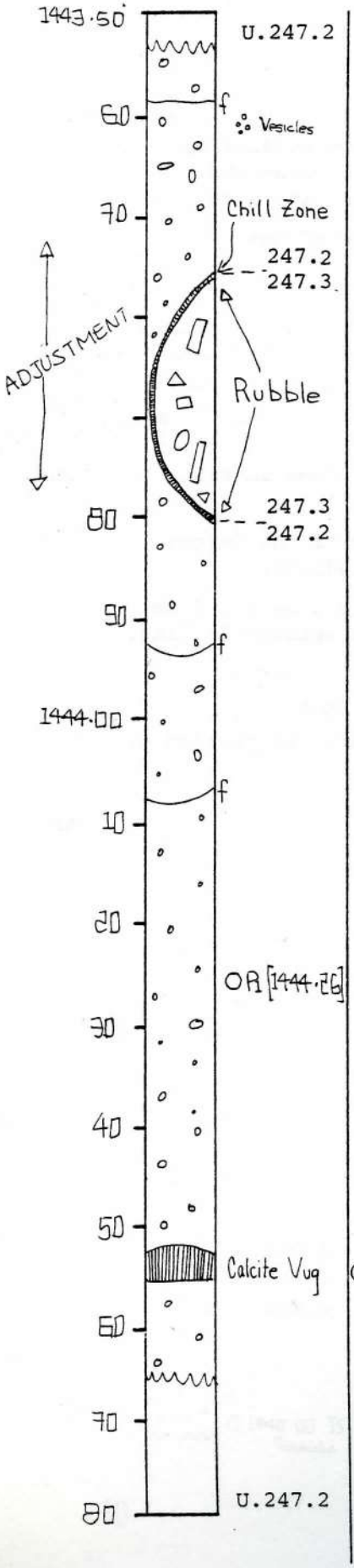
FRACTURES - VEINS - BRECCIA

Fractures are almost all 0-10°, one @ 30°. No particular lining.

Visual Core Description Observer RHW

Depth Interval 1443.53 cm to 1444.65 cm

Box 247, Section 4



LITHOLOGY-PETROGRAPHY

Continuing Unit 247.2

1443.53-1444.20 Grayish-green, vesicular (amygdaloidal) fine-grained, flow top type, altered basalt. May be altered, healed scoria or breccia.

1443.76-1443.81 (247.2) Fine-grained, altered, gray-green basalt intrusion.

1444.23 Greenish tint gives way to a reddish hue as vesicles are lost and amygdules get less prevalent (upper massive part of flow).

STRUCTURE

Massive

VESICELES/AMYGDALES

Vesicles prevalent (3-5%) to around 1444.20. Many are smectite filled, zeolite or calcite filled, a void.

Amygdules occur throughout. Upper part of section, to around 1443.90, has mainly zeolite filling, lower part, including large vug @ 1444.54, has calcite ± zeolite filling.

FRACTURES - VEINS - BRECCIA

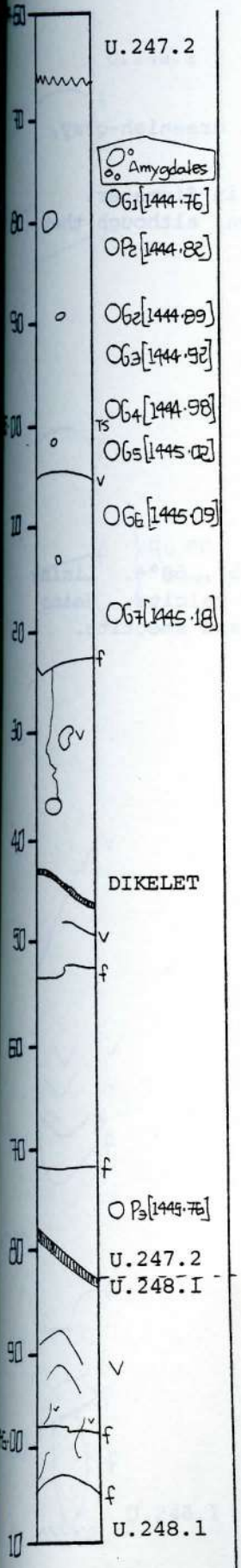
Fractures almost all ∿ 30°. Calcite and smectite (or perhaps chlorite) lined.

ICELAND RESEARCH DRILLING

Visual Core Description Observer RHW

Depth Interval 144466 cm to 144616 cm

Box 248, Section 1



LITHOLOGY-PETROGRAPHY

Continuing U.247.2

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

DIKELET - .5 cm thick chilled zone, probably related to 248.1 below.

1445.82 - Chilled margin, chilled into Unit 248.1 - 248.1 younger.

U.248.1 Grain size finest at contact, coarsening away from it. Aphyric, gray, holocrystalline basalt.

STRUCTURE

Massive

VESICLES/AMYGDALES

U.247.2 Vesicles not really present. Large, but not abundant, amygdules filled with calcite and zeolite. Rimmed with green smectite (perhaps chlorite).

U.248.1 Absent

FRACTURES - VEINS - BRECCIA

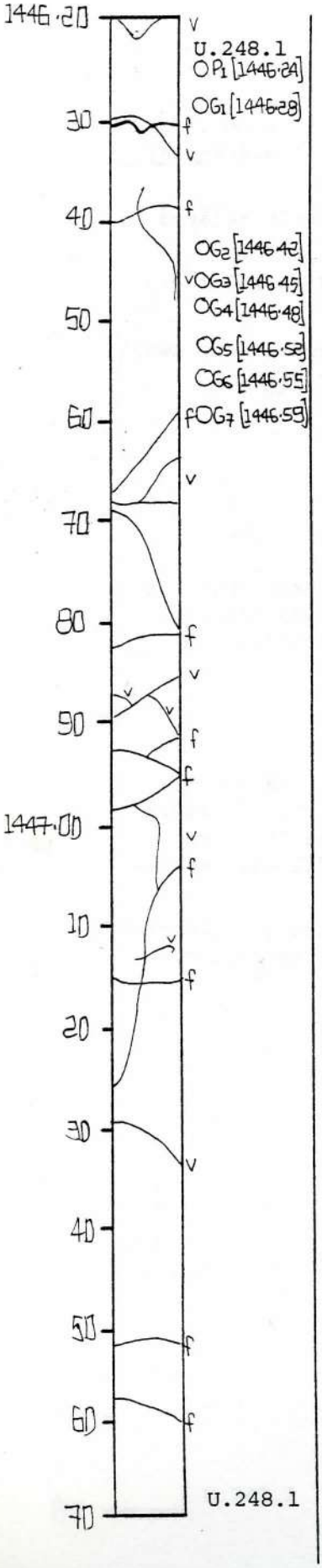
U.247.2 Fractures subhorizontal (0-10°) and ∿ 60°. Coated with green smectite (or chlorite ?). @ 1445.53 diffuse pyrite + green smectite (chlorite ?) .1 mm pyrite blebs. Veins hairline, zeolite filled. Pyrite occurs at vein edges, 1445.47.

U.248.1 Fractures 0-10°, calcite + smectite (chlorite) lining. Veins @ high angles (60°), calcite filled.

Visual Core Description Observer RHW

Depth Interval 14461 6 cm to 14478 cm

Box 248, Section 2



LITHOLOGY-PETROGRAPHY

Continuing Unit 248.1

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

Disseminated pyrite zones, .1 mm or so in diameter, are present in many areas of the section, although they do not appear throughout.

STRUCTURE

Massive

VESICLES/AMYGDALES

Absent

FRACTURES - VEINS - BRECCIA

Fractures at varying angles, 0-10°, ∿ 45°, 60°+. Lining zeolite + green smectite (chlorite ?) ± calcite. Veins to .5 mm thick, calcite rich ± zeolite and smectite.

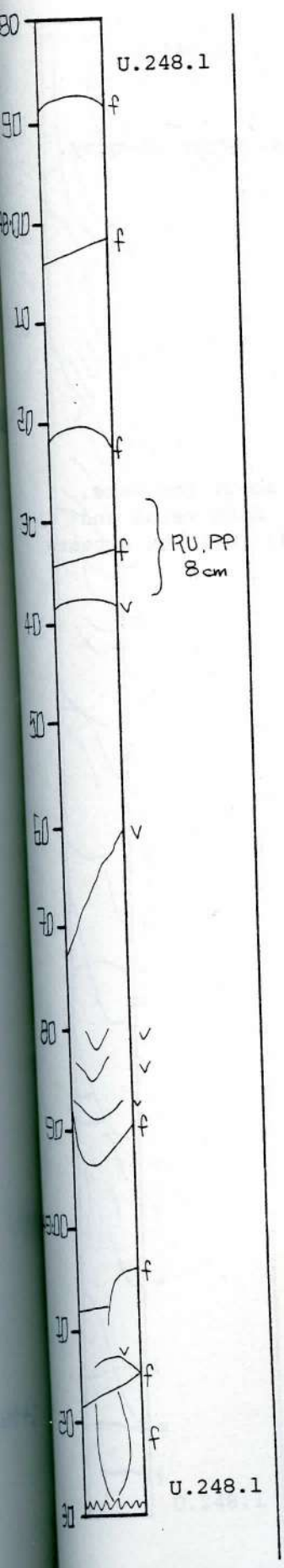
ICELAND RESEARCH DRILLING PROJECT - REYDARFJORDUR 1978

Visual Core Description Observer RHW

Depth Interval 1447.78 cm to 1449.29 cm

Box 248, Section 3

Graphic Representation Sample



LITHOLOGY-PETROGRAPHY

Continuing Unit 248.1

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

Disseminated pyrite isn't as prevalent in this section as the section above, but it does appear (1448.10-1448.25). Small patches, .1-.2 mm diameter.

STRUCTURE

Massive

VESICLES/AMYGDALES

Absent

FRACTURES - VEINS - BRECCIA

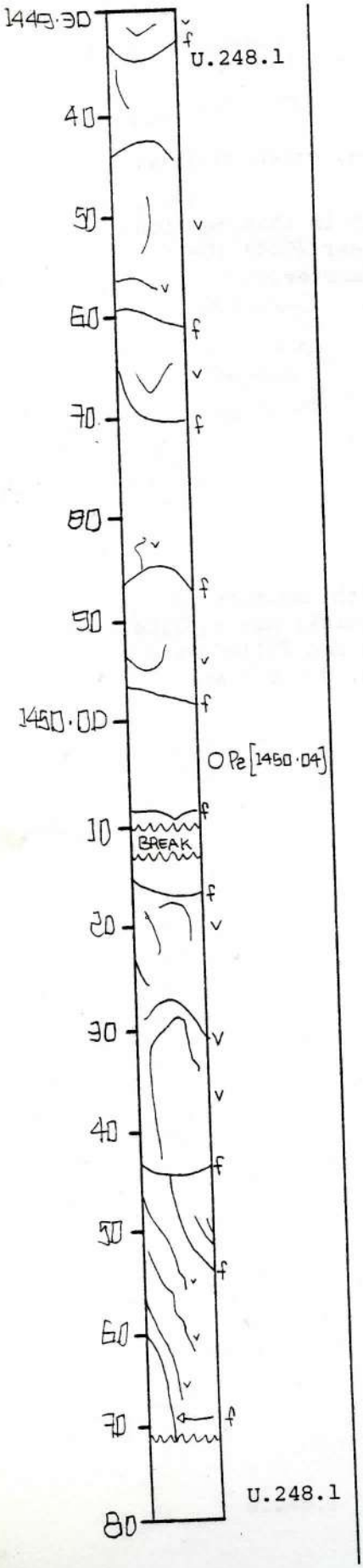
Fractures mostly 45° and 60°, lined with smectite (or chlorite?). Larger veins (.5 mm thick) are zeolite filled. Several smaller (.1 mm) veins are filled with calcite. Third, hairline set of veins, @ ∿ 60° are smectite filled.

Visual Core Description

Observer RHW

Depth Interval 144.29 cm to 145.71 cm

Box 248, Section 4



LITHOLOGY-PETROGRAPHY

Continuing Unit 248.1

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

STRUCTURE

Massive

VESICLES/AMYGDALES

Absent

FRACTURES - VEINS - BRECCIA

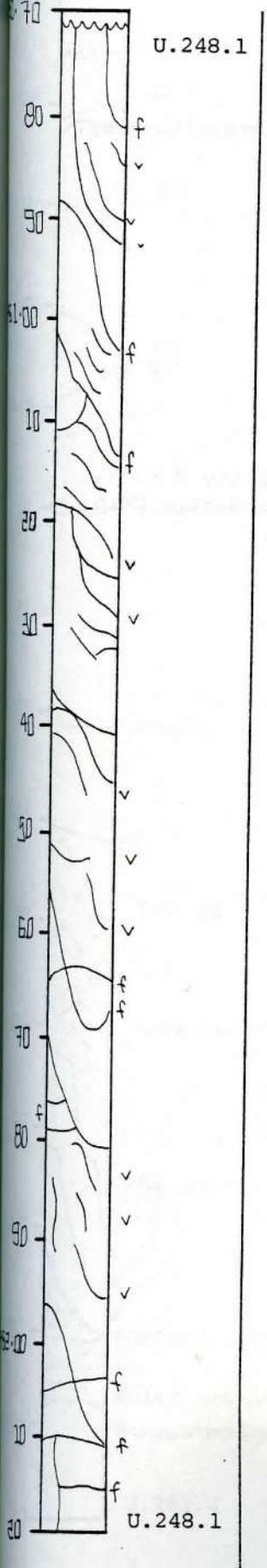
Fractures 0-10°, 45°, and 60°. Veins about the same, tending more towards the high angles. Both veins and fractures are smectite + zeolite lined. Calcite appears to be absent.

Visual Core Description Observer RHW

Depth Interval 145071 cm to 145221 cm

Box 249, Section 1

Graphic Representation Sample



LITHOLOGY-PETROGRAPHY

Continuing Unit 248.1

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

Rather rare, disseminated pyrite patches, ∿ .1 mm diameter.

STRUCTURE

Massive

VESICLES/AMYGDALES

Absent

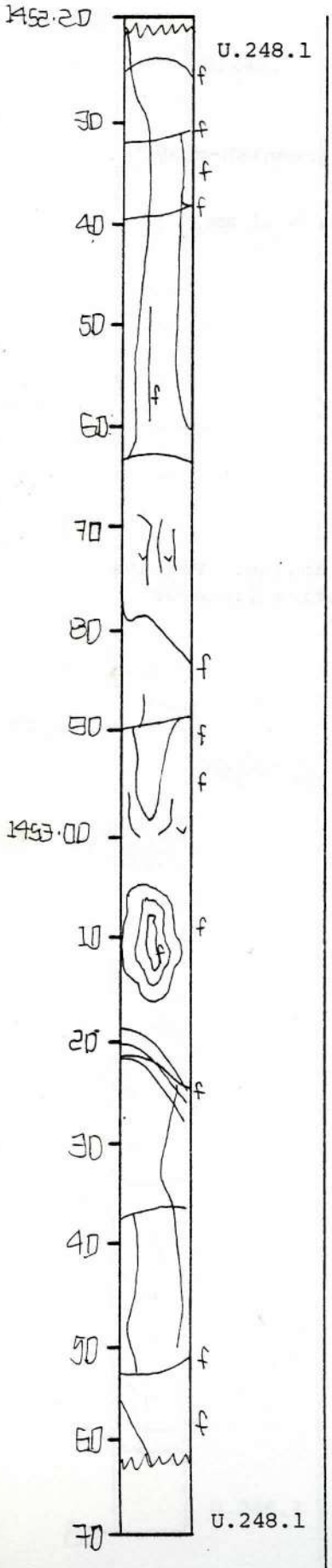
FRACTURES - VEINS - BRECCIA

Extremely fractured and veined, at many angles. Perhaps a majority at around 60°. Most are smectite lined or veined. Vein maximum .5 mm thick.

Visual Core Description Observer RHW

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

Box 249, Section 2



LITHOLOGY-PETROGRAPHY

Continuing U.248.1

Fine-grained, aphyric, holocrystalline, greenish-gray, equigranular basalt. No pyrite seen.

STRUCTURE

Massive

VESICLES/AMYGDALES

Absent

FRACTURES - VEINS - BRECCIA

Extensively fractured and veined, a majority @ 60°+. Filling is smectite + zeolite, calcite absent. Vein maximum .5 mm thick.

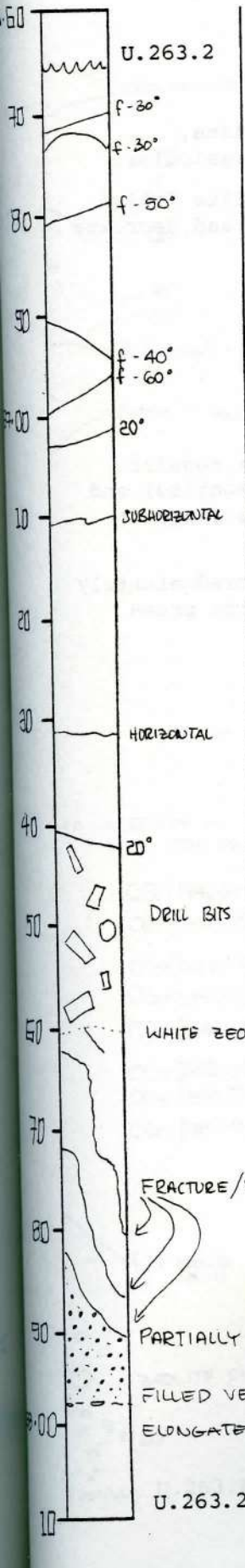
ICELAND RESEARCH DRILLING PROJECT - REYDARFJORDUR 1978

Visual Core Description Observer JM

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

Box 263, Section 3

Graphic Representation Sample



LITHOLOGY-PETROGRAPHY

Continues U.263.2

Green, highly altered and crumbly vesicular basalt down to 1537.60, due to the highly altered and crumbly nature of the section primary features are difficult to observe.

1537.58 Transition from green crumbly altered basalt to less altered light grayish green vesicular basalt. Medium- to fine-grained, holocrystalline, aphyric basalt flow.

STRUCTURE

Vesicular

VESICLES/AMYGDALES

Highly vesicular, with epidote and green smectite completely filling vesicles, down to 1537.88 then vesicles only partially filled with epidote and quartz and green smectite at 1532.92. Calcite also fills vesicles and vesicles are completely filled.

At 1538.10 white zeolite (laumontite) is filling irregular vesicles, along with minor calcite, smectite and epidote (?).

FRACTURES - VEINS - BRECCIA

Fractures may be due to drilling, but due to their similarity to other fracture systems in the core, they are interpreted as pre-drilling features.

No veins recognized until 1537.60.

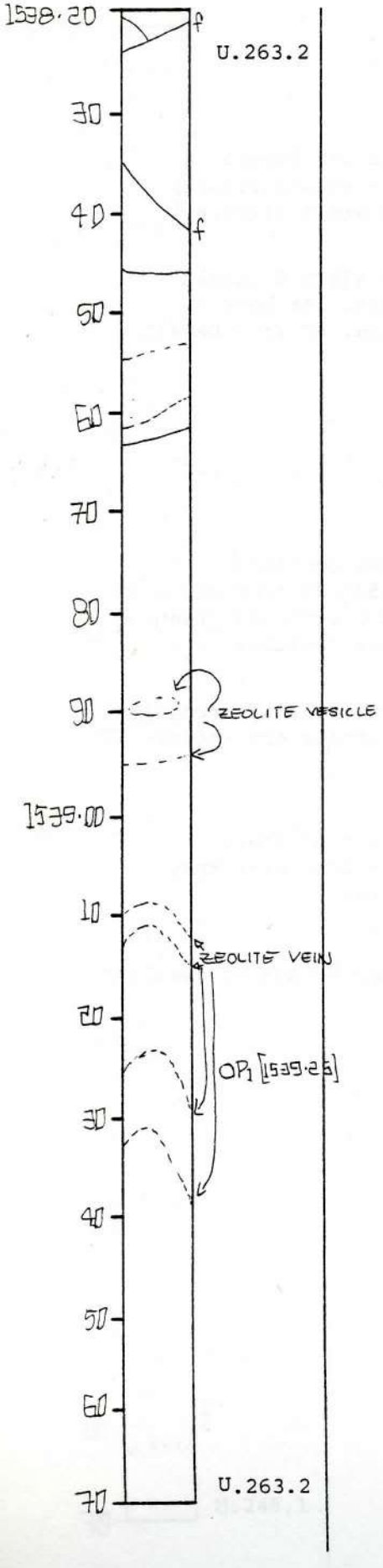
1538.13 Fresh, irregular fractures, may be due to swelling clays.

Visual Core Description Observer .....

Depth Interval 1538.20 cm to 1539.75 cm

Box 263, Section 4

Graphic Representation Sample



LITHOLOGY-PETROGRAPHY

Continues U.263.2

Greenish-gray, medium-grained, holocrystalline, equigranular, aphyric basalt flow, highly vesicular.

1539.10 Transition from predominately zeolite filled vesilces to green smectite filled vesilces and decrease in size of vesicles.

STRUCTURE

Massive

VESICLES/AMYGDALES

1538.20 - 1539.10 Highly vesicular, with irregular veinlike vesicles filled with zeolite (laumontite) and smaller smectite filled vesicles. Vesicles range in size from less than 1 mm to ∿ 1 cm.

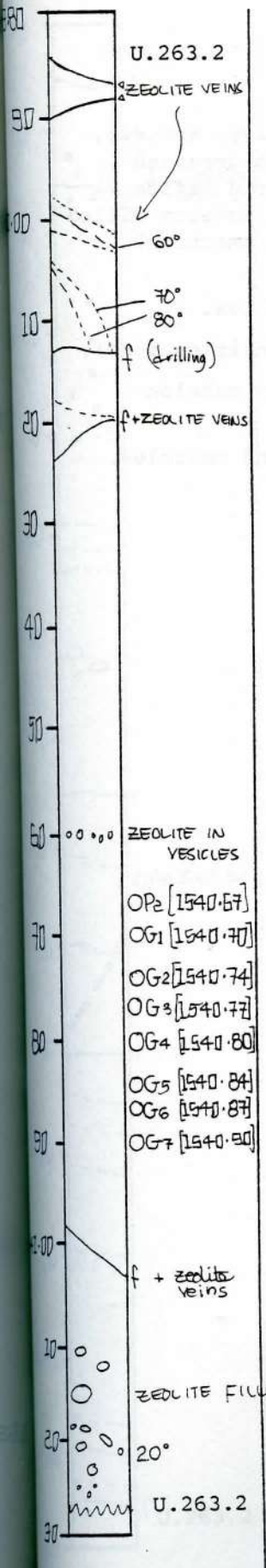
1539.10 - 1539.75 Vesicles - smaller and predominately filled with green smectite and some yellowish green epidote.

Visual Core Description Observer ....HUS.....

Depth Interval 1539.75 cm to 1541.27 cm

Box 264, Section 1

Graphic Representation Sample



LITHOLOGY-PETROGRAPHY

Continues U.263.2

Gray-greenish, medium-grained holocrystalline, aphyric equigranular basalt.

Most vesicles small and filled with green chlorite ?, ca 10%, with red mineral (hematite ?) vesicle filling?

Top 1/3 with < 1 mm ϕ discontinuous zeolite veinlets.

1540.59 Minor zeolite vesicle zone.

1541.11-1541.26 Major zeolite vesicle zone, vesicle sheets with zeolites.

STRUCTURE

Massive

VESICLES/AMYGDALES

Mostly < 2 mm ϕ , smectite/quartz-filled.

FRACTURES - VEINS - BRECCIA

Dip ∿ 50°.

ROCK ALTERATION

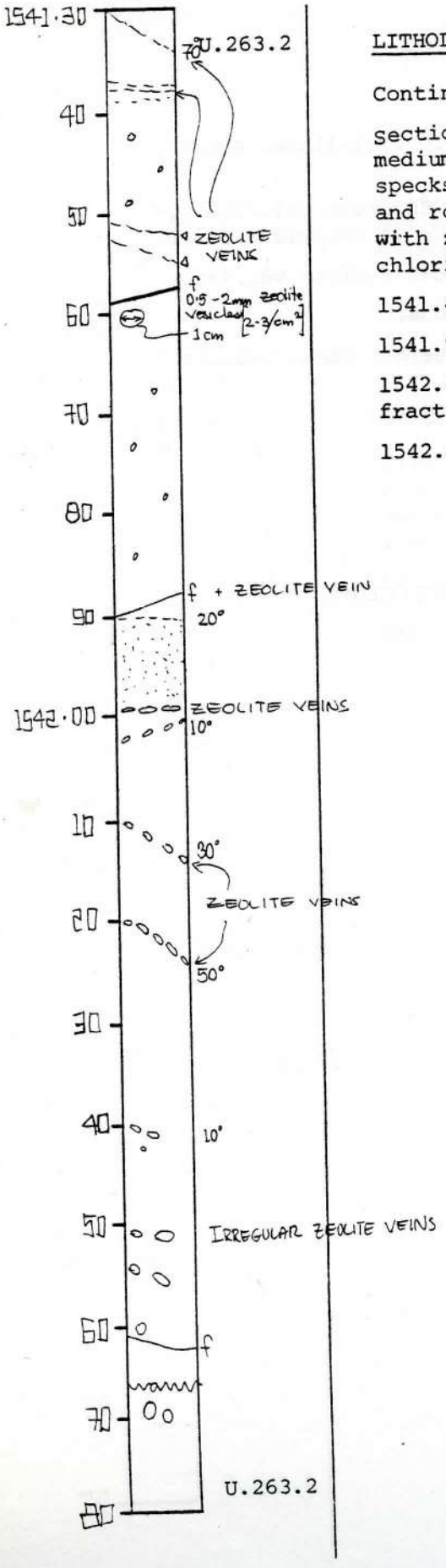
Quartz.

Visual Core Description

Observer HUS

Depth Interval 1541.27 cm to 1542.67 cm

Box 264, Section 2



LITHOLOGY-PETROGRAPHY

Continues U.263.2

section similar to section 1: gray, massive, aphyric, medium-grained basalt with abundant .5-3 m greenish specks (= chlorite ?, mesortasig and altered mafics ?) and round vesicles or fractures, often an echelon filled with zeolite. Some fractures filled with smectite? chlorite?

1541.41-1541.90 Zone of small round vesicles.

1541.90-1541.99 Many small vesicles (transition zone).

1542.13-1542.56 Zone of subhorizontal, en echelon fractures, commonly filled with zeolites.

1542.60-1542.70 Large, partly filled round vesicles.

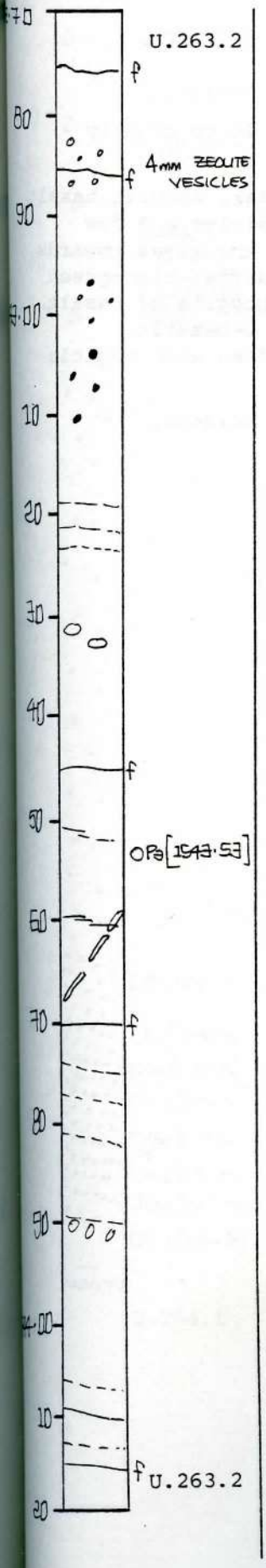
ICELAND RESEARCH DRILLING PROJECT - REYDARFJORDUR 1978

Visual Core Description Observer HUS .....

Depth Interval 1 5 4 2 6 7 cm to 1 5 4 4 2 0 cm

Box 264, Section 3

Graphic Representation Sample



LITHOLOGY-PETROGRAPHY

Continues U.263.2

Similar to section 2: massive gray greenish (chlorite ? groundmass), aphyric, equigranular medium-grained basalt.

Steep fractures filled with zeolites, subhorizontal fractures beginning flow-banding?, filled with chlorite ?

1942.96-1543.60 Few with round chlorite (?) filled vesicles, dark rims, light green cores. Some epidote.

1943.81-1943.90 zone of large 1 mm Ø vesicles, mostly zeolite filled.

1543.90-1944.20 Chlorite filled vesicles.

STRUCTURE

Massive

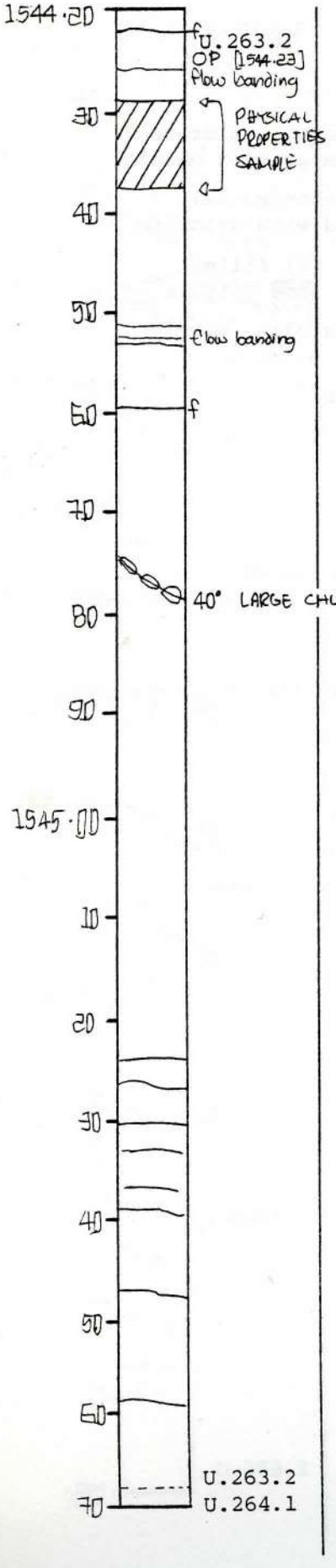
ROCK ALTERATION

Quartz/smectite/zeolite.

Visual Core Description Observer HUS

Depth Interval 154420 cm to 154570 cm

Box 264, Section 4



LITHOLOGY-PETROGRAPHY

Continues U.263.2

Massive, similar to Section 3, but basal 40 cm crumbly and highly altered.

General: gray medium-grained, equigranular, aphyric basalt with irregular mostly chlorite-filled vesicles. A few large vesicles with zeolite. Alteration increases towards bottom where rock consists of epidote, quartz, blue-green chlorite (?) and a pink mineral. Basal breccia of basalt. Base of unit and top of next unit highly debatable. Subhorizontal "flow-banding" fractures often with vesicle poor "selvages".

1545.25-1545.59 Crumbly zone with large epidote, quartz and chlorite.

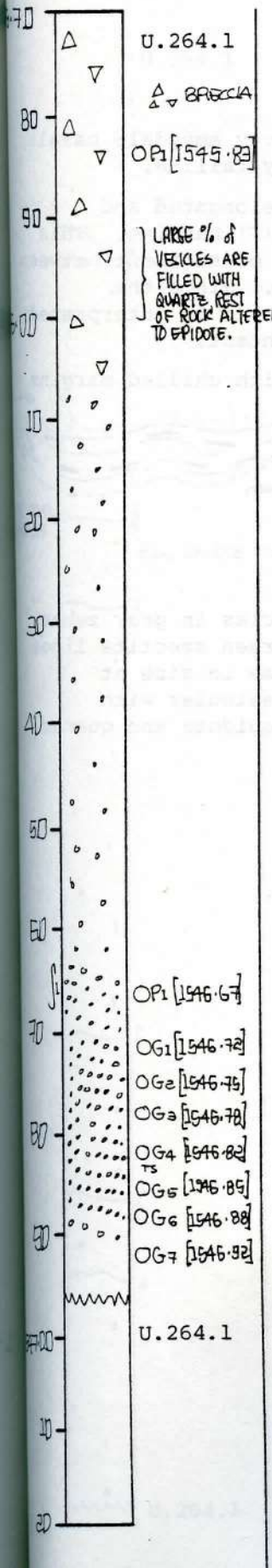
ICELAND RESEARCH DRILLING PROJECT - REYDARFJORDUR 1978

Visual Core Description Observer .....

Depth Interval 1 5 4 5 7 0 cm to 1 5 4 6 9 6 cm

Box 265, Section 1

Graphic Representation | Sample



LITHOLOGY-PETROGRAPHY

Continues U.264.1 Green flow top breccia grading down to green amygdale basalt flow.

STRUCTURE

1545.70-1546.10 Brecciated

1946.10 - Beginning amygdale

VESICLES/AMYGDALES

Vesicles 20%. Range in size (2 cm - 1 mm), elongated and rounded, green smectite, yellow-green epidote, large euhedral quartz crystals fill vesicles.

Quartz and epidote intergrown with smectite lining vesicles.

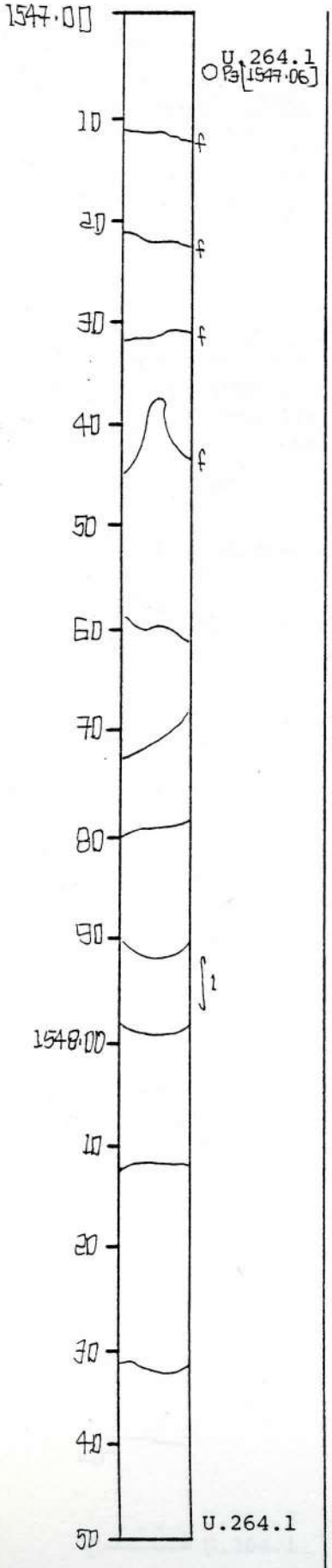
1546.65 Vesicles filled predomintly with smectite and decreasing in size downward and abundance.

Visual Core Description Observer .....

Depth Interval 1546.96 cm to 1548.50 cm

Box 265, Section 2

Graphic Representation | Sample



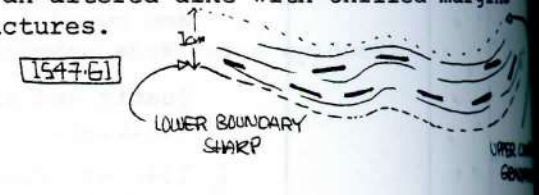
LITHOLOGY-PETROGRAPHY

Continues U.264.1

Alternating between green and greenish-gray amygdale basalt flow. Coarse- to medium-grained, holocrystalline.

1547.61 - Light greenish-gray band with elongated and oriented smectite vesicles (?) and flow (?) banding. This zone may be a contact between two flows, or sediment between two flows or alteration along a fracture. Since the lithology doesn't change across this zone it is interpreted to be a highly altered zone and not a contact.

∫1 1547.93 Appears to be an altered dike with chilled margins or alteration along fractures.



STRUCTURE

Amygdale

VESICLES/AMYGDALES

Vesicles ∿ 15-20%, laumontite fills vesicles in gray zones and epidote and quartz in green zones, green smectite lines vesicles in both zones. Vesicles increase in size at 1547.20-1548.50. Below 1547.50 highly vesicular with vesicules filed with green smectite and epidote and quartz.

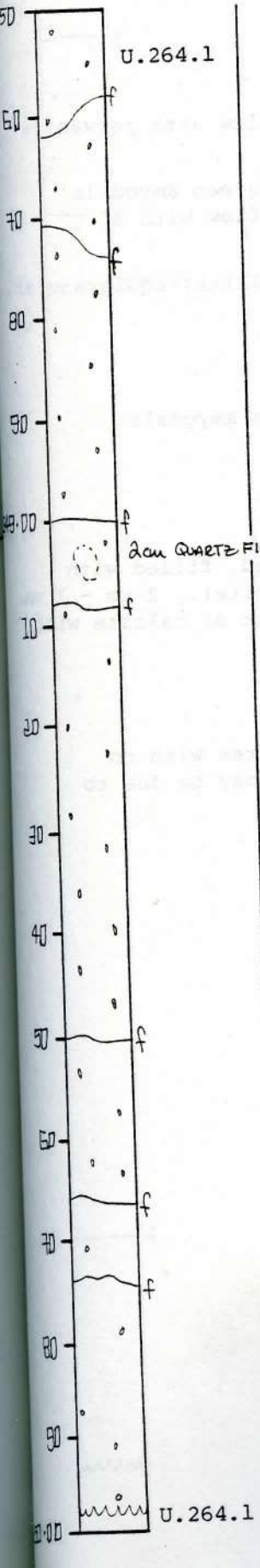
ICELAND RESEARCH DRILLING PROJECT - REYDARFJORDUR 1978

Visual Core Description Observer .....

Depth Interval 154850 cm to 154998 cm

Box 265, Section 3

Graphic Representation Sample



LITHOLOGY-PETROGRAPHY

Continues U.264.1

Green, highly vesicular, friable, basalt flow, extreme alteration with green smectite lining vesicles and epidote and quartz filling vesicles. Vesicles 20%-30% of section, but difficult to tell due to the degree of alteration. Vesicles range from 2 cm - 1 mm in size.

STRUCTURE

Vesicular/amygdale

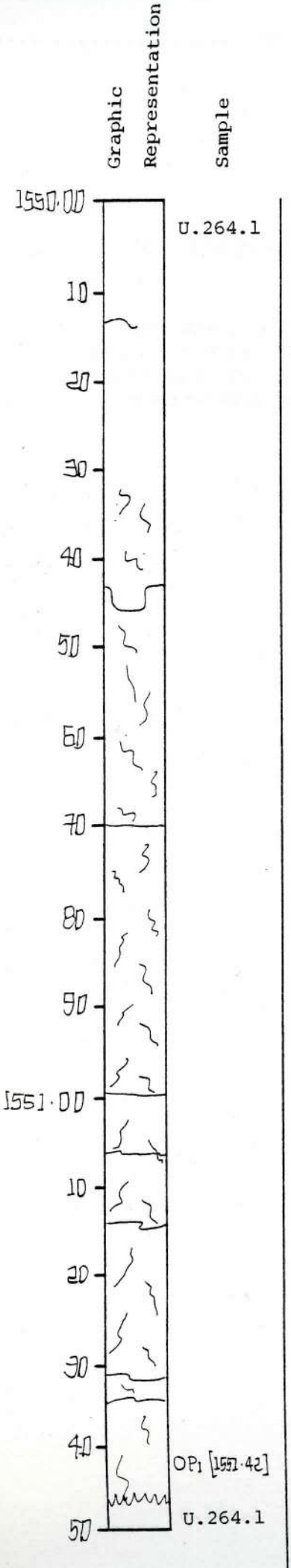
FRACTURES - VEINS - BRECCIA

Fracturing may be from drilling.

Visual Core Description Observer .....

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

Box 265, Section 4



LITHOLOGY-PETROGRAPHY

Continues U.264.1

Green, highly altered, amygdale basalt flow with pervasive epidote alteration.

1550.32 Transition from highly altered green amygdale basalt flow to grey less altered basalt flow with a decrease in vesicles.

Fine- to medium-grained gray, holocrystalline, equigranular, aphyric basalt flow.

STRUCTURE

Amygdale - becoming more massive and less amygdale

VESICLES/AMYGDALES

Vesicles filled with quartz and epidote.

Vesicules irregular, rounded and elongated, filled with green smectite and white zeolite (laumontite). 2 cm - 1 mm size range. 10% of section. Minor amount of calcite with laumontite in vesicles.

FRACTURES - VEINS - BRECCIA

1550.32 downward. Irregular fresh fractures with no secondary mineralization, and fracturing may be due to swelling clays.

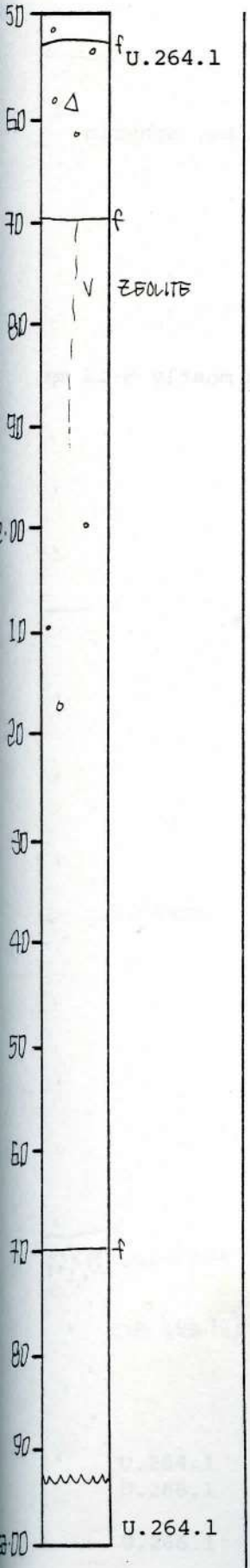
ICELAND RESEARCH DRILLING PROJECT - REYDARFJORDUR 1978

Visual Core Description Observer .....

Depth Interval 155147 cm to 155293 cm

Box 266, Section 1

Graphic Representation Sample



LITHOLOGY-PETROGRAPHY

Continues U.264.1

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

STRUCTURE

Very slight flow banding in center of section defined by stringers of chlorite or smectite.

VESICLES/AMYGDALES

Vesicles about 2%, most 3-15 mm, some 25 cm, round to oval, filled with zeolite and some with quartz crystals. Several amygdules at top of section - others scattered.

FRACTURES - VEINS - BRECCIA

One veinlet of zeolite dips 80°.

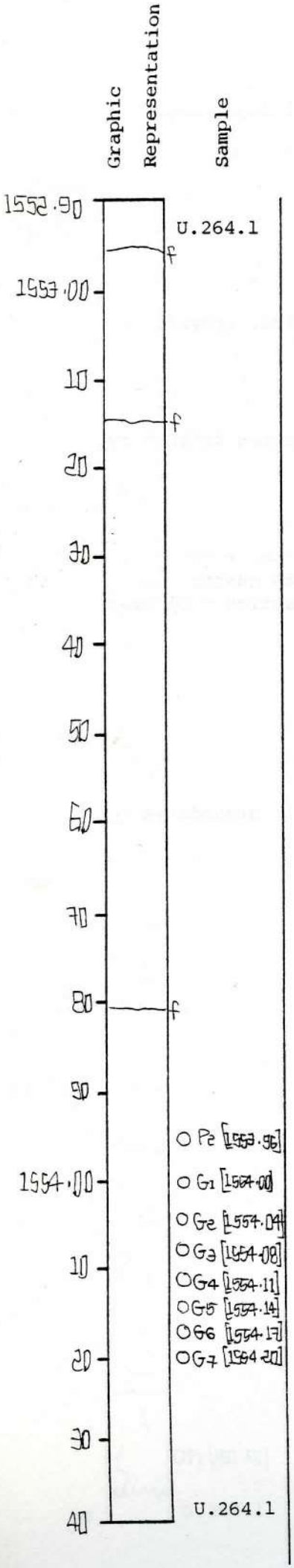
ROCK ALTERATION

Moderately fresh - chlorite or smectite in groundmass.

Visual Core Description Observer .....

Depth Interval 1552.93 cm to 1554.45 cm

Box 266, Section 2



LITHOLOGY-PETROGRAPHY

Continues U.264.1

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

STRUCTURE

Massive

VESICLES/AMYGDALES

Sparsely vesicular ∿ 1% of round vesicles mostly 5-15 mm, filled with zeolite and minor quartz.

FRACTURES - VEINS - BRECCIA

No primary fractures. No veins.

ROCK ALTERATION

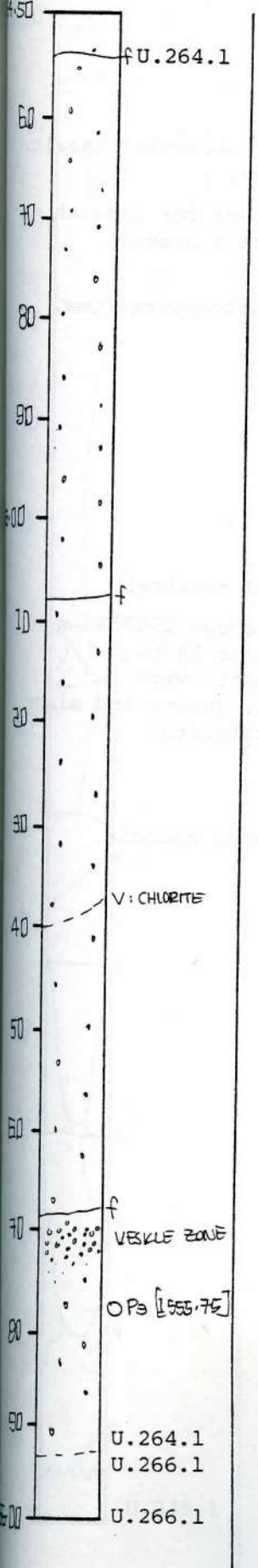
Minor green chlorite in interstitial zones.

Visual Core Description Observer PTR

Depth Interval 1 5 5 4 4 5 cm to 1 5 5 6 0 0 cm

Box 266, Section 3

Graphic Representation Sample



LITHOLOGY-PETROGRAPHY

Continues U.264.1

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

Contact dips about 40-45°. Contact is depositional in breccia of next lower unit. There is a fine-grained base but not a chill zone. Vesicles are very small at base.

U.266.1 Gray to reddish gray, brecciated aphyric basalt.

STRUCTURE

Massive (U.264.1)

U.266.1 Brecciated

VESICLES/AMYGDALES

U.264.1 Moderately vesicular, 5-10%, most are 2-3 mm round; some about 10 mm, and oval. Smaller ones filled with chlorite, larger ones with zeolite and quartz at base of unit. Vesicles are small and somewhat flattened.

U.266.1 Very sparse.

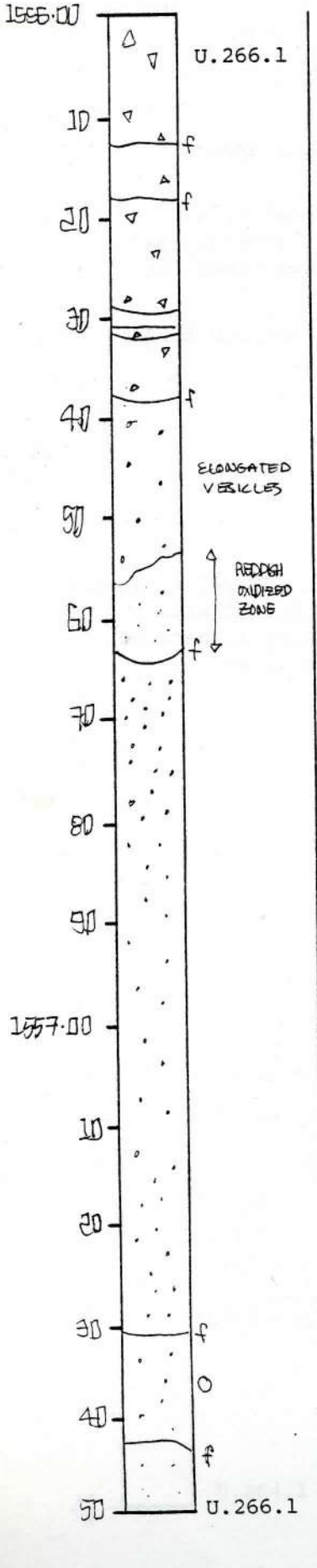
FRACTURES - VEINS - BRECCIA

U.266.1 Much zeolite in breccia matrix.

Visual Core Description Observer .....

Depth Interval 1556.00 cm to 1557.53 cm

Box 266, Section 4



LITHOLOGY-PETROGRAPHY

Continues U.266.1

Upper 30 cm somewhat brecciated, aphyric, vesicular basalt. Mostly light gray to slightly reddish gray.

Below about 1556.30 m rock is massive except for reddish zone; oxidized zone at 1556.60 which may be a breccia fragment.

Rock is grayish-green highly vesicular, holocrystalline, fine-grained, aphyric basalt.

U.266.1 is interpreted as a lava flow.

STRUCTURE

Weakly brecciated.

VESICLES/AMYGDALES

Vesicles filled with calcite, epidote and zeolite.

Vesicles abundant from about 1556.40 to about 1557.30 m then sparse below. Most are 1-2 mm some to 15 cm, subround to oval or irregular, filled mostly with chlorite, a few larger ones have zeolite, quartz and minor calcite. Some of these are lined with chlorite.

FRACTURES - VEINS - BRECCIA

Calcite, zeolite and epidote form matrix of breccia.

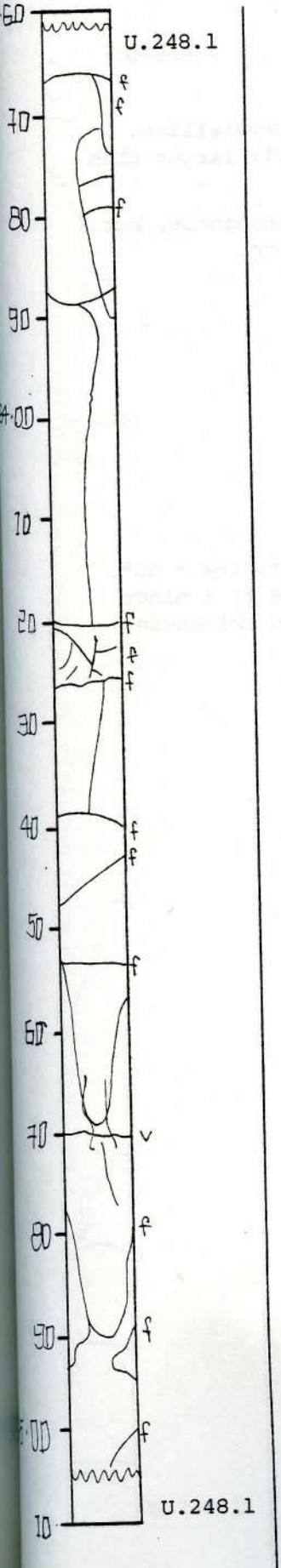
ICELAND RESEARCH DRILLING PROJECT - REYDARFJORDUR 1978

Visual Core Description Observer RHW

Depth Interval 145362 cm to 145505 cm

Box 249, Section 3

Graphic Representation Sample



LITHOLOGY-PETROGRAPHY

Continuing Unit 248.1

Aphyric, holocrystalline, greenish-gray, equigranular basalt. Grain size is fine, but size gets a little larger towards the bottom of the section.

Disseminated pyrite patches .1-.2 mm diameter, scattered throughout section, although not abundant in any one place.

STRUCTURE

Massive

VESICLES/AMYGDALES

Absent

FRACTURES - VEINS - BRECCIA

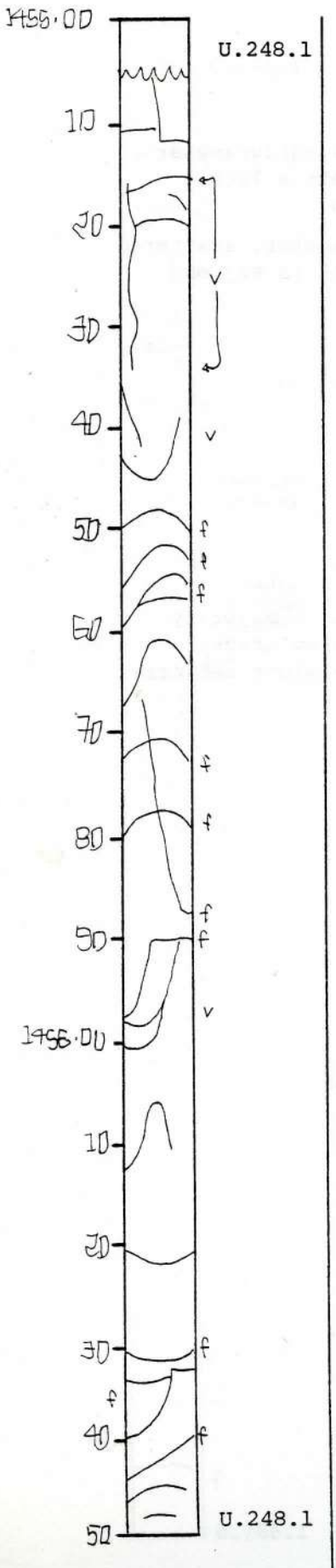
Fractures and veins in many orientation. A majority of high angles, > 60°. Veins maximum .5 mm thick. Smectite (chlorite ?) lined or filled, + minor zeolite.

Visual Core Description Observer RHW

Depth Interval 145505 cm to 145656 cm

Box 249, Section 4

Graphic Representation Sample



LITHOLOGY-PETROGRAPHY

Continuing Unit 248.1

Fine to medium-grained, aphyric, holocrystalline, gray-green, basalt. Grain size slightly larger than in previous sections.

Disseminated pyrite patches present throughout, but rare. Maximum size up to .5 mm diameter.

STRUCTURE

Massive

VESICLES/AMYGDALES

Absent

FRACTURES - VEINS - BRECCIA

Fractures and veins at many angles, majority > 60°. Lined or filled with smectite (chlorite ?) + minor zeolite. Calcite absent. Maximum vein thickness ∿ .2 mm.

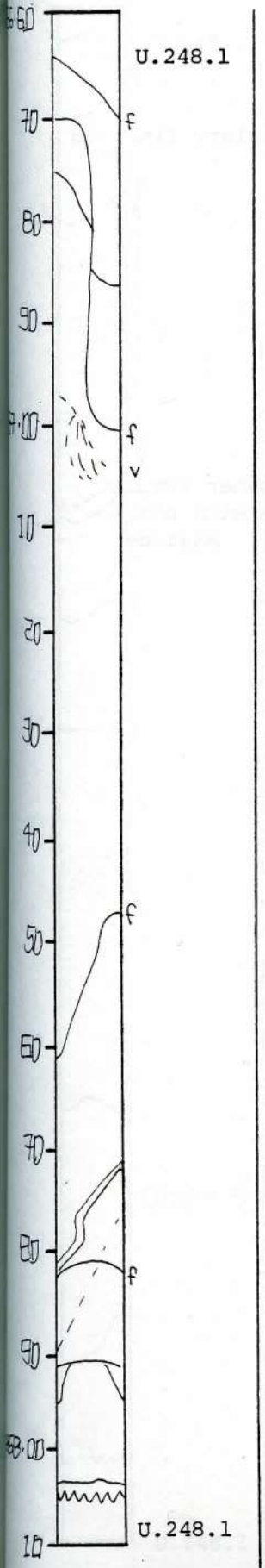
Visual Core Description Observer .....

Depth Interval 145659 cm to 145805 cm

Box 250, Section 1

Graphic Representation

Sample



LITHOLOGY-PETROGRAPHY

Greenish-gray, equigranular, fine- to medium-grained, holocrystalline aphyric basalt. Continued from U.248.1

STRUCTURE

Massive

VESICLES/AMYGDALES

None

FRACTURES - VEINS - BRECCIA

Both planer and irregular fractures, filled with black and green smectite and minor amount of calcite.

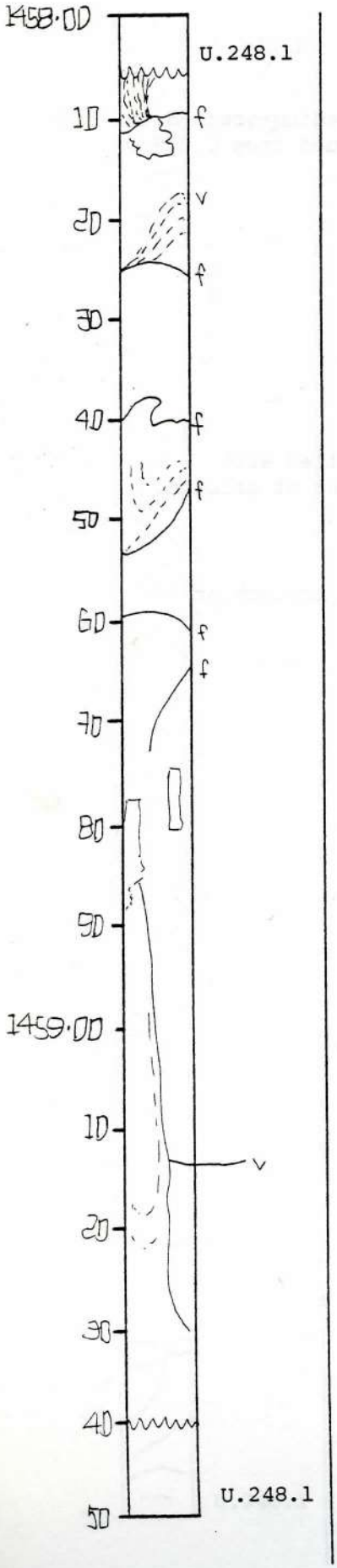
ROCK ALTERATION

Minor amount of disseminated pyrite (?) throughout section.

Visual Core Description Observer .....

Depth Interval 145805 cm to 145940 cm

Box 250, Section 2



LITHOLOGY-PETROGRAPHY

Continues from U.248.1

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

STRUCTURE

Massive

VESICLES/AMYGDALES

None

FRACTURES - VEINS - BRECCIA

Highly fractured and veined with both planer simple fractures and irregular fractures filled with black and dark green smectite, some pyrite (?). Maximum width of filled fracture 4 mm.

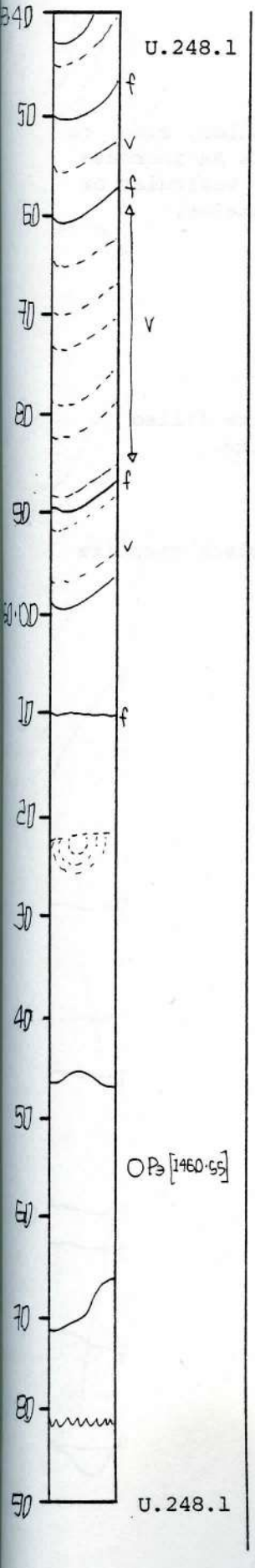
Visual Core Description Observer .....

Depth Interval 1 4 5 9 4 0 cm to 1 4 6 0 8 1 cm

Box 250, Section 1

Graphic Representation

Sample



LITHOLOGY-PETROGRAPHY

Continues from U.248.1

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

STRUCTURE

Massive

VESICLES/AMYGDALES

None

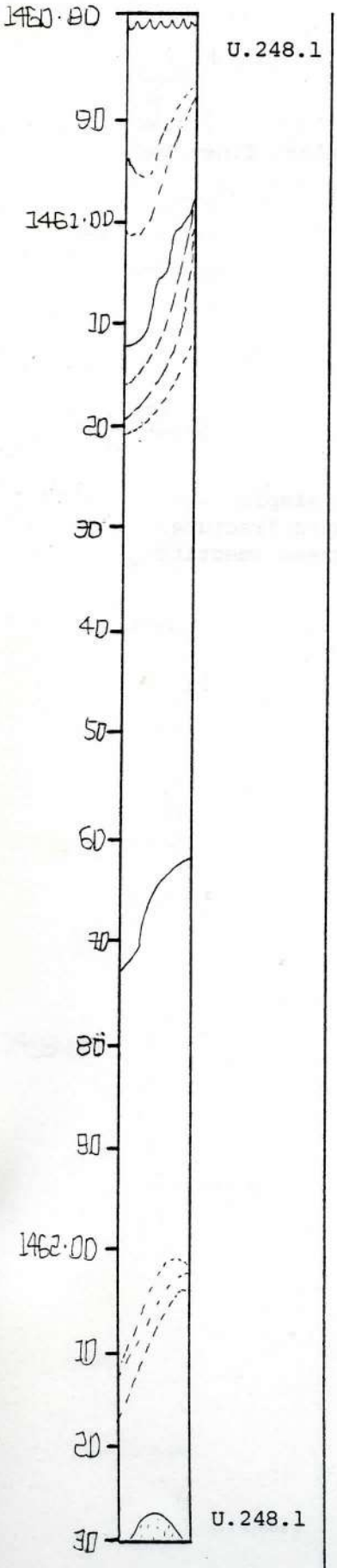
FRACTURES - VEINS - BRECCIA

Highly fractures and veined, with planer simple fractures dipping 75°, the most predominate fracture. Fracture's and veins filled with light green smectite and black smectite.

Visual Core Description Observer .....

Depth Interval 1460.81 cm to 1462.38 cm

Box 250, Section 4



LITHOLOGY-PETROGRAPHY

Continues from U.248.1

Greenish-gray, holocrystalline, equigranular, fine to medium-grained, aphyric basalt. There is an increase in dark green blotches that are slightly vesicular or weathered. Blotches 2 cm - .5 mm in diameter.

STRUCTURE

Massive

VESICLES/AMYGDALES

Slightly vesicular (?) with green smectite filled vesicles and very minor amounts of calcite.

FRACTURES - VEINS - BRECCIA

Fractures predominately irregular with black smectite and green smectite filling veins.

ICELAND RESEARCH DRILLING PROJECT - REYDARFJORDUR 1978

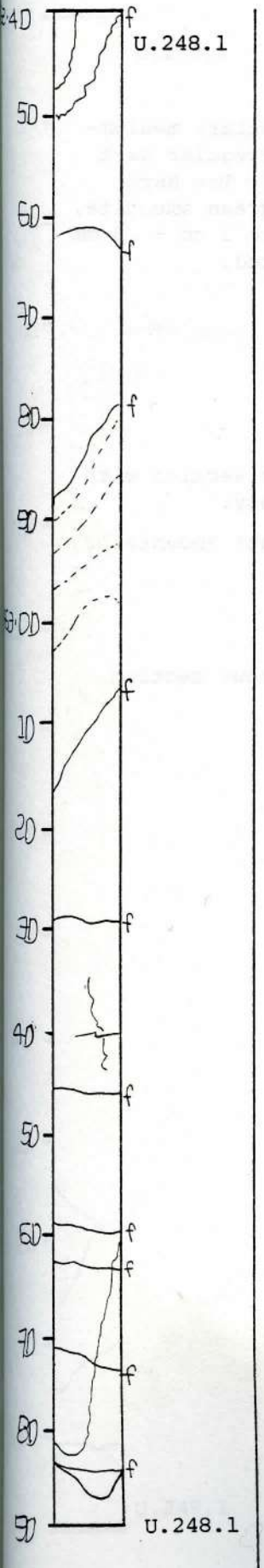
Visual Core Description Observer .....

Depth Interval 1 4 6 2 3 8 cm to 1 4 6 3 9 1 cm

Box 251, Section 1

Graphic Representation

Sample



LITHOLOGY-PETROGRAPHY

Continues from U.248.1

Greenish-gray, holocrystalline, equigranular, medium-grained, aphyric basalt, with irregular dark green vesiculated or weathered patches. The dark green patch seem to be predominately green smectite. Patches are 5 cm - .5 mm in size and randomly distributed. Some calcite also occurs.

STRUCTURE

Massive

FRACTURES - VEINS - BRECCIA

Planer simple fractures dipping 70° and with fracture surface filled with black smectite.

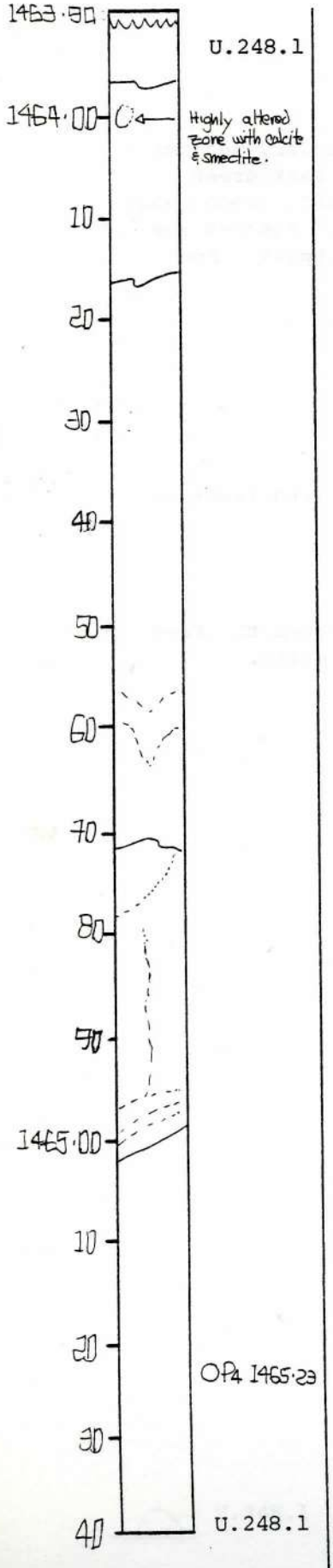
ROCK ALTERATION

Groundmass appears to be pervasively altered to green smectite, minor amount of disseminated pyrite.

Visual Core Description Observer .....

Depth Interval 1463.91 cm to 1465.40 cm

Box 251, Section 2



LITHOLOGY-PETROGRAPHY

Continues U.248.1

Greenish-gray, holocrystalline, equigranular, medium- to fine-grained, aphyric basalt, with irregular dark green vesiculated or alteration patches. The dark green patches seem to be predominately green smectite, and calcite (minor amounts). Patches are 3 cm - .5 mm in diameter. Patches randomly distributed.

STRUCTURE

Massive

FRACTURES - VEINS - BRECCIA

Large scale fracturing decreased in this section with predominately irregular hairline vein only.

Veins filled with black smectite and minor amounts of calcite.

ROCK ALTERATION

Pervasive alteration to smectite throughout section.

ICELAND RESEARCH DRILLING PROJECT - REYDARFJORDUR 1978

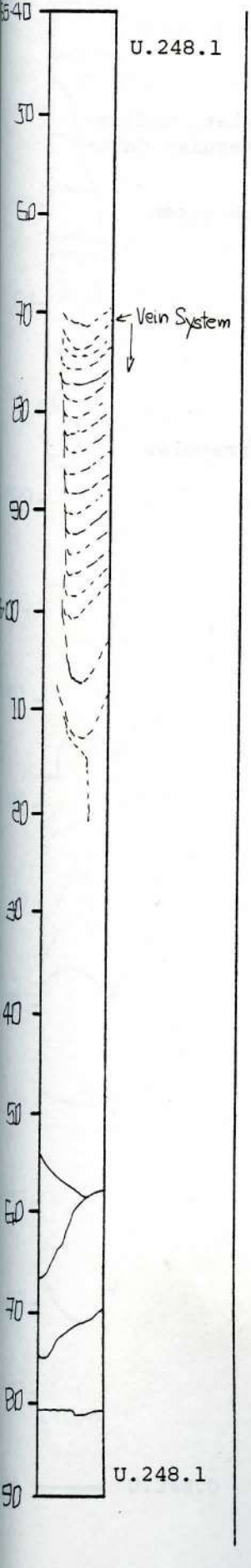
Visual Core Description Observer .....

Depth Interval 1465.40 cm to 1466.92 cm

Box 251, Section 3

Graphic Representation

Sample



LITHOLOGY-PETROGRAPHY

Continues U.248.1

Greenish-gray, holocrystalline, equigranular, fine-grained, aphyric basalt, with irregular dark green vesiculated alteration patches. The dark green patches are predominately green smectite with some calcite.

STRUCTURE

Massive

FRACTURES - VEINS - BRECCIA

Fracture and vein showing possible age relationships from 1465.60-1466.20. Fracture filled with black smectite. Fracture predominately irregular.

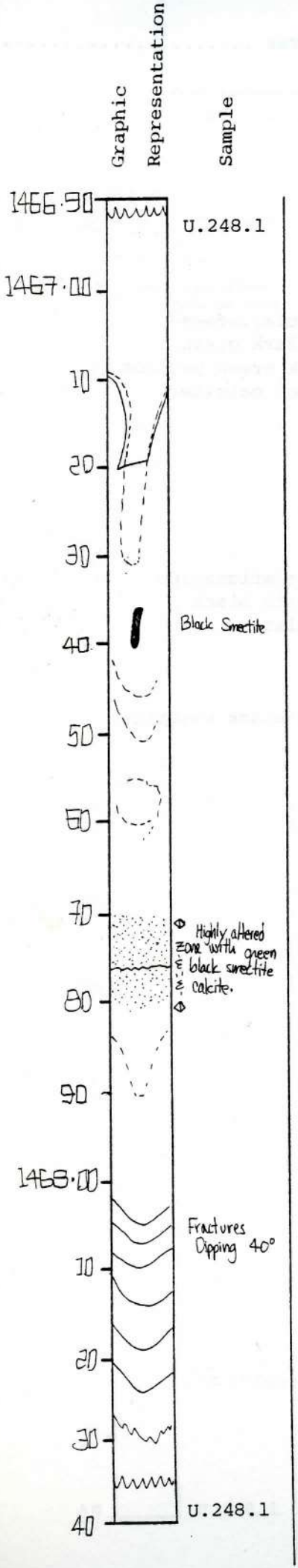
ROCK ALTERATION

Section pervasively altered to green and black smectite.

Visual Core Description Observer .....

Depth Interval 1466.92 cm to 1468.35 cm

Box 251, Section 4



LITHOLOGY-PETROGRAPHY

Continues U.248.1

Greenish-gray, holocrystalline, equigranular, medium- to fine-grained, aphyric basalt, with irregular dark-green vesiculated alteration patches.

1467.71-1467.81. Highly altered zone with green and black smectite and calcite.

STRUCTURE

Massive

FRACTURES - VEINS - BRECCIA

Highly fractured with both regular and irregular fractures, lined with black smectite.

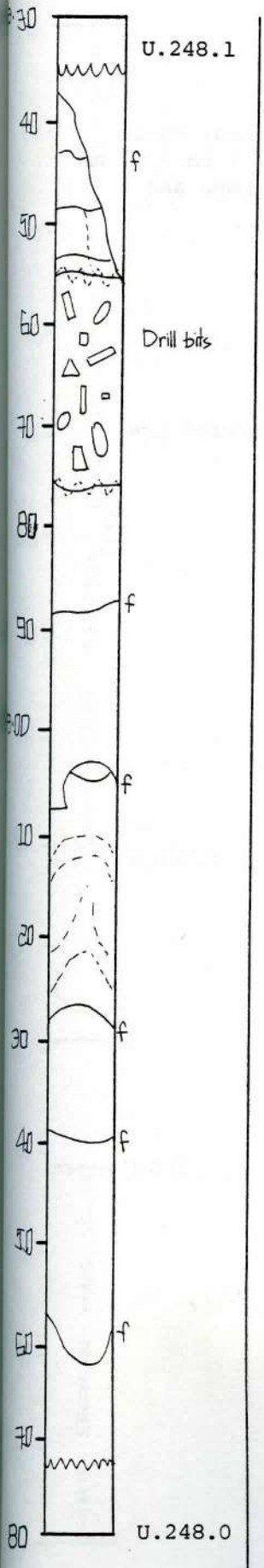
ICELAND RESEARCH DRILLING PROJECT - REYDARFJORDUR 1978

Visual Core Description Observer .....

Depth Interval 1 4 6 8 3 5 cm to 1 4 6 9 7 2 cm

Box 252, Section 1

Graphic Representation Sample



LITHOLOGY-PETROGRAPHY

Note, ≈ 170 cm of core was lost in this box with 115 cm in section # 3 and 55 cm in section # 4. This seems to be all part of Unit # 248.1 based on hand sample descriptions and assuming that no contact occurred in lost material.

STRUCTURE

Massive

VESICLES/AMYGDALES

None

FRACTURES - VEINS - BRECCIA

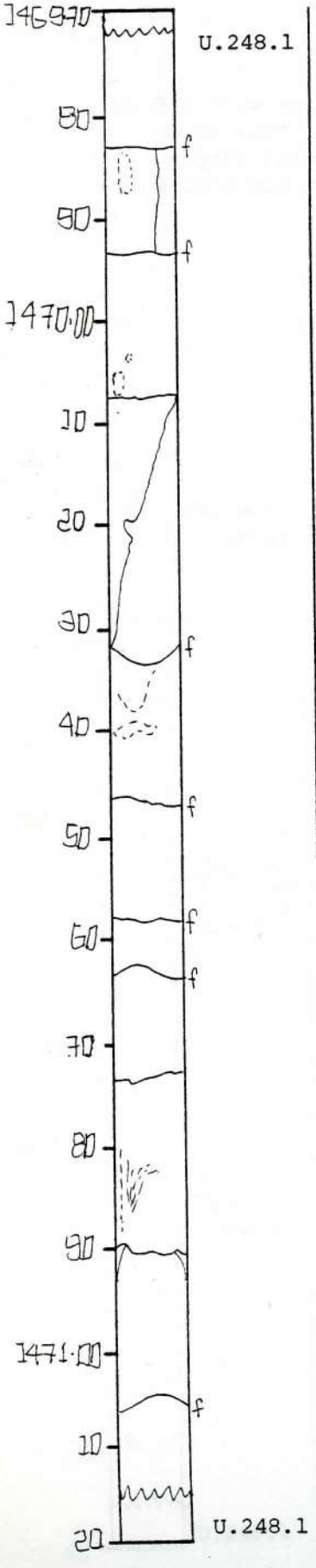
Fractures and veins filled with black smectite, facture irregular predominately.

Visual Core Description Observer .....

Depth Interval 1469.72 cm to 1471.15 cm

Box 252, Section 2

Graphic Representation | Sample



LITHOLOGY-PETROGRAPHY

Continues U.248.1

Greenish-gray, holocrystalline, fine-grained, equigranular, aphyric basalt, with dark green 1 cm - .1 mm smectite patches. Patches irregular in shape and randomly distributed throughout section.

STRUCTURE

Massive

FRACTURES - VEINS - BRECCIA

Fractures irregular with black smectite lining the fracture surface.

ICELAND RESEARCH DRILLING PROJECT - REYDARFJORDUR 1978

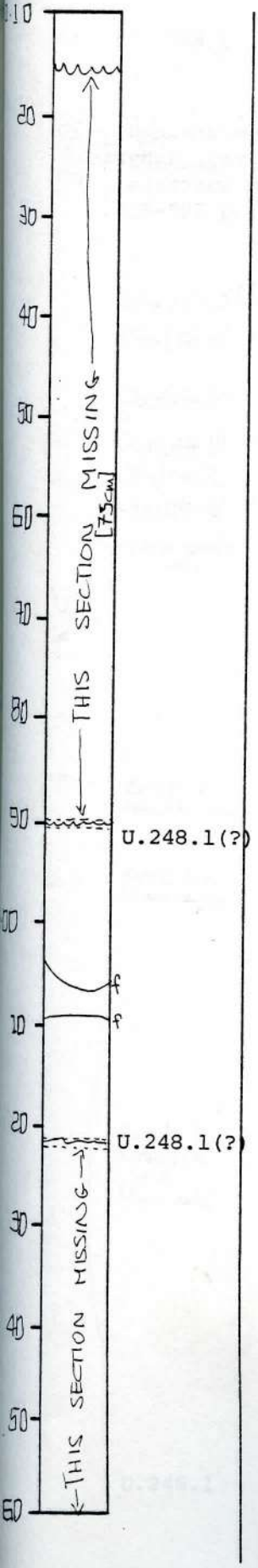
Visual Core Description Observer .....

Depth Interval 1471.15 cm to 1472.62 cm

Box 252, Section 3

Graphic Representation

Sample



LITHOLOGY-PETROGRAPHY

1471.15-1471.90 - MISSING CORE.

1471.90-1472.21. Continues U.248.1. Fine-grained, greenish-gray, holocrystalline, equigranular, aphyric basalt, with dark green irregular patches.

1472.21-1472.62. MISSING CORE.

STRUCTURE

Massive

VESICLES/AMYGDALES

None

FRACTURES - VEINS - BRECCIA

Minor amount of fractures with black smectite on fracture surface.

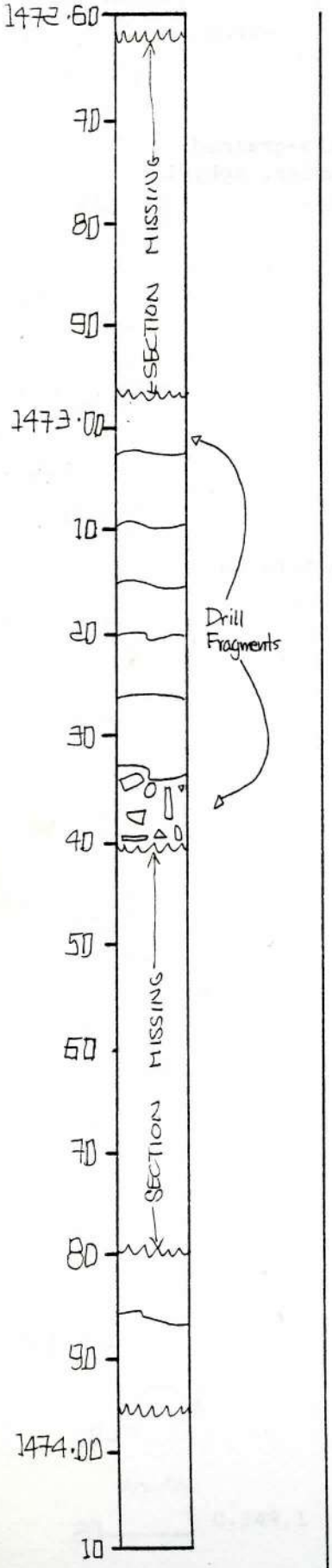
Visual Core Description Observer .....

Depth Interval 1472.62 cm to 1473.95 cm

Box 252, Section 4

Graphic Representation

Sample



LITHOLOGY-PETROGRAPHY

1472.62-1472.96. MISSING CORE

1472.96-1473.40. Continues U.248.1. Fine-grained, holocrystalline, equigranular, greenish-gray, aphyric basalt. With planer fracture filled with smectite in the larger fragments. Fractures dipping 70°-80°.

1473.40-1473.79. MISSING CORE

1473.79-1473.95. Same as above. (U.248.1).

STRUCTURE

Massive

VESICLES/AMYGDALES

None

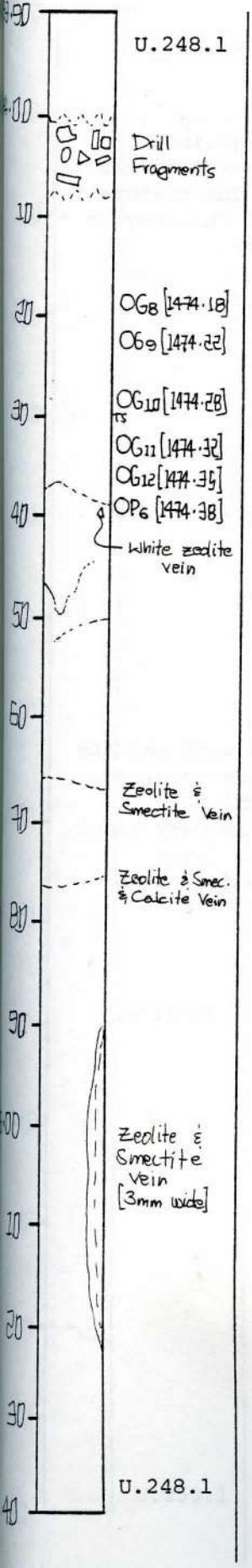
ICELAND RESEARCH DRILLING PROJECT - REYDARFJORDUR 1978

Visual Core Description Observer .....

Depth Interval 1 4 7 3 9 5 cm to 1 4 7 5 4 0 cm

Box 253, Section 1

Graphic Representation Sample

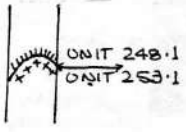


LITHOLOGY-PETROGRAPHY

Continues U.248.1

Medium-grained, grading downward to a very fine-grained, grayish-green, holocrystalline, equigranular, aphyric basalt.

1475.40 Box 253, Section # 1 is Unit 248.1, with U.253.1 in Section 2. Contact between the units is aplaner contact dipping 60°, with chilled margin in Unit 248.1. Unit 248.1 has intruded Unit 253.1.



STRUCTURE

Massive

VESICLES/AMYGDALES

None

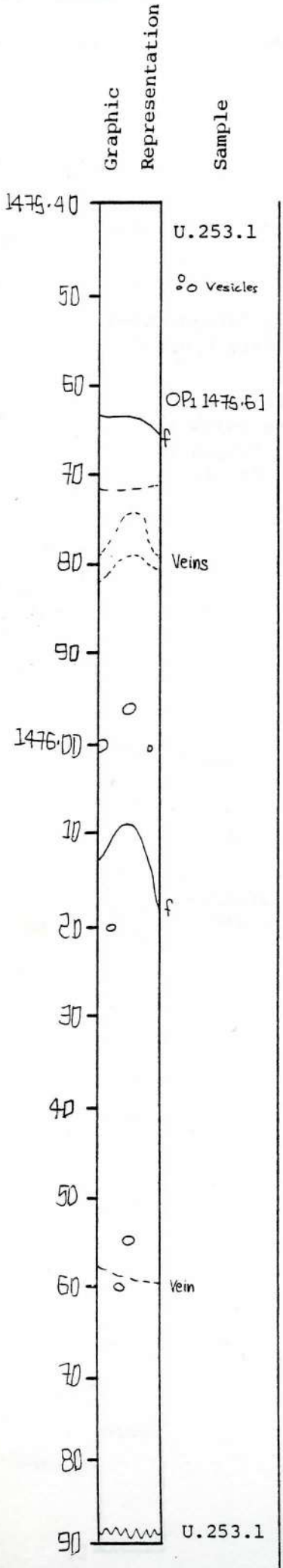
FRACTURES - VEINS - BRECCIA

Fracture and vein rapidly decreased in abundance from last box. Fracture filled with white zeolite and smectite and minor amount of calcite.

Visual Core Description Observer .....

Depth Interval 1475405 cm to 1476899 cm

Box 253, Section 2

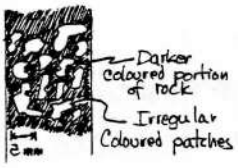


LITHOLOGY-PETROGRAPHY

Starting U.253.1

Bluish-green-gray, holocrystalline, fine-grained, aphyric basalt. Texturally this unit is very distinct from any other basalt described so far. The texture is very mottled with variations in color, this may be due to alteration of material to smectites.

Unit 253.1 is interpreted to be a basalt flow.



1476.40 Lighter colored patches increasing in size downward.

STRUCTURE

Massive

VESICLES/AMYGDALES

Vesicles ∿ 2%, elongated and round filed with calcite and white zeolite, calcite appears to have occurred before white zeolite, zeolite (?) is a white massive fine-grained zeolite. Smectite is very minor in occurrence, and appears to have formed later than zeolite and calcite, vesicles range from 1 cm-2 mm in size.

FRACTURES - VEINS - BRECCIA

Veins ∿ 1/2%. Filled with calcite, white zeolite, minor smectite.

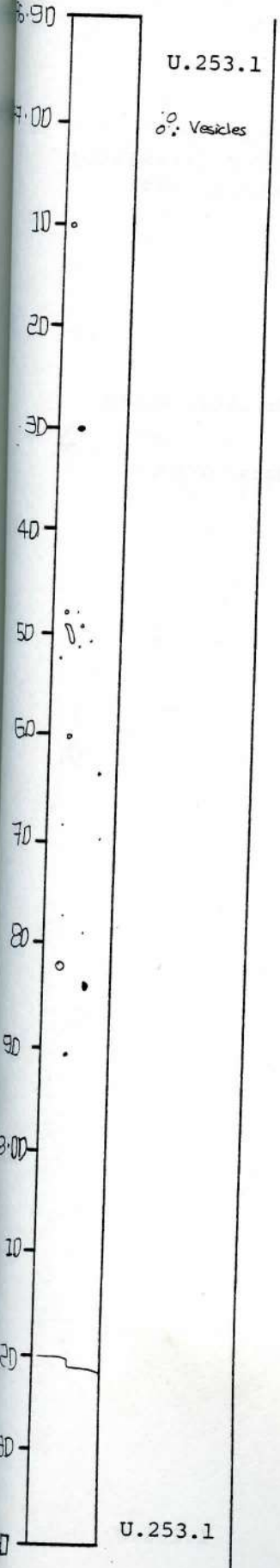
Visual Core Description Observer .....

Depth Interval 1476 89 cm to 1478 41 cm

Box 253, Section 3

Graphic Representation

Sample



LITHOLOGY-PETROGRAPHY

Continues U.253.1

Bluish-green-gray, holocrystalline, fine-grained, equigranular, aphyric basalt. White patches increasing in size.

STRUCTURE

Massive

VESICLES/AMYGDALES

Vesicles ∿ 1%, same as preceeding page, except decrease in calcite and no smectite.

FRACTURES - VEINS - BRECCIA

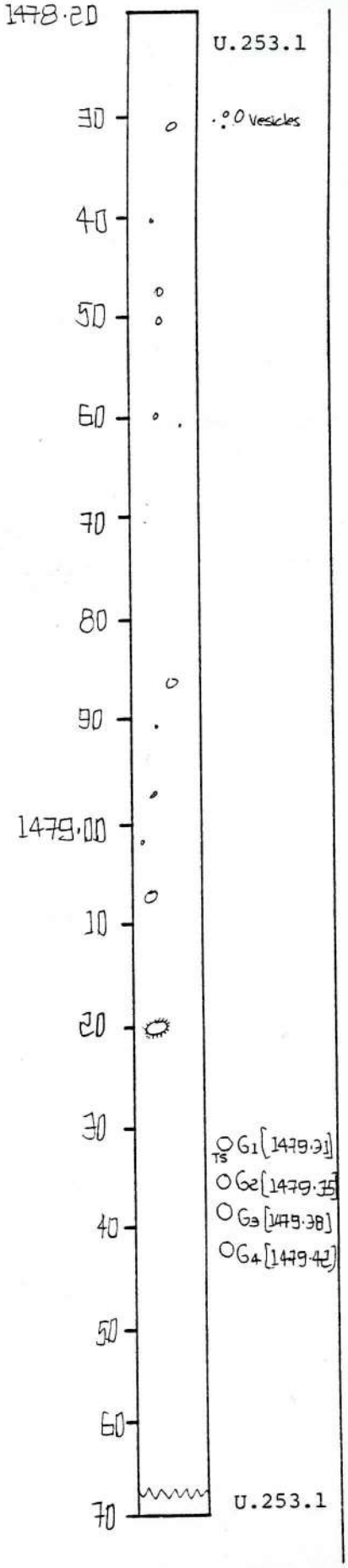
Fractures ∿ 1/2% or less, may actually be hammer breaks.

Visual Core Description Observer .....

Depth Interval 1 4 7 8 2 0 cm to 1 4 7 9 6 8 cm

Box 253, Section 1

Graphic Representati Sample



LITHOLOGY-PETROGRAPHY

Continues U.253.1

Bluish-green-gray, holocrystalline, fine-grained, equigranular, aphyric basalt. White patches increasing in size until ≈ 1479.30 where they decrease in size.

STRUCTURE

Massive

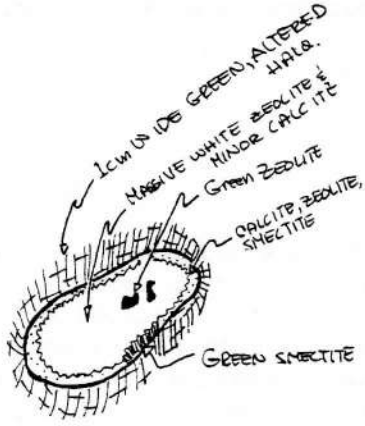
VESICLES/AMYGDALES

Vesicles 2 cm - 1 mm in size, ∿ 1%. Calcite, white massive zeolite, green smectite.

Large (2 cm) vesicles at 1429.20 show dark green alteration halo, that is 1 cm wide.

Vesicle rounded.

1429.20



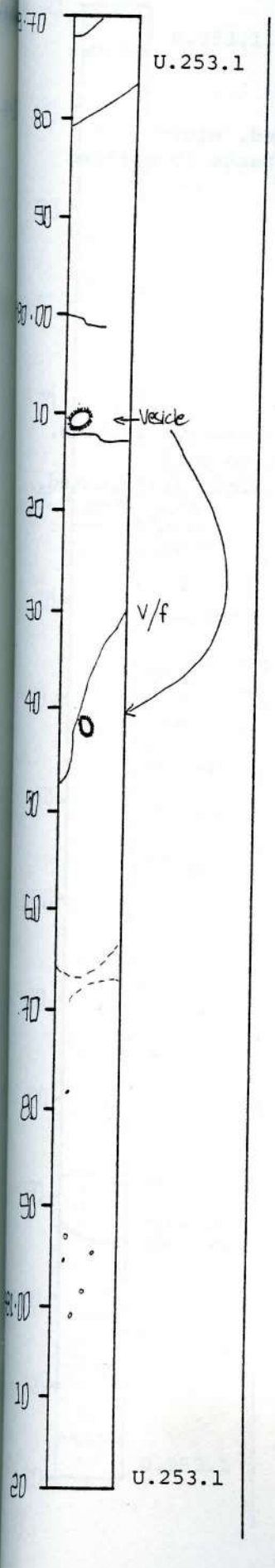
FRACTURES - VEINS - BRECCIA

Rare

Visual Core Description Observer .....

Depth Interval 1 4 7 9 6 8 cm to 1 4 8 1 2 1 cm

Box 253, Section 1



LITHOLOGY-PETROGRAPHY

Continues U.253.1

Bluish-green-gray, holocrystalline, fine-grained, equigranular, mottled, aphyric basalt.

Light and dark patches of the mottled texture seem to be equal in size and quantity, with the overall size of patches decreasing from previous box.

STRUCTURE

Massive

VESICLES/AMYGDALES

Vesicles < 1%. Size range 2 cm - 2 mm. White massive zeolite and calcite filling. Vesicles elongated and round. Have well developed alteration halos, up to 1 cm thick, vesicles randomly distributed.

FRACTURES - VEINS - BRECCIA

Veins ard fractures are rare.

$^{V}/_{f}$ - vein and fracture, planer simple, dipping 70°, filled with black smectite, 1 mm wide, at 1480.30.

Visual Core Description Observer .....

Depth Interval 148121 cm to 148274 cm

Box 254, Section 2

Graphic Representation Sample

1481.20

U.253.1

LITHOLOGY-PETROGRAPHY

Continues U.253.1

Bluish-green-holocrystalline, fine-grained, equi-granular, mottled, aphyric basalt. No change in mottled texture.

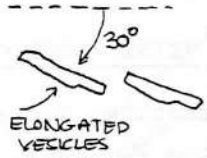
STRUCTURE

Massive

VESICLES/AMYGDALES

Vesicles < 1%.

Size range 5 mm-1 mm. Filled with white massive zeolite, minor calcite (?) smectite, elongated, have well developed alteration halo. Vesicles randomly distributed. Vesicles may be oriented.



FRACTURES - VEINS - BRECCIA

Rare

U.253.1

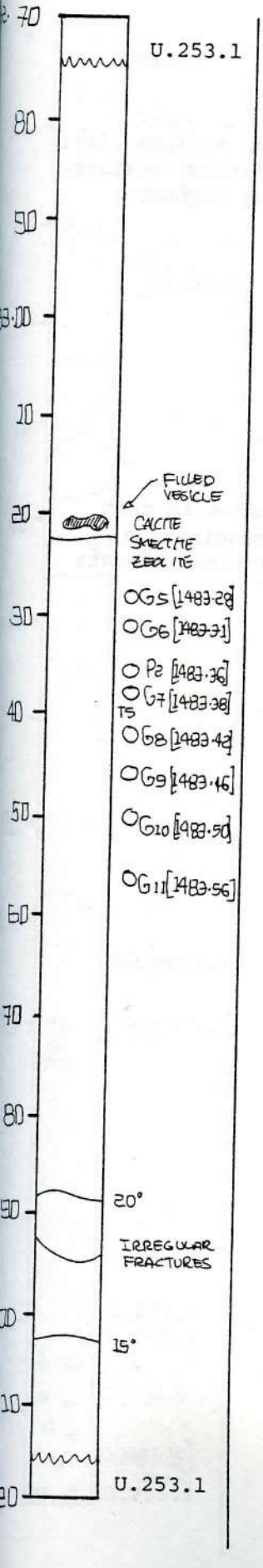
1482.70

Visual Core Description Observer .....

Depth Interval 1 4 8 2 7 4 cm to 1 4 8 4 1 6 cm

Box 254, Section 3

Graphic Representation Sample



LITHOLOGY-PETROGRAPHY

Continues U.253.1

Bluish-green-gray, mottled, fine-grained, holocrystalline, equigranular, aphyric basalt. No change in mottled texture.

STRUCTURE

Massive

VESICLES/AMYGDALES

Vesicles << 1%. Filled with white zeolite, minor calcite and smectite.

FRACTURES - VEINS - BRECCIA

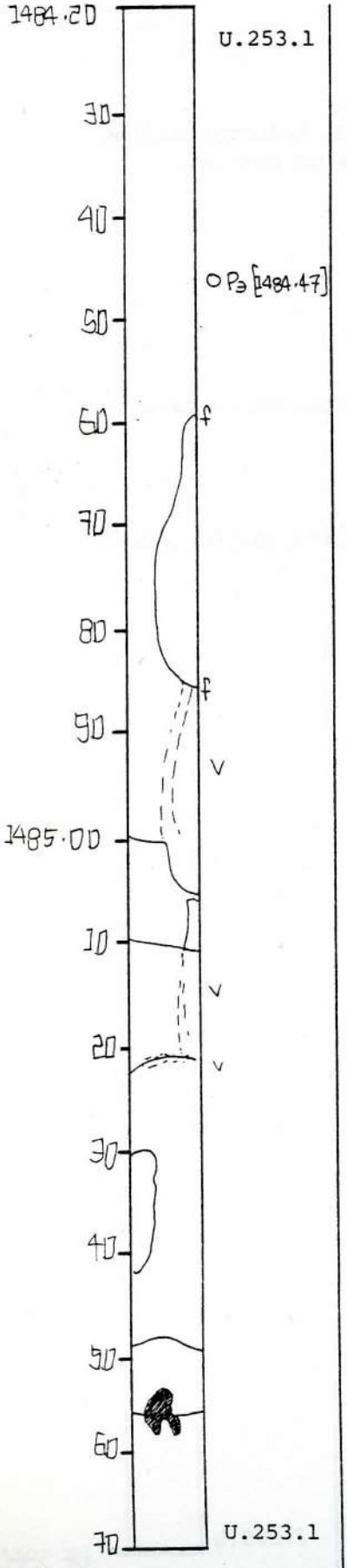
None, except for 3 planer fractures at 1483.90-1484.00.

Visual Core Description Observer .....

Depth Interval 1484.16 cm to 1485.70 cm

Box 254, Section 4

Graphic Representation | Sample



LITHOLOGY-PETROGRAPHY

Continues U.253.1

Bluish-green-gray, mottled, fine-grained, equigranular, holocrystalline, aphyric basalt flow. Mottled texture decreasing so that coloration is becoming lighter.

STRUCTURE

Massive

VESICLES/AMYGDALES

Rare

FRACTURES - VEINS - BRECCIA

Fractures and veins have become more common in this section. Fracture and vein systems predominantly irregular, with black smectite and very minor amounts of calcite.

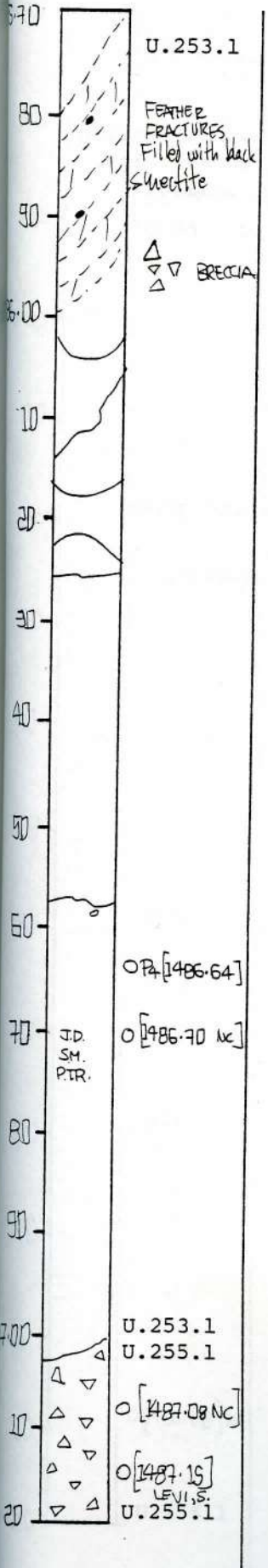
ICELAND RESEARCH DRILLING PROJECT - REYDARFJORDUR 1978

Visual Core Description Observer .....

Depth Interval 1485.70 cm to 1487.20 cm

Box 255, Section 1

Graphic Representation | Sample



LITHOLOGY-PETROGRAPHY

Continues U.253.1

Bluish-green-gray, fine-grained, holocrystalline, equigranular basalt flow, with mottled texture.

1486.70. Transition to more vesiculated base with epidote, apophyllite (?), quartz, calcite and green smectite filling vesiclts.

U.255.1. Depositional contact with oxidation at the top of U.255.1 contact dipping 43°.

Scouraceous flow top breccia, with reddish brown coloration and green in vesicles filled with epidote.

STRUCTURE

U.253.1 Massive

U.255.1 Brecciated, scouraceous

VESICLES/AMYGDALES

Vesicles ∿ 1%. Elongated and irregular with white massive zeolite, calcite filling vesicles. Alteration halo still pervasive around vesicles.

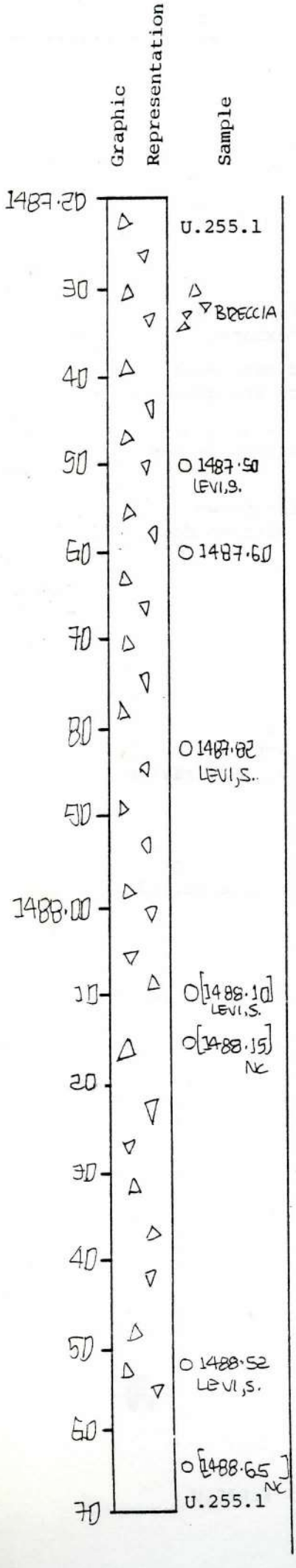
FRACTURES - VEINS - BRECCIA

Fractures, both planer and feather. Fractures filled with black smectite.

Visual Core Description Observer .....

Depth Interval 1 4 8 7 2 0 cm to 1 4 8 8 7 0 cm

Box 255, Section 2



LITHOLOGY-PETROGRAPHY

Continues U.255.1

Scouraceous flow top breccia, reddish-brown coloration with some yellowish green due to epidote in vesicles, clasts vesicular and fine-grained aphyric basalts.

1488.55. Transition to less brecciated portion of flow.

STRUCTURE

1487.20-1488.44. Brecciated.

1488.55. Less brecciated, more massive.

VESICLES/AMYGDALES

Vesicles in clasts contain white zeolite and green epidote.

1488.60. Green smectite in irregular vesicles.

FRACTURES - VEINS - BRECCIA

Rare.

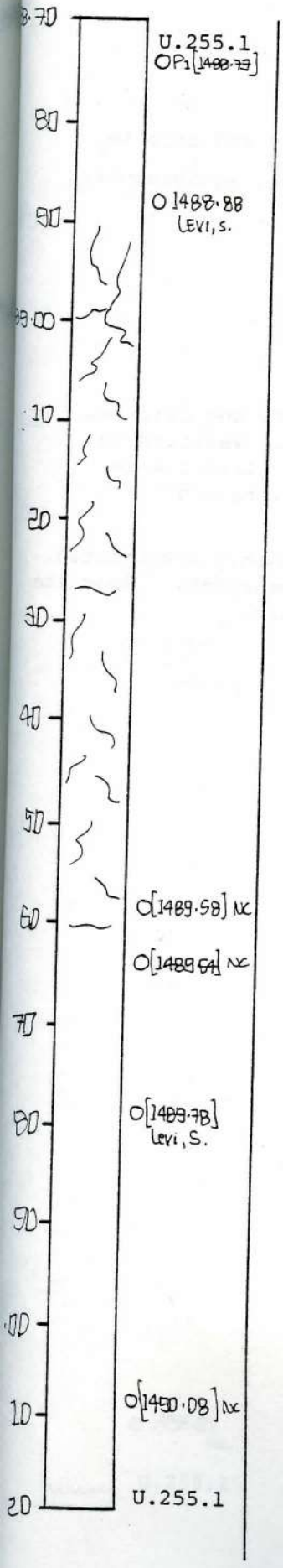
ICELAND RESEARCH DRILLING PROJECT - REYDARFJORDUR 1978

Visual Core Description Observer .....

Depth Interval 1488.70 cm to 1490.21 cm

Box 255, Section 3

Graphic Representation Sample



LITHOLOGY-PETROGRAPHY

Continues U.255.1

Light-gray, fine-grained, holocrystalline, equigranular aphyric basalt flow.

STRUCTURE

Massive

VESICLES/AMYGDALES

Vesicles ∿ 20%. Elongated and rounded filled with white unknown zeolite and lined with green smectite and filled with green smectite. Vesicles 1 cm - 1 mm in size.

FRACTURES - VEINS - BRECCIA

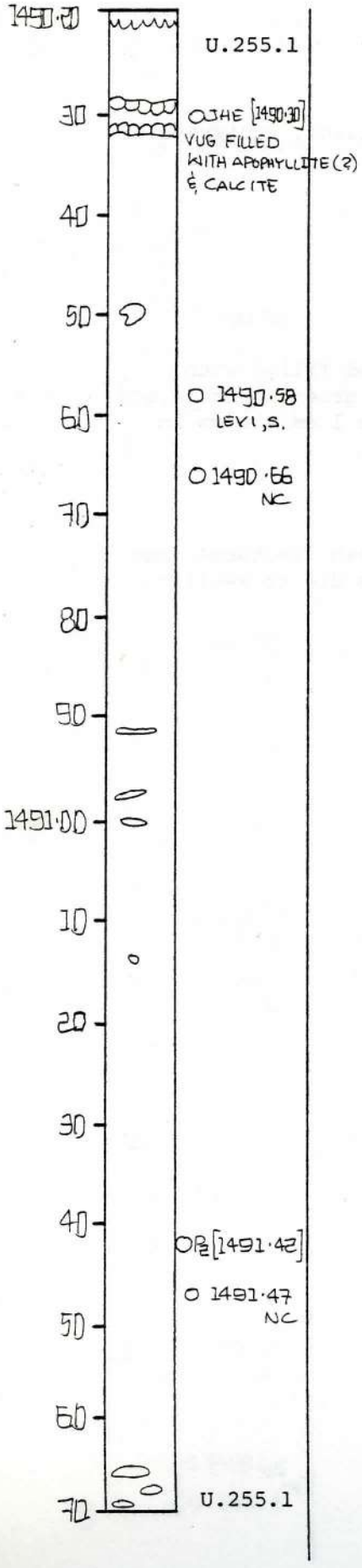
Fractures - pervasive, irregular, fresh fractures from 1488.90 - 1489.60. Fracturing may be due to swelling clays.

Visual Core Description Observer .....

Depth Interval 1490210 cm to 1491760 cm

Box 253, Section 4

Graphic Representation | Sample



LITHOLOGY-PETROGRAPHY

Continues U.255.1

1490.30 - Vug filled with apophyllite (?) and calcite.

Light-gray, fine-grained, holocrystalline, equigranular, aphyric basalt flow.

STRUCTURE

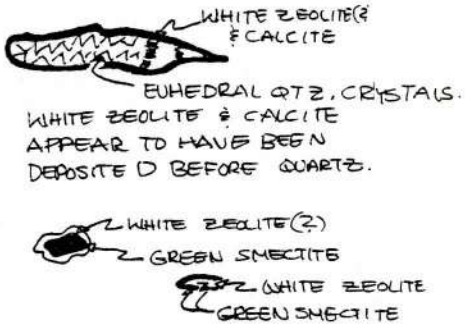
Massive

VESICLES/AMYGDALES

Vug at 1490.30 is filled with apophyllite and calcite, with calcite later than the apophyllite. Vesicles in this section are fewer in number but are larger with well developed quartz, calcite, apophyllite and green smectite.

Vesicles ∿ 1% of section. Vesicles randomly distributed. Vesicles elongated 2 cm-4 mm, equal dimensional. Smectite filled vesicles are 8 mm - < 1 mm in size.

Vesicles dip - 0.15°, angle varies.



FRACTURES - VEINS - BRECCIA

Rare