

Observer JM

5	2	8	7	0
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cm to

5	3	0	1	0
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CM

LITHOLOGY PETROGRAPHY

529.06 Medium-grained, massive, holocrystalline, sparsely porphyritic, grey-green, phyric basalt with intrusion at both margins.

Superficially unit 90.3 resembles 90.1.

529.33 Hairline veins - secondary minerals filling (?)
green smectite.

529.38 Chilled margin.

529.45 Fine-grained - grading downward to a medium-grained basaltic intrusion, grey coloured, aphyric, holocrystalline, superficially unit 90.4 and 90.2 are similar.

VESICLES/AMYGDALLES

None observed.

FRACTURES - VEINS - BRECCIA

528.70 Rare .

529.45 Irregular and planar fracture with white zeolites, (laumontite), on the fracture surfaces, hairline veins dipping 60° filled with white zeolite (laumontite).

ROCK ALTERATION

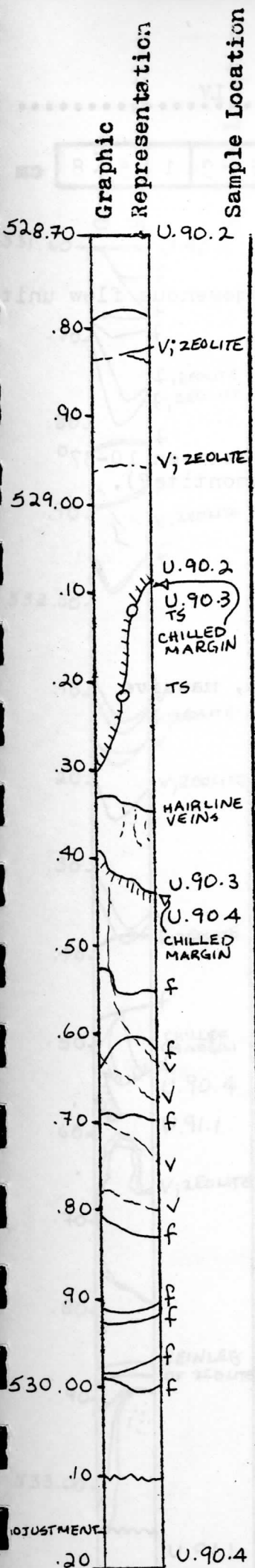
None observed.

STRUCTURE

528.70 - 529.07 Aphyric, fine grained, holocrystalline, massive.

529.07 - 529.38 Phyrlic, medium grained; holocrystalline, sparsely porphyritic, massive basalt bounded on both margins by chilled contacts. [U.90.3]

529.38 - 530.10 Aphyric, holocrystalline, massive basalt
fine grained grading downward to a medium grained basalt.



ICELAND RESEARCH DRILLING PROJECT

Visual Core Description

ObserverLV.....

Depth Interval

5 3 0 1 0

cm to

5 3 1 5 8

cm

BOX 91, Section 1

LITHOLOGY PETROGRAPHY

Grey, fine- to medium-grained, aphyric, homogenous flow unit dense.

VESICLES/AMYGDALES

None observed.

FRACTURES - VEINS - BRECCIA

Many fractures with angle of dips varying between 10-37° and 60-75°, covered mostly by zeolite (laumontite?).

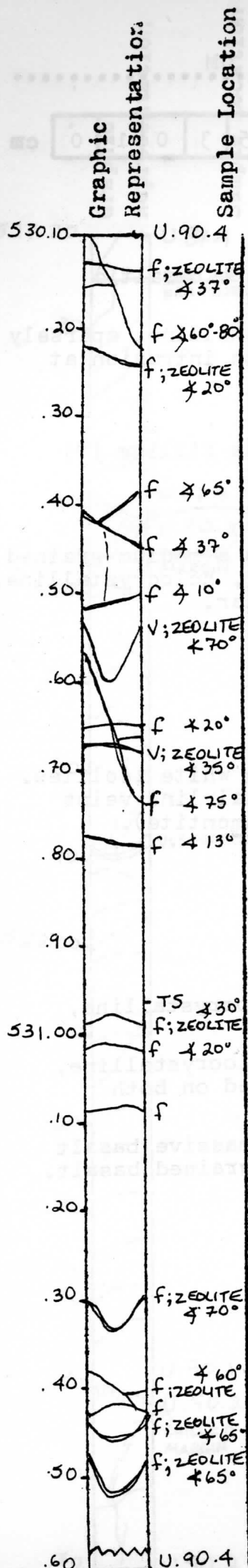
Veins of zeolite also occur.

ROCK ALTERATION

None observed.

STRUCTURE

U.90.4 Aphyric, medium grained, homogeneous, massive basalt.



ICELAND RESEARCH DRILLING PROJECT

Visual Core Description

ObserverLV.....

Depth Interval

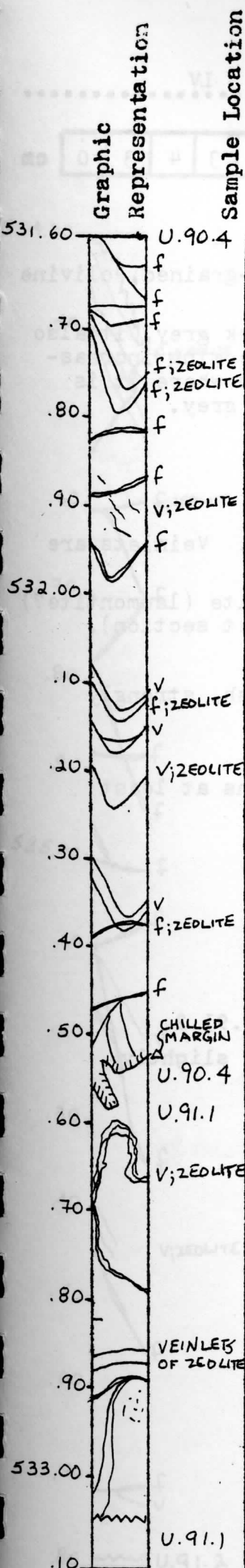
5	3	1	5	8
---	---	---	---	---

 cm to

5	3	3	0	5
---	---	---	---	---

 cm

Box 91, Section 2



LITHOLOGY PETROGRAPHY

Aphyric, fine- to medium-grained, dense, homogeneous unit.

532.47 Closer to the contact this unit becomes a little darker grey, and finer grained (chilled?), greenish, porous, highly altered basalt, mottled dark grey to green, kind of blotchy, strongly zeolitized and fractured.

VESICLES/AMYGDALES

None observed.

FRACTURES - VEINS - BRECCIA

531.58 Most of the fractures are coated with white zeolite (laumontite?). Fractures and veinlets dip about 65°.

532.60 Fractures are coated with smectite.

Veinlets are filled with zeolites.

ROCK ALTERATION

532.55 Unit 91.1 is strongly altered, it is zeolitized and porous.

OTHER

531.58 Large zeolite (laumontite) coated fractures.

Unit 90.4 seems to be a dike with a chilled contact.

532.55 Similar to 90.3. Ophitic "olivine basalt".

STRUCTURE

531.58 - 532.53 Aphyric, medium grained, homogeneous basalt. Separated from lower unit by chilled margin.

532.53 - 533.05 Highly altered basalt.

ICELAND RESEARCH DRILLING PROJECT

Visual Core Description

Observer LV

Depth Interval

5 3 3 0 5

cm to

5 3 4 3 0

cm

Box 91, Section 3

LITHOLOGY PETROGRAPHY

Greenish, highly altered, zeolitized, fine-grained, olivine basalt, mottled dark grey to green.

533.57 The contact is fine-grained and dark grey, it also looks slightly brecciated. The unit is becoming increasingly coarser grained into the next section where it is medium grained and homogeneous. Colour is grey.

VESICLES/AMYGDALES

None observed.

FRACTURES - VEINS - BRECCIA

533.05 Fractures are coated with smectite. Veinlets are filled with white zeolite.

533.57 Fractures are coated by white zeolite (laumontite?) and dip about 65° (compare unit 90.4 in last section).

ROCK ALTERATION

533.05 Unit is zeolitized, porous, greenish, strongly fractured.

OTHER

There are about 20cm of core too much, means at least 533.14 to 533.20 exist twice.

533.57 Unit 91.2 is similar to 90.4.

Unit 91.2 is a dike.

STRUCTURE

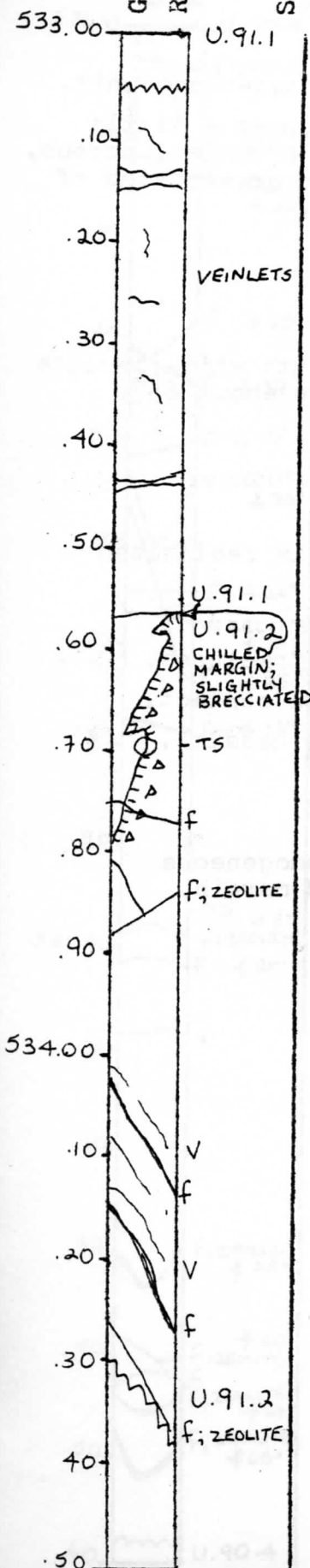
533.05 - 533.57 Highly altered basalt.

533.57 Chilled contact between U.91.1 and U.91.2.

533.57 - 534.30 Contact is fine grained and slightly brecciated, and becomes increasingly coarse.

Graphic Representation

Sample Location



ICELAND RESEARCH DRILLING PROJECT

Visual Core Description

Observer LV

Depth Interval

5 3 4 3 0

cm to

5 3 5 7 9

cm

Box 91, Section 4

LITHOLOGY PETROGRAPHY

Grey, medium-grained, aphyric, massive unit, homogeneous in the whole section.

VESICLES/AMYGDALES

None observed.

FRACTURES - VEINS - BRECCIA

Fractures mostly dip about 65-70° and are coated with zeolite. Veinlets are less than 1mm in width and filled with zeolite.

ROCK ALTERATION

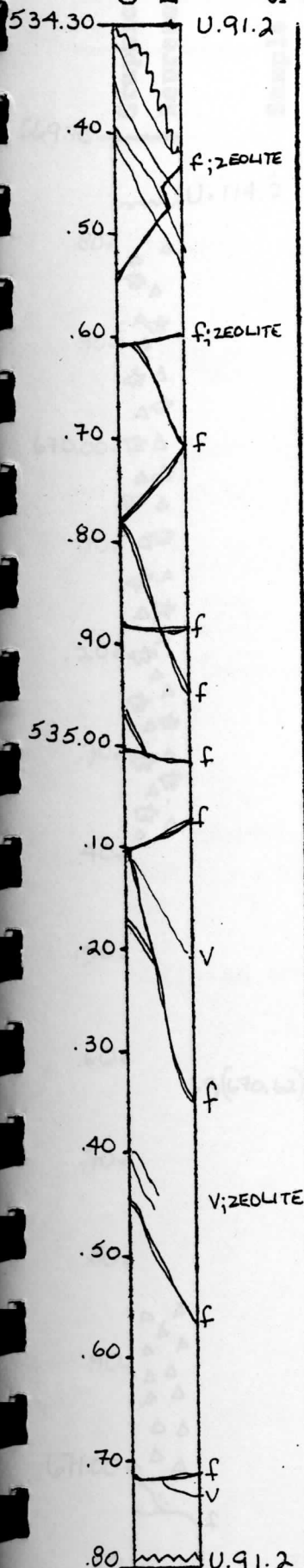
None observed.

OTHER

Unit 91.2 is similar to 90.4.

STRUCTURE

U.91.2 Aphyric, medium grained, massive unit.



STRUCTURE

669.76 - 669.80 Massive basalt.

669.80 - 670.38 Scoriaceous and brecciated.

670.38 - 670.75 Massive basalt.

670.75 - 671.26 Brecciated.

ICELAND RESEARCH DRILLING PROJECT

Visual Core Description

Observer JH.....

Depth Interval

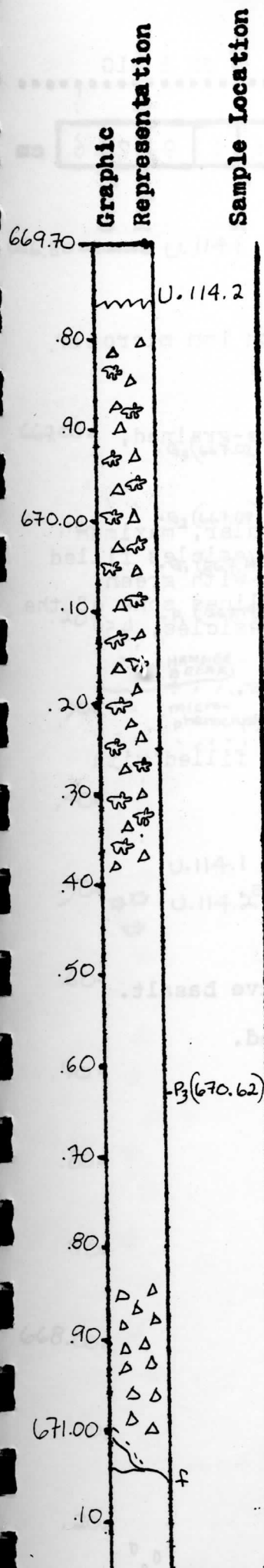
6	6	9	7	6
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 cm to

6	7	1	2	6
---	---	---	---	---

 cm

Box 115 , Section 2



LITHOLOGY/ PETROGRAPHY

Continuation of unit from last section.

669.80 Transition to coarse breccia.

670.38 Rapid transition to less brecciated, less weathered and lighter coloured, fine-grained, amygdale.

670.75 Brecciated zone 15 cm wide.

VESICLES/ AMYGDALES

669.80 Irregular amygdales filled with white zeolites (laumontite) and green smectite.

670.38 Irregular amygdales filled with white zeolite (laumontite) with smaller amygdale filled with green smectite. Size range 2cm to less than 1mm.

670.92 Green smectite in vesicles with decreasing size of vesicles; laumontite in irregular vein-like vesicles.

FRACTURES - VEINS - BRECCIA

669.80 Irregular hair-like fractures and vein-like fractures filled with white zeolites and green smectite.

670.38 Irregular fractures throughout rock.

ROCK ALTERATION

669.80 Groundmass altered to reddish-brown clays and swelling clays.

670.38 Groundmass fresh appearing but increased (?) in abundance of swelling clays based on fracturing.

OTHER

669.80 Coarse breccia moderately weathered.

STRUCTURE

669.76 - 669.80 Massive basalt.

669.80 - 670.38 Scoriaceous and brecciated.

667.38 - 670.75 Massive basalt.

670.75 - 671.26 Brecciated.

ICELAND RESEARCH DRILLING PROJECT

Visual Core Description

Observer JH & IIG

Depth Interval

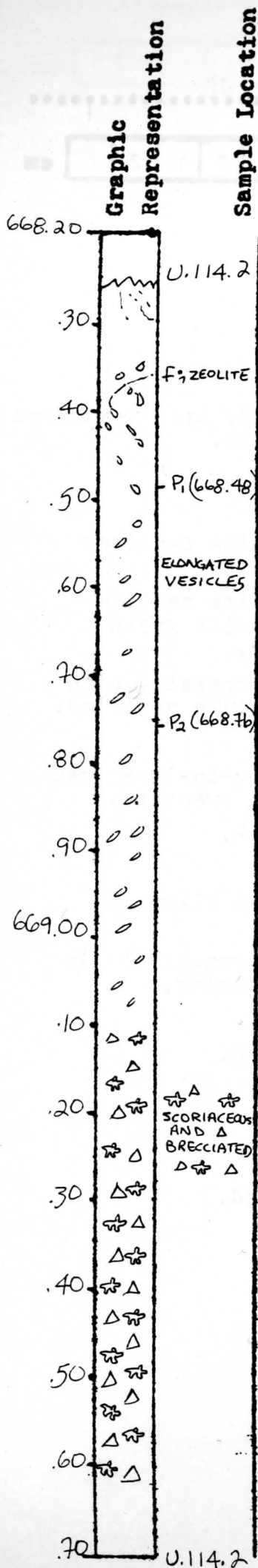
6 6 8 2 6

cm to

6 6 9 7 6

cm

Box 115 , Section 1



LITHOLOGY PETROGRAPHY

Light grey basalt. Very fine-grained, with 1mm micro-phenocrysts.

669.10 Transition to coarse breccia.

669.65 Transition to light grey, very fine-grained, basalt.

VESICLES/AMYGDALES

668.26 Vesicles, 80% elongated, 20% irregular, maximum length 2cm, minimum less than 1mm; 70% of vesicles filled with white zeolite, 20% of vesicles filled with green smectite, 10% not filled. Green smectite lines some of the zeolite filled vesicles. Orientation of vesicles, 45° and 120°.

668.80 Questionable actinolite in vesicles.

FRACTURES - VEINS - BRECCIA

668.40 Some irregular vein-like fractures filled with zeolite.

669.60 Irregular fractures.

ROCK ALTERATION

Green smectite and zeolite. Swelling clays.

STRUCTURE

668.26 - 669.10 Very fine-grained, massive basalt.

669.10 - 669.65 Scoriaceous and brecciated.

669.65 - 669.76 Massive basalt.

ICELAND RESEARCH DRILLING PROJECT

Visual Core Description

Observer JRD

Depth Interval

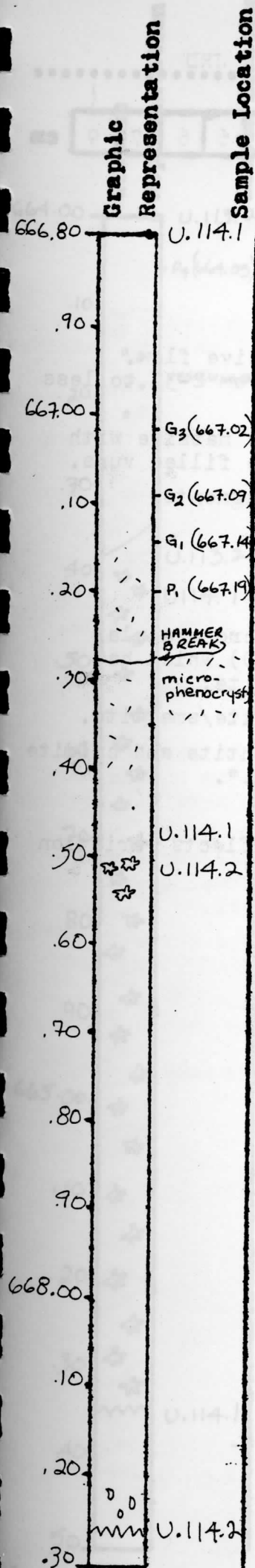
6	6	6	7	9
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 cm to

6	6	9	2	6
---	---	---	---	---

 cm

Box 114 , Section 4



LITHOLOGY PETROGRAPHY

Block of vesicular amygdular basalt included in massive portion of them.

667.26 Microphenocryst content increases slightly.

667.48 Unit 114.2. Scoriaceous flow top of unit is typical of others described in the last few units. Variable fragments of vesicular/amygdular porphyritic character. Most fragments very irregular in character and appearance.

VESICLES/AMYGDALES

667.10 The sulphide in chlorite/smectite amygdale and on fractures is very yellow and appears to be chalcopryrite - extremely small grains.

FRACTURES - VEINS - BRECCIA

666.79 None observed.

667.48 Filling between fragments often consists of reddish-yellow material mixed with chlorite/smectite and zeolite with calcite.

ROCK ALTERATION

668.10 Irregular pitted portions of lower part of this section is probably result of erosion of more altered clasts by drilling fluids.

ICELAND RESEARCH DRILLING PROJECT

Visual Core Description

Observer JRD

Depth Interval

6	6	5	3	5
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 cm to

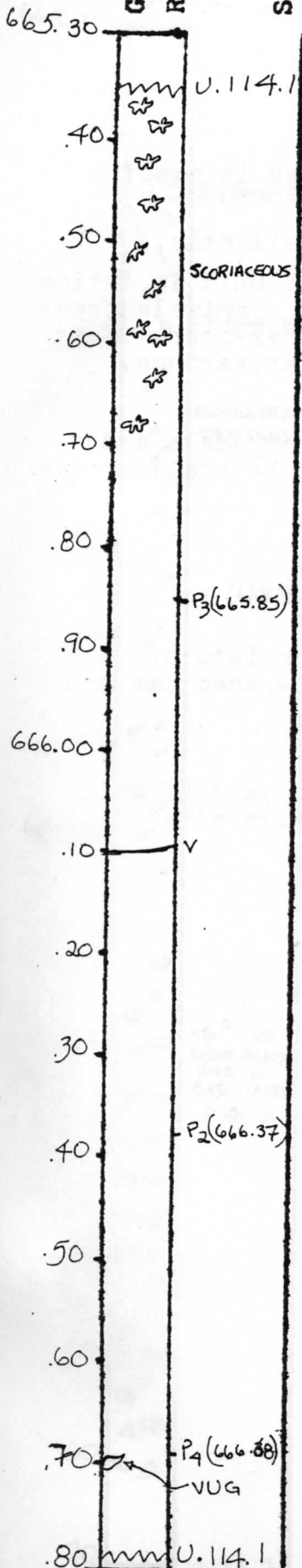
6	6	6	7	9
---	---	---	---	---

 cm

Box 114 , Section 3

Graphic Representation

Sample Location



LITHOLOGY PETROGRAPHY

Continuation of scoriceous flow top.

665.70 Transition zone from scoria to massive flow. Abundance of micro phenocrysts decreases from 2-3% to less than 0.5%.

666.30 Colour becomes pale green. Unit is massive with minor, much less than 1%, chlorite/smectite filled vugs.

666.77 Includes vesicular/amygdaloidal fragments.

VESICLES/AMYGDALES

None observed.

FRACTURES - VEINS - BRECCIA

666.08 Veinlet set filled with massive micro granular white mineral (No.1 - section 662.60-664.00) which has a hardness about 5. Also bright green chlorite.

Minor hairline fractures filled with chlorite/smectite.

666.70 Vug filled with quartz, some laumontite and calcite with outer rim composed of new mineral no.1*.

ROCK ALTERATION

Furplish to pale green mottled colour. Reflects variation in oxidation reduction?

ICELAND RESEARCH DRILLING PROJECT

Visual Core Description

Observer ^{JRD}

Depth Interval

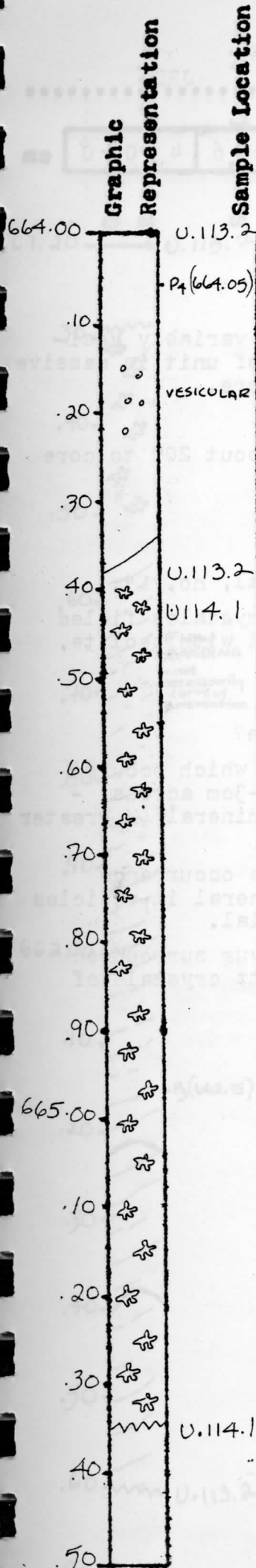
6 6 4 0 0

cm to

6 6 5 3 5

cm

Box 114 , Section 2



LITHOLOGY PETROGRAPHY

Pale greenish-grey, variably vesicular fine-grained basalt with micro phenocrysts which amount to about 3-4% of rock.

664.38 Flow bottom.

664.41 Unit 114.1. Scoriaceous flow top - typical pale purplish mixture of highly vesicular fragments cemented by zeolite calcite clay. Most fragments are porphyritic with 1-2mm micro phenocrysts of plagioclase quenched in very fine-grained, highly vesicular lava fragments. Estimate of original open space about 12% of rock - now filled with secondary minerals. No significant change.

VESICLES/AMYGDALES

664.10 Mostly filled with chlorite, some zeolite, calcite and minor quartz. Elongate vesicles with core angle of about 5°.

664.41 Vesicles and amygdalae abundance and shape varies widely from fragment to fragment.

664.90 Yellowish cast along certain parts of brecciated flow top - apparently alteration effect - seems to correspond to open space filling and often appears bright yellow.

FRACTURES - VEINS - BRECCIA

664.00 Fractures contain zeolite, chlorite and possible new sheet silicate - sericite?

664.20 Very tiny sulphide grains on altered fracture surface associated with flakey whitish alteration product (sericite?) on the surface

665.00 Fractures and some vugs are filled with older unknown radiating, clear, fibrous to acicular, needle-like crystals. Also calcite, chlorite/smectite.

ROCK ALTERATION

664.30 Chlorite on fine scale.

664.41 Apparent oxidation of flow tops.

ICELAND RESEARCH DRILLING PROJECT

Visual Core Description

Observer JRD

Depth Interval

6 6 2 6 0

cm to

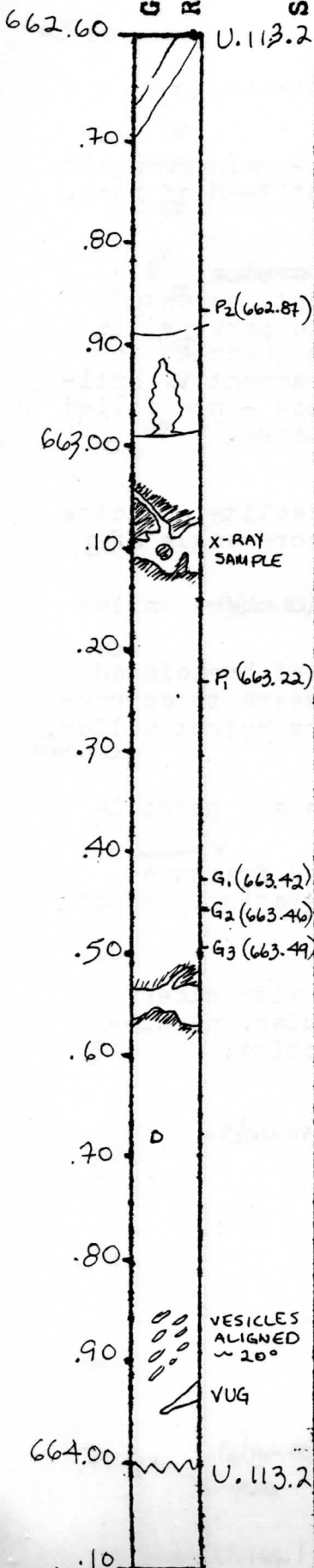
6 6 4 0 0

cm

Box 114 , Section 1

Graphic
Representation

Sample Location



LITHOLOGY PETROGRAPHY

Pale greenish-grey, sparingly porphyritic, variably vesicular fine-grained basalt. Upper portion of unit is massive with very little primary structure or texture.

663.00 Homogeneous.

663.83 Primary alignment of vesicles at about 20° to core angle.

VESICLES/AMYGDALES

662.60 None observed.

663.65 Filled amygdales contain new mineral, no. 1*.

663.83 Aligned or elongated, many small amygdales filled with chlorite/smectite. Larger ones filled with zeolite, calcite, quartz and chlorite/smectite.

FRACTURES - VEINS - BRECCIA

662.60 Pale green flakey chlorite/smectite?

663.10 *X-ray sample taken of new mineral which occurs in large fracture related opening (up to 2-3cm across) - massive finely granular, very hard, white mineral (H greater than 5) - mineral no.1.

663.55 Vein - new mineral no.1 again, this occurrence associated with pink laumontite. White mineral in vesicles with associated very green chloritic material.

663.90 Vug - new mineral* (no.1). Green vug surrounded by massive mineral no.1 with euhedral quartz crystals of laumontite, calcite lining cavity also.

ROCK ALTERATION

None observed.

ICELAND RESEARCH DRILLING PROJECT

Visual Core Description

Observer JN

Depth Interval

6	6	1	2	9
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 cm to

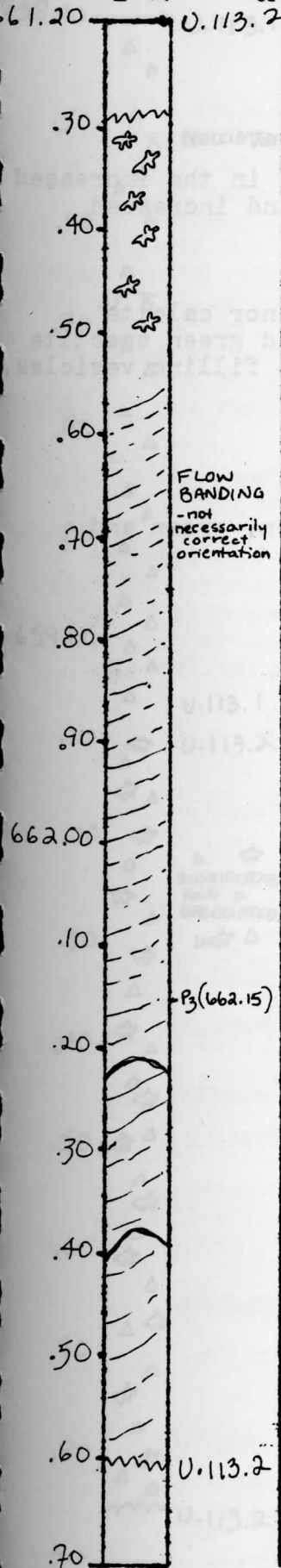
6	6	2	6	0
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 cm

Box 113 , Section 4

Graphic Representation

Sample Location



LITHOLOGY/PETROGRAPHY

Continuation of flow unit. Upper 20cm weathered scoriaceous breccia grading down to fresher rock with some orientation of vesicles and (?)flow banding.

661.40 Light grey vesiculated basalt with flow banding (?), moderately fresh basalt, only minor plagioclase phenocryst less than 1mm. Very fine-grained groundmass.

VESICLES/AMYGDALES

661.29 Vesicles - size ranges from 2cm to less than 1mm decreasing in abundance downward in core. Shape irregular to rounded in smaller vesicles filled with white laumontite and green smectite.

662.00 Vesicles filled with green smectite, only minor laumontite.

662.10 Only minor vesicles.

FRACTURES - VEINS - BRECCIA

661.29 Fractures rare, filled with green smectite and white laumontite. Fractures hairlike from 661.30 to 662.20.

662.20 Fractures and veins increase in abundance.

ROCK ALTERATION

Pyroxene(?) phenocryst and groundmass show minor alteration to green smectite.

OTHER

662.00 Major variation in porosity of core, decreasing with depth.

STRUCTURE

661.29 - 661.40 Scoriaceous.

661.40 - 662.60 Vesiculated basalt with flow banding.

STRUCTURE

658.40 - 659.07 Brecciated.

659.70 - 659.85 Scoriaceous and brecciated.

ICELAND RESEARCH DRILLING PROJECT

Visual Core Description

Observer JM

Depth Interval

6 5 9 8 5

cm to

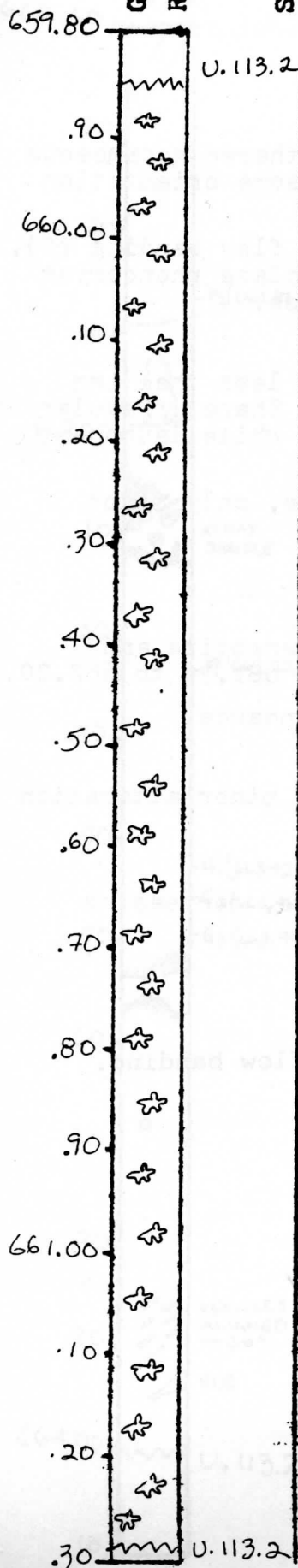
6 6 1 2 0

cm

Box 113 , Section 3

Graphic
Representation

Sample Location



LITHOLOGY PETROGRAPHY

Continuation of flow unit from last section.

Major change between this and last section in the increased weathering and vesicles in this section, and increased fragment size.

VESICLES/AMYGDALES

Size: 2cm to less than 1mm, filled with minor calcite HCl (+), white zeolites, green smectite and green smectite rimming vesicles with calcite and zeolites filling vesicles.

FRACTURES - VEINS - BRECCIA

None observed.

ROCK ALTERATION

Alteration - increasing downward in section, green and brown clays in groundmass.

STRUCTURE

659.85 - 661.29 Scoriaceous.

ICELAND RESEARCH DRILLING PROJECT

Visual Core Description

Observer JM

Depth Interval

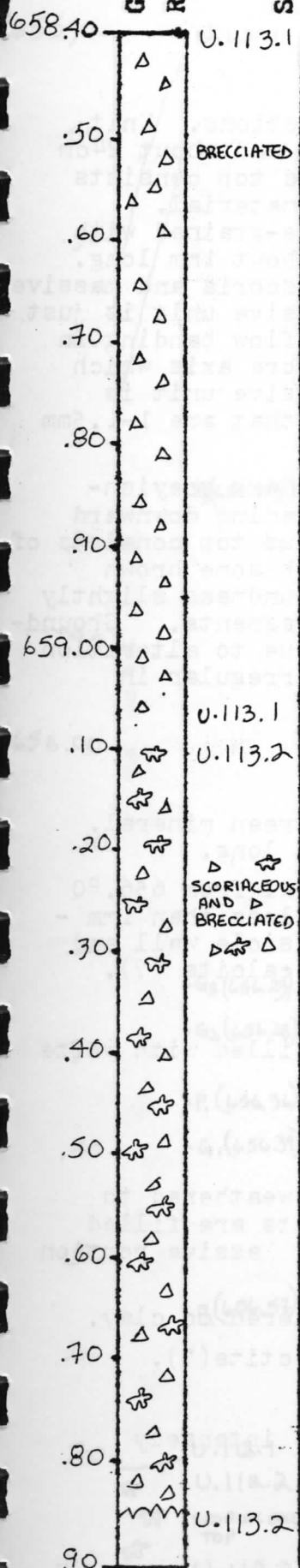
6	5	8	4	0
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 cm to

6	5	9	8	5
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 cm

Box 113 , Section 2



LITHOLOGY PETROGRAPHY

Less brecciated portion of unit 113.1, lighter grey colour than overlying material, fragments irregular in shape, angular, in glassy groundmass with 1-2% plagioclase and pyroxene phenocrysts.

659.07 Unit 113.2. Scoriaceous flow top with upper 10cm reddish brown altered glass, brecciated and vesicular throughout, dark grey in colour predominantly. 1-2% lath shaped plagioclase phenocrysts, 2mm maximum size. Moderate colour change at 659.80 and less weathering. Groundmass fine-grained and altered glass. Vesicular fragments range from 10cm to less than 1mm, fragments angular, irregular in shape.

VESICLES/AMYGDALES

658.40 Moderately vesiculated. Irregular in shape filled with green smectite and white zeolite. Green smectite vesicles normally smaller than white zeolite filled vesicles.

659.07 Moderately vesiculated filling: white zeolites, green clays or green clays rimming, vesicles with white zeolites in centre. Size range 2cm - less than 1mm.

FRACTURES - VEINS - BRECCIA

658.40 Fractures rare, filled with green smectite.

659.07 Fractures rare and hairline, filled with green clays and white zeolites.

ROCK ALTERATION

658.40 Groundmass weathering to brown clay and green smectite. Vesicles and spaces and hairline fractures filled with white zeolites, green smectite.

658.80 Less groundmass alteration, rock appearing fresher.

659.07 10-12cm of groundmass altered to reddish-brown clays. Plagioclase phenocrysts weathering. Groundmass altering to green and brown clays.

OTHER

658.40 Rock highly porous.

659.07 Contact irregular.

659.80 Less altered portion.

STRUCTURE

658.40 - 659.07 Brecciated.

659.70 - 659.85 Scoriaceous and brecciated.

ICELAND RESEARCH DRILLING PROJECT

Visual Core Description

Observer NG & JM

Depth Interval

6	5	6	8	3
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 cm to

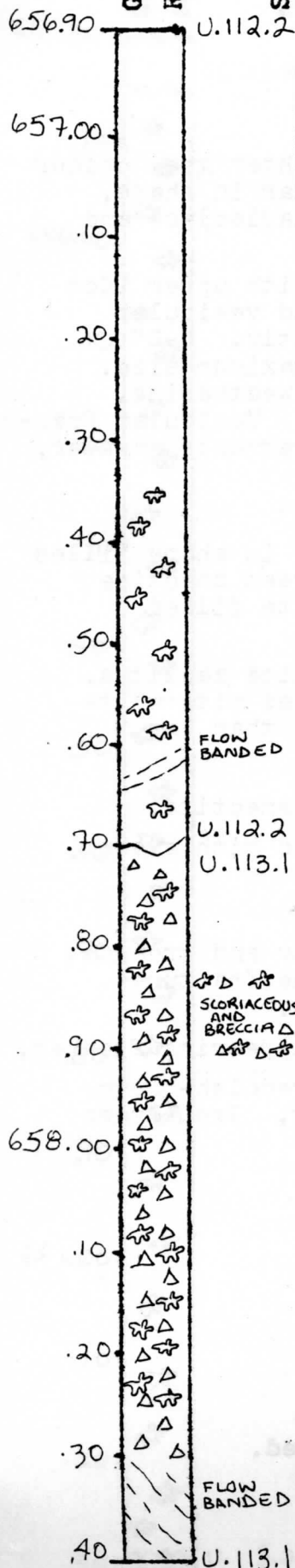
6	5	8	4	0
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 cm

Box 113 , Section 1

Graphic Representation

Sample Location



LITHOLOGY. PETROGRAPHY

Continuation of flow unit from previous sections. Unit has 67cm of purplish-brown scoriaceous top and about 24cm of greyish-green massive flow. Scoriaceous top consists of welded vesicular fragments of volcanic material. Groundmass appears glassy or extremely fine-grained with 1-2% phenocrysts of plagioclase in laths about 1mm long. There is a moderately sharp break between scoria and massive unit below which may indicate that the massive unit is just an inclusion in the scoria. However, the flow banding in the massive rock is perpendicular to the core axis which is what would be expected for a flow. Massive unit is fine-grained with phenocrysts of feldspar that are 1-1.5mm long.

657.70 Unit 113.1. Scoriaceous flow top, dark greyish-green scoriaceous brecciated upper 60cm, grading downward to light grey, vesicular basalts, scoriaceous top consists of vesicular fragments 0.5 to 5cm in size with some brown alteration along fragment boundaries. Groundmass slightly finer-grained and less vesiculated than fragments. Groundmass has some brown colouration possibly due to alteration of glassy matrix. Fragments angular and irregular in shape.

VESICLES/AMYGDALES

656.83 Abundant, 1-2mm, irregular shape.

657.40 Moderately abundant, filled with green mineral. Vesicles are mostly elongated, about 1.5mm long.

657.70 Vesicles less abundant than material from 656.80 - 657.40. Irregular. Range in size from less than 1mm - 2cm, filled with green platy mineral on vesicle wall and white zeolites (laumontite?) in cavities, calcite (?).

FRACTURES - VEINS - BRECCIA

656.83 Fractures are rare, hairlike and filled with white zeolite.

657.70 Fractures rare.

ROCK ALTERATION

656.83 Groundmass of scoriaceous unit has weathered to clay. Vesicles and spaces between fragments are filled with laumontite and other white zeolites? Massive portion is altered to green mineral.

657.70 Groundmass of scoriaceous top weathered to clay.

658.20 Groundmass weathering to green smectite(?).

OTHER

656.83 Scoriaceous portion of this unit is intensely weathered.

657.70 Rock very porous.

ICELAND RESEARCH DRILLING PROJECT

Visual Core Description

Observer JRD

Depth Interval

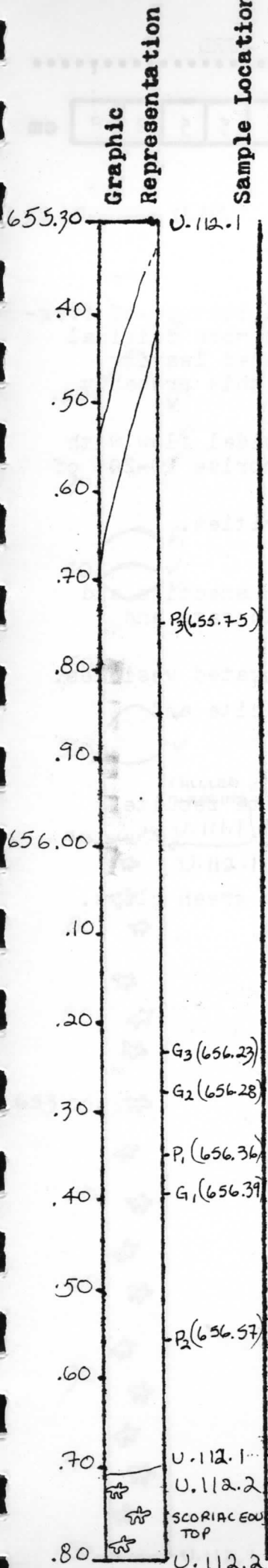
6	5	5	2	9
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 cm to

6	5	6	9	3
---	---	---	---	---

 cm

Box 112 , Section 4



LITHOLOGY PETROGRAPHY

Continuation of unit 112.1 from previous section. Greyish-green, aphyric basaltic flow with 1% amygdales.

656.70 Unit 112.2. Scoriaceous flow top of microporphyrific.

VESICLES/AMYGDALES

655.28 Filling mineralogy: quartz, laumontite, green smectite and (?) unknown white massive zeolite. Shape: larger amygdales rounded and elongated with some small irregular green smectite filled vesicles. Size: 3.5cm - 1mm.

Note: Very detailed structure was observed within the amygdale showing different stages of green smectite vesicle filling.

FRACTURES - VEINS - BRECCIA

655.28 Rare fractures and veins. Fractures present are at high angles.

656.50 Hairline fractures with green smectite and white zeolite(?).

ROCK ALTERATION

Green smectite throughout the groundmass.

STRUCTURE

Amygdales seem to have some degree of orientation.

ICELAND RESEARCH DRILLING PROJECT

Visual Core Description

Observer JRD

Depth Interval

6	5	3	5	7
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 cm to

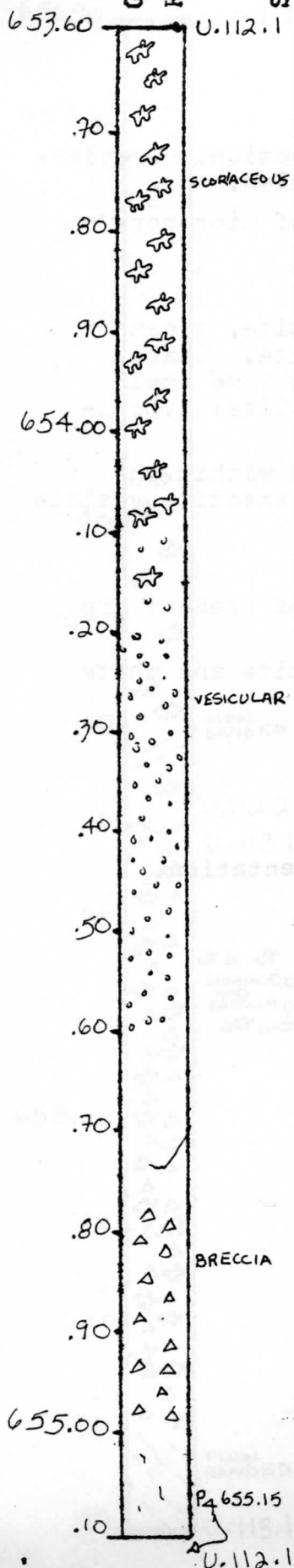
6	5	5	2	8
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 cm

Box 112 , Section 3

Graphic Representation

Sample Location



LITHOLOGY: PETROGRAPHY

Continue scoraceous texture but colour and texture of fragments much darker - more green. Also with more original open space about 10%. Some of core is eroded leaving irregular pits in surface of drill core - this probably represents more altered areas.

654.15 Transition from scoria to amygdaloidal flow with about 30% original vesicles. Vesicles comprise 10-20% of flow.

654.73 Brecciated zone with irregular cavities.

VESICLES/AMYGDALES

654.15 On some vesicles laumontite, green smectite and calcite. Size range 4cm - 1mm. Shape: elongate and irregular.

654.70 Irregular cavities only minor elongated vesicles.

654.80 Irregular cavities filled with calcite and laumontite.

FRACTURES - VEINS - BRECCIA

655.00 Hairline fractures filled with white zeolite (laumontite).

ROCK ALTERATION

654.15 Fyroxene(?) phenocrysts altered to green clays. Minor plagioclase laths weathering.

ICELAND RESEARCH DRILLING PROJECT

Visual Core Description

Observer JRD

Depth Interval

6	5	2	0	6
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 cm to

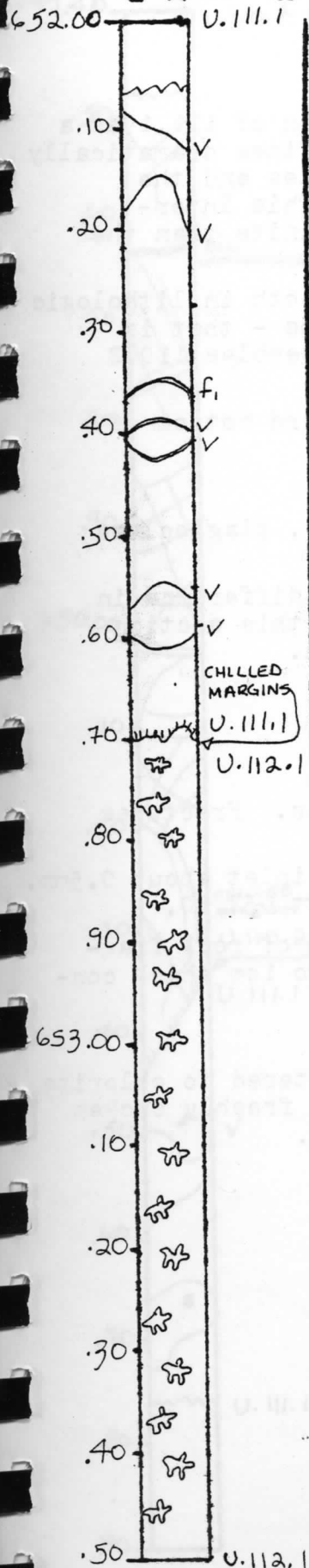
6	5	3	5	7
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 cm

Box 112 , Section 2

Graphic Representation

Sample Location



LITHOLOGY PETROGRAPHY

Medium-grained, medium grey, plagioclase phyric basaltic diabase which exhibits a pronounced decrease in grain size from about 1.00mm at 652.00 to very fine at 652.65 near contact.

652.70 Chilled contact (see discussion previous page). Unit 112.1. Scoraceous, fragmental, top of lava flow - grades downward to upper contact shows no contact effects such as baking or chilling. Fairly typical, purplish-grey, scoraceous material with secondary filling-in of open spaces. Original open space (estimated by counting with ruler) about 5-6%. This has the obvious open space and represents an absolute minimum of the original porosity.

VESICLES/AMYGDALES

None observed.

FRACTURES - VEINS - BRECCIA

652.36 Fracture (f₁) = probably conjugate set of fractures

ROCK ALTERATION

None observed.

ICELAND RESEARCH DRILLING PROJECT

Visual Core Description

Observer JRD

Depth Interval

6 5 0 7 6

cm to

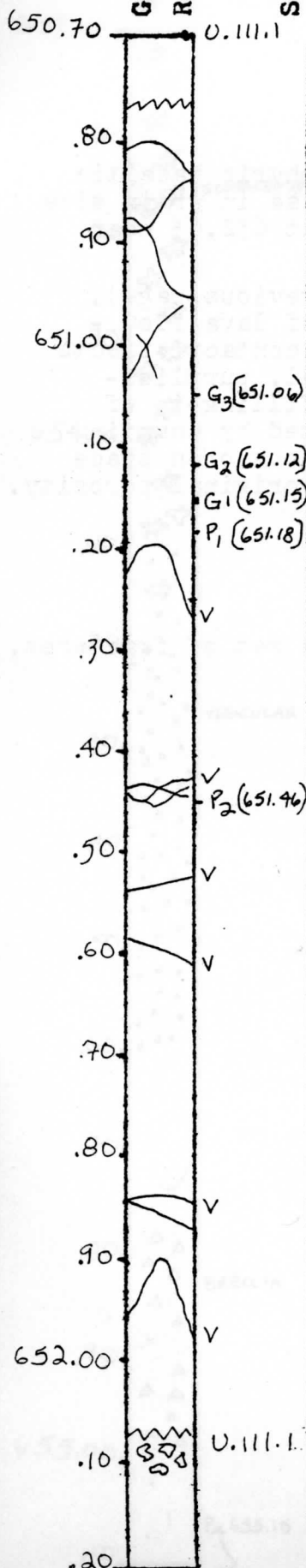
6 5 2 0 6

cm

Box 112 , Section 1

Graphic Representation

Sample Location



LITHOLOGY PETROGRAPHY

Contributing evidence to the interpretation of 111.1 as a dike includes the diabasic texture which fines dramatically toward to the contact, the lack of vesicles and the lack of any fragments from other units. This interpretation is considered slightly less definite than the decision that 110.1 is a dike.

Note: This unit is similar to unit 94.1 both in lithologic character and in terms of age relationships - that is 94.1 was older than 92.1 which closely resembles 110.2 which is younger than 111.1.

651.35 Grain size begins to decrease toward bottom of this section (about 652.20).

No obvious pyrite.

651.95 Medium-grained, dark greenish-grey, plagioclase phyrlic diabase.

652.05 Discontinuity - there is a subtle difference in character between the bottom-most rock in this section and the uppermost rock in the next section.

VESICLES/AMYGDALES

None observed.

FRACTURES - VEINS - BRECCIA

Hairline smectite/chlorite filled fractures. Fractures not abundant in this unit.

651.23 Vein - chlorite/smectite filled veinlet about 0.5mm. No zeolite or calcite in the vein except at 652.10.

652.10 Bottom of section contains a group of rock fragments which are from a veinlet about 0.5 to 1cm thick containing laumontite, calcite and chlorite.

ROCK ALTERATION

Many of the plagioclase phenocrysts are altered to chlorite/smectite partially or totally, yet on some freshly broken surfaces it appears that pyroxene is fresh. No pyrite noted on fractures.

ICELAND RESEARCH DRILLING PROJECT

Visual Core Description

Observer JRD

Depth Interval

6 4 9 4 7

cm to

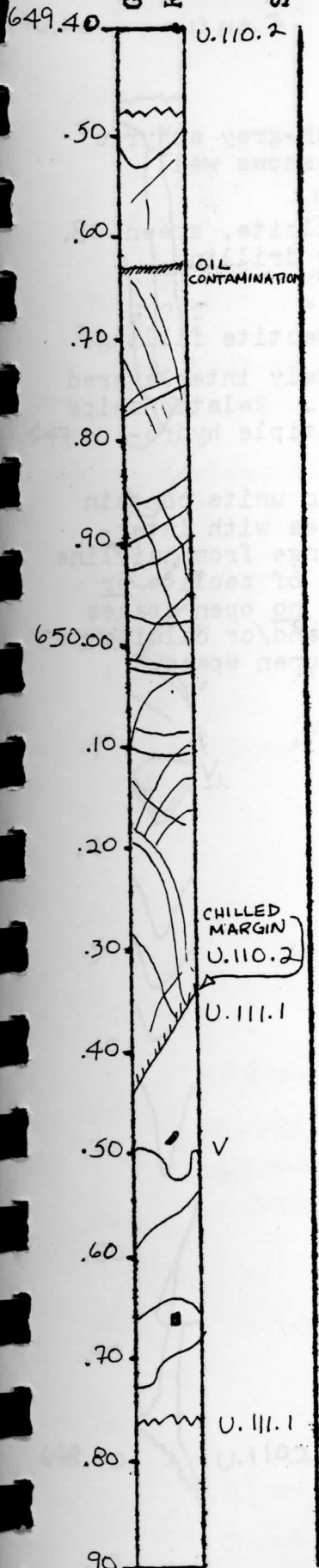
6 5 0 7 6

cm

Box 111 , Section 4

Graphic Representation

Sample Location



LITHOLOGY PETROGRAPHY

Medium-grained, highly fractured, green-grey, aphyric basaltic diabase.

649.64 Caution! Rock is contaminated with oil during or after drilling.

The grain size of this unit decreases gradually from about 649.50 to the contact at 650.40. The intrusive nature of the contact is well exposed and has a 20° core angle.

Possibly as a result of decrease in grain size this unit becomes less green and more grey toward contact - this may also (or alternatively) represent a decrease in degree of alteration.

650.40 Contact of 110.2 against 111.1 is sharp planar chilled margin proving that 110.2 is intrusive against 111.1. Unit 111.1 is a dark green porphyritic diabase with plagioclase phenocrysts up to 1cm long. Phenocrysts about 1%.

650.75 Lower contact is chilled against a lava flow, therefore this is interpreted as a dike. However, the contact had to be reconstructed from fragments of core and the interpretation is based on only one piece.

VESICLES/ALYCGDALES

None in unit 110.2.

FRACTURES - VEINS - BRECCIA

649.47 Many fractures coated or lined with chlorite only. No zeolites.

650.30 Fractures seem to decrease slightly in abundance toward contact.

650.50 Chlorite fractures.

ROCK ALTERATION

649.47 Chlorite/smectite alteration.

STRUCTURE

Chilled contact between units 110.2 and 111.1.

ICELAND RESEARCH DRILLING PROJECT

Visual Core Description

Observer JPD

Depth Interval

6 4 8 0 0

cm to

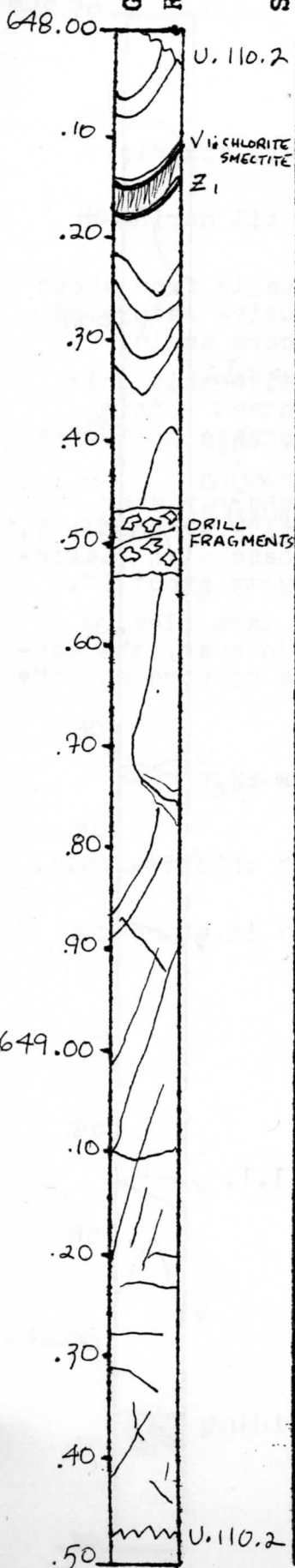
6 4 9 4 7

cm

Box 111, Section 3

Graphic Representation

Sample Location



LITHOLOGY PETROGRAPHY

Medium-grained, highly fractured, greenish-grey aphyric diabasic basalt. Freshly broken surface shows well developed chloritization.

648.47 Break in continuity - zeolite, calcite, green chlorite/smectite veinlet. Fragmented by drilling.

VESICLES/AMYGDALES

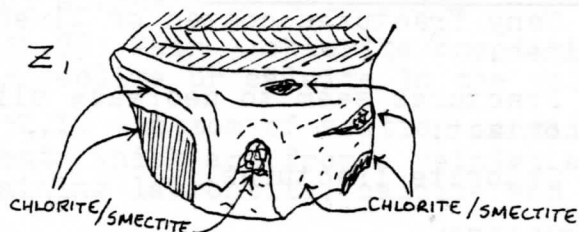
648.07 Vein (v₁) principally chlorite/smectite filling.

648.14 (Z₁) Chlorite/smectite is intimately interlayered or intergrown with the zeolite or calcite. Relationships are not simple and probably represent multiple hydro-thermal pulses.

General comment: A number of the diabasic units contain abundant chlorite/smectite-filled fractures with intermediate core angles about 30-40° which range from hairline fractures to 1cm.- those show no evidence of zeolite or calcite deposition - these fractures have no open spaces and seem very 'tight'. But when zeolite and/or calcite do occur there is almost always evidence of open space.

ROCK ALTERATION

Chlorite/smectite alteration of rock.



ICELAND RESEARCH DRILLING PROJECT

Visual Core Description

Observer JRD

Depth Interval

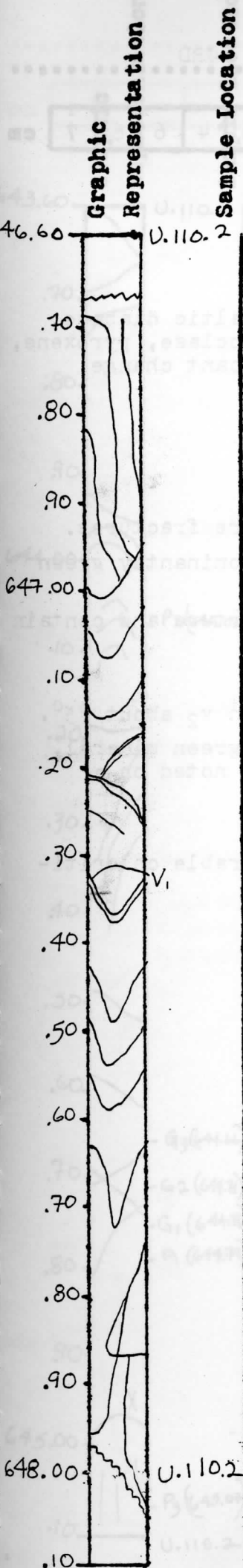
6	4	6	6	7
---	---	---	---	---

 cm to

6	4	0	0	0
---	---	---	---	---

 cm

Box 111 , Section 2



LITHOLOGY: PETROGRAPHY

Medium-grained, greenish-grey, aphyric basaltic diabase. Average grain size about 1 to 0.5mm. Plagioclase and pyroxene. No pyrite in rock. This section is very similar to proceeding section.

VESICLES/AMYGDALES

None observed.

FRACTURES - VEINS - BRECCIA

Fractures are filled essentially with chlorite/smectite, but no calcite or zeolite. Network of very fine hairline fractures throughout the length of the section.

647.32 Vein (v₁) dark green smectite-filled veinlets 0.5cm aperture, completely filled with smectite - no zeolite. Also contains grass green, soft, waxy material, mentioned on previous page.

ROCK ALTERATION

Chlorite/smectite alteration.

ICELAND RESEARCH DRILLING PROJECT

Visual Core Description

Observer JRD

Depth Interval

6 4 5 2 0

cm to

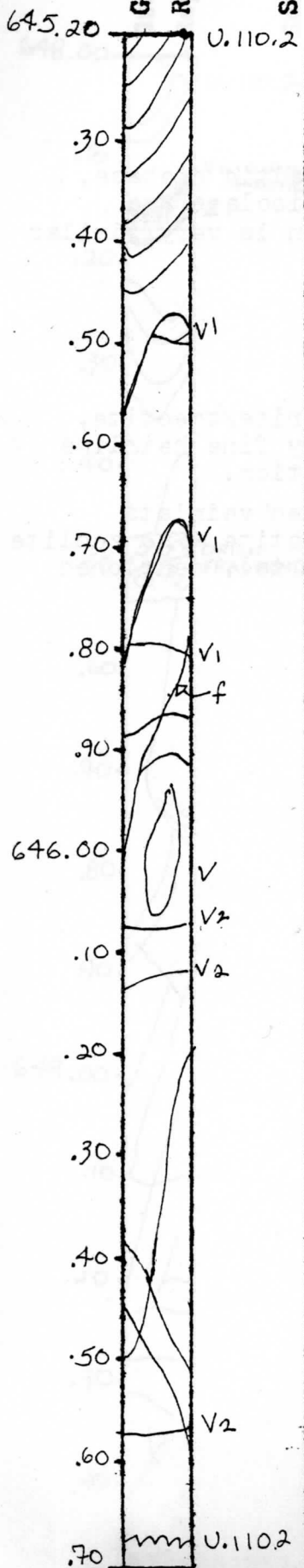
6 4 6 6 7

cm

Box 111, Section 1

Graphic Representation

Sample Location



LITHOLOGY PETROGRAPHY

Medium-grained, greenish-grey, aphyric basaltic diabase. Average grain size about 1.0-0.5mm. Plagioclase, pyroxene, magnetite. No pyrite in rock. No significant change through section.

VESICLES/AMYGDALES

None observed.

FRACTURES - VEINS - BRECCIA

Numerous hairline and less than 1mm aperture fractures.

All fractures on this section contain predominantly green smectite.

Veins - those marked 'V' are about 1mm aperture and contain essentially all green smectite.

Other are hairline fractures.

Core angle on v_1 about 10° . Core angle on v_2 about 85° .

645.78 this fracture contains a soft, waxy, green mineral, but may actually be a smectite. No pyrite noted on fracture surfaces.

ROCK ALTERATION

Hand specimen examination suggests considerable chloritization of the rock minerals.

ICELAND RESEARCH DRILLING PROJECT

Visual Core Description

Observer JH

Depth Interval

6 4 3 5 2

cm to

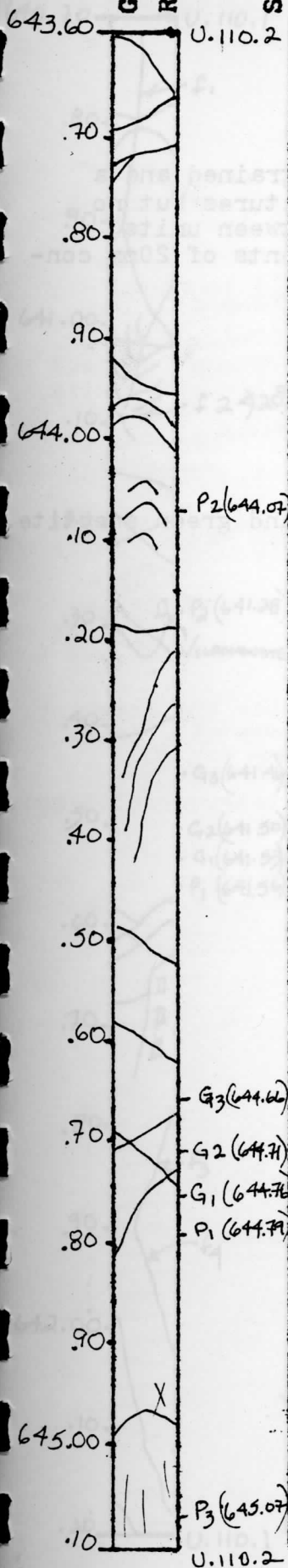
6 4 5 2 0

cm

Box 110 , Section 4

Graphic
Representation

Sample Location



LITHOLOGY, PETROGRAPHY

Same as last section.

VESICLES/AMYGDALES

None observed.

FRACTURES - VEINS - BRECCIA

643.52 Fracture filled with black and green smectite.

644.00 - 644.15 Fracture filled with black swelling clays.

ROCK ALTERATION

644.95 Greenish-grey rock alteration.

ICELAND RESEARCH DRILLING PROJECT

Visual Core Description

Observer JH

Depth Interval

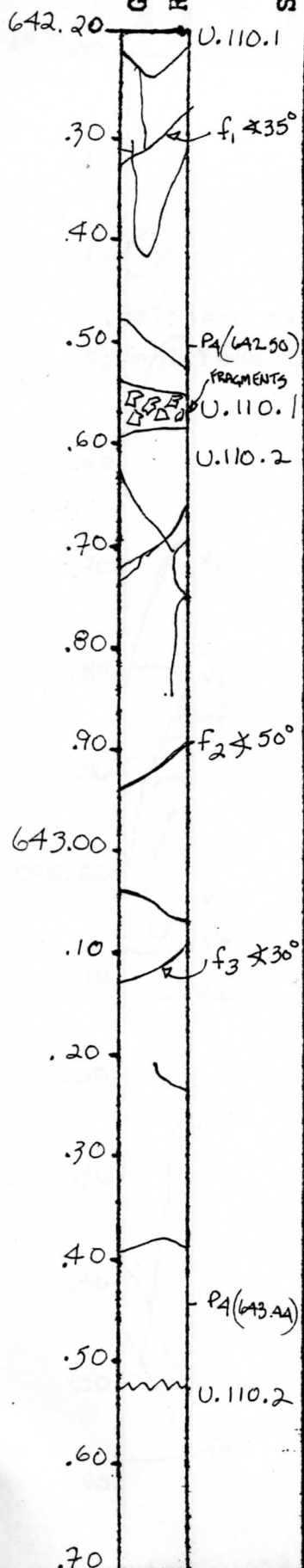
6 4 2 2 0

cm to

6 4 3 5 2

cm

Box 110 , Section 3



LITHOLOGY PETROGRAPHY

Same as last two sections.

642.38 Unit 110.2. This unit is coarse-grained and a homogeneous material. It has several fractures but no vesicles or flow structures. Interval between units 110.1 and 110.2 has planar fracture fragments of 20mm containing fillings of laumontite.

VESICLES/AMYGDALES

None observed.

FRACTURES - VEINS - BRECCIA

642.30 Fracture (f_1) has laumontite.

642.70 Fracture filled with laumontite.

642.90 Fracture, 3mm, filled with black and green smectite.

ROCK ALTERATION

None observed.

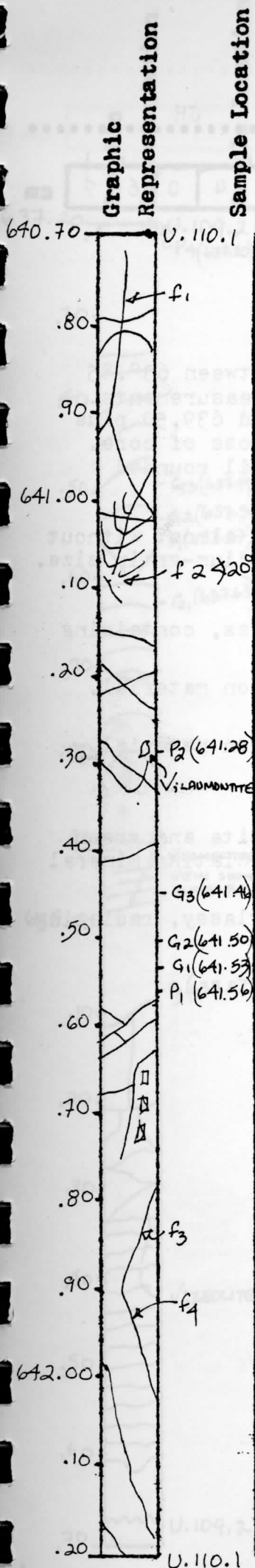
ICELAND RESEARCH DRILLING PROJECT

Visual Core Description

Observer JH

Depth Interval 6 4 0 6 9 cm to 6 4 2 2 0 cm

Box 110, Section 2



LITHOLOGY PETROGRAPHY

Same as last section.

VESICLES/AMYGDALES

641.30 Vesicles, 1x1cm containing laumontite.

FRACTURES - VEINS - BRECCIA

641.10 Fracture (f2) has laumontite, size 1mm.

641.80 Fracture (f3) containing some calcite.

641.90 Fracture (f4) with radiating crystals of high luster.

ROCK ALTERATION

641.80 Greenish-grey rock alteration.

ICELAND RESEARCH DRILLING PROJECT

Visual Core Description

Observer JH

Depth Interval

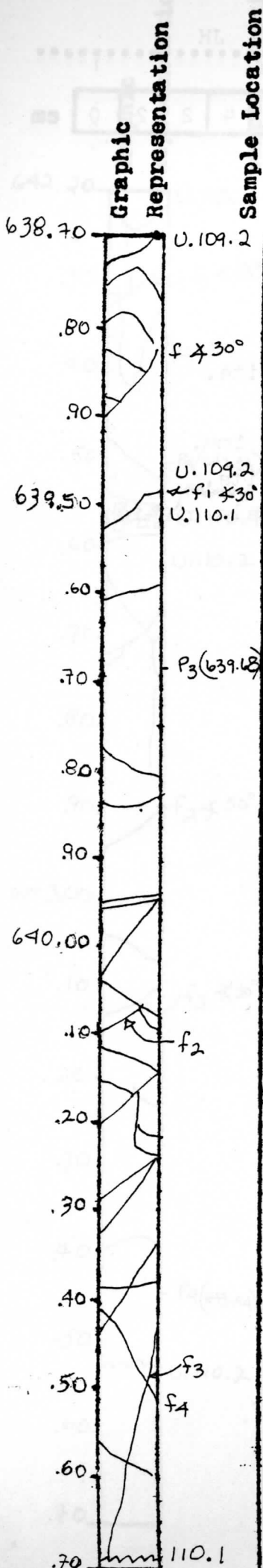
6 3 8 7 0

cm to

6 4 0 6 9

cm

Box 110 , Section 1



LITHOLOGY PETROGRAPHY

Depth adjustment in this section occurs between 638.85 and 639.60 to account for discrepancy in measurements at the drill site. Fractures at 638.85 and 639.50 plus fracture material in between indicate no loss of core. Medium-grained material almost without small rounded vesicles.

639.00 Unit 110.1. Fine-grained material almost without vesicles. Grades slowly downwards into medium-grain size.

VESICLES/AMYGDALES

638.70 Numerous small vesicles, 1mm or less, containing black smectite.

639.90 Vesicles containing white alteration material. Size: 2mm.

640.30 Vesicles containing white alteration material. Size: 4mm.

FRACTURES - VEINS - BRECCIA

639.00 At least 20mm wide filling of calcite and green smectite material and an unknown glassy radiating mineral and calcite filling fracture (f₁).

640.10 F₂ - f₄ are fractures containing glassy, radiating mineral with high luster.

ROCK ALTERATION

638.70 Greenish alteration shade.

640.00 Some pyrite alteration.

640.60 Pyrite amount close to 1%.

ICELAND RESEARCH DRILLING PROJECT

Visual Core Description

Observer JM

Depth Interval

6	3	7	1	5
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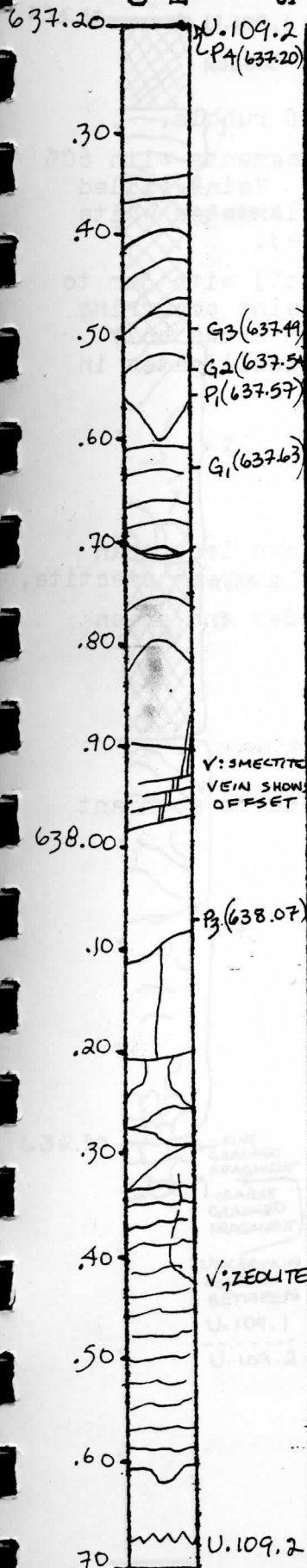
 cm to

6	3	8	6	7
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 cm

Box 109 , Section 4

Graphic Representation Sample Location



LITHOLOGY. PETROGRAPHY

Fine- to medium-grained aphyric basalt(?) with planar and irregular vein and fracture filled with green smectite and minor white zeolites. Homogeneous through the section, no major variation.

VESSICLES/AMYGDALES

None observed.

FRACTURES - VEINS - BRECCIA

Planar and irregular Fractures, slicken sides and green smectite (?) on fracture surface.

ROCK ALTERATION

None observed.

STRUCTURE

637.15 - 638.67 Massive.

ICELAND RESEARCH DRILLING PROJECT

Visual Core Description

Observer JM

Depth Interval

6 3 6 3 0

cm to

6 3 7 1 5

cm

Box 109 , Section 3

Graphic
Representation

Sample Location

636.70 U.109.2

40

50

60

70

80

90

637.00

10

20

30

40

50

60

70

80

U.109.2

U.109.2

LITHOLOGY PETROGRAPHY

*NOTE: Section composed high percentage of rubble.

1. 40% of rock, fine-grained, aphyric rock fragments with 60% of rock composed of vein filling minerals. Veins filled with high proportion of calcite and some elongated white needles of unknown mineral (?green smectite).
2. Medium to fine-grained aphyric rock (basalt?) with 5mm to less than 1mm green phylosilicate filled veins occurring throughout with irregular patterns (diagram shows only largest vein). Calcite(?) occurs with phylosilicates in some veins.

VEG ICLES/AMYGDALES

None observed.

FRACTURES - VEINS - BRECCIA

1. Veins - irregular, maximum width 2mm, minimum less than 1mm, filled with calcite, white needles, (?) green smectite.
2. Planar and irregular fractures, slicken sides and green smectite (?) on fracture surface.

ROCK ALTERATION

None observed.

OTHER

*NOTE: Adjustment occur in this section due to abundant drilling breccia.

STRUCTURE

1. Brecciated.
2. Massive and highly fractured.

ICELAND RESEARCH DRILLING PROJECT

Visual Core Description

ObserverJM.....

Depth Interval

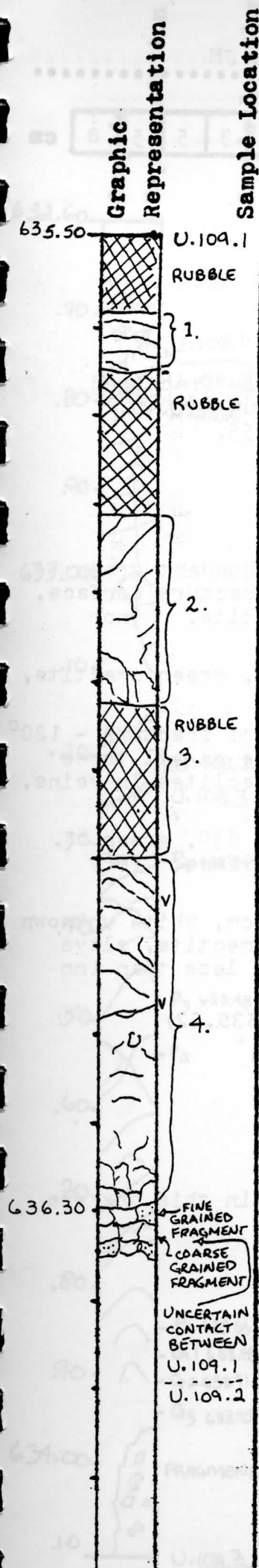
6	3	5	5	0
---	---	---	---	---

 cm to

6	3	6	3	0
---	---	---	---	---

 cm

Box 109 , Section 2



LITHOLOGY PETROGRAPHY

* NOTE: Section composed high percentage of rubble. 70% of core is fractured or has green smectite on white zeolite veins.

1. Fine-grained, light grey aphyric basalt.
2. Fine-grained, light grey aphyric basalt with slightly larger grain-size than fragment above.
3. Rubble: Fine-grained, light grey, aphyric basalt fragments and coarser grained fragments with weathered phenocryst.
4. Similar to above fragments but with increased grain size.

VESICLES/AMYGDALES

4. Bottom of section - ?If present less than 1mm in size, may be just weathered feldspar phenocryst.

FRACTURES - VEINS - BRECCIA

1. Core angle of fracture = 90°, black slickenside, green smectite on surface. 3mm vein containing white zeolite. Fracture surface planar.
2. Fracture surface is random, irregular, black slicken side and green smectite, and white zeolite bladed zeolite.
3. Rubble - contains irregular fragments with slicken sides and green smectite and bladed crystals. Bladed crystals are colourless and have striations on crystal surface. Radiating white unknown zeolites are present.
4. Veins contain 70% green smectite, 25-29% white zeolite and minor calcite. White zeolite (laumontite) veins and fractures irregular.

ROCK ALTERATION

4. Alteration of unknown type causing colour variation along fracture.

OTHER

3. Rubble - contact of unknown origin between fine and coarser grained basalts may occur in this zone.

*NOTE: Adjustment occurred in this section due to abundant drilling breccia. Therefore core depth numbers incomplete.

STRUCTURE

Massive.

ICELAND RESEARCH DRILLING PROJECT

Visual Core Description

Observer JM

Depth Interval

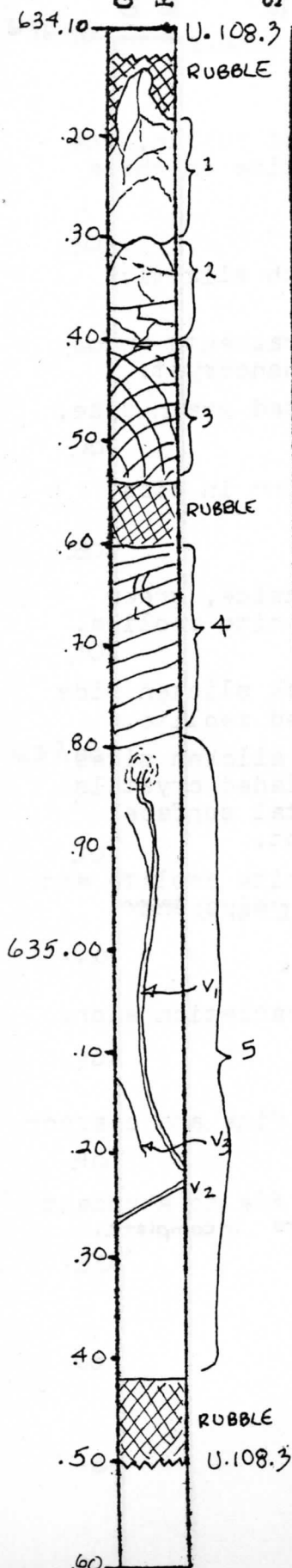
6 3 4 1 3

cm to

6 3 5 5 0

cm

Box 109 , Section 1



LITHOLOGY PETROGRAPHY

*NOTE: high percentage of rubble in core.

Light grey coloured, aphyric basalt, highly fractured with decreasing grain size downward to about 635.40. Predominantly fractured zone 635.40 - 635.55.

VESICLES/AMYGDALES

None observed.

FRACTURES - VEINS - BRECCIA

1. Fracture, both planar and irregular with abundant green smectite and black slicken side covering fracture surface. White unknown mineral intergrown with smectite. Minor pyrite. (634.15)
2. Fractures irregular, slicken side surfaces, green smectite, very fine-grained pyrite. (634.30).
3. Three fractures and vein sets, core angle of fracture - 120° and 50°; parallel to core length. Chlorite on all three fracture surfaces. White bladed unknown zeolites in veins. (634.42)
4. Fractures planar; core angle of fracture - 65°, green smectites and slicken sides on fracture surface. Very fine-grained pyrite. (634.60)

Vein (v₁) - system with maximum width of 1cm, white unknown mineral on edges, and centre composed of smectite, clays and zeolites (?). Vein widths, range from less than 1mm to 1cm. (634.83)

Vein (v₂) - green smectite vein 3mm wide. (635.22)

Vein (v₃) - white unknown zeolites. (635.12)

ROCK ALTERATION

None observed.

OTHER

*NOTE: Adjustment of log thickness occurs in this box due to abundant drilling breccia.

STRUCTURE

Massive.

ICELAND RESEARCH DRILLING PROJECT

Visual Core Description

Observer JH

Depth Interval

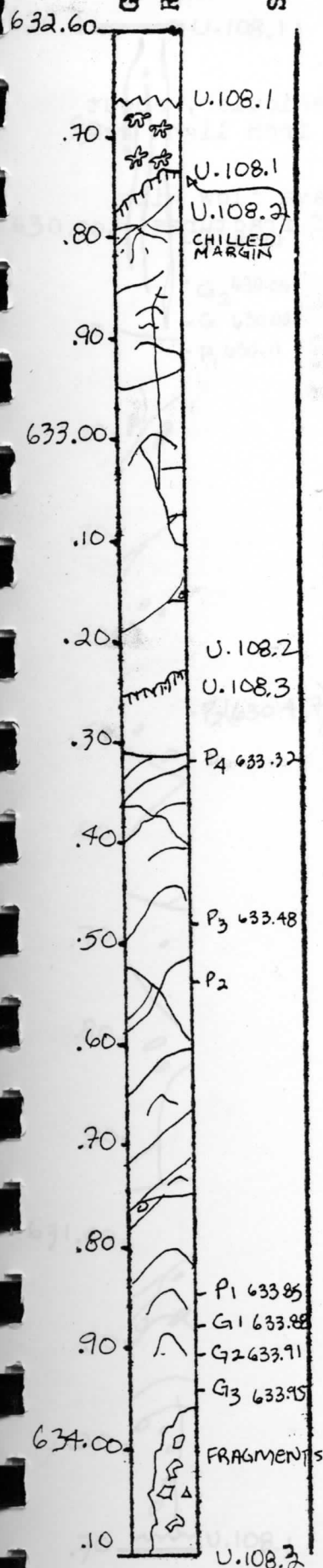
6	3	2	6	6
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 cm to

6	3	4	1	3
---	---	---	---	---

 cm

Box 108 , Section 4



LITHOLOGY PETROGRAPHY

Compact scoriaceous lava flow.

632.74 Fine-grained basalt with small vesicles and sparse plagioclase phenocrysts. Contact at 632.70 is chilled against unit 10^o.1.

633.23 Fine-grained material without vesicles but numerous regular fractures. Contact at 633.20 is chilled against unit 10^o.2.

VESICLES/AMYGDALES

633.53 Light green filling which becomes soft with hydrochloric acid. Small amount of calcite.

FRACTURES - VEINS - BRECCIA

632.94 Fractures contain pyrite and smectite and a white mineral.

633.33 - 633.39 Green and black smectite alteration on fracture surfaces.

633.54 Fracture, core angle of fracture - 45^o, containing 2mm black and green smectite alteration material.

ROCK ALTERATION

632.70 Unit 108.2. Has 3mm irregular flakes of pyrite and pervasive green smectite.

STRUCTURE

Chilled contact between units 108.1 and 108.2.

Chilled contact between units 108.2 and 108.3.

ICELAND RESEARCH DRILLING PROJECT

Visual Core Description

Observer JH

Depth Interval

6 3 1 2 9

cm to

6 3 2 6 6

cm

Box 108 , Section 3

LITHOLOGY PETROGRAPHY

Same unit as last two sections but more vesicular, about 20%. The colour of this interval changes from light grey to dark grey at 631.55.

631.95 Compact scoriaceous part of a lava flow with sparse small vesicles and almost devoid of fractures.

VESICLES/AMYGDALES

631.29 20% vesicles.

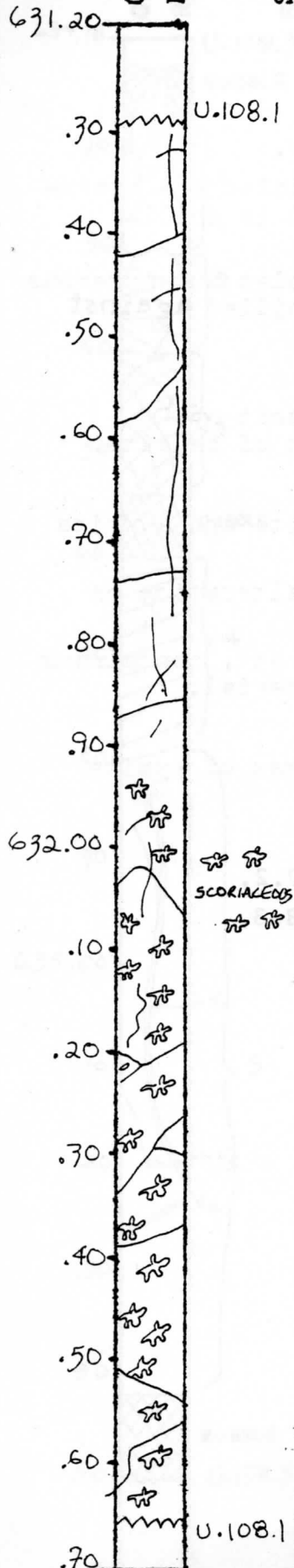
631.95 Sparse, small vesicles.

FRACTURES - VEINS - BRECCIA

Rare.

ROCK ALTERATION

None observed.



ICELAND RESEARCH DRILLING PROJECT

Visual Core Description

Observer JH

Depth Interval

6 2 9 7 8

cm to

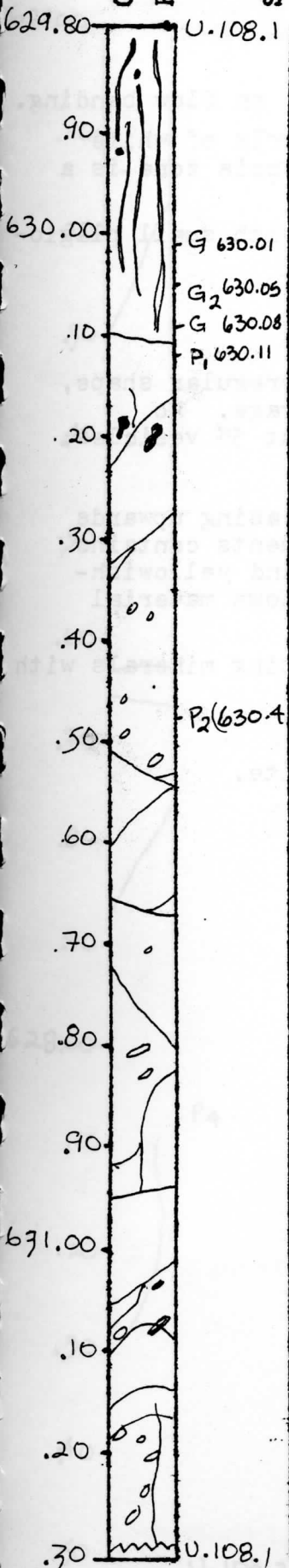
6 3 1 2 0

cm

Box 108 , Section 2

Graphic
Representation

Sample Location



LITHOLOGY PETROGRAPHY

Vesicular lava flow. The same as in previous section, but size of phenocrysts is up to 4mm and amount has increased to about 10%.

VESICLES/AMYGDALES

630.20 Vesicles are elongate, size 5-30mm. Amygdales = quartz, calcite and white radiating highly reflecting mineral.

FRACTURES - VEINS - BRECCIA

Fractures are filled with an unknown mineral with high luster

ROCK ALTERATION

Minor alteration of green and black smectite.

STRUCTURE

629.80 - 631.29 Vesicular lava flow dips from 45° to 90°.

ICELAND RESEARCH DRILLING PROJECT

Visual Core Description

ObserverJH.....

Depth Interval

6 2 8 5 3

cm to

6 2 9 7 8

cm

Box 108 , Section 1

LITHOLOGY PETROGRAPHY

Fine-grained massive unit without vesicles on flow banding.

628.60 Angular breccia fragments in a matrix of white alteration minerals. Lower surface of breccia zone is a clean flat boundary.

628.82 Unit 108.1. Vesicular lava flow with small plagioclase phenocrysts of 1mm size.

VESICLES/AMYGDALES

628.53 None *observed*.

628.82 Elongate vesicles of regular to irregular shape, filled with milky white mass without cleavage. No alteration rim surrounding amydales. About 5% vesicles.

FRACTURES - VEINS - BRECCIA

628.60 Size of breccia fragments is increasing upwards from 1-30mm. Matrix between breccia fragments contains alteration. Quartz, calcite, dark green and yellowish-green clay minerals and white massive unknown material (zeolite).

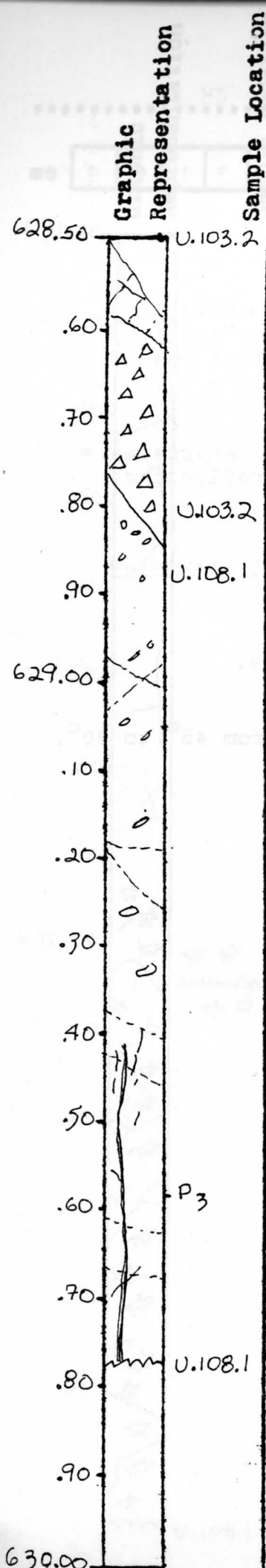
628.80 Fractures filled with white radiating minerals with high luster.

ROCK ALTERATION

Minor alteration of green and black smectite.

STRUCTURE

Breccia zone dips at approximately 70°.



ICELAND RESEARCH DRILLING PROJECT

Visual Core Description

Observer ^{ILG}

Depth Interval

6 2 6 9 6

cm to

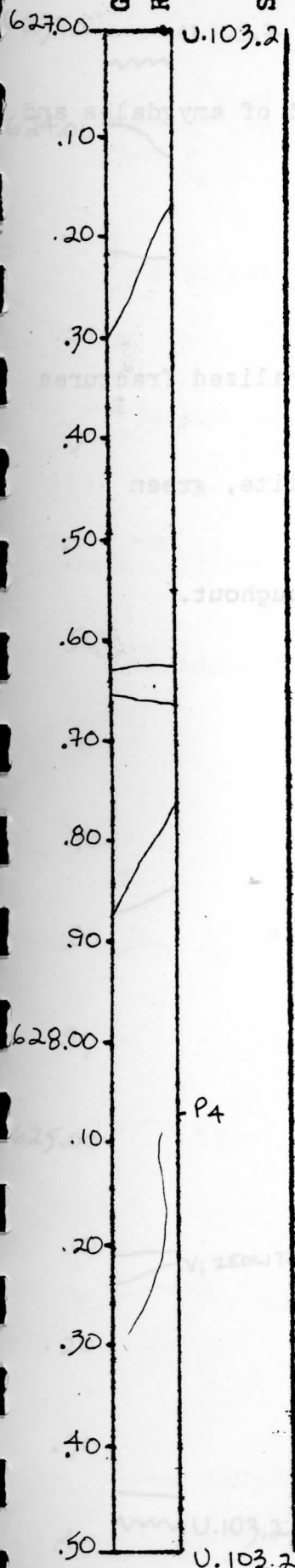
6 2 8 5 3

cm

Box 107 , Section 4

Graphic
Representation

Sample Location



LITHOLOGY PETROGRAPHY

Fine-grained aphyric tholeiite becoming progressively very fine-grained.

VESICLES/AMYGDALES

None observed.

FRACTURES - VEINS - BRECCIA

Very marked preferred orientation of mineralized fractures at 50° to vertical.

628.05 Hairlike zeolite filled fractures.

ROCK ALTERATION

Pervasive zeolite, green smectite.

OTHER

Pyrite seems rare in this finer portion of this unit.

STRUCTURE

Unit 103.2 very massive and isotropic throughout.

ICELAND RESEARCH DRILLING PROJECT

Visual Core Description

Observer ... ILG

Depth Interval

6 2 5 3 7

cm to

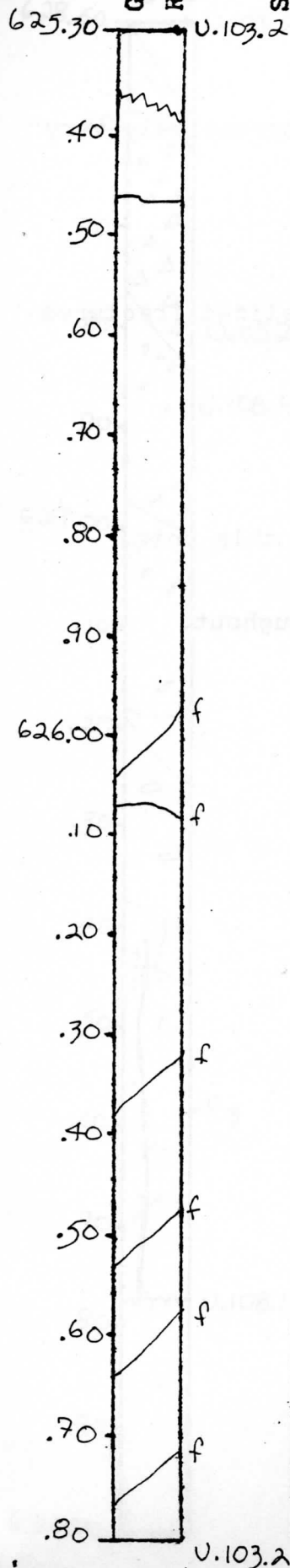
6 2 6 9 6

cm

Box 107 , Section 3

Graphic Representation

Sample Location



LITHOLOGY PETROGRAPHY

Aphyric, medium-grained, tholeiite, devoid of amygdaloids and phenocrysts.

Progressive gradual change to:

626.45 Fine-grained aphyric tholeiite.

VESICLES/AMYGDALES

None observed.

FRACTURES - VEINS - BRECCIA

Very marked preferred orientation of mineralized fractures at 50° to core.

ROCK ALTERATION

Sparse pyrite throughout. ?Pervasive zeolite, green smectite.

STRUCTURE

Unit 103.2 very massive and isotropic throughout.

ICELAND RESEARCH DRILLING PROJECT

Visual Core Description

Observer ILG

Depth Interval

6	2	3	9	3
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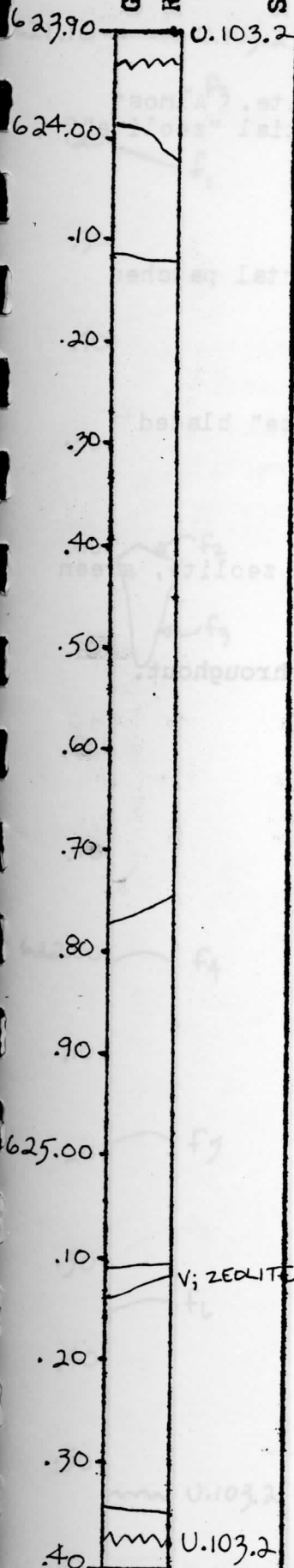
 cm to

6	2	5	3	7
---	---	---	---	---

 cm

Box 107 , Section 2

Graphic Representation
Sample Location



LITHOLOGY PETROGRAPHY

Aphyric, medium-grained, tholeiite. Devoid of amygdaloids and phenocrysts. White groundmass feldspar and ?interstitial zeolite.

VESICLES/AMYGDALES

None observed.

FRACTURES - VEINS - BRECCIA

Hairlike fractures with green smectite.

625.14 Zeolite filled vein, 1mm thick.

ROCK ALTERATION

Sparse pyrite throughout (0.1%). ?Pervasive zeolite, green smectite.

STRUCTURE

Unit 103.2 very massive and isotropic throughout.

ICELAND RESEARCH DRILLING PROJECT

Visual Core Description

Observer ILG

Depth Interval

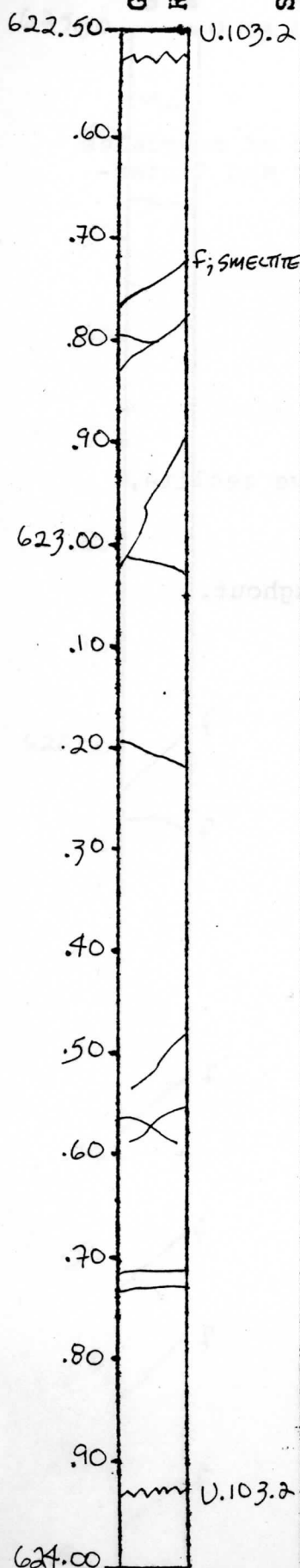
6	2	2	5	3
---	---	---	---	---

 cm to

6	2	3	9	3
---	---	---	---	---

 cm

Box 107 , Section 1



LITHOLOGY PETROGRAPHY

As above. Aphyric, medium-grained, tholeiite. Almost devoid of vesicles, phenocrysts. Interstitial "zeolite"? and conspicuous white groundmass feldspar.

623.73 Adjustment point. No spin off.

VESICLES/AMYGDALES

Almost none. Only isolated larger intersertal patches about 1mm in diameter of white "zeolite".

FRACTURES - VEINS - BRECCIA

622.75 Green smectite on fractures.

623.50 Mineralized fracture, white "zeolite" bladed lustrous.

623.57 Second thin fracture.

ROCK ALTERATION

Sparse pyrite throughout (0.2%), pervasive zeolite, green smectite and veins of one or other.

STRUCTURE

Unit 103.2 very massive and is isotropic throughout.

ICELAND RESEARCH DRILLING PROJECT

Visual Core Description

Observer CP

Depth Interval

6 2 1 0 7

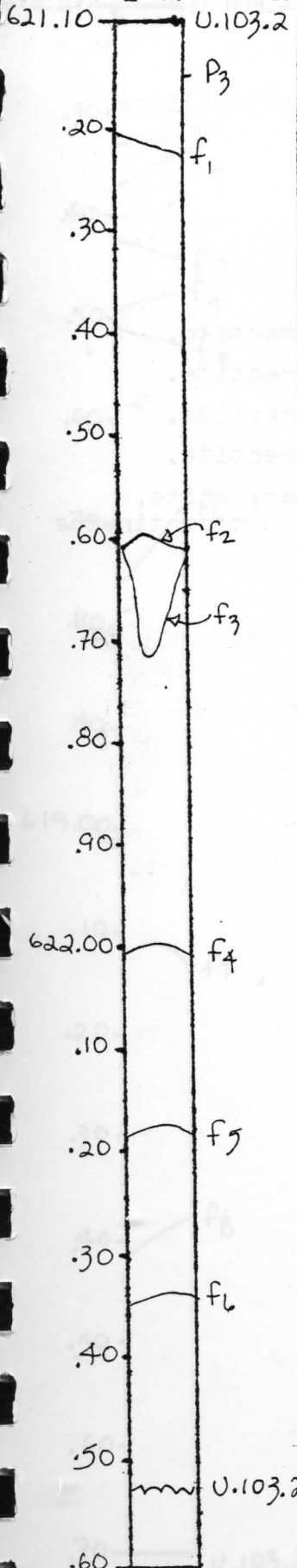
cm to

6 2 2 5 3

cm

Box 106 , Section 4

Graphic Representation
Sample Location



LITHOLOGY PETROGRAPHY

Greenish-grey, fine-grained, aphyric, holocrystalline, diabasic intrusion.

VESICLES/AMYGDALES

None observed.

FRACTURES - VEINS - BRECCIA

621.21 Fracture (f_1), irregular, angle about 90°, filled with white, fibrous, radiating mineral and calcite.

621.60 Fracture (f_2); green smectite in fracture.

621.62 Fracture (f_3), green and black smectite in fracture. Angle 100°, irregular.

622.02 Fracture (f_4), fracture filled with white radiating mineral, angle 75°.

622.18 Fracture (f_5), angle 70°.

622.35 Fracture (f_6), angle 70°, filled with white radiating mineral.

ROCK ALTERATION

Sparse pyrite throughout core.

ICELAND RESEARCH DRILLING PROJECT

Visual Core Description

Observer ^{CF}

Depth Interval

6	1	9	7	0
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 cm to

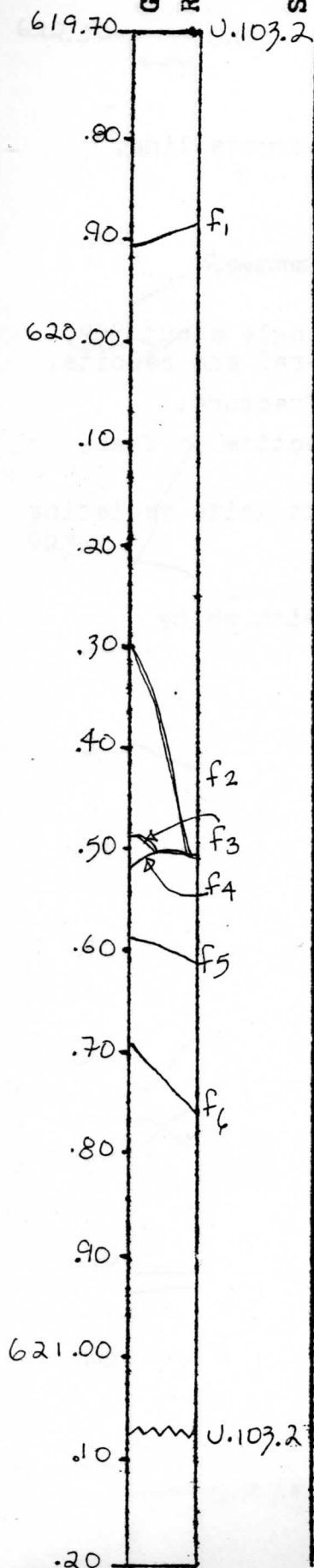
6	2	1	0	7
---	---	---	---	---

 cm

Box 106 , Section 3

Graphic
Representation

Sample Location



LITHOLOGY PETROGRAPHY

Greenish-grey, fine-grained, aphyric, holocrystalline, diabasic intrusion.

VESICLES/AMYGDALES

None observed.

FRACTURES - VEINS - BRECCIA

619.90 Fracture (f₁) - angle 70°.

620.30 Fracture (f₂) - angle 15°, green smectite.

620.50 Fracture (f₃) - angle 30°, green smectite.

620.53 Fracture (f₄) - angle 40°, green smectite.

620.58 Fracture (f₅) - angle 90°, green smectite.

620.69 Fracture (f₆) - angle 60°, irregular; white, fibrous mineral filling fracture - patchy, not continuous distribution of white mineral in fracture.

ROCK ALTERATION

Sparse pyrite throughout.

ICELAND RESEARCH DRILLING PROJECT

Visual Core Description

Observer CP

Depth Interval

6	1	8	2	0
---	---	---	---	---

 cm to

6	1	9	7	0
---	---	---	---	---

 cm

Box 106 , Section 2

LITHOLOGY PETROGRAPHY

Greenish-grey, fine-grained, aphyric, holocrystalline, diabasic intrusion.

VESICLES/AMYGDALES

None *observed*.

FRACTURES - VEINS - BRECCIA

618.33 Fracture (f₁) - irregular fracture with white, radiating, fibrous mineral filling. Angle about 60°.

618.36 Fracture (f₂) - green smectite. Angle 50°.

618.42 Fracture (f₃) - slicken sides, green smectite, angle 65°.

618.48 Fracture (f₄) - green smectite, slickensides, angle 90°.

618.50 Fracture (f₅) - green and black smectite, angle 75°.

618.70 Fracture (f₆) - black smectite, angle 40°.

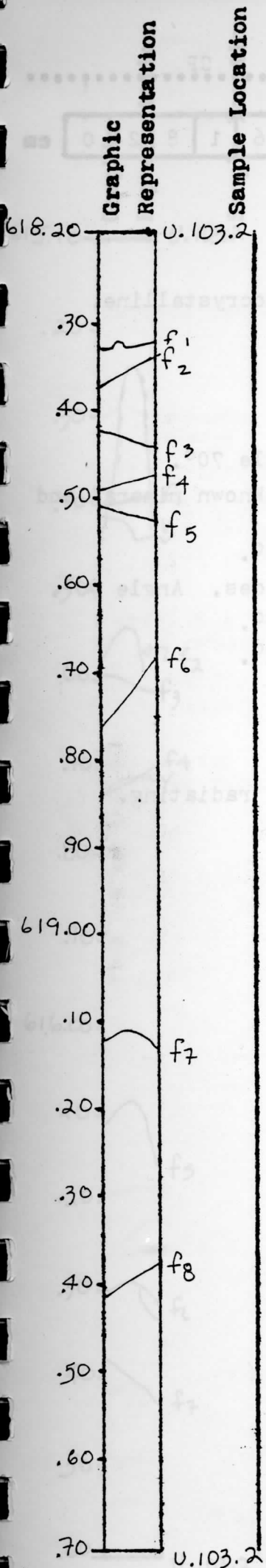
619.12 Fracture (f₇) - green smectite, angle 50°.

619.35 Fracture (f₈) - black and green smectite, angle 50°.

ROCK ALTERATION

Sparse pyrite throughout core.

None *observed*.



ICELAND RESEARCH DRILLING PROJECT

Visual Core Description

Observer^{CP}.....

Depth Interval

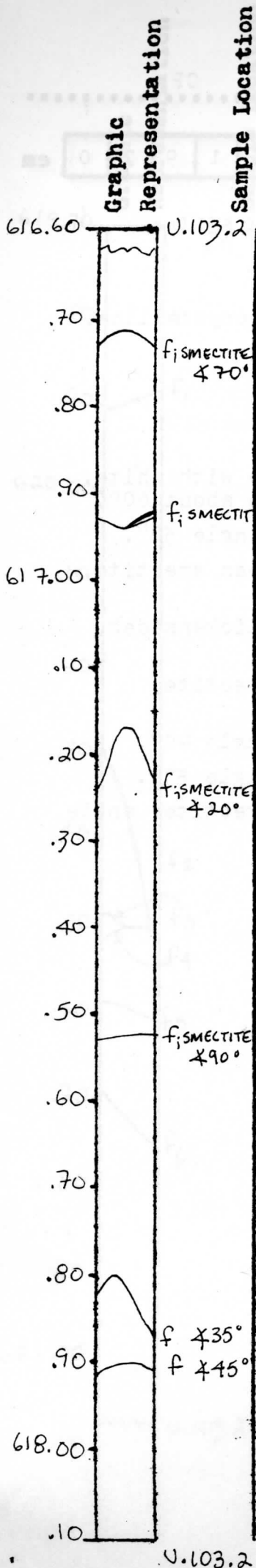
6 1 6 6 3

cm to

6 1 8 2 0

cm

Box 106 , Section 1



LITHOLOGY PETROGRAPHY

Greenish-grey, fine-grained, aphyric, holocrystalline, diabasic intrusion.

VESICLES/AMYGDALES

None observed.

FRACTURES - VEINS - BRECCIA

616.73 Fracture with black smectite, angle 70°.

616.94 Fractures partially filled with unknown mineral and smectite. F₁ angle 80°; F₂ angle 75°.

617.20 Fracture with smectite. Angle 20°.

617.53 Fracture with smectite, slickensides. Angle 90°.

617.81 Fracture with smectite. Angle 35°.

617.92 Fracture with smectite. Angle 45°.

ROCK ALTERATION

Sparse pyrite throughout unit.

OTHER

616.94 Unknown mineral - white, fibrous, radiating.

ICELAND RESEARCH DRILLING PROJECT

Visual Core Description

Observer JH

Depth Interval

6 1 5 1 0

cm to

6 1 6 6 3

cm

Box 105 , Section 4

LITHOLOGY PETROGRAPHY

Greenish-grey, fine-grained, aphyric, holocrystalline, diabasic intrusion.

VESICLES/AMYGDALES

None observed.

FRACTURES - VEINS - BRECCIA

615.40 Fracture (f₁) - Simple planar, core angle of fracture - 80°, minor pyrite and black smectite.

615.40 Vein - white, fine-grained unknown mineral.

615.41 Vein - as above.

615.56 Fracture (f₂) - Hairline, irregular pattern.

615.59 Fracture (f₃) - planar, simple, radiating blade (?)zeolite, white.

615.70 Fracture (f₄) - core angle of fracture - 70°. Fracture cutting vein of white radiating zeolites.

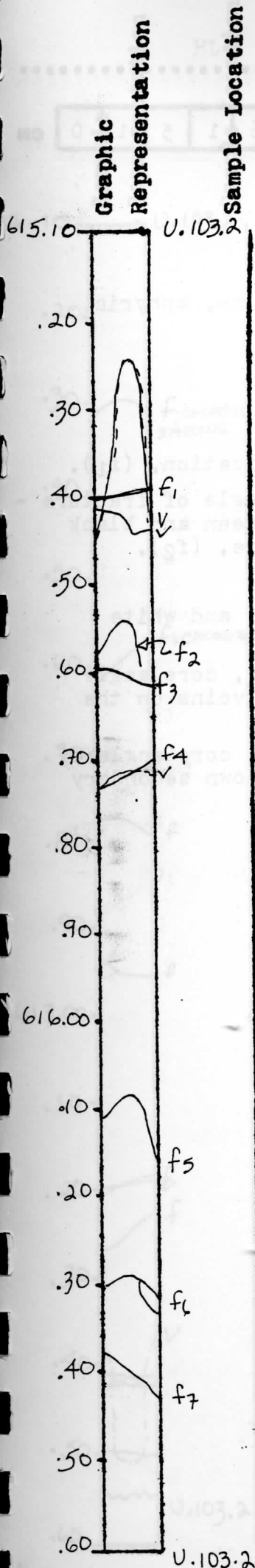
616.12 Fracture (f₅) - planar, simple fracture, black and green smectite, minor white fine-grained mineral.

616.30 Fracture (f₆) - irregular fracture, black smectite.

616.47 Fracture (f₇) - simple fracture, pyrite and black smectite.

ROCK ALTERATION

None observed.



ICELAND RESEARCH DRILLING PROJECT

Visual Core Description

Observer JH

Depth Interval

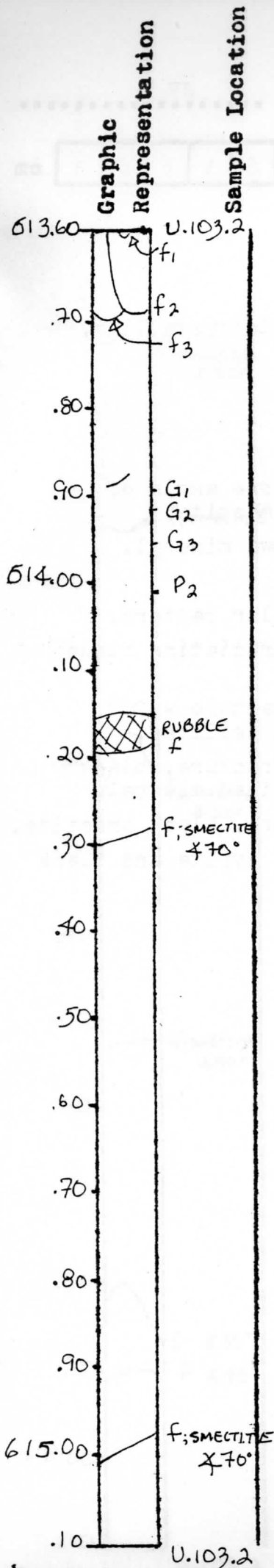
6 1 3 5 5

cm to

6 1 5 1 0

cm

Box 105 , Section 3



LITHOLOGY PETROGRAPHY

Greenish-grey, fine-grained, holocrystalline, aphyric, diabasic intrusion.

VESICLES/AMYGDALES

None observed.

FRACTURES - VEINS - BRECCIA

613.57 Fracture - hairline, some mineralisation, (f₁).

613.60 Fracture - planar, simple, core angle of fracture - 340°. white unknown secondary minerals, green and black secondary minerals (?) chlorite and smectite, (f₂).

613.87 Hairline fracture.

614.14 Fracture - rubble, large fractures and white radiating, irregular fractures and veins.

614.30 Fracture - planar fracture, simple, core angle of fracture - 70°. Black smectite, white veins on the bottom of core, 0.5mm.

615.00 Fracture - simple planar fracture, core angle of fracture - 70°, black smectite, white unknown secondary mineral, very fine-grained.

ROCK ALTERATION

None observed.

ICELAND RESEARCH DRILLING PROJECT

Visual Core Description

Observer JH

Depth Interval

6 1 2 0 5

cm to

6 1 3 5 5

cm

Box 105 , Section 2

LITHOLOGY PETROGRAPHY

Greenish-grey, fine-grained, holocrystalline, aphyric, diabasic intrusion.

VESICLES/AMYGDALES

None observed.

FRACTURES - VEINS - BRECCIA

612.33 Fracture - minor chlorite and smectite on fracture surface, simple irregular fracture.

612.57 Fracture - minor (?)chlorite, planar, simple fracture. Core angle of fracture - 50°.

613.20 Fracture. Vein - white, fine-grained, 1mm wide. Fracture.

613.38 Vein - light grey, very fine-grained, aphyric vein, 1cm-2cm wide, discontinuous vein, some white radiating minerals in fractures. cutting veins. Vein comes into core at 613.20, goes out at 613.50.

ROCK ALTERATION

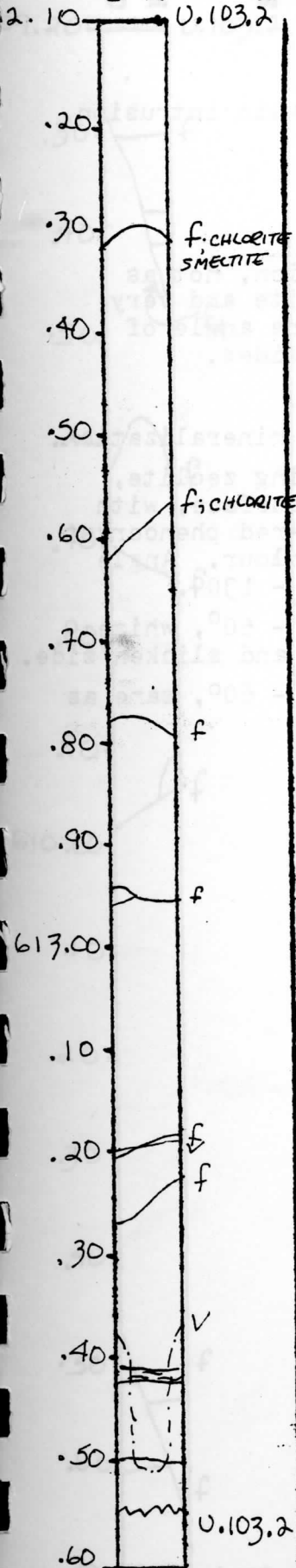
None observed.

STRUCTURE

Unit 103.2 is massive.

Graphic Representation

Sample Location



ICELAND RESEARCH DRILLING PROJECT

Visual Core Description

ObserverJH.....

Depth Interval

6 1 0 7 2

cm to

6 1 2 0 5

cm

Box 105 , Section 1

LITHOLOGY PETROGRAPHY

Greenish-grey, fine-grained, aphyric diabasic intrusion.

VESICLES/AMYGDALES

None observed.

FRACTURES - VEINS - BRECCIA

610.74 Fracture (f_1) - minor mineralization, not as noticeable as other fractures, some chlorite and very fine-grained white radiating zeolite. Core angle of fracture - 160° , simple, planar, slicken sides.

611.17 Hairline fracture zone, and minor mineralization.

611.55 Non planar fracture, white radiating zeolite, green chlorite, slicken side on fracture surface, with associated hairline fractures and 3mm altered phenocryst of unknown mineralogy, reddish-brown in colour. Angle of large fracture, core angle of fracture - 130° .

611.81 Fracture - core angle of fracture - 60° , white radiating unknown zeolite, green chlorite and slicken side.

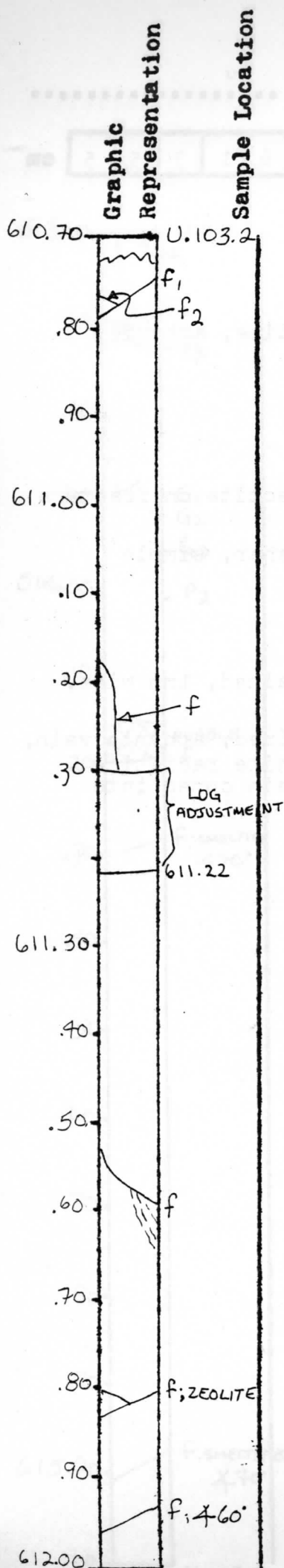
611.95 Fracture - core angle of fracture - 60° , same as fracture above.

ROCK ALTERATION

None observed.

STRUCTURE

Unit 103.2 is massive.



ICELAND RESEARCH DRILLING PROJECT

Visual Core Description

ObserverJH.....

Depth Interval

6 1 0 7 2

cm to

6 1 2 0 5

cm

Box 105 , Section 1

LITHOLOGY PETROGRAPHY

Greenish-grey, fine-grained, aphyric diabasic intrusion.

VESICLES/AMYGDALES

None observed.

FRACTURES - VEINS - BRECCIA

610.74 Fracture (f_1) - minor mineralization, not as noticeable as other fractures, some chlorite and very fine-grained white radiating zeolite. Core angle of fracture - 160° , simple, planar, slicken sides.

611.17 Hairline fracture zone, and minor mineralization.

611.55 Non planar fracture, white radiating zeolite, green chlorite, slicken side on fracture surface, with associated hairline fractures and 3mm altered phenocryst of unknown mineralogy, reddish-brown in colour. Angle of large fracture, core angle of fracture - 130° .

611.81 Fracture - core angle of fracture - 60° , white radiating unknown zeolite, green chlorite and slicken side.

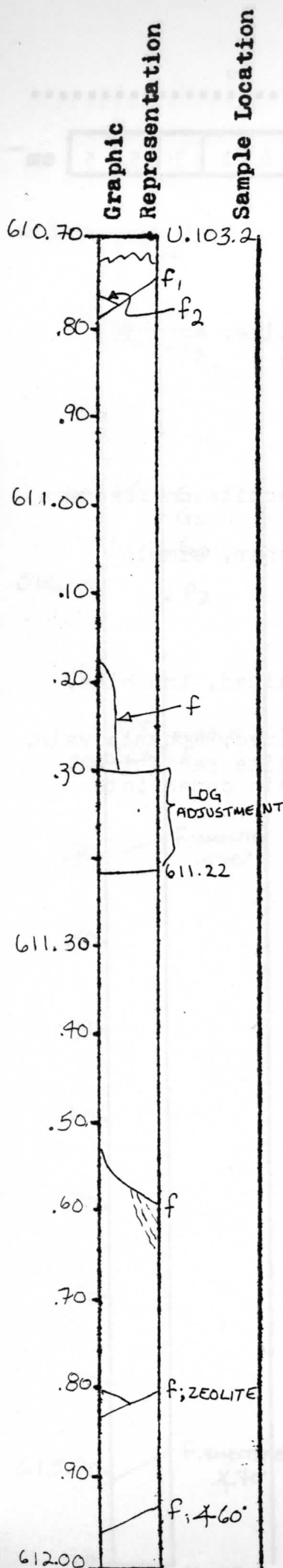
611.95 Fracture - core angle of fracture - 60° , same as fracture above.

ROCK ALTERATION

None observed.

STRUCTURE

Unit 103.2 is massive.



ICELAND RESEARCH DRILLING PROJECT

Visual Core Description

Observer JM

Depth Interval

6 0 9 2 0

cm to

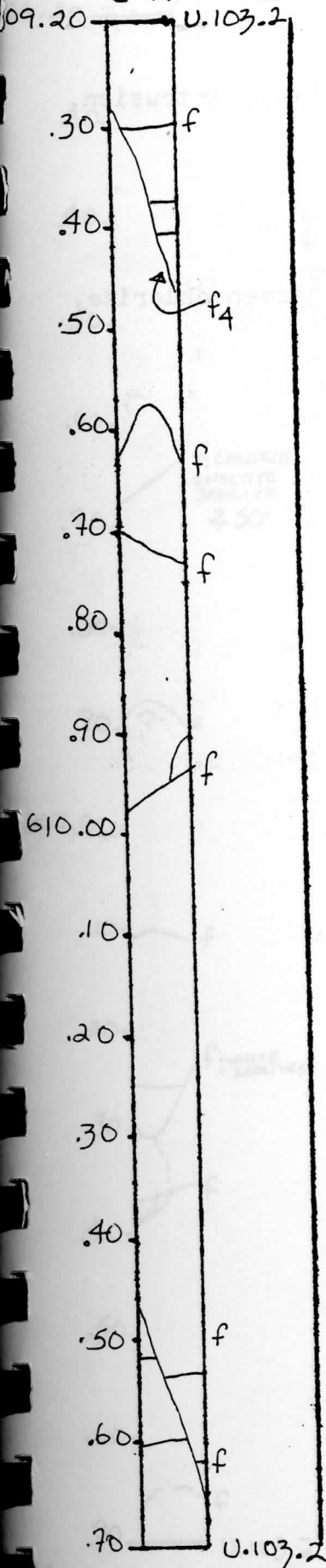
6 1 0 7 2

cm

Box 104 , Section 4

Graphic Representation

Sample Location



LITHOLOGY PETROGRAPHY

Greenish-grey, fine-grained, aphyric diabasic intrusion.

VESICLES/AMYGDALES

None observed.

FRACTURES - VEINS - BRECCIA

609.44 F₄ - minor slicken sides on planar fractures.

609.70 Fracture - planar surface, green chlorite, slicken side, core angle of fracture - 115°.

609.90 Fracture - slicken side, green chlorite (?), unknown white radiating zeolite. Core angle of fracture - 60°.

610.47 Primary fracture, slicken side, white unknown zeolite, radiating; green chlorite, core angle of fracture - 170°.

STRUCTURE

Unit 103.2 is massive.

ROCK ALTERATION

None observed.