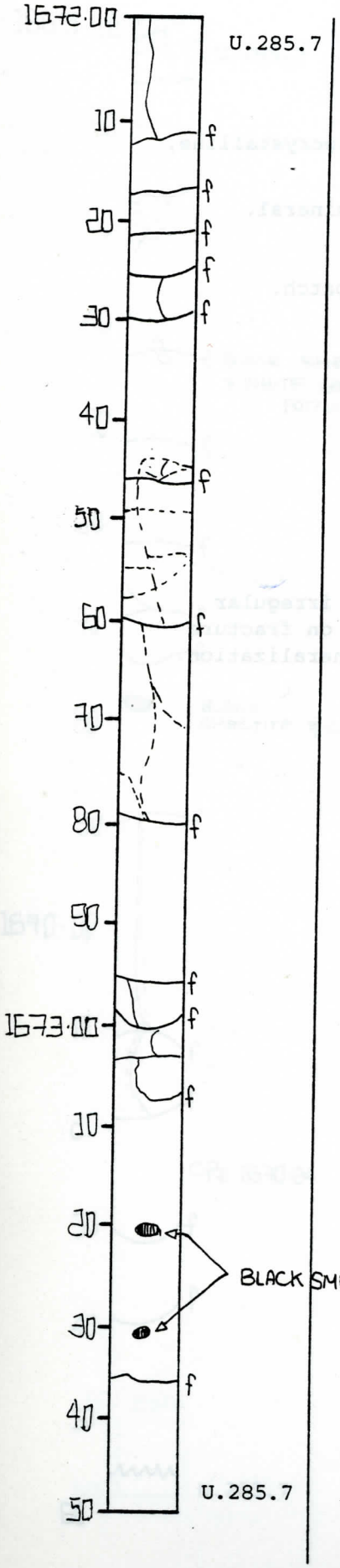
Visual Core Description Observer JM

Depth Interval 1672.00 cm to 1673.50 cm

Box 286, Section 2



LITHOLOGY-PETROGRAPHY

Continues U.285.7

Fine-grained, greenish-gray, holocrystalline, aphyric, basaltic intrusion.

1672.54 and 1672.68 Hairline fractures with alteration halo around many of them common, filled with black smectite and white zeolite (?).

1673.20 and 1673.30 Black smectite and white zeolite (?) patches.

STRUCTURE

Massive

VESICLES/AMYGDALES

None

FRACTURES - VEINS - BRECCIA

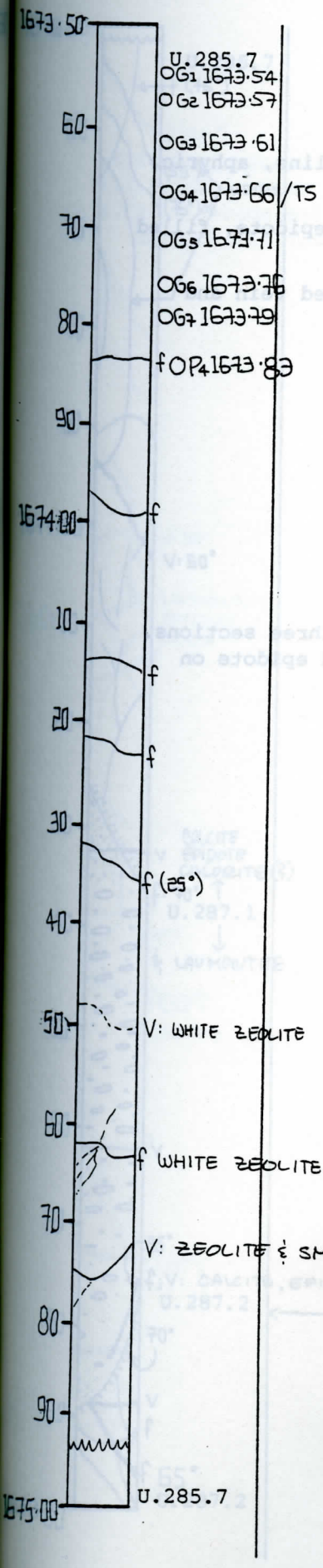
Moderately fractured, planer fractures dipping 0-20°, irregular fracture with alteration halos and smectite filling are common.

ICELAND RESEARCH DRILLING PROJECT - REYDARFJORDUR 1978

Visual Core Description Observer JM

Depth Interval 1673.50 cm to 1674.94 cm

Box 286, Section 3



LITHOLOGY-PETROGRAPHY

Continues U.285.7

Fine-grained, greenish-gray, equigranular, holocrystalline, aphyric, basaltic intrusion.

STRUCTURE

Massive

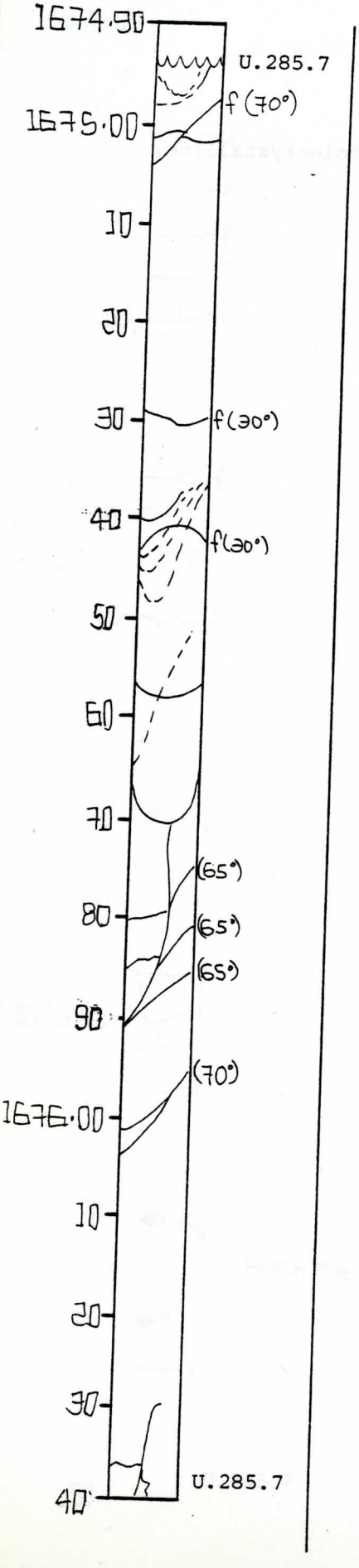
VESICLES/AMYGDALES

None

Visual Core Description Observer JM

Depth Interval 167494 cm to 167651 cm

Box 286, Section 4



LITHOLOGY-PETROGRAPHY

Continues U.285.7

Fine-grained, greenish-gray, holocrystalline, aphyric, basaltic intrusion.

1675.76 Laumontite, green smectite and epidote, filled vein and fracture system.

1676.32 Zeolite and green smectite filled vein and fracture.

STRUCTURE

Massive

VESICLES/AMYGDALES

None

FRACTURES - VEINS - BRECCIA

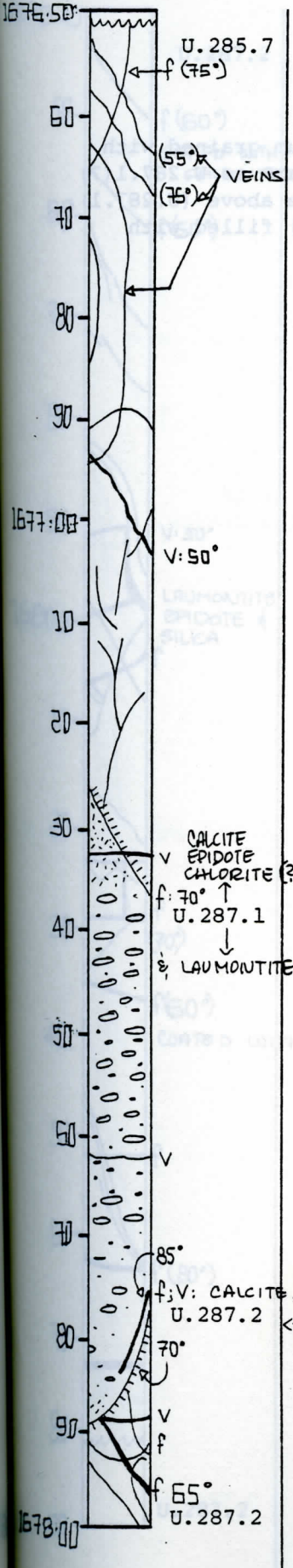
Increased fracturing, compared to last three sections. Black and green smectite, laumontite and epidote on fracture surfaces.

Visual Core Description Observer GW

Depth Interval 167651 cm to 167800 cm

Box 287, Section 1

Graphic Representation Sample



LITHOLOGY-PETROGRAPHY

Continues U.285.7

Grey, dike rock, aphyric and fine grained with chilled contact to U. 287.1.

U.287.1 Grey-green lava flow.

U.287.2 Seems to be the same dike (U.285.7). Chilled contact against U.287.1.

Dike with adjacent country rock.

STRUCTURE

U.285.7 Massive

U.287.1 Vesicular

U.287.2 Massive

VESICLES/AMYGDALES

U.285.7 None

U.287.1 Abundant, elongated with horizontal orientation vesicles filled with silica and calcite, some chlorite.

FRACTURES - VEINS - BRECCIA

U.285.7 Moderately fractured with abundant veins (0.1 mm - 4 mm) filled with quartz, calcite and epidote. Large ones have laumontite.

U.287.1 Few

U.287.2 See U.285.7 this section.

ROCK ALTERATION

U.285.7 Seems to be rather fresh.

U.287.1 Moderate

→ OPz 1677.78

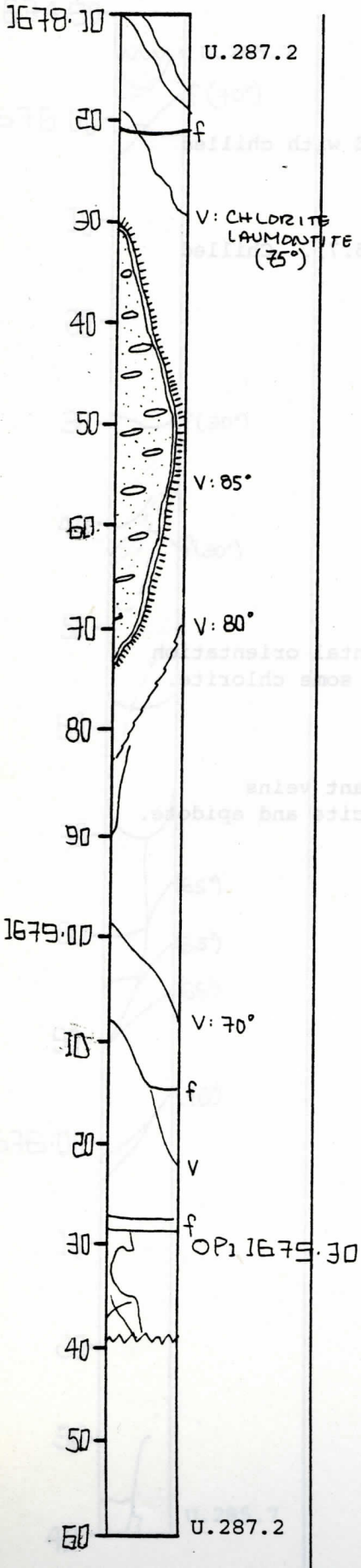
ICELAND RESEARCH DRILLING PROJECT - REYDARFJORDUR 1978

Visual Core Description Observer GW

Depth Interval 1678.05 cm to 1679.39 cm

Box 287, Section 2

Graphic Representation Sample



LITHOLOGY-PETROGRAPHY

Continues U.287.2

Greenish gray aphyric basalt, fine to medium grained with chilled contact to slice of country rock same as U.287.1(?) aphyric, highly vesicular, grey-green. See above (U.287.1). Between dike and country rock vein (→ 3 mm) filled with laumontite, calcite and chlorite.

STRUCTURE

Massive

VESICLES/AMYGDALES

None

FRACTURES - VEINS - BRECCIA

Moderately fractured

ROCK ALTERATION

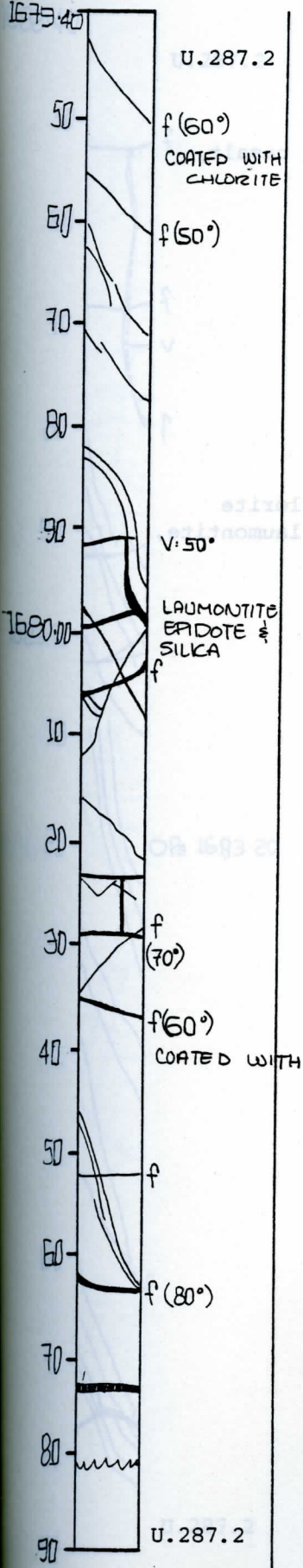
Low

Visual Core Description Observer GW

Depth Interval 167939 cm to 168081 cm

Box 287, Section 3

Graphic Representation | Sample



LITHOLOGY-PETROGRAPHY

Continues U.287.2

Grey-green aphyric fine to medium grained basalt, similar to previous section.

STRUCTURE

Massive

VESICLES/AMYGDALES

None

FRACTURES - VEINS - BRECCIA

Some very steep, some subhorizontal. One steep filled with laumontite (chlorite and epidote).

ROCK ALTERATION

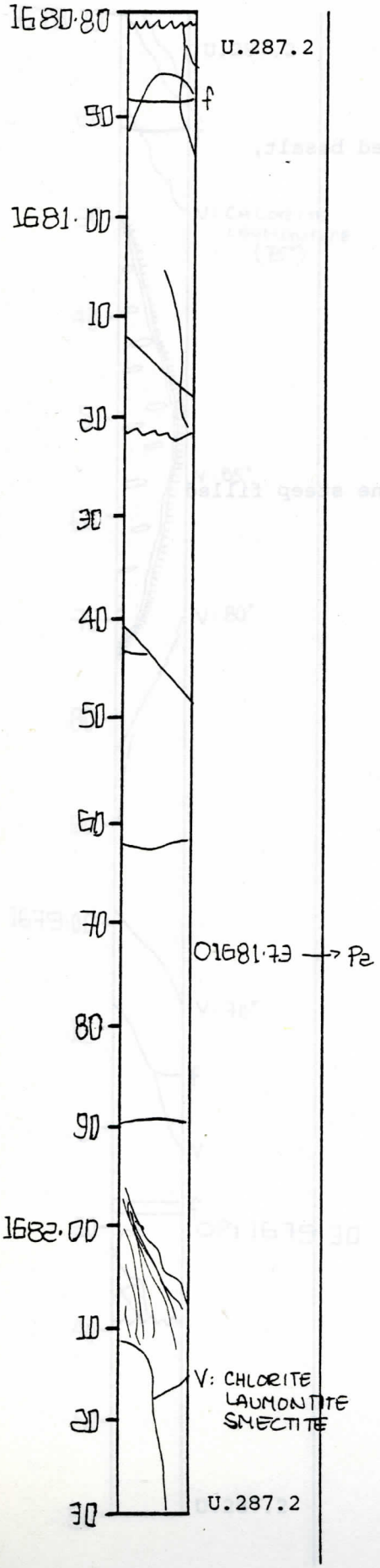
Low

Visual Core Description Observer GW

Depth Interval 1680.81 cm to 1682.39 cm

Box 287, Section 4

Graphic Representation | Sample



LITHOLOGY-PETROGRAPHY

Continues U.287.2

Grey-green, aphyric fine to medium grained basalt, very similar to previous section.

STRUCTURE

Massive

VESICLES/AMYGDALES

None

FRACTURES - VEINS - BRECCIA

Moderately fractured, veins filled with chlorite (smaller ones). Vein 1682.20 filled with laumontite, chlorite, smectite, few calcite.

ROCK ALTERATION

Low to moderate.

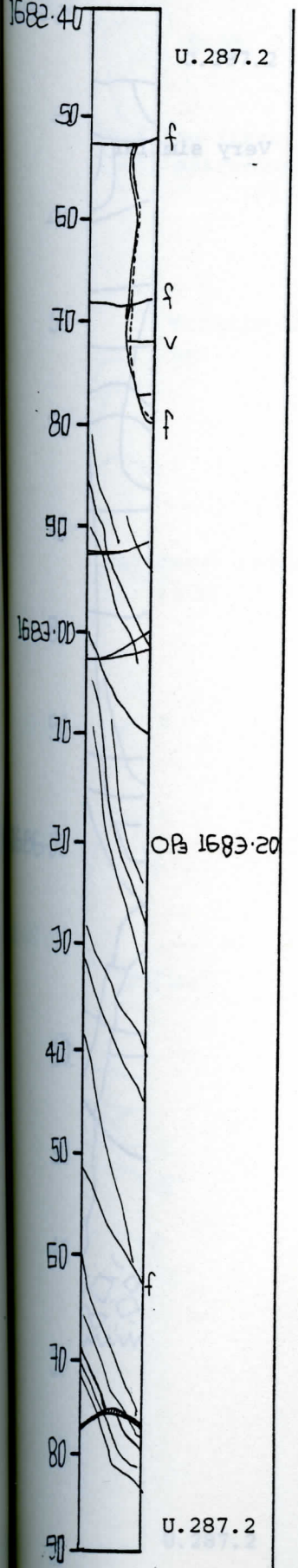
ICELAND RESEARCH DRILLING PROJECT - REYDARFJORDUR 1978

Visual Core Description Observer GW

Depth Interval 1682.39 cm to 1683.79 cm

Box 288, Section 1

Graphic Representation Sample



LITHOLOGY-PETROGRAPHY

Continues U.287.2

Grey-green, medium- to fine-grained non-vesicular basalt, very similar to previous section.

STRUCTURE

Massive

VESICLES/AMYGDALES

None, some veins, filled with chlorite, laumontite, and few patches of calcite.

FRACTURES - VEINS - BRECCIA

Moderately fractured.

ROCK ALTERATION

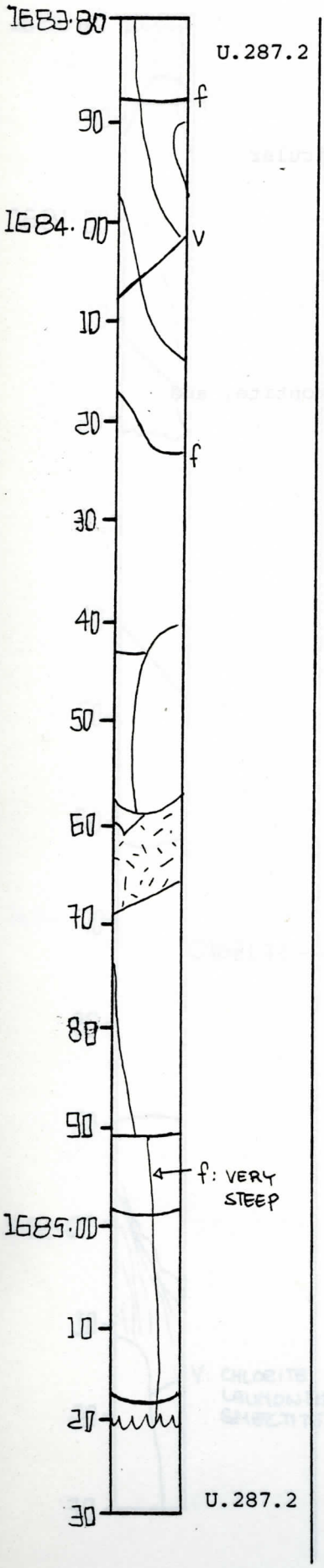
Moderate but pervasive.

Graphic Representation | Sample

Visual Core Description Observer GW

Depth Interval 1683.79 cm to 1685.20 cm

Box 288, Section 2



LITHOLOGY-PETROGRAPHY

Continues U.287.2

Grey-green, medium- to fine-grained basalt. Very similar to previous section. Dike.

Between 1684.60 and 1807.70 no correlation.

STRUCTURE

Massive

VESICLES/AMYGDALES

None

FRACTURES - VEINS - BRECCIA

Highly fractured.

ROCK ALTERATION

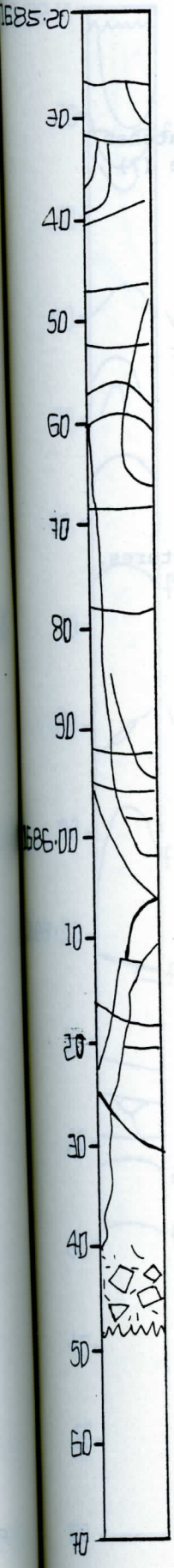
Moderate but pervasive.

Visual Core Description Observer .....

Depth Interval 1685.20 cm to 1686.48 cm

Box 288, Section 3

Graphic Representation Sample



U.287.2

U.287.2

LITHOLOGY-PETROGRAPHY

Continues U.287.2

Grey-green, medium to fine-grained, aphyric basalt. Same as previous section. Very small patches of pyrite.

Between 1685.70 and 1685.80 as well as from 1686.48 to next section no exact correlation possible due to fractures!

* From 1648.70-1685.45 the core is misoriented (U.H.).

STRUCTURE

Massive but weakly to highly fractured.

VESICLES/AMYGDALES

None

FRACTURES - VEINS - BRECCIA

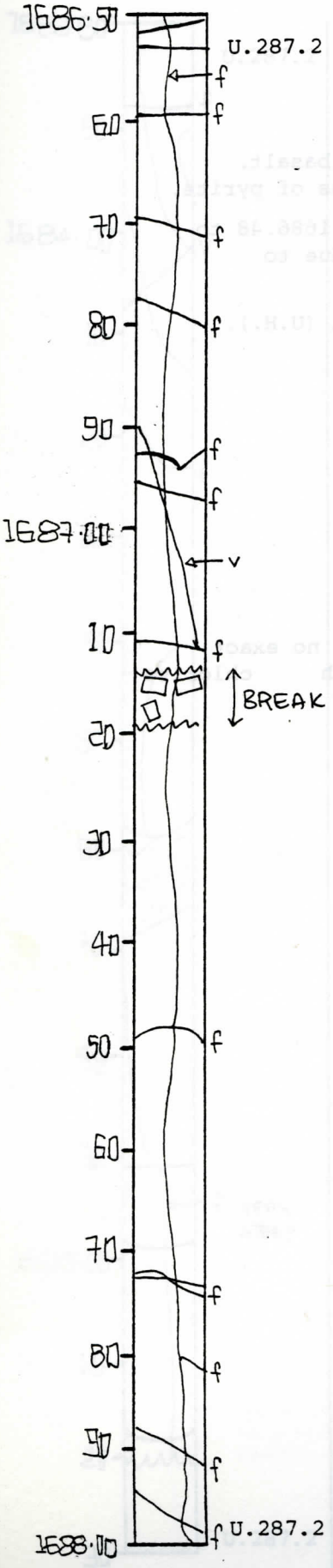
Fractures most subhorizontal or subvertical, no exact measurements possible. Sometimes coated with chlorite or smectite.

Visual Core Description Observer GW

Depth Interval 1686.48 cm to 1688.12 cm

Box 288, Section 4

Graphic Representation Sample



LITHOLOGY-PETROGRAPHY

Continues U.287.2

Grey-green, aphyric medium grained basalt. Small patches of pyrite. Vein filled with chlorite and laumontite (?) at 1687.0. Some laumontite in vein at 1686.50.

Dike (getting medium-grained).

STRUCTURE

Massive

VESICLES/AMYGDALES

None

FRACTURES - VEINS - BRECCIA

Highly fractured, subhorizontal and subvertical fractures.

ROCK ALTERATION

Macroscopic, rather fresh!

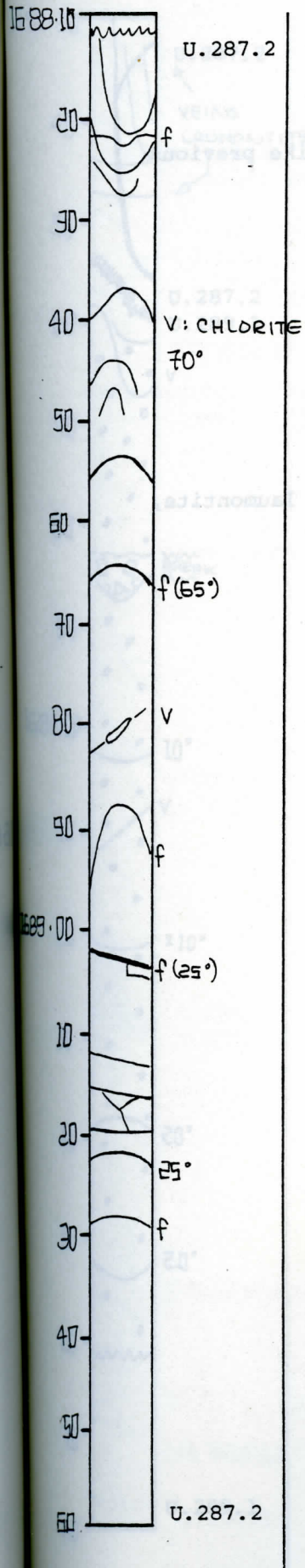
ICELAND RESEARCH DRILLING PROJECT - REYDARFJORDUR 1978

Visual Core Description Observer GW

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

Box 289, Section 1

Graphic Representation Sample



LITHOLOGY-PETROGRAPHY

Continues U.287.2

Medium-grained, grey green basalt with few plagioclase-phenocrysts (rounded) + olivine (??) and some small pyrite patches.

Dike.

STRUCTURE

Massive

VESICLES/AMYGDALES

None

FRACTURES - VEINS - BRECCIA

Moderate to low

ROCK ALTERATION

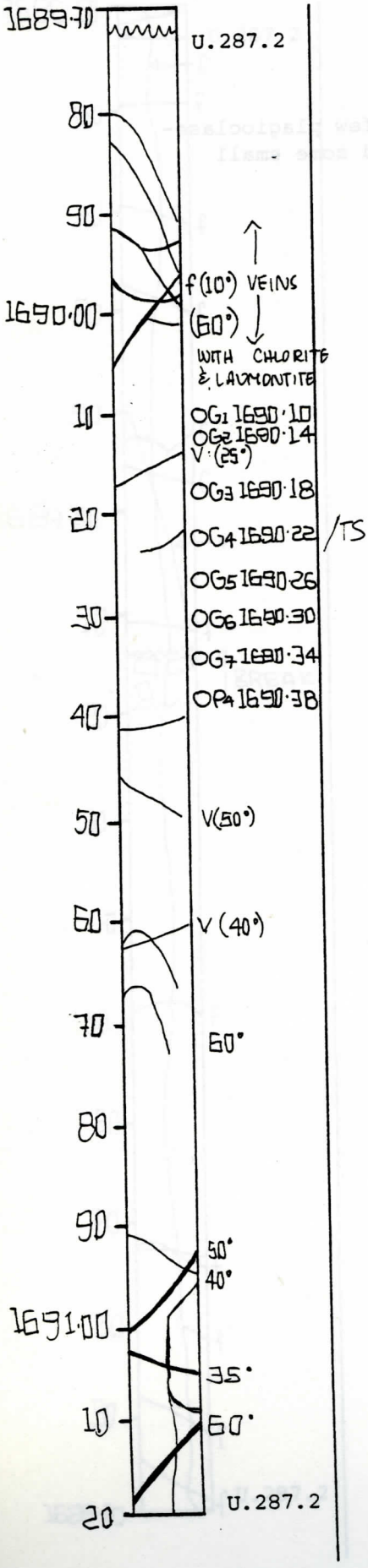
Moderate but pervasive.

Visual Core Description Observer GW

Depth Interval 168972 cm to 169127 cm

Box 289, Section 2

Graphic Representation Sample



LITHOLOGY-PETROGRAPHY

Continues U.287.2

Grey-green, medium grained, dike-basalt, like previous section.

STRUCTURE

Massive

VESICLES/AMYGDALES

None

FRACTURES - VEINS - BRECCIA

Moderately fractured, many thin veins with laumontite, chlorite.

ROCK ALTERATION

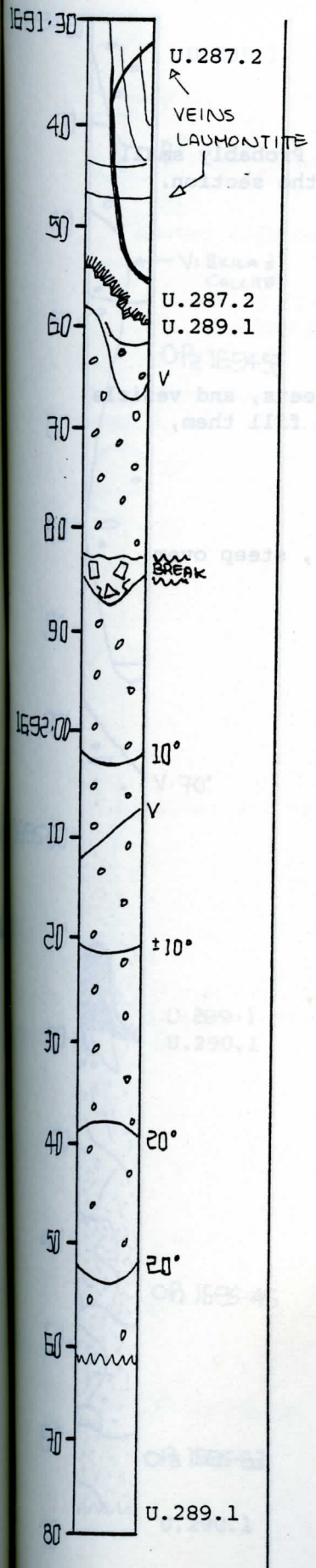
Moderate

Visual Core Description Observer GW

Depth Interval 169127 cm to 169261 cm

Box 289, Section 3

Graphic Representation Sample



LITHOLOGY-PETROGRAPHY

Continues U.287.2

Grey-green, medium-grained, basalt, similar to previous section with some small plagioclase phenocrysts.

U.289.1 Chilled contact between Dike 287.2 and vesicular green-gray basalt with probably some very small plagioclase-phenocrysts. Contact seems to be brecciated.

STRUCTURE

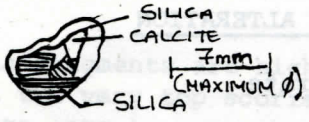
U.287.2 Massive

U.289.1 Vesicular

VESICLES/AMYGDALES

U.287.2 None

U.289.1 Vesicles, filled with silica and calcite, sometimes geopetal structures.



Most vesicles are spherical. Smaller vesicles (0.5-2 mm) filled with chlorite and/or smectite (?).

FRACTURES - VEINS - BRECCIA

U.287.2 Subhorizontal or subvertical

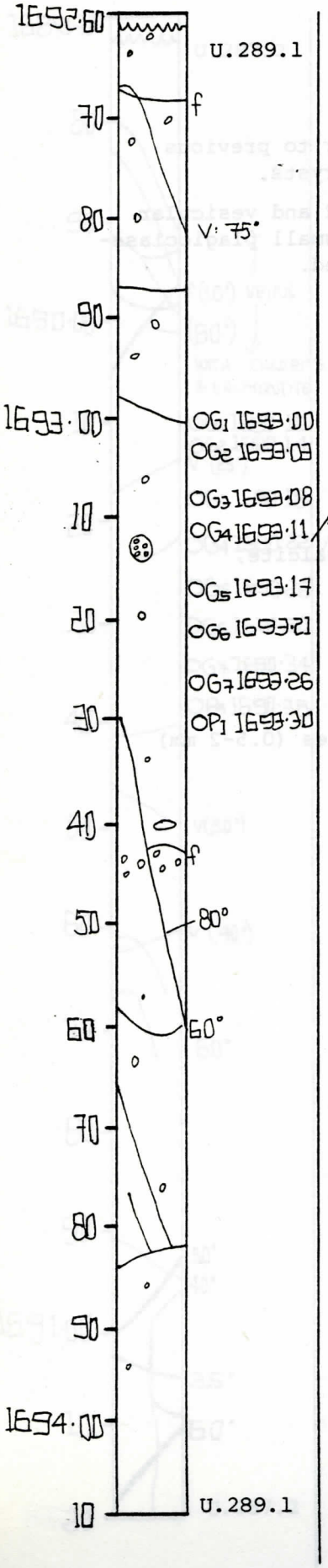
ROCK ALTERATION

Moderate

Visual Core Description Observer GW

Depth Interval 16926 1 cm to 16941 4 cm

Box 289, Section 4



LITHOLOGY-PETROGRAPHY

Continues U.289.1

Grey-green, medium-grained, basalt flow. Probably small plagioclase phenocrysts in lower part of the section.

STRUCTURE

Vesicular

VESICLES/AMYGDALES

Some large vesicles 0 - 12 mm, vesicle sheets, and vesicle patches. Quartz and chlorite and epidote fill them, sometimes calcite.

FRACTURES - VEINS - BRECCIA

Few very steep or subhorizontal fractures, steep over coated with chlorite (epidote ?).

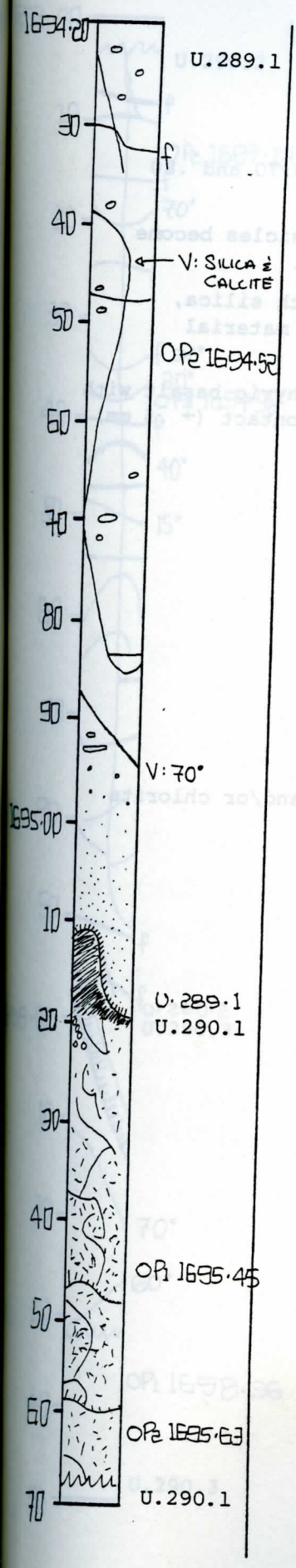
ROCK ALTERATION

Moderate

Visual Core Description Observer GW

Depth Interval 1694.14 cm to 1695.68 cm

Box 290, Section 1



LITHOLOGY-PETROGRAPHY

Continues U.289.1

Grey-green basalt, similar to previous section, but finer grained. Decreasing vesicle size but increasing vesicularity to the base of the flow. Large vesicles are stretched.

U.290.1 Brecciated transition zone to next unit. At 1695.47 and 1695.58 chilled contacts between brecciated material = brecciated flow top of lava flow (next section).

Lava flow base and transitional zone.

STRUCTURE

U.289.1 Vesicular

VESICLES/AMYGDALES

U.289.1 Vesicles filled with silica, some have still a cavity.

U.290.1 Breccia fragments are high vesicules (→ 154.). 0 - 1-2 mm. At the very top scoriaceous, high altered material (epidote, etc.).

FRACTURES - VEINS - BRECCIA

U.289.1 Moderately fractured, some steep veins filled with silica.

U.290.1 Brecciated, not fractured. No veins.

ROCK ALTERATION

U.289.1 Moderate, to high at the very base of the unit.

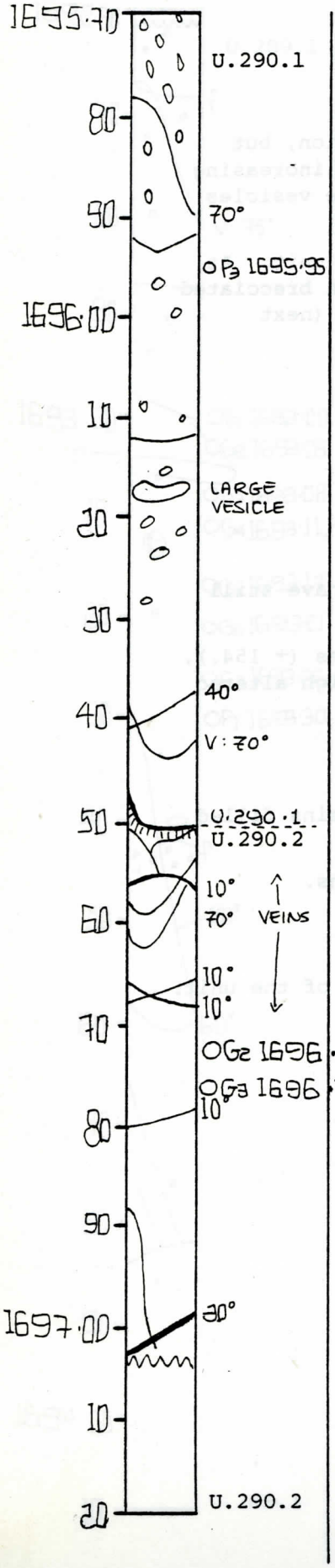
U.290.1 Highly altered.

Visual Core Description Observer GW

Depth Interval 169568 cm to 169703 cm

Box 290, Section 2

Graphic Representation Sample



OP1 1696.67
OG1 1696.70
OG4 1696.80/TS
OG5 1696.83
OG6 1696.86
OG7 1696.87

LITHOLOGY-PETROGRAPHY

Continues U.290.1

Vesicular, grey-green basalt. Between 1695.70 and .80 elongated vesicles dip 60° approximately.

From 1695.90 vesicularity decreases and vesicles become spherical and larger in diameter (→ 15 mm).

At 1696.16 large vesicle (Ø5 cm) filled with silica, calcite, epidote; shows internal brecciated material from the flow.

U.290.2 Grey, fine-grained, plagioclase-phyric basalt with chilled contact to 290.2. Pyrite at the contact (→ .5 mm) are idiomorphic! beautiful.

Lava flow with dike (290.3).

STRUCTURE

U.290.2 Massive

VESICLES/AMYGDALES

U.290.2 None

FRACTURES - VEINS - BRECCIA

U.290.2 Many veins, filled with calcite and/or chlorite (smectite).

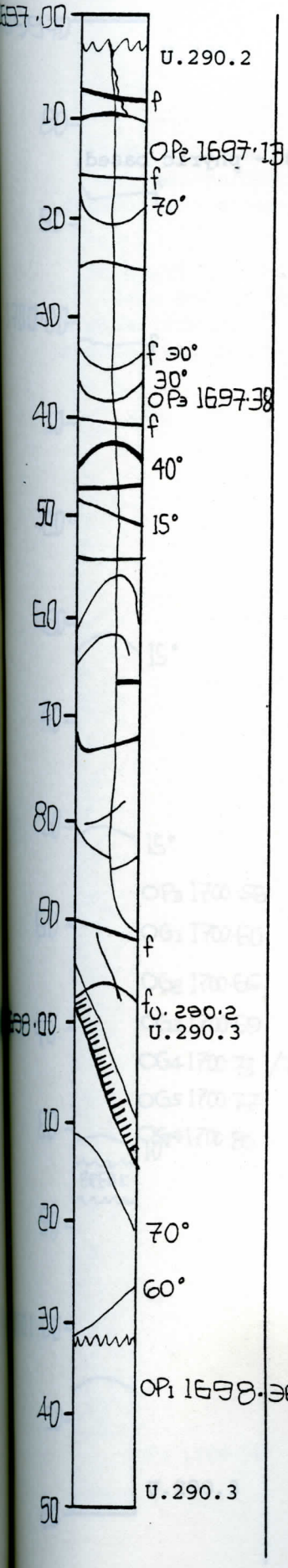
ROCK ALTERATION

U.290.1 Highly (top) to moderate.

Visual Core Description Observer GW

Depth Interval 169703 cm to 169832 cm

Box 290, Section 3



LITHOLOGY-PETROGRAPHY

Continues U.290.2

Fine-grained, basalt similar to previous section below 1696.50 with chilled contact against more coarse grained dike. (dike in dike - contact).

U.290.3 Medium-grained, plagioclase and olivine-phyric basalt (dike) with patches of pyrite (0-1 mm).

Dike with contact with another dike (290.3).

STRUCTURE

U.290.2 Massive

U.290.3 Massive

VESICLES/AMYGDALES

U.290.2 None

U.290.3 None

FRACTURES - VEINS - BRECCIA

U.290.2 Highly fractured many veins, mostly filled with silica. Fractures subhorizontal or subvertical.

U.290.3 Few fractures.

ROCK ALTERATION

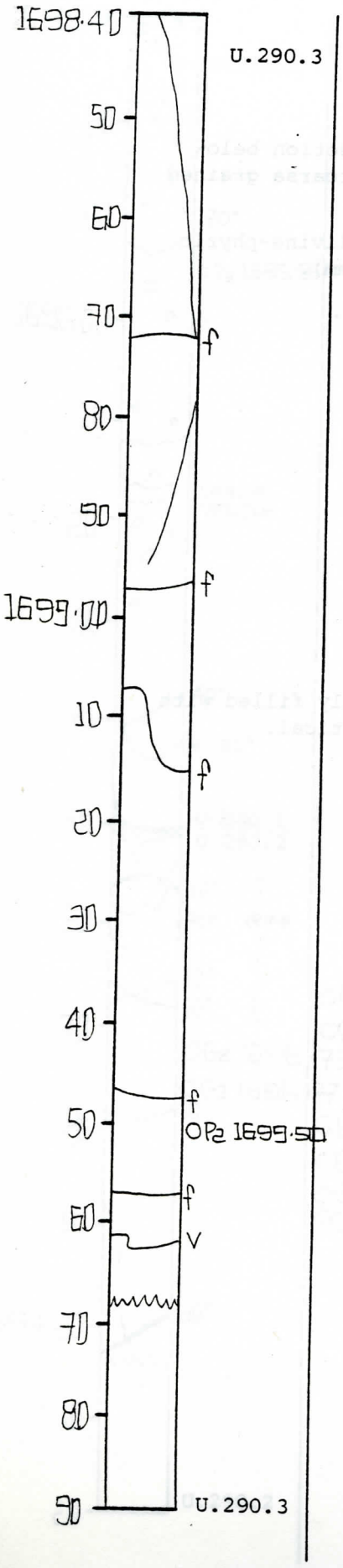
U.290.2 Moderate

U.290.3 Moderate

Visual Core Description Observer GW

Depth Interval 1698380 cm to 1699680 cm

Box 290, Section 4



LITHOLOGY-PETROGRAPHY

Continues U.290.3

Medium-grained, plagioclase and olivine (?) - phyric based. Plagioclase laths - 3 mm!

Dike.

STRUCTURE

Massive

VESICLES/AMYGDALES

None (?)

FRACTURES - VEINS - BRECCIA

Few fractures, one vein (very thin).

ROCK ALTERATION

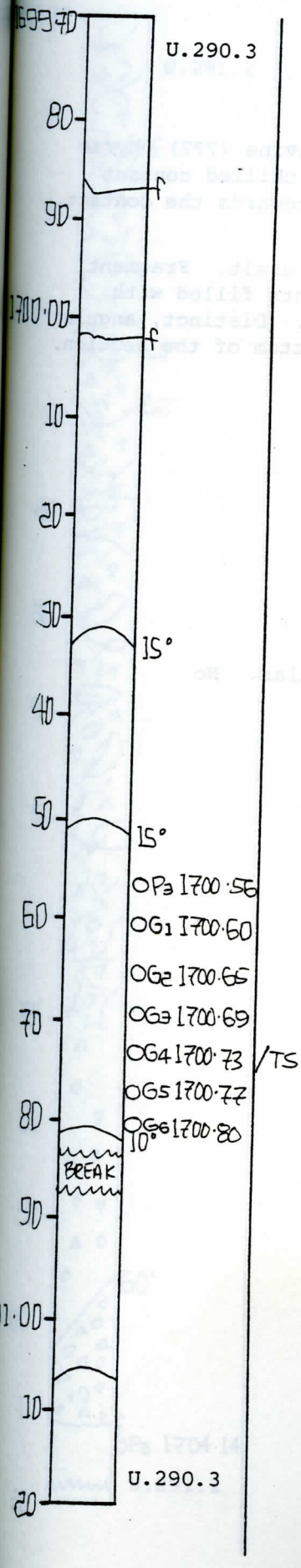
Moderate but pervasive.

Visual Core Description Observer GW

Depth Interval 169968 cm to 170120 cm

Box 291, Section 1

Graphic Representation Sample



LITHOLOGY-PETROGRAPHY

Continues U.290.3

Medium- to coarse-grained plagioclase and olivine (?) - phyric grey-green basalt. At 1700.40 some vesicles 0 - 1 mm filled with smectite. Dike.

STRUCTURE

Massive

VESICLES/AMYGDALES

None

FRACTURES - VEINS - BRECCIA

Few, none.

ROCK ALTERATION

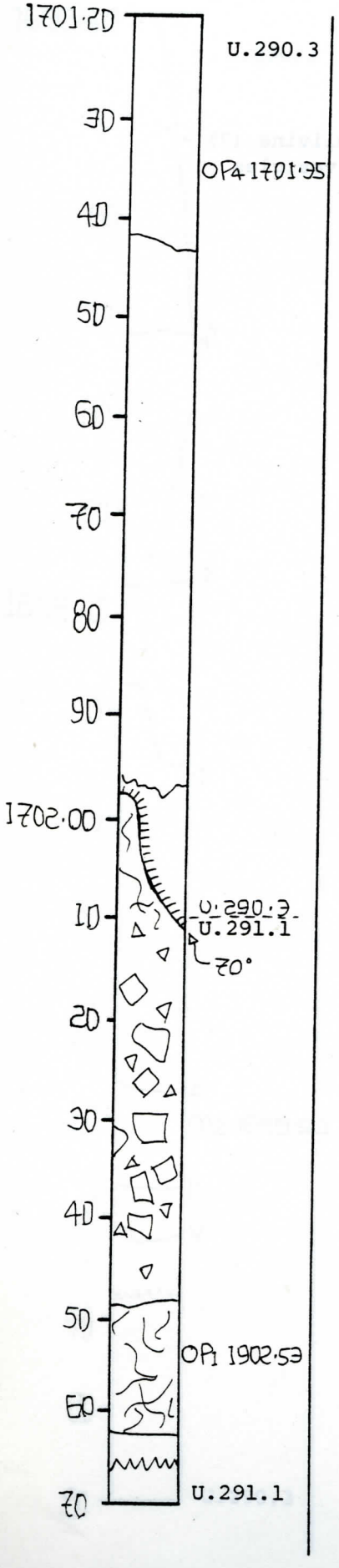
Moderate.

Visual Core Description Observer GW

Depth Interval 170120 cm to 170266 cm

Box 291, Section 2

Graphic Representation Sample



LITHOLOGY-PETROGRAPHY

Continues U.290.3

Medium to fine-grained plagioclase and olivine (???) phyric basalt (similar to previous section) with chilled contact to next unit. Increasingly fine-grained towards the contact. Plagioclase - .5 vol.%.

U.291.1 Brecciated, grey-green vesicles basalt. Fragment 0.5 cm - 5.0 cm pore space between fragments filled with silica, epidote some chlorite and calcite. Distinct, angular fragments becoming more diffuse to the bottom of the section.

Dike and contact to a top breccia.

STRUCTURE

U.290.3 Massive

U.291.1 Brecciated, vesicular

VESICLES/AMYGDALES

U.290.3 Few.

U.291.1 Some fragments are highly vesicular. No fractures.

FRACTURES - VEINS - BRECCIA

U.290.3 Rare, no veins.

U.291.1 Highly altered.

ROCK ALTERATION

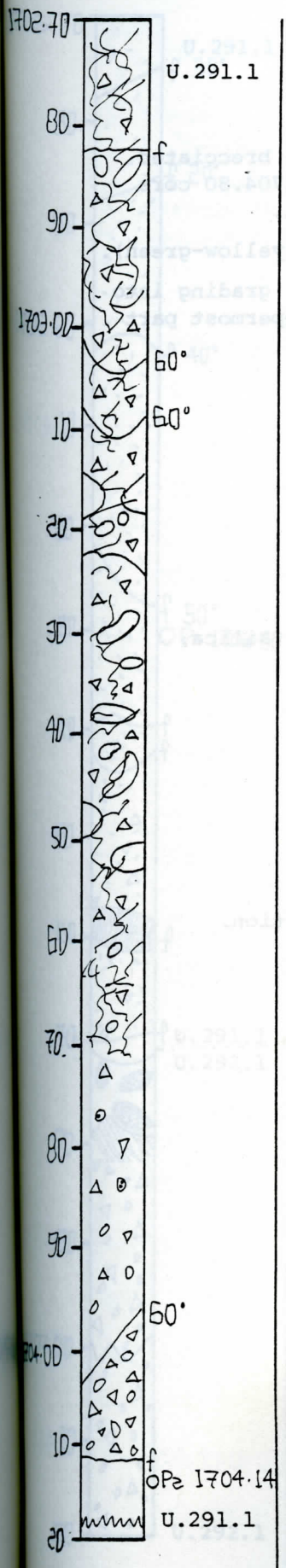
U.290.3 Moderate but pervasive.

Visual Core Description Observer GW

Depth Interval 1702.66 cm to 1704.18 cm

Box 290, Section 3

Graphic Representation | Sample



LITHOLOGY-PETROGRAPHY

Continues U.291.1

Grey to grey-green, brecciated aphyric basalt. Above ∿ 1703.30 pore space between breccia fragments (0-.5 cm ≃ 8 cm) filled with secondary minerals (epidote, silica). Below 1703.30 the matrix is a grey-green altered basalt. Distinct fragments 0 → 3 cm show high to moderate vesicularity; matrix is dense (fragments 60%, matrix 40%).

Fragment size decreases towards the bottom to 3-5 cm sometimes larger.

STRUCTURE

Brecciated

VESICLES/AMYGDALES

Common in breccia fragments, mostly filled with epidote.

FRACTURES - VEINS - BRECCIA

Some fractures

ROCK ALTERATION

Highly altered, epidote, silica no calcite.