ICELAND RESEARCH DRILLING PROJECT

REYDARFJORDUR 1978

UNIT NO. 232.1 INTERVAL(m) 1357.79 - 1364.50 THICKNESS(m) 6.71

INTERPRETATION Basalt flow (incomplete)

MACROSCOPIC DESCRIPTION

Grayish-green, ophimottled, medium- to coarse-grained, aphyric basalt with pronounced decrease in grain size in lower 40 cm. Zones of varying grain size and steeply dipping (30-40°) flow banding in lower 1.5 m. Fractures moderately abundant in upper meter and lower meter; lined with calcite in upper part, with smectite/chlorite in lower part. Fractures in central part generally sparse except between 1359.30 and 1359.40 m, lined with smectite/chlorite. Vesicles less than 10%, lined with dark green smectite/chlorite and filled with silica. Upper contact truncated by dike of unit 231.3; lower contact rests depositionally on unit 234.1.

UNIT NO. 234.1 INTERVAL(m) 1364.56 - 1365.66 THICKNESS(m) 1.10

INTERPRETATION Basalt scoria flow (complete)

MACROSCOPIC DESCRIPTION

Reddish to grayish-green clastic unit made up of cm to dm size, finely to coarsely vesicular clasts; grain size and vesicularity of clasts increases downward. Irregular fractures and void space filled with carbonate, zeolite, and clay. Epidote-rich vein, 1 cm wide, in lower part. Unit interpreted as separate 'rubble flow' but may possibly be basal breccia of overlying flow. Upper contact sharp and subhorizontal, lower contact dips 30-40°, irregular, with 5-cm-thick layer of fine-grained reddish 'tuff' at base. Unit lies between 232.1 and 234.2.

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UNIT NO. 234.2 INTERVAL(m) 1365.66 - 1366.05 THICKNESS(m) 0.39

INTERPRETATION Clastic unit (incomplete)

MACROSCOPIC DESCRIPTION

Red, ash- to lapilli-size basalt clasts, finely vesicular with zeolite and silica in veins and voids. Clasts in lower part flattened, possibly due to fusion and baking of underlying dike. Irregular fractures. Top contact with unit 234.1 depositional; basal contact dips 60°, truncated by dike of unit 234.3. Unit may be part of eruptive unit 234.1.

UNIT NO. 234.3 INTERVAL(m) 1366.05 - 1419.52 THICKNESS(m) 53.47

INTERPRETATION Basalt dike (complete)

MACROSCOPIC DESCRIPTION

Gray, fine- to medium-grained, very uniform basalt with very rare plagioclase microphenocrysts, less than 1%, 1-1.5 mm across. Fractures common, varying from horizontal to steep, generally coated with chlorite/smectite. Very rare calcite and zeolite in veinlets. Disseminated pyrite widespread, quartz rare. Some fine-grained, red alteration products in groundmass (altered olivine?). Alteration most pronounced toward bottom between 1412.0 and 1414.0 m. Unit intruded between 234.2 and 243.1.

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UNIT NO. 243.1 INTERVAL(m) 1419.52 - 1429.80 THICKNESS(m) 10.28

INTERPRETATION Basalt flow (incomplete)

MACROSCOPIC DESCRIPTION

Flow divided into three parts:
a) 1419.52 - 1424.50 m: Reddish-gray, fine- to medium-grained, scoriaceous basalt breccia with welded fragments less than 5 cm across. Homogeneous, more massive zone between 1421.10 and 1421.80 m. Below 1421 m basalt is brecciated and scoriaceous. Sparse plagioclase microphenocrysts 1% or less, 1-2 mm. Moderately fractured with generally irregular surfaces. Vesicles filled with zeolite; several amygdules of zeolite greater than 1 cm across. Base of subunit transitional to central part of flow.
b) 1424.60 - 1429.50 m: Grayish-green, medium-grained basalt; sparsely phyric, plagioclase phenocrysts 1% or less, 1-2 mm; olivine microphenocrysts 1% or less, 1 mm, altered to red hematite(?). Abundant microvesicles (5%) filled with green smectite/chlorite. Several silica-filled veins up to 5 mm wide between 1425.60 and 1427.10 m. Fractures moderately abundant and horizontal.
c) 1429.50 - 1429.80 m: Bluish-green basal breccia of finely vesicular fragments less than 5 cm across; vesicles filled with silica, zeolite, and some carbonate. Basal contact subhorizontal, depositional with unit 245.1; upper contact truncated by unit 234.3.

UNIT NO. 245.1 INTERVAL(m) 1429.80 - 1430.00 THICKNESS(m) 0.20

INTERPRETATION Clastic unit (complete)

MACROSCOPIC DESCRIPTION

Red, relatively massive sediment, probably crystal vitric tuff with excellent dark, sparsely vesicular shards. Top and bottom contacts irregular, subhorizontal, depositional. Lies between units 243.1 and 245.2.

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UNIT NO. 245.2 INTERVAL(m) 1429.95 - 1435.95 THICKNESS(m) 6.

INTERPRETATION Basalt flow (incomplete)

MACROSCOPIC DESCRIPTION

Flow divided into two parts:
a) 1429.95 - 1433.10 m: Upper 40 cm reddish-gray, highly vesicular scoriaceous breccia grading downward into grayish-blue, denser, brecciated basalt with fewer vesicles and epidote in addition to other secondary minerals. Vesicles filled with calcite and zeolite. Lower half most strongly altered with conspicuous epidote. Below 1432.40 rock is crumbly for 10 cm. Some vugs in lower 50 cm partly filled with quartz, epidote and zeolites, up to 2 cm across.
b) 1433.10 - 1435.95 m: Light gray, medium-grained, dense, aphyric basalt with scattered vugs up to 2 cm. Microvesicles filled with smectite/chlorite. Fractures moderately abundant and subhorizontal. Unit lies between 245.1 and 246.1; upper contact subhorizontal, depositional; lower contact truncated by dike, dips 70°.

UNIT NO. 246.1 INTERVAL(m) 1435.95 - 1441.83 THICKNESS(m) 5.88

INTERPRETATION Basalt dike (complete)

MACROSCOPIC DESCRIPTION

Gray, fine- to medium-grained, aphyric basalt. Relatively fresh. Irregular vertical veins up to 3 mm wide, filled mostly with calcite. Unit intruded between units 245.2 and 247.1; top and bottom contacts chilled, dip 50-70°.

ICELAND RESEARCH DRILLING PROJECT

REYDARFJORDUR 1978

UNIT NO. 245.2 INTERVAL(m) 1429.95 - 1435.95 THICKNESS(m) 6.00

INTERPRETATION Basalt flow (incomplete)

MACROSCOPIC DESCRIPTION

Flow divided into two parts:
a) 1429.95 - 1433.10 m: Upper 40 cm reddish-gray, highly vesicular scoriaceous breccia grading downward into grayish-blue, denser, brecciated basalt with fewer vesicles and epidote in addition to other secondary minerals. Vesicles filled with calcite and zeolite. Lower half most strongly altered with conspicuous epidote. Below 1432.40 rock is crumbly for 10 cm. Some vugs in lower 50 cm partly filled with quartz, epidote and zeolites, up to 2 cm across.
b) 1433.10 - 1435.95 m: Light gray, medium-grained, dense, aphyric basalt with scattered vugs up to 2 cm. Microvesicles filled with smectite/chlorite. Fractures moderately abundant and subhorizontal. Unit lies between 245.1 and 246.1; upper contact subhorizontal, depositional; lower contact truncated by dike, dips 70°.

UNIT NO. 246.1 INTERVAL(m) 1435.95 - 1441.83 THICKNESS(m) 5.88

INTERPRETATION Basalt dike (complete)

MACROSCOPIC DESCRIPTION

Gray, fine- to medium-grained, aphyric basalt. Relatively fresh. Irregular vertical veins up to 3 mm wide, filled mostly with calcite. Unit intruded between units 245.2 and 247.1; top and bottom contacts chilled, dip 50-70°.

ICELAND RESEARCH DRILLING PROJECT

REYDARFJORDUR 1978

UNIT NO. 247.1 INTERVAL(m) 1441.83 - 1442.00 THICKNESS(m) 0.17

INTERPRETATION Clastic unit (incomplete)

MACROSCOPIC DESCRIPTION

Green to dark green, medium- to coarse-grained, crystal vitric tuff. Lies between units 246.1 and 247.2; top truncated by dike, contact dips 50-70°; base irregular, depositional on underlying rubbly flow top.

UNIT NO. 247.2 INTERVAL(m) 1442.00 - 1445.80 THICKNESS(m) 3.80

INTERPRETATION Basalt flow (incomplete)

MACROSCOPIC DESCRIPTION

Flow divided into two parts:
a) 1442.00 - 1433.90 m: Upper 50 cm is scoriaceous breccia, pervasively altered, especially by epidote giving it a green mottled texture. Below follows greenish-gray to gray, fine-grained, brecciated basalt which may be partly scoriaceous breccia, partly internally brecciated lava. Vesicularity is irregular; many vesicles open, other vesicles and void spaces between fragments filled with calcite, zeolite, smectite/chlorite and epidote.
b) 1443.90 - 1445.80 m: Gray, even-grained, massive basalt. Zoned vesicles moderately abundant, up to 1 cm across, filled with calcite and zeolite. 1-cm-wide vein filled with calcite and zeolite at 1445.54 m. Fractures rare except for hairline veins. 0.5-cm-wide dikelet at 1445.45.
Unit lies between units 247.1 and 248.1; upper contact depositional, basal contact truncated by chilled dike, dips 50°.

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REYDARFJORDUR 1978

UNIT NO. 248.1 INTERVAL(m) 1445.80 - 1475.50 THICKNESS(m) 29.70

INTERPRETATION Basalt dike (complete)

MACROSCOPIC DESCRIPTION

Gray to green, fine- to medium-grained, aphyric, non-vesicular basalt. Steep angle fractures common, generally coated with slickensided smectite/chlorite. Core generally highly broken up, spacing of fractures commonly less than 5 cm. Fractures less abundant in lower 1.5 m. Top and bottom contacts intrusive, dip about 50°. Unit intruded between units 247.2 and 253.1.

UNIT NO. 253.1 INTERVAL(m) 1475.50 - 1487.00 THICKNESS(m) 11.50

INTERPRETATION Basalt flow (incomplete)

MACROSCOPIC DESCRIPTION

Dominantly fine- to medium-grained, aphyric basalt with pronounced mottled texture. Basal 25 cm brecciated. Mottling begins 50 cm below top as 0.5 to 2 mm wide light colored spots in dark matrix; increases at 1476.65 m to coarse mottling with light spots up to 2 cm across; decreases from 1429.60 m to base of flow. Flow banding in lower half, generally dips less than 10°. Amygdules scattered in upper 4 m, 0.5 to 3 cm across, filled with carbonate and zeolite; veins in upper 1-2 m subhorizontal to steeply inclined, to 4 mm wide, filled with carbonate and zeolite. Fractures rare above 1484.30 m, common below, lined with smectite/chlorite. Oxidation and alteration pervasive in mottled part of flow; voids in basal breccia filled with carbonate and zeolite. Basal breccia consists of coarse upper and finer-grained lower part. Lies between units 248.1 and 255.1. Upper contact cut by dike, dips about 70°; lower contact depositional, subhorizontal.

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REYDARFJORDUR 1978

UNIT NO. 255.1 INTERVAL(m) 1487.00 - 1498.00 THICKNESS(m) 11.00

INTERPRETATION Basalt flow (complete)

MACROSCOPIC DESCRIPTION

Flow divided into two parts:
a) 1487.00 - 1488.60 m: Dominantly brick red scoriaceous flow top breccia; Fragments 1-10 mm, generally only finely vesicular, most vesicles much less than 1 mm across. Voids filled with epidote and zeolite, mostly finely disseminated. Breccia grades rapidly into zone of brecciated lava 10 cm thick, and then into main part of flow.
b) 1488.60 - 1498.00 m: Light gray, dominantly fine-grained, aphyric basalt with several textural subunits. Very sparse fractures, subhorizontal. Subunits are: 1) 1488.70 - 1490.00 m: Basalt with 10% vesicles, mostly 0.5 - 2 mm, filled with green smectite/chlorite, others filled with zeolite. Abundant irregular fractures. 2) 1490.00 - 1491.70 m: Vesicles decrease to less than 5%; lensoid cavities at 1480.00, 1490.90 filled with zeolite and quartz crystals. Flow banding throughout, dips about 30°, 3) 1491.70 - 1493.40 m: Similar to subunit 2 with somewhat coarser grain size, fewer vesicles and more pronounced flow banding. Some amygdules, partly open, 4) 1493.40 - 1496.30 m: Decreasing vesicularity; vesicles filled with green smectite/chlorite. Grain size coarser than subunit 3 and texture more homogeneous, 5) 1496.30 - 1498.00 m: Decreasing grain size, increasing vesicularity; vesicles less than 5%, 1-3 mm across. Base is 10-cm-thick layer of breccia.
Unit lies between units 253.1 and 257.1; top contact subhorizontal, depositional, basal contact sharp, subhorizontal, depositional.

UNIT NO. 257.1 INTERVAL(m) 1498.00 - 1498.30 THICKNESS(m) 0.30

INTERPRETATION Clastic unit (complete)

MACROSCOPIC DESCRIPTION

Brick red, moderately bedded, indurated vitric tuff. Upper part fine-grained, lower part coarse-grained. Basal 2-3 cm fine-grained, interfingers with scoria of underlying flow top. Lies between units 255.1 and 257.2.

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UNIT NO. 257.2 INTERVAL(m) 1498.30 - 1506.92 THICKNESS(m) 8.62

INTERPRETATION Basalt flow (complete)

MACROSCOPIC DESCRIPTION

Flow divided into three parts:
a) 1498.30 - 1499.20 m: Brick red, scoriaceous, flow top breccia; clasts 0.5 to 1 cm across, top fragments highly vesicular, basal fragments finely vesicular. Vesicles filled with zeolite at top and zeolite with calcite and epidote at base. Irregular fractures. Lower boundary gradational.
b) 1499.20 - 1500.70 m: Brecciated flow top between scoriaceous breccia and massive bulk of flow. Gray to green basalt with 5-10% vesicles, irregularly shaped and distributed. Basalt alternates with brecciated zones. Lower boundary gradational, indistinct.
c) 1500.70 - 1506.92 m: Fine- to medium-grained grayish-green basalt. Upper 60 cm vesicular; vesicles less than 10%, 1- 10 mm, filled with green smectite/chlorite, some with quartz. Flow banding in upper half of lower unit, rock more massive in lower part. Lower 15 cm is basal breccia.
Fractures very rare, subhorizontal to 70° dip. Unit lies between units 257.1 and 258.1; top and bottom contacts subhorizontal, depositional.

UNIT NO. 258.1 INTERVAL(m) 1506.92 - 1510.19 THICKNESS(m) 3.27

INTERPRETATION Basalt flow (complete)

MACROSCOPIC DESCRIPTION

Flow divided into two parts:
a) Flow top breccia - dominantly brick red scoriaceous breccia; most fragments less than 10 cm across, some highly vesicular; vesicles filled with mostly zeolite, some with carbonate and epidote. Lower 20-30 cm gray, internally brecciated basalt. Upper subunit extends to about 1508.30 m.
b) Gray, fine- to medium-grained, aphyric basalt with vesicular zone between 1509.50 and 1509.70 m. Rare fractures.
Unit lies between units 257.2 and 259.1; contacts subhorizontal, depositional.

ICELAND RESEARCH DRILLING PROJECT

REYDARFJORDUR 1978

UNIT NO. 259.1 INTERVAL(m) 1510.19 - 1526.30 THICKNESS(m) 16.11

INTERPRETATION Basalt flow (complete)

MACROSCOPIC DESCRIPTION

Flow divided into two parts:
a) 1510.19 - 1511.50 m: Greenish-gray to reddish-gray,scoriaceous, flow top breccia grading relatively quickly into massive part of flow. Rather altered and partly soft and crumbly; epidote and minor zeolite common.
b) 1511.50 - 1526.30 m: Greenish-gray, fine- to medium-grained basalt with several smectite/chlorite filled vesicle zones in upper 2 m and lower 1 m. Sparse zeolite and quartz filled amygdules, partly open, mostly near top of subunit. Fractures subhorizontal, rare. Lower 20 cm is basal breccia.
Unit lies between units 258.1 and 261.1; top contact horizontal, abrupt; lower contact irregular, dips about 40°.

UNIT NO. 261.1 INTERVAL(m) 1526.30 - 1534.85 THICKNESS(m) 8.55

INTERPRETATION Basalt flow (complete)

MACROSCOPIC DESCRIPTION

Flow divided into two parts:
a) 1526.30 - 1528.50 m: Greenish-gray,scoriaceous, flow top breccia. Primary textures and structures difficult to define because of extreme and pervasive alteration, dominantly to epidote but also to quartz, zeolite and smectite/chlorite. Part of unit very friable, soft and crumbly, with crystals of secondary minerals growing in cavities. Irregular fractures.
b) 1528.50 - 1534.85 m: Reddish-gray in upper part, greenish-gray in lower part, fine- to medium-grained, aphyric basalt. Vesicles less than 5%, 1- 10 mm across in upper 40 cm, filled with green smectite/chlorite and minor zeolite, quartz and epidote. Vesicles gradually decrease in abundance but partly open quartz and zeolite filled vugs occur sparsely throughout unit. Vesicularity increases again 30 cm above base. Basal breccia in lower 3 cm.
Unit lies between units 259.1 and 263.1; upper and lower contacts depositional, subhorizontal. Fractures rare, irregular to subhorizontal. Basal 20 cm cut by abundant chlorite/smectite lined high angle fractures.

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UNIT NO. 263.1 INTERVAL(m) 1534.85 - 1535.12 THICKNESS(m) 0.27

INTERPRETATION Clastic unit (complete)

MACROSCOPIC DESCRIPTION

Brick red to green at base, moderately bedded, ash to fine lapilli size tuff(?). Moderately indurated, top part soft. Lower contact difficult to define and probably gradational to underlying scoriaceous flow top. Unit lies between units 261.1 and 263.2.

UNIT NO. 263.2 INTERVAL(m) 1535.12 - 1545.68 THICKNESS(m) 10.56

INTERPRETATION Basalt flow (complete)

MACROSCOPIC DESCRIPTION

Flow divided into three parts:
a) 1535.12 - 1537.60 m: Reddish-gray in upper meter, to greenish-gray, scoriaceous flow top breccia with transitional contact from overlying tuff. Rock is highly altered, some parts very friable. Alteration minerals are smectite/chlorite, epidote, zeolite, quartz. Irregular and regular fractures.
b) 1537.60 - 1545.30 m: Dominantly light green, fine- to medium-grained, aphyric basalt with several vesicle zones and vesicle sheets in upper meter; vesicles 1-3 mm, mostly filled with quartz. Small irregular smectite filled vesicles throughout; vesicle amount and size increase in lower meter. Flow banding in upper and lower part and massive in central part.
c) 1545.30 - 1545.68 m: Greenish-gray, flow base breccia perhaps with some unrelated tuff and possibly scoriaceous breccia of underlying flow. Highly altered to epidote, chlorite/smecite, quartz.
Unit lies between units 263.1 and 264.1; contacts depositional, subhorizontal. Main part of flow has some low angle fractures. Quartz filled veinlets 1-4 mm wide occur every 20-40 cm.

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UNIT NO. 264.1 INTERVAL(m) 1545.68 - 1555.95 THICKNESS(m) 10.27

INTERPRETATION Complex basalt flow unit (complete)

MACROSCOPIC DESCRIPTION

Unit divided into two parts:
a) 1545.68 - 1550.40 m: Complex series of thin breccia and massive zones. Between 1545.68 and 1547.00 m rock is dominantly light to medium, greenish-gray, highly vesicular, breccia with some massive vesicular baslt with partly open vesicles. Vesicles mostly 0.1-10 mm across, lined with drusy minerals, mostly prismatic quartz crystals. Epidote and smectite/chlorite also common. Below 1547.00 rock more massive followed downward by reddish-gray, oxidized,vesicular basalt below which lies green, highly altered, vesicular, dense basalt. Fractures mostly irregular.
b) 1550.40 - 1555.95 m: Chiefly massive, light gray, fine- to medium-grained, aphyric basalt. More vesicular in upper and lower meter than in central part. Brecciated zone occurs between 1551.00 and 1551.35. Amygdaloidal minerals chiefly quartz, zeolite and green smectite/chlorite. Flow banding and slightly mottled texture in central part. Basal 20 cm more brecciated and amygdaloidal. Irregular fractures in upper meter but rare and low angle in most of flow. Unit lies between units 263.2 and 266.1. Contacts depositional, upper contact subhorizontal, lower contact dips 20°.

UNIT NO. 266.1 INTERVAL(m) 1555.95 - 1560.40 THICKNESS(m) 4.45

INTERPRETATION Basalt flow (complete)

MACROSCOPIC DESCRIPTION

Flow divided into three main parts:
a) 1555.95 - 1556.70 m: Reddish- to greenish-gray, fine-grained, brecciated basalt and some scoriaceous breccia with abundant epidote, chlorite/smectite, and zeolite in upper part. Denser in lower part. Subhorizontal fractures.
b) 1556.70 - 1559.20 m: Main part of flow greenish-gray, highly vesicular fine-grained basalt. Vesicles up to 50%, 1-5 mm, filled with chlorite/smectite and some quartz. Fractures rare, subhorizontal.
c) 1559.20 - 1560.40 m: Freshest part of flow is gray, fine-grained, highly flow banded basalt with highly vesicular zone in lower central part. Flow banding dips 0-20°. Some large drusy cavities to 2 cm across, with quartz and zeolite crystals.
Unit lies between units 264.1 and 267.1; upper contact depositional, subhorizontal; lower contact depositional, indistinct, subhorizontal.

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UNIT NO. 267.1 INTERVAL(m) 1560.40 - 1563.78 THICKNESS(m) 3.38

INTERPRETATION Basalt flow (complete)

MACROSCOPIC DESCRIPTION

Flow divided into two parts:
a) 1560.40 - 1561.88 m: Flow top breccia, light green, highly altered, very vesicular; friable between 1561.00 and 1561.25 m. Vesicles 1-5 mm across, filled with epidote and minor chlorite/smectite. Some subhorizontal and low angle fractures to 20°. Relatively sharp contact to lower part of flow.
b) 1561.88 - 1563.78 m: Light to medium gray, aphyric, fine- to medium-grained basalt with abundant drusy vugs, mostly 0.5 to 2 cm across, chiefly filled with silica. Many vugs open and also contain zeolite crystals. Vesicles abundant but smaller in lower 20 cm.
Unit lies between units 268.1 and 266.1; upper contact depositional, subhorizontal; lower contact very sharp, depositional, subhorizontal.

UNIT NO. 268.1 INTERVAL(m) 1563.78 - 1577.09 THICKNESS(m) 13.31

INTERPRETATION Basalt flow (complete)

MACROSCOPIC DESCRIPTION

Flow divided into two parts:
a) 1563.78 - 1565.10 m: Flow top breccia composed of light gray, fine-grained, finely vesicular basalt clasts with a little scoria on top. Green alteration (epidote) prominent in lower half but on the whole flow top is neither as scoriaceous, vesicular, nor altered as many overlying flows. Few fractures.
b) 1565.10 - 1577.09 m: Mainly fine- to medium-grained, light to medium gray, aphyric basalt. Upper part highly vesicular; vesicles 1-10 mm across, irregular to elongate, filled with epidote, smectite/chlorite, and calcite. Flow banding from 1566.20 to 1568.80 m, more massive to base except for slightly vesicular lower 20 cm. As usual, there are scattered round amygdules in central part and sparse veinlets. Fractures rare and subhorizontal.
Unit lies between units 267.1 and 270.1; basal contact, indistinct, difficult to define; basal breccia thicker than normal and probably intermixed with top breccia of underlying flow; upper contact depositional, sharp.

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UNIT NO. 270.1 INTERVAL(m) 1577.09 - 1583.40 THICKNESS(m) 6.31

INTERPRETATION Basalt flow (incomplete)

MACROSCOPIC DESCRIPTION

Flow divided into two subunits:
a) 1577.09 - 1578.35 m: Grayish-red, to grayish-green, scoriaceous flow top breccia and brecciated lava. Grain size difficult to determine. One large fragment between 1577.75 and 1577.95 m highly vesicular, otherwise rock is finely vesicular. Vesicles and void spaces filled mostly with epidote; rock pervasively altered but not as thoroughly as overlying flows.
b) 1578.35 - 1583.50 m: Medium gray, fine- to medium-grained, sparsely phyric basalt. Plagioclase microphenocrysts or microlites less than 1%; olivine microphenocrysts about 1%, 0.5 to 1 mm across, altered to hematite(?). Structure massive in upper part but some brecciation in lower 1.2 m. Scattered vugs filled with quartz and zeolite common in lower brecciated part. Subhorizontal fractures moderately abundant.
Unit lies between units 268.1 and 271.1; upper contact depositional, gradational, subhorizontal; lower contact against chilled dike margin, dips 60°

UNIT NO. 271.1 INTERVAL(m) 1583.40 - 1586.00 THICKNESS(m) 2.60

INTERPRETATION Basalt dike (complete)

MACROSCOPIC DESCRIPTION

Gray, aphyric, non-vesicular, fine- to medium-grained basalt. Intrusive contacts at top and bottom, dip about 60-70°. Moderately fractured, fractures mostly dip about 40°, some subvertical and irregular. Unit lies between units 270.1 and 271.2.

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UNIT NO. 271.2 INTERVAL(m) 1586.00 - 1586.55 THICKNESS(m) 0.55

INTERPRETATION Basalt flow (incomplete)

MACROSCOPIC DESCRIPTION

Medium-grained, finely to moderately vesicular basalt. Top and bottom bounded by dikes but chlorite/smectite filled vesicles make flow origin very likely. Subhorizontal fractures common. Unit lies between units 271.1 and 271.3; possibly a continuation of flow in unit 270.1.

UNIT NO. 271.3 INTERVAL(m) 1586.55 - 1600.65 THICKNESS(m) 14.10

INTERPRETATION Basalt dike (complete)

MACROSCOPIC DESCRIPTION

Medium gray, fine- to medium-grained, aphyric, non-vesicular basalt. Sub-horizontal fractures in about 20 cm intervals above 1593.20 m, with additional more abundant high angle fractures below, mostly dipping 40-70°. Fractures coated with chlorite/smectite. Carbonate -zeolite veins up to 2 mm wide in lower 2 m. Vugs filled with carbonate and zeolite in brecciated lower meter. Upper and lower contacts chilled against units 271.2 and 274.1, respectively.

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| | | | | |
|---|---|---|---|---|
| | 274.1 | 1600.65 - 1600.70 | | 0.05 |
| | 274.3 | 1600.90 - 1601.04 | | 0.14 |
| | 274.5 | 1601.12 - 1601.30 | | 0.18 |
| UNIT NO. | 274.6 | INTERVAL(m) 1601.30 - 1608.88 | THICKNESS(m) | 7.58 |

INTERPRETATION Basalt flow (incomplete) (cut by dikes of units 274.2 and 274.4)

MACROSCOPIC DESCRIPTION

Units interpreted as part of single flow based on similar lithology and thinness of dikes cutting upper part. Upper part is reddish-gray to greenish-gray, scoriaceous flow top breccia of moderately phyric basalt. Most breccia fragments less than 10 cm across; fragments partly altered and vesicles and voids filled with epidote, calcite and zeolite. This grades downward into light gray, fine- to medium-grained, sparsely phyric basalt at about 1603.20 m. Phenocrysts are plagioclase, less than 5%, 1-3 mm, partly albitized(?) and olivine, less than 1%, less than 1 mm, altered. Zones of irregular vesicles in lower part filled with smectite/chlorite and quartz. Lower part relatively massive with some flow banding and calcite-filled veins. Lower 5 cm highly brecciated. Fractures mostly dip less than 40°, some filled with calcite, spaced about every 20-30 cm. Unit lies between units 271.3 and 275.1; contacts depositional, subhorizontal. Flow probably complete except for thin dikes in upper part.

UNIT NO. 274.2 INTERVAL(m) 1600.70 - 1600.90 THICKNESS(m) 0.20

INTERPRETATION Basalt dike (complete)

MACROSCOPIC DESCRIPTION

Gray, fine-grained, aphyric basalt with chilled contacts. Intruded between units 274.1 and 274.1

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UNIT NO. 274.4 INTERVAL(m) 1601.04 - 1601.12 THICKNESS(m) 0.08

INTERPRETATION Basalt dike (complete)

MACROSCOPIC DESCRIPTION

Gray, fine-grained, aphyric basalt with chilled contacts. Intruded between units 274.3 and 274.5.

UNIT NO. 275.1 INTERVAL(m) 1608.88 - 1609.85 THICKNESS(m) 0.97

INTERPRETATION Clastic unit (complete)

MACROSCOPIC DESCRIPTION

Dark red-brown, moderately bedded, fine- to medium-grained vitric crystal tuff. Shards and pumice fragments visible. Irregular calcite-filled hairline veinlets and 3-cm-wide vein at 1609.84 m with 3-cm-wide green 'halo'. Subhorizontal fractures at 2-15 cm intervals. Unit lies between units 274.6 and 275.2; upper and lower contacts depositional, subhorizontal.

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UNIT NO. 275.2 INTERVAL(m) 1609.85 - 1616.48 THICKNESS(m) 6.63

INTERPRETATION Basalt flow (complete)

MACROSCOPIC DESCRIPTION

Flow divided into two parts:
a) 1609.85 - 1613.60 m: Dominantly gray, finely vesicular, brecciated basalt makes up bulk of flow. Voids filled dominantly with calcite, some epidote. Fractures rare.
b) 1613.60 - 1616.48 m: Lower part of flow is gray to reddish-gray, fine- to medium-grained, aphyric basalt with possible flow unit boundary at 1614.45 m. Irregular flow banding. Secondary minerals rare except groundmass smectite/chlorite. Most fractures subhorizontal and spaced at 20-50 cm intervals. Two fractures near base dip 40-50°.
Unit lies between units 275.1 and 276.1; upper and lower contacts depositional, subhorizontal; upper contact sharp, lower contact indistinct and drawn arbitrarily.

UNIT NO. 276.1 INTERVAL(m) 1616.48 - 1628.48 THICKNESS(m) 12.00

INTERPRETATION Basalt flow (complete)

MACROSCOPIC DESCRIPTION

Flow divided into two parts:
a) 1616.48 - 1617.50 m: Reddish-gray, breccia of small clasts, less than 10 cm across. Clasts finely vesicular, somewhat welded with indistinct boundaries. Some epidote and calcite in vesicles but alteration moderate. Fractures rare. Lower contact indistinct.
b) 1617.50 - 1628.48 m: Fine- to medium-grained, aphyric basalt. Flow banding between 1620.00 and 1624.40 m, dipping about 50°. Fractures rare and mostly subhorizontal. Vesicles rare, generally less than 1 cm across, mostly filled with quartz; vesicles slightly more abundant in lower 40 cm except for very fine-grained basal layer 10 cm thick. No basal breccia.
Unit lies between units 275.2 and 278.1; contacts depositional, subhorizontal; upper contact indistinct, lower contact sharp.

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UNIT NO. 278.1 / 280.1 INTERVAL(m) 1628.48 - 1634.80 / 1635.70 - 1642.85 THICKNESS(m) 6.32 / 7.15

INTERPRETATION Basalt flow (incomplete)

MACROSCOPIC DESCRIPTION

These two units are considered part of a single flow based on similar lithology and the thinness of the intervening dike. Upper part of flow consists of three parts from top down. Top part is bedded tuff and lithic lapilli breccia with 2 large basalt clasts, reddish on top, red to green at base. This zone may represent a separate epiclastic or pyroclastic unit with fragments from the underlying brecciatd flow top. This zone passes downward into reddish-gray, scoriaceous breccia in which most clasts are less than 10 cm across. Much carbonate in vesicles. Below this is grayish-green, microvesicular, medium-grained, aphyric basalt with rare subhorizontal fractures and rare vesicles 1-5 mm across, filled with calcite and quartz. This continues to base of combined unit with about 5 cm of fine-grained basal breccia.
Combined unit lies between units 276.1 and 281.1 and is cut in the middle by the dike of unit 279.1. Upper and lower contacts depositional, subhorizontal, sharp.

UNIT NO. 279.1 INTERVAL(m) 1634.80 - 1635.70 THICKNESS(m) 0.90

INTERPRETATION Basalt dike (complete)

MACROSCOPIC DESCRIPTION

Gray, medium-grained to fine-grained at margins, aphyric basalt with some subvertical fractures. Unit intruded between units 278.1 and 280.1 and has chilled contacts dipping 50-80°.

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UNIT NO. 278.1 / 280.1 INTERVAL(m) 1628.48 - 1634.80 / 1635.70 - 1642.85 THICKNESS(m) 6.32 / 7.15

INTERPRETATION Basalt flow (incomplete)

MACROSCOPIC DESCRIPTION

These two units are considered part of a single flow based on similar lithology and the thinness of the intervening dike. Upper part of flow consists of three parts from top down. Top part is bedded tuff and lithic lapilli breccia with 2 large basalt clasts, reddish on top, red to green at base. This zone may represent a separate epiclastic or pyroclastic unit with fragments from the underlying brecciatd flow top. This zone passes downward into reddish-gray, scoriaceous breccia in which most clasts are less than 10 cm across. Much carbonate in vesicles. Below this is grayish-green, microvesicular, medium-grained, aphyric basalt with rare subhorizontal fractures and rare vesicles 1-5 mm across, filled with calcite and quartz. This continues to base of combined unit with about 5 cm of fine-grained basal breccia.
Combined unit lies between units 276.1 and 281.1 and is cut in the middle by the dike of unit 279.1. Upper and lower contacts depositional, subhorizontal, sharp.

UNIT NO. 279.1 INTERVAL(m) 1634.80 - 1635.70 THICKNESS(m) 0.90

INTERPRETATION Basalt dike (complete)

MACROSCOPIC DESCRIPTION

Gray, medium-grained to fine-grained at margins, aphyric basalt with some subvertical fractures. Unit intruded between units 278.1 and 280.1 and has chilled contacts dipping 50-80°.

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UNIT NO. 281.1 INTERVAL(m) 1642.85 - 1655.40 THICKNESS(m) 12.55

INTERPRETATION Basalt flow (incomplete)

MACROSCOPIC DESCRIPTION

Flow divided into two parts:
a) 1642.85 - 1647.20 m: Complex unusually thick flow top breccia. At top is red, fine-to medium-grained tuffaceous sedimentary interbed about 5 cm thick with subhorizontal depositional contacts. This is underlain by about 1 m ot reddish, moderately vesicular basalt consisting of clasts up to about 30 cm. Vesicles up to 2 cm across, filled chiefly with epidote and calcite. Below this is about 2 m of light to dark green, strongly altered, coherent scoriaceous breccia. Light green clasts set in darker matrix except near base where gray clasts of fine-grained basalt occur. Grayish-green, internally brecciatd basalt at very base.
b) 1647.20 - 1655.40 m: Light to medium gray, fine- to medium-grained basalt with sparse subhorizontal fractures in upper part, increasing in abundance in lower part. Generally low vesicularity except in a few zones. Subhorizontal flow banding occurs in lower part. Alteration along hairline fractures slight.
Unit lies between units 280.1 and 283.1; upper contact truncated by chilled dike margin; lower contact depositional, subhorizontal.

UNIT NO. 283.1 INTERVAL(m) 1655.40 - 1662.25 THICKNESS(m) 6.85

INTERPRETATION Basalt dike (complete?)

MACROSCOPIC DESCRIPTION

Fine- to medium-grained, aphyric, medium to light gray basalt. Color becomes lighter at base. Moderately to strongly fractured; fractures mostly dip about 45° but some steeper, some subhorizontal. Fractures lined with smectite/chlorite. Unit intruded between units 281.1 and 284.1; upper and lower contacts chilled; upper contact steep and dips about 40°; lower contact steep and wavy from 1662.25 to 1662.40 m. Carbonate(?)-filled vein occurs at lower contact thus difficult to determine whether unit 283.1 is chilled against unit 284.1 or vice versa.

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UNIT NO. 284.1 INTERVAL(m) 1662.25 - 1663.20 THICKNESS(m) 0.95

INTERPRETATION Basalt dike (complete?)

MACROSCOPIC DESCRIPTION

Complex, internally brecciated multiple(?) dike. Fine-grained, gray, aphyric basalt with two large veins up to 1 cm wide, filled with quartz and epidote. Intruded between units 283.1 and unit 284.2; upper contact steep and wavy, not clear which unit chilled against which; lower contact chilled, subhorizontal.

| | | | |
|---|---|---|---|
| | 284.2 | 1663.20 - 1665.50 | 2.30 |
| | 285.2 | 1665.68 - 1665.73 | 0.05 |
| | 285.4 | 1665.90 - 1667.68 | 1.78 |
| UNIT NO. | 285.6 | INTERVAL(m) 1667.82 - 1668.12 | THICKNESS(m) 0.30 |

INTERPRETATION Basalt flow (incomplete) (intruded by several dikes)

MACROSCOPIC DESCRIPTION

These units considered as parts of single flow cut by narrow dikes based on similar lithologies and thinness of intervening dikes. Unit consists of light gray, fine- to medium-grained, aphyric basalt. Grain size generally increases downward. Top 50 cm very vesicular; vesicles mostly 0.5 to 2 cm across, filled with quartz, epidote, some calcite and zeolite. Generally fewer vesicles but some irregular pods of secondary minerals in lower parts. Fractures sparse, irregular, mostly dip 20-40°, mostly lined with quartz.
Compound unit lies between units 284.1 and 285.7; upper and lower contacts truncated by dikes; unit interpreted as flow from grain size and vesicularity. Flow cut by dikes of units 285.1, 285.3, and 285.5.

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UNIT NO. 285.1 INTERVAL(m) 1665.50 - 1665.68 THICKNESS(m) 0.18

INTERPRETATION Basalt dike (complete)

MACROSCOPIC DESCRIPTION

Dark gray, fine-grained, aphyric basalt with chilled upper and lower contacts. Unit lies between units 284.2 and 285.2.

UNIT NO. 285.3 INTERVAL(m) 1665.73 - 1665.90 THICKNESS(m) 0.17

INTERPRETATION Basalt dike (complete)

MACROSCOPIC DESCRIPTION

Dark gray, fine-grained, aphyric basalt with chilled upper and lower contacts. Unit lies between units 285.2 and 285.4.

ICELAND RESEARCH DRILLING PROJECT

REYDARFJORDUR 1978

UNIT NO. 285.5 INTERVAL(m) 1667.68 - 1667.82 THICKNESS(m) 0.14

INTERPRETATION Basalt dike with slices of flow (complete?)

MACROSCOPIC DESCRIPTION

Thin dike with fragments of flow basalt. Dike is dark gray, aphyric, fine-grained basalt with veinlets of quartz, chlorite/smectite and epidote, mostly 1-3 mm wide. Unit lies between units 285.4 and 285.6; contacts chilled; upper contact subhorizontal, lower contact dips about 20°.

UNIT NO. 285.7 INTERVAL(m) 1668.12 - 1677.25 THICKNESS(m) 9.13

INTERPRETATION Basalt dike (complete)

MACROSCOPIC DESCRIPTION

Fine- to medium-grained, light gray, aphyric basalt. Moderately to highly fractured; fractures chiefly subhorizontal, some dip up to 70° especially in lower 1.5 m. Fractures generally lined with chlorite/smectite, but calcite, zeolite and epidote also occur in lower 1.5 m. Unit intruded between units 285.6 and 287.1; contacts chilled, dip about 70-80°.

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UNIT NO. 287.1 INTERVAL(m) 1677.33 - 1677.76 THICKNESS(m) 0.43

INTERPRETATION Basalt flow (incomplete)

MACROSCOPIC DESCRIPTION

Upper 6 cm fine- to medium-grained, moderately bedded red to dark brown tuff. This is followed by vesicular, non-brecciated basalt grading downward into light gray, fine-grained, aphyric basalt. Vesicles less than 10%, mostly less than 5 mm in upper half, greater than 5 mm in lower half; filled with quartz, epidote and calcite; chlorite/smectite fills small vesicles. Unit lies between units 285.7 and 287.2; upper and lower contacts truncated by dikes, dip about 70-80°.

UNIT NO. 287.2 INTERVAL(m) 1677.76 - 1691.58 THICKNESS(m) 13.82

INTERPRETATION Basalt dike (complete)

MACROSCOPIC DESCRIPTION

Fine- to medium-grained, greenish-gray, sparsely phyric basalt. Plagioclase microphenocrysts less than 1%, 1-3 mm. High angle fractures common, often open, others lined with smectite/chlorite. Some intermediate angle fractures dip 20-40° in lower meter, mostly filled with quartz. Irregular, slightly brecciated basal contact, chilled. Slice of country rock (unit 287.1?) lies between 1678.30 and 1678.75 m. Unit intruded between units 287.1 and 289.1.

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REYDARFJORDUR 1978

UNIT NO. 289.1 INTERVAL(m) 1691.58 - 1695.20 THICKNESS(m) 3.62

INTERPRETATION Basalt flow (incomplete)

MACROSCOPIC DESCRIPTION

Fine- to medium-grained, grayish-green to dark green, aphyric basalt. Less than 1% vesicles, filled with quartz and chlorite/smectite, with some epidote. Subhorizontal fractures common, some subvertical. Unit lies between units 287.2 and 290.1; top contact against dike is irregular and brecciated, lower contact depositional, irregular, arbitrary.

UNIT NO. 290.1 INTERVAL(m) 1695.20 - 1696.50 THICKNESS(m) 1.30

INTERPRETATION Basalt flow (incomplete)

MACROSCOPIC DESCRIPTION

Flow divided into three subunits:
a) 1695.20 - 1695.70 m: Gray to slightly reddish-violet, fine-grained, slightly brecciated and finely vesicular flow top breccia with epidote and quartz in interstices. Two pods of epidote and quartz greater than 1 cm across.
b) 1695.70 - 1696.10 m: Central part gradational to overlying breccia. Consists of fine-grained, gray, distinctly vesicular basalt with inclined flow banding dipping 10-30°. Vesicles about 5%, filled with quartz, epidote and chlorite/smectite. One subhorizontal fracture. Basal contact gradational.
c) 1696.10 - 1696.50 m: Gray, medium-grained, aphyric basalt with scattered vesicles up to 1 cm across, filled with quartz and epidote with some smectite/chlorite. One brecciated zone near top has quartz in interstices.
Unit lies between units 290.2 and 289.1; upper contact depositional, irregular, indistinct; lower contact against dike dip about 70-80°.

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REYDARFJORDUR 1978

UNIT NO. 290.2 INTERVAL(m) 1696.50 - 1698.00 THICKNESS(m) 1.50

INTERPRETATION Basalt dike (complete)

MACROSCOPIC DESCRIPTION

Gray, fine- to medium-grained, aphyric basalt. Fractures mostly subhorizontal, lined with carbonate, chlorite/smectite and epidote. Unlined subvertical fractures throughout most of unit. Unit lies between units 290.1 and 290.3; upper and lower contacts chilled, dip about 70°.

UNIT NO. 290.3 INTERVAL(m) 1698.00 - 1702.10 THICKNESS(m) 4.10

INTERPRETATION Basalt dike (incomplete?)

MACROSCOPIC DESCRIPTION

Fine- to relatively coarse-grained, sparsely phryic basalt. Plagioclase microphenocrysts 1%, 1-3 mm. Rare fractures subhorizontal to 15° dip. Unusually massive unit; rock is fresh and relatively unfractured. Because of relatively coarse grain-size, unit is probably part of thicker dike. Unit lies between 290.2 and 291.1; top contact truncated by overlying dike; lower contact chilled against underlying flow.

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REYDARFJORDUR 1978

UNIT NO. 291.1 INTERVAL(m) 1702.10 - 1706.68 THICKNESS(m) 4.58

INTERPRETATION Basalt flow (incomplete)

MACROSCOPIC DESCRIPTION

Fine-grained, aphyric, greenish-gray to gray, 'mottled' basalt with 'pseudo-brecciated' texture in which 1-5 mm wide light gray, subspherical spots lie in a darker matrix; may represent selective alteration. Top 1 m of flow brecciated. Epidote-rich green zone between 1704.75 and 1704.90 m, just below more massive 20-cm-thick layer with subvertical flow banding. Lower 50 cm has irregular vesicles and vesicle sheets, partly open. Moderately fractured, mostly subhorizontal, some dipping 50-60°. Unit lies between units 290.3 and 292.1; upper contact dips 70° against chilled dike margin; lower contact depositional, indistinct, subhorizontal.

UNIT NO. 292.1 INTERVAL(m) 1706.68 - 1709.68 THICKNESS(m) 3.00

INTERPRETATION Basalt flow (incomplete)

MACROSCOPIC DESCRIPTION

Flow divided into two parts:
a) Deep green to yellow-green, highly altered, friable to soft, vesicular basalt rich in epidote, chlorite/smectite. Probably flow top breccia. Irregular fractures common, spaced 5-30 cm, mostly dip less than 20°. Transition zone between 1708.80 and 1709.15 where breccia passes into more massive basalt.
b) Grayish-green, medium-grained, aphyric, massive basalt with smectite/chlorite filled microvesicles. No large vesicles or veins.
Unit lies between units 291.1 and 292.2; upper contact depositional, indistinct; lower contact truncated by chilled dike margin, dips 80°.

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UNIT NO. 292.2 INTERVAL(m) 1709.68 - 1720.36 THICKNESS(m) 10.68

INTERPRETATION Basalt dike (incomplete)

MACROSCOPIC DESCRIPTION

Light gray to greenish-gray, fine- to relatively coarse-grained, relatively fresh, sparsely phyric basalt. Grain size increases from margins toward center of unit. Plagioclase microphenocrysts less than 1%, 1-3 mm across. Vesicles sparse, filled with pyrite. Fractures rare, usually at 5 to 60 cm intervals, mostly subhorizontal or dipping up to 50°. Hairline veins filled with quartz, epidote, calcite. Unit lies between units 292.1 and 294.1; upper contact truncated by chilled dike margin dipping 80°; lower contact probably steep but sheared off. Because of relatively coarse grain size dike may have been quite thick.

UNIT NO. 294.1 INTERVAL(m) 1720.36 - 1721.28 THICKNESS(m) 0.92

INTERPRETATION Basalt flow (incomplete)

MACROSCOPIC DESCRIPTION

Greenish-gray, aphyric, fine-grained, vesicular basalt; upper half brecciated. Vesicles filled with chlorite/smectite, calcite and zeolite. Fractures subhorizontal. Overall unit very amygdaloidal but solid basalt. Some minor brecciation at base. Unit lies between units 292.2 and 294.2; top contact sheared but probably dips 70-80°; lower contact arbitrary because underlying highly altered, broken up material may contain some basal breccia.

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UNIT NO. 294.2 / 295.3 INTERVAL(m) 1721.28 - 1727.08 / 1728.10 - 1735.80 THICKNESS(m) 5.80 / 7.70

INTERPRETATION Basalt flow (incomplete)

MACROSCOPIC DESCRIPTION

These units interpreted to be part of same flow cut by dikes of units 295.1 and 295.2 because of similar texture and mineralogy. Upper unit is fine- to medium-grained, grayish-green sparsely phyric basalt. Plagioclase microphenocrysts 1-2%, altered. Sparse amygdules and slightly inclined flow banding suggest flow origin. Top 40 cm highly altered breccia, possibly flow top, but the contact to more massive basalt at about 1721.75 m is sheared off. Breccia contains abundant epidote, quartz and chlorite/smectite. Fractures sparse and mostly subhorizontal. Some thick lensoid amygdules up to 1 cm filled with quartz, epidote, and chlorite/smectite, otherwise massive basalt, relatively fresh.
Lower unit similar to massive part of upper one; has sparse microvesicles throughout, filled with smectite/chlorite. Several veinlets between 1732.60 and 1733.00 m, filled with epidote and quartz. Unit lies between units 294.1 and 296.1; upper contact with flow indistinct, subhorizontal, depositional; lower contact against chilled dike margin, dips 70-80°

UNIT NO. 295.1 INTERVAL(m) 1727.08 - 1727.43 THICKNESS(m) 0.35

INTERPRETATION Basalt dike(?) (incomplete)

MACROSCOPIC DESCRIPTION

Grayish-green, medium-grained, sparsely phyric basalt. Plagioclase phenocrysts 1%, 2-5 mm. Unit lies between units 294.2 and 295.2; top contact horizontal, appears chilled against overlying flow; lower contact highly brecciated and invaded by thin dikes of unit 295.2. Origin of unit unclear; upper contact and absence of vesicles suggest a dike, flow banding suggests flow.

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REYDARFJORDUR 1978

UNIT NO. 295.2 INTERVAL(m) 1727.43 - 1728.10 THICKNESS(m) 0.67

INTERPRETATION Complex basalt dike

MACROSCOPIC DESCRIPTION

Light to dark gray, fine-grained basalt with sparse altered plagioclase microphenocrysts, less than 1%. Consists of 10-20 thin dikelets and screens and fragments of country rock. Unit lies between units 295.1 and 295.3; top and bottom contacts irregular but steep, dipping 50-60°. Dikelets dip about 60-70°.

UNIT NO. 296.1 INTERVAL(m) 1735.80 - 1736.70 THICKNESS(m) 0.90

INTERPRETATION Basalt dike (complete)

MACROSCOPIC DESCRIPTION

Gray, fine-grained, massive, aphyric basalt with four subhorizontal fractures. Unit intruded between units 295.3 and 296.2; top and bottom contacts chilled, dip about 70°

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UNIT NO. 296.2 INTERVAL(m) 1736.70 - 1737.00 THICKNESS(m) 0.30

INTERPRETATION Clastic unit (incomplete)

MACROSCOPIC DESCRIPTION

Brown to greenish-gray, vaguely bedded, ash to fine lapilli size crystal-vitric tuff(?). Very compact rock (metamorphosed?). One subhorizontal fracture lined by chlorite/smectite and pyrite. Unit lies between units 296.1 and 296.3; upper contact against chilled dike margin dips about 70°; lower contact depositional, irregular, dips about 50°.

Qtz to be part of 296.4

UNIT NO. 296.3 INTERVAL(m) 1737.00 - 1737.36 THICKNESS(m) 0.36

INTERPRETATION Basalt flow (complete?)

MACROSCOPIC DESCRIPTION

Gray, highly to moderately vesicular, fine-grained, aphyric basalt. Minor flow top breccia with vesicles up to 20%, filled with quartz, epidote, and zeolite. Some tuff(?) from overlying unit below uppermost 10-cm-thick fragment. Unit lies between units 296.2 and 296.4; top contact depositional, irregular, dips about 50°; lower contact depositional, subhorizontal, sharp.

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UNIT NO. 296.4 INTERVAL(m) 1737.36 - 1742.09 THICKNESS(m) 4.73

INTERPRETATION Basalt flow (complete)

MACROSCOPIC DESCRIPTION

Gray, aphyric basalt, fine-grained and vesicular in upper part to 1741.20 m, medium-grained and flow banded in lower part. Flow may be continuation of unit 296.3, but gets distinctly finer grained toward top. Degree of vesicularity and alternation of vesicular and less vesicular zones suggests that unit 296.4 consists of several flow units in the top part of a thick flow. Most vesicles except in the lower 1 m are irregular, elongated, filled with quartz, epidote, and chlorite/smectite. Some are open, drusy cavities. Fractures moderately abundant, generally spaced 15-40 cm apart, generally dip less than 40°. Unit lies between units 296.3 and 297.1; upper contact depositional, subhorizontal; lower contact against chilled dike margin dips about 10°.

UNIT NO. 297.1 INTERVAL(m) 1742.09 - 1747.40 THICKNESS(m) 4.31

INTERPRETATION Basalt dike (incomplete?)

MACROSCOPIC DESCRIPTION

Gray, fine- to medium-grained, aphyric basalt. Alteration minor except for chlorite/smectite linings on fractures and minor hairline veins. Upper 25 cm of unit complex, consisting of several thinner dikes and screens. Fractures common, mostly subvertical, especially in central part of unit; most fractures closed. Lies between units 296.4 and 298.1; upper contact against chilled dike margin dips about 10°; basal contact very irregular, not definitely chilled. Contact replaced by 5-cm-thick, inclined vein filled with quartz and zeolite(?).

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UNIT NO. 298.1 INTERVAL(m) 1747.40 - 1748.68 THICKNESS(m) 1.28

INTERPRETATION Basalt dike (complete?)

MACROSCOPIC DESCRIPTION

Greenish-gray, fine-grained, aphyric basalt. Veins dip 10-20°, some irregular, filled with quartz and zeolite, spaced at 5-15 cm intervals. Lies between units 297.1 and 298.2; upper contact very complex, interfingering with irregular quartz-epidote-zeolite vein; lower contact dips about 70-80°, irregular, chilled against underlying flow. Dike may be continuation of unit 297.1.

UNIT NO. 298.2 INTERVAL(m) 1748.68 - 1753.76 THICKNESS(m) 5.08

INTERPRETATION Basalt flow (incomplete)

MACROSCOPIC DESCRIPTION

Greenish-gray, fine- to medium-grained basalt with highly variable vesicle zones except for zone between 1752.20 and 1753.65 m which is medium-grained and has only very few scattered, round vesicles. Vesicles filled with quartz, epidote, and smectite/chlorite. Fractures subhorizontal to 30° dip, very rare. Upper part of flow probably consists of several flow units welded together. Thin, fine-grained dikelets about 1 cm wide between 1748.90 and 1749.14 m. 2-cm-wide vein at base of lower dikelet, filled with quartz and zeolite. Unit lies between units 298.1 and 299.1; upper contact against chilled dike margin; lower contact indistinct, arbitrary, depositional.

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UNIT NO. 299.1 / 300.1 INTERVAL(m) 1753.76 - 1756.24 / 1756.24 - 1757.32 THICKNESS(m) 2.48 / 1.08

INTERPRETATION Basalt flow (incomplete)

MACROSCOPIC DESCRIPTION

Upper unit is gray to reddish-gray, highly to moderately vesicular basalt. Upper 40 cm is breccia with vesicular clasts up to 15 cm across, and zones of varying vesicularity. Zone between 1754.30 and 1754.60 m has largest (up to 1 cm) and most abundant vesicles, up to 30%. This zone is green and most highly altered but not friable; contains epidote and quartz. Fractures at 20-30 cm intervals, subhorizontal. Basal contact dips about 10° and lies above slightly chilled underlying basalt which is probably another flow unit of this complex cooling unit but separated from it because of the very sharp and clear contact.
Lower unit gray to reddish-gray, medium- to fine-grained, aphyric basalt. Vesicles 10% in upper part; 2% in lower part, filled with quartz, chlorite/smectite, and epidote. Flow banding in lower half slightly inclined. Rare fractures dip 20-40°. Greenish-gray, irregular, 1-cm-wide dike in lower 20 cm associated with thick quartz-epidote vein.
Compound unit lies between units 298.2 and 300.2; upper contact depositional, indistinct, arbitrary; lower contact depositional, subhorizontal, has 2 cm of basal breccia.

UNIT NO. 300.2 INTERVAL(m) 1757.32 - 1759.51 THICKNESS(m) 2.19

INTERPRETATION Basalt flow (complete)

MACROSCOPIC DESCRIPTION

Gray, fine- to medium-grained, aphyric basalt with 10 cm flow top breccia and abundant quartz-pyrite-epidote veins in upper 30 cm. Vesicles rare below 1758.30 m. Lower half of flow has well developed flow banding, dips about 30°. Basal 20 cm again vesicular. Lower half of unit contains irregular pods and veins of quartz-epidote-chlorite/smectite. Fractures 10-60 cm apart, mostly subhorizontal to less than 40° dip; two fractures dip 60-70°. One vein filled with smectite/chlorite dips 70°. Units lies between units 300.1 and 300.3; top and bottom contacts irregular, depositional. This flow may be subunit of complex flow including units 299.1, 300.1 and 300.3.

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UNIT NO. 300.3 INTERVAL(m) 1759.51 - 1761.00 THICKNESS(m) 1.49

INTERPRETATION Basalt flow (incomplete)

MACROSCOPIC DESCRIPTION

Medium gray, fine- to medium-grained, aphyric to very sparsely phyric basalt. Upper 20 cm scoriaceous breccia with fragments 2-15 cm across, moderately to highly vesicular. Irregular subhorizontal fractures 10-30 cm apart. Vesicles filled with quartz, carbonate, zeolite and epidote. Unit lies between units 300.2 and 300.4; upper contact irregular, indistinct, depositional; lower contact against chilled dike margin, sharp, subhorizontal. This flow may be a subunit of complex flow including units 299.1, 300.1 and 300.2.

UNIT NO. 300.4 INTERVAL(m) 1761.00 - 1772.83 THICKNESS(m) 11.83

INTERPRETATION Basalt dike (complete)

MACROSCOPIC DESCRIPTION

Medium gray, fine- to medium-grained, sparsely phyric basalt. Plagioclase microphenocrysts 1%, 1-3 mm. Entire unit relatively fresh except for chlorite/smectite lining on fracture surfaces and some irregular thin quartz veins in lower 50 cm. Unit strongly fractured, fractures subhorizontal to steep. Unit lies between units 300.3 and 303.1; upper contact sharp, subhorizontal, chilled; lower contact chilled with three 1-cm-thick dikelets and thin screens of underlying flow.

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UNIT NO. 303.1 INTERVAL(m) 1772.83 - 1774.54 THICKNESS(m) 1.71

INTERPRETATION Basalt flow (incomplete)

MACROSCOPIC DESCRIPTION

Gray, medium- to fine-grained, aphyric basalt. Pods and veins up to 1 cm thick, scattered through unit, filled with quartz and epidote. Irregular smectite/chlorite-filled microvesicles throughout. Fractures subhorizontal, veins dip about 60-70°. Unit lies between unit 300.4 and 303.2; upper contact against chilled dike margin; lower contact depositional, subhorizontal.

UNIT NO. 303.2 INTERVAL(m) 1774.54 - 1775.05 THICKNESS(m) 0.51

INTERPRETATION Clastic unit (complete)

MACROSCOPIC DESCRIPTION

Dominantly violet-gray, moderately bedded, chiefly ash size, very well indurated tuff(?) with layers of different grain size. Dark colored at top and bottom. Several layers of lapilli fragments, less than 1 cm across, particularly in central part of unit. Sparse subvertical to inclined hairline fractures. Lies between units 303.1 and 303.2; upper and lower contacts depositional, subhorizontal.

ICELAND RESEARCH DRILLING PROJECT

REYDARFJORDUR 1978

UNIT NO. 303.3 INTERVAL(m) 1775.05 - 1775.75 THICKNESS(m) 0.70

INTERPRETATION Basalt flow (incomplete)

MACROSCOPIC DESCRIPTION

Light gray to dark gray, fine- to medium-grained, aphyric, highly vesicular, often brecciated basalt. Upper 40 cm with large clasts or flow units up to 35 cm thick. Below 1775.50 m unit is moderately vesicular, scoriaceous breccia with general clast size less than 10 cm. Pods and vesicles filled with quartz and zeolite, some epidote and calcite. Smectite/chlorite occurs in small irregular vesicles. Lies between units 303.2 and 303.4; upper contact depositional, subhorizontal; lower contact against chilled dike margin, dips about 50°. Unit could possibly be top of thick flow in unit 304.1.

UNIT NO. 303.4 INTERVAL(m) 1775.75 - 1782.65 THICKNESS(m) 6.90

INTERPRETATION Basalt dike (complete)

MACROSCOPIC DESCRIPTION

Gray, fine- to medium-grained, aphyric basalt. Top 40 cm complex with several 1-cm-thick dikelets, brecciation and a large zeolite-calcite-filled vug. A piece of country rock (vesicular basalt) at 1779.85 m. Subhorizontal fractures common between 1776.80 and 1778.40 where rock is largely broken up. Scattered subvertical hairline veins. Lies between units 303.3 and 304.1; top and bottom contacts chilled, dip 70-80°.

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REYDARFJORDUR 1978

UNIT NO. 304.1 INTERVAL(m) 1782.65 - 1788.45 THICKNESS(m) 5.80

INTERPRETATION Basalt flow (incomplete) (cut by dikelet at 1784.85 m)

MACROSCOPIC DESCRIPTION

Gray to greenish-gray, fine- to medium-grained, aphyric basalt with abundant relatively large, irregular to lensoid vesicles and prominent veins throughout. Veins and vesicles filled with quartz, zeolite, epidote and calcite; green smectite/chlorite in small vesicles. Lower 2 m greenish-gray basalt with more massive texture, lacking vesicles. Fractures relatively abundant, most dipping about 70°, some subhorizontal. Sulphide specks up to 2 mm across common in lower part of unit. Unit lies between units 303.4 and 305.1; upper and lower contacts truncated by chilled dike margins dipping 70-80°. Unit may be lower part of flow in unit 303.3.

N.B. Box 304 in core photographs is upside down.

UNIT NO. 305.1 INTERVAL(m) 1788.45 - 1838.53 THICKNESS(m) 50.08

INTERPRETATION Basalt dike (complete)

MACROSCOPIC DESCRIPTION

Gray, fine- to medium-grained, sparsely phyric basalt. Plagioclase microphenocrysts 1%, 1-2 mm long. Unit generally very fresh and massive but cut by moderately abundant, dominantly vertical fractures lined with smectite/chlorite. A few widely spaced 'shear' zones, 10-20 m apart, filled with thick veins and vugs of zeolite, epidote, calcite. Closely spaced horizontal fractures , 1-5 cm apart, occur below 1828.90 m. Unit intruded between units 304.1 and 314.1; upper and lower contacts chilled, dip 70-80°. Unit may be part of large multiple dike.

ICELAND RESEARCH DRILLING PROJECT

REYDARFJORDUR 1978

UNIT NO. 314.1 INTERVAL(m) 1838.53 - 1839.70 THICKNESS(m) 1.17

INTERPRETATION Basalt dike(?) (incomplete)

MACROSCOPIC DESCRIPTION

Grayish-green, massive, medium-grained, aphyric basalt, probably representing part of intrusion judging from absence of vesicles and massive texture. Lies between units 305.1 and 314.2; upper and lower contacts against chilled margins of younger dikes, steeply dipping. Probably part of large multiple dike.

UNIT NO. 314.2 INTERVAL(m) 1839.70 - 1840.42 THICKNESS(m) 0.72

INTERPRETATION Basalt dike (complete)

MACROSCOPIC DESCRIPTION

Grayish-green, fine- to medium-grained, aphyric basalt with chilled margins. Lies between units 314.1 and 314.3. Probably part of large multiple dike.

ICELAND RESEARCH DRILLING PROJECT

REYDARFJORDUR 1978

UNIT NO. 314.3 INTERVAL(m) 1840.42 - 1846.51 THICKNESS(m) 6.09

INTERPRETATION Basalt dike (incomplete)

MACROSCOPIC DESCRIPTION

Grayish-green, fine- to medium-grained, very sparsely phyric basalt. Plagioclase microphenocrysts less than 1%, 0.5 to 1 mm long. Basalt slightly flow banded. Extremely fractured; fractures dip 75-90°, coated with smectite/chlorite, some with calcite and zeolite. Unit lies between units 314.2 and 315.1; upper contact against chilled margin of younger dike; lower margin chilled against underlying flow, contact dips 80°. Probably unit is part of large multiple dike.

UNIT NO. 315.1 INTERVAL(m) 1846.51 - 1851.62 THICKNESS(m) 5.11

INTERPRETATION Basalt flow (incomplete)

MACROSCOPIC DESCRIPTION

Gray, chiefly medium-grained, aphyric basalt. Vugs up to 3 cm, filled with calcite, quartz, zeolite and epidote above about 1849.40 m. Below vugs are smaller, generally less than 3 mm, and chiefly filled with green smectite/chlorite. Gray dikelet, 1-3 cm wide, dips 70°. Broken material at 1850.66 m. Breccia in lower 20 cm rich in epidote with one large, 3-cm-wide vug. Unit lies between units 314.3 and 316.1; upper contact against chilled dike margin; basal contact depositional, indistinct, arbitrary. Possible that units 315.1, 316.1 and 316.2 are parts of large complex flow.

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UNIT NO. 316.1 INTERVAL(m) 1851.62 - 1853.20 THICKNESS(m) 1.58

INTERPRETATION Basalt flow (complete)

MACROSCOPIC DESCRIPTION

Green, highly altered scoriaceous breccia with highly vesicular fragments in upper part, vesicles up to 4 mm across, filled with epidote and quartz. Relatively massive, fine-grained basalt below 1852.80 m. Unit lies between units 315.1 and 316.2; upper and lower contacts depositonal, subhorizontal, uneven, somewhat arbitrary. Unit may be part of larger unit of highly vesicular rubbly flows including 315.1 and 316.2.

unit
This/must be part of either 316.1 or 317.1 !

UNIT NO. 316.2 INTERVAL(m) 1853.20 - 1854.72 THICKNESS(m) 1.52

INTERPRETATION Scoriaceous breccia unit (complete)

MACROSCOPIC DESCRIPTION

Scoriaceous breccia with highly vesicular clasts to greater than 10 cm across. Highly altered to clays, quartz, epidote and zeolite. Some vesicles open. Subhorizontal fractures common, possibly due to drilling. Lies between units 316.1 and 317.1; top and bottom contact irregular, depositional, somewhat arbitrary. Unit probably part of complex of thin scoriaceous flows including units 315.1 and 315.2.

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UNIT NO. 317.1 INTERVAL(m) 1854.72 - 1856.21 THICKNESS(m) 1.49

INTERPRETATION Clastic unit (complete)

MACROSCOPIC DESCRIPTION

Dominantly reddish-brown to dark brown, chiefly ash-size volcaniclastic sediments. Bedding dips about 20°. Some coarse ash to fine-grained lapillistone. Some epidote in upper part. Beds vary from 5 mm to 10 cm thick. Lies between units 316.2 and 317.2; top contact depositional, indistinct; basal contact sharp, irregular on vesicular flow top.

UNIT NO. 317.2 INTERVAL(m) 1856.21 - 1859.35 THICKNESS(m) 3.14
318.1 1860.15 - 1863.83 3.68

INTERPRETATION Basalt flow (incomplete) (cut by dike of unit 317.3)

MACROSCOPIC DESCRIPTION

These two units interpreted as parts of single flow based on lithology and thinness of dike between them. Upper unit gray, fine- to medium -grained, highly vesicular basalt with large, partly open vesicles in sheets up to 1 cm wide between 1856.50 and 1856.80 m. Vesicles filled with quartz, epidote and zeolite; small vesicles filled with smectite/chlorite. Vesicles become rounder and less abundant downward. Fractures 20-40 cm apart, subhorizontal to inclined up to 50°.
Lower unit is gray, medium-grained aphyric, massive basalt with round vesicles, 0.2 to 1 cm across, filled with quartz, calcite, and epidote in central part. Fractures mostly 10-20 cm apart, subhorizontal; several hairline fractures filled with quartz, zeolite and calcite are subvertical.
Compound unit lies between units 317.1 and 318.2; top contact depositional, irregular, subhorizontal; lower contact against chilled margin of dike, partly brecciated.

ICELAND RESEARCH DRILLING PROJECT

REYDARFJORDUR 1978

UNIT NO. 317.3 INTERVAL(m) 1859.35 - 1860.15 THICKNESS(m) 0.80

INTERPRETATION Basalt dike (complete)

MACROSCOPIC DESCRIPTION

Dark gray, fine- to medium-grained, aphyric to very sparsely plagioclase-phyric basalt with abundant pyrite blebs. Fractures dip 30-70°. Lies between units 317.2 and 318.1; top and bottom contacts chilled, dip 75-80°.

UNIT NO. 318.2 INTERVAL(m) 1863.83 - 1869.23 THICKNESS(m) 5.40

INTERPRETATION Basalt dike (complete)

MACROSCOPIC DESCRIPTION

Greenish-gray, fine- to medium-grained, aphyric basalt with deep green, highly altered, partly brecciated central part between 1865.20 and 1866.40 m. Large veins and vugs filled with crystals of quartz, epidote and zeolite. Most fractures and veins dip 30-70°. Unit lies between units 318.1 and 319.1; upper contact chilled, partly brecciated; lower contact chilled, wavy, dips about 80°.

ICELAND RESEARCH DRILLING PROJECT

REYDARFJORDUR 1978

UNIT NO. 319.1 INTERVAL(m) 1869.23 - 1876.90 THICKNESS(m) 7.67

INTERPRETATION Basalt flow-breccia unit (incomplete)

MACROSCOPIC DESCRIPTION

Gray, fine-grained, aphyric, vesicular basalt. Upper part to 1872.05 m dominantly massive basalt with minor brecciation but abundant smectite/chlorite-filled vesicles to 2 mm, and scattered vugs filled with quartz, zeolite and epidote. This is followed to about 1873.10 m by more highly brecciated but 'healed' gray basalt similar to upper part. From 1873.10 to 1874.00 m rock is brecciated and more highly vesicular with vugs filled with quartz and epidote. This followed by more massive basalt to 1875.25 m. Small vesicles in sheets with irregular orientation, suggesting flow banding or brecciation with subsequent welding. At base is about 1.5 m of brecciated, scoriaceous basalt, dark gray in color with round to irregular clasts up to 15 cm across. Clasts set in light gray, finely vesicular, fine-grained matrix. Rare fractures, subhorizontal.
Unit lies between units 318.2 and 320.1; upper contact against chilled dike; lower contact depositional, somewhat arbitrary.

UNIT NO. 320.1 INTERVAL(m) 1876.90 - 1881.70 THICKNESS(m) 4.80

INTERPRETATION Basalt flow (complete)

MACROSCOPIC DESCRIPTION

Flow divided into two parts:
a) 1876.90 - 1878.10 m: Dominantly green, epidotized, scoriaceous breccia. Most clasts less than 5 cm, set in fine-grained, reddish-gray matrix. Few fractures. Gradational into lower part.
b) 1878.10 - 1881.70 m: Light grayish-green, fine- to medium-grained, aphyric basalt. Upper 40 cm welded, brecciated rock with scattered quartz-filled veins up to 1 cm wide. Fractures subhorizontal to subvertical, spaced 10-40 cm. Some hairline cracks and veins. 15 cm of breccia at base with scoria fragments in lava matrix. Unit lies between units 319.1 and 321.1; contacts depositional, irregular. Unit may be part of composite flow including units 320.1, 321.1 and 321.2.

ICELAND RESEARCH DRILLING PROJECT

REYDARFJORDUR 1978

UNIT NO. 321.1 INTERVAL(m) 1881.70 - 1882.95 THICKNESS(m) 1.25

INTERPRETATION Basalt flow (complete)

MACROSCOPIC DESCRIPTION

Gray basalt breccia composed of moderately vesicular scoria clasts,mostly less than 5 cm across, set in green, epidote-rich matrix. Massive, internally brecciated zone between 1882.60 and 1882.90 m. Unit lies between units 320.1 and 321.2; upper and lower contacts depositional and somewhat arbitrary. Flow probably part of composite unit including 320.1 and 321.2.

UNIT NO. 321.2 INTERVAL(m) 1882.95 - 1890.69 THICKNESS(m) 7.74

INTERPRETATION Basalt flow (complete)

MACROSCOPIC DESCRIPTION

Flow divided into four subunits:
a) 1882.95 - 1883.70 m: Green to greenish-gray, scoriaceous breccia with abundant epidote. Clasts mostly less than 5 cm across but boundaries indistinct. Base soft and clayey and broken up. Fractures spaced 5-40 cm apart and subhorizontal to 30° dip.
b) 1883.70 - 1886.30 m: Gray, finely vesicular, faintly internally brecciated, fine-grained, apyric basalt with transitional boundaries. Vesicles filled with smectite/chlorite.
c) 1886.30 - 1890.20 m: Grayish-green, flow banded, medium-grained basalt with rare,irregular, large sheet-like, quartz-filled vugs, partly open.
d) 1890.20 - 1890.69 m: Internally brecciated basal zone with two large vesicles, up to 2 cm across, filled with quartz and minor epidote and calcite.
Unit lies between units 321.1 and 323.1; Upper contact depositional, indistinct; lower contact depositional, sharp, dips 10°. Unit may be part of composite flow including units 320.1, 321.1 and 321.2.

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UNIT NO. 323.1 INTERVAL(m) 1890.69 - 1900.49 THICKNESS(m) 8.80

INTERPRETATION Basalt flow (complete)

MACROSCOPIC DESCRIPTION

Unit divided into three parts:
a) 1881.69 - 1893.00 m: Red to gray, scoriaceous breccia with clasts generally less than 5 cm across. Vesicles and breccia interstices filled with epidote. Clasts subrounded and moderately to highly vesicular in top part, finely vesicular and fine-grained in lower part. Fractures spaced 10-20 cm and horizontal. Base gradational to next subunit.
b) 1893.00 - 1894.90 m: Light gray, fine-grained, faintly internally brecciated basalt with irregular vesiculated areas suggesting brecciation and rewelding, but not complete disruption during flowage. Contacts diffuse.
c) 1894.90 - 1900.49 m: Medium-grained, massive, aphyric basalt. Vesicles sparse, 2 mm to 1 cm, filled with quartz and minor epidote, calcite and zeolite. Brown grossular(?) also present. Finely vesicular zone with smectite/chlorite-filled vesicles below 1900.20 m.
Unit lies between units 321.2 and 324.1; upper contact depositional, sharp; lower contact depositional, relatively sharp, dips about 20°.

UNIT NO. 324.1 INTERVAL(m) 1900.49 - 1910.53 THICKNESS(m) 10.04

INTERPRETATION Basalt flow (complete)

MACROSCOPIC DESCRIPTION

Basalt flow similar to those above and below with 2-3-meter-thick flow top breccia and sharp base. Unit divided into three subunits:
a) upper 1.7 m - gray, red, and green mottled scoriaceous breccia with abundant vesicles filled with epidote.
b) 1.7 to 2.3 m - green breccia and internally brecciated basalt with abundant epidote.
c) remainder of flow - gray, very sparsely plagioclase phyric basalt. Plagioclase phenocrysts less than 1%, less than 2 mm long. Rock fine- to medium-grained, moderately altered to smectite/chlorite.
Unit lies between units 323.1 and 326.1; contacts depositional, subhorizontal.

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UNIT NO. 326.1 INTERVAL(m) 1910.53 - 1910.62 THICKNESS(m) 0.09

INTERPRETATION Clastic unit (complete)

MACROSCOPIC DESCRIPTION

Brick red, rather massive tuff(?). Unit lies between units 324.1 and 326.2; contacts depositional; upper contact subhorizontal; lower contact dips about 80°.

UNIT NO. 326.2 INTERVAL(m) 1910.62 - 1918.52 THICKNESS(m) 7.90

INTERPRETATION Basalt flow (complete)

MACROSCOPIC DESCRIPTION

Top 30 cm reddish to purple, grading downward to gray at 1911.60 m. Flow internally brecciated to 1912.30 m. Top 1 m contains abundant quartz and epidote. Vesicles mostly less than 5 mm across, mostly filled with chlorite/smectite. Lower part of flow is gray, aphyric basalt, generally massive but with some flow banding. Vesicles less abundant in lower part than in top. Unit lies between units 326.1 and 327.1; contacts depositional; upper contact dips about 80°; lower contact subhorizontal.

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REYDARFJORDUR 1978

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UNIT NO. 327.1 INTERVAL(m) 1918.52 - 1918.85 THICKNESS(m) 0.33

INTERPRETATION Clastic unit (complete)

MACROSCOPIC DESCRIPTION

Red to dark brown, well bedded on cm-scale, air fall, crystal-vitric tuff. Lies between units 326.2 and 327.2; contacts depositional, subhorizontal.

UNIT NO. 327.2 INTERVAL(m) 1918.85 - 1919.73 THICKNESS(m) 0.88

INTERPRETATION Basalt flow (incomplete)

MACROSCOPIC DESCRIPTION

Red to green, scoriaceous breccia with clasts up to 8 cm across. Fine-grained basalt with 10 to 50% vesicles, filled by smectite/chlorite, abundant epidote, and quartz. Rock highly altered. Unit lies between unit 327.1 and base of hole; upper contact depositional, irregular, indistinct.