CY-1

CORE DESCRIPTIONS

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Name of signatory Date

CYPRUS CRUSTAL STUDY PROJECT
Hole CY-1 Core Descriptions

Location:	Lat. 35°02'54"N
	Long. 33°10'46"E
Date occupied:	22 April 1982
Drilling started:	29 April 1982
Drilling ended:	3 June 1982
Date departed:	14 June 1982
Depth drilled:	474.88 m
Recovery:	92%
Lithology:	Pillowed and massive lava flows

The enclosed core descriptions were compiled and edited by Louisa Douma, Angela Dobson and Paul T. Robinson using detailed core descriptions written by the observers listed on the individual core forms. Graphic representations were drafted by the Cyprus Geological Survey.

During description of the core, cooling units were identified and numbered sequentially down the hole. The unit numbers designate the core box in which the unit first appears. Contacts were drawn at the tops of individual pillows and at massive basalt flow margins.

Among the secondary minerals that occur throughout the section, chlorite and smectite were impossible to distinguish in the field and are listed usually as smectite or layer silicates. Individual zeolites could only rarely be distinguished in hand specimen. Estimates of groundmass alteration were made from hand specimens and are approximate at best.

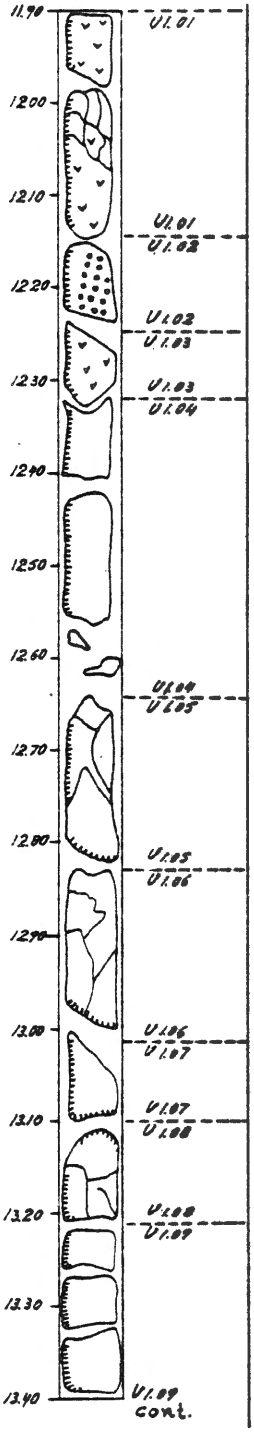
Louisa Douma
Paul T. Robinson
January, 1984

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 1 Sheet 1a

Visual Core Description Observer PTR

Depth Interval 11.90 m to 13.40 m



UNIT 1.01 OVERALL DESCRIPTION

Upper contact - 11.90 m Ambiguous. Dip not clear. No glass.
Lower contact - 12.15 m Ambiguous. Dip not clear. No glass.
Unit thickness - 0.25 m Type of unit: probably a pillow basalt.

Fine-grained, grey, very sparsely phyric basalt.

Phenocrysts:- <1% uniformly distributed
- maximum size - 1 mm
- altered to iddingsite

No vesicles.

Veins:- 1-2%
- size - hairline to 3 mm
- filling - carbonate

UNIT 1.02 OVERALL DESCRIPTION

Upper contact - 12.15 m Ambiguous. No glass. Dip not clear.
Lower contact - 12.23 m Ambiguous. No glass. Dip not clear.
Unit thickness - 0.08 m

Light grey sediment with angular clasts up to 1 cm in fine-grained clayey matrix. Probably not drilling mud.

UNIT 1.03 OVERALL DESCRIPTION

Upper contact - 12.23 m Ambiguous. No glass. Dip not clear.
Lower contact - 12.32 m Ambiguous. No glass. Dip not clear.
Unit thickness - 0.09 m

A single piece of light grey, sparsely olivine phyric basalt.

Phenocrysts:- 1%
- size - 1-2 mm
- olivine altered to iddingsite

Vesicles:- <1%
- size - 1 mm
- filling - open or lined with clay

Veins:- 3%
- irregular
- filling - carbonate and minor hematite

UNITS 1.04, 1.05 and 1.06 Descriptions - see Box 1, Sheet 1b.
UNITS 1.07, 1.08 and 1.09 Descriptions - see Box 1, Sheet 1c.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1
Core Box 1 Sheet 16

Graphic Representation | Sample

Visual Core Description Observer PTR
Depth Interval 11.90 m to 13.40 m

UNIT 1.04 OVERALL DESCRIPTION

Upper contact - 12.32 m Ambiguous. No glass. Dip not clear.
Lower contact - 12.65 m Ambiguous. No glass. Dip not clear.
Unit thickness - 0.33 m

Light brown, coarse-grained sediment. No bedding. No sorting. Angular pieces of various material up to 1 cm in clayey matrix. A few small flakes (?) of glass. Probably formed during drilling i.e. not primary sediment.

UNIT 1.05 OVERALL DESCRIPTION

Upper contact - 12.65 m Ambiguous. No glass. Dip not clear.
Lower contact - 12.82 m Depositional. Altered glass. Dip approximately 45°. Unit thickness - 0.17 m

Light brown, fine-grained, very sparsely olivine phyric basalt. Pillow fragment.

Phenocrysts:- approximately 1%
- size - 1-2 mm
- subhedral, olivine altered to iddingsite

Vesicles:- 4%
- maximum size - 2 mm
- filling - 50% clay, 40% open, 10% hematite

Veins:- 15%
- maximum size - 10 mm
- filling - 95% carbonate, 5% clay

GMA:- approximately 15% - to green smectite and carbonate
- glassy rind on base approximately 1 cm thick
- staining present

UNIT 1.06 OVERALL DESCRIPTION

Upper contact - 12.82 m Ambiguous. No glass. Dip not clear.
Lower contact - 13.00 m Ambiguous. Altered glass. Dip not clear.
Unit thickness - 0.18 m

Brownish-grey, very sparsely phyric, fine-grained basalt.

Phenocrysts:- 1%
- size - 1 mm
- subhedral, olivine altered to iddingsite

Vesicles:- 3%
- size - 2 mm
- filling - 80% open, 15% clay minerals, 5% carbonate

Veins:- 7%
- filling - 90% carbonate, 10% hematite

GMA:- 10% - locally stained red by hematite

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 1 Sheet 1c

Graphic Representation | Sample

Visual Core Description Observer PTR

Depth Interval 11.90 m to 13.40 m

UNIT 1.07 OVERALL DESCRIPTION

Upper contact - 13.00 m Ambiguous. No glass. Dip not clear.
Lower contact - 13.10 m Ambiguous. Altered glass. Dip 70°.
Unit thickness - 0.10 m

A single pillow fragment of greyish-brown, very sparsely olivine phyric basalt.

Phenocrysts:- 1%
- size - 1 mm
- subhedral, olivine altered to iddingsite

Vesicles:- 1%
- size - 1 mm
- filling - 90% open, 10% clay

No veins.

GMA:- 5%-groundmass oxidization by hematite

UNIT 1.08 OVERALL DESCRIPTION

Upper contact - 13.10 m Ambiguous. No glass. Dip not clear.
Lower contact - 13.20 m Ambiguous. No glass. Dip not clear.
Unit thickness - 0.10 m

A single piece of greyish-brown, aphyric basalt.

No vesicles.

Veins:- 8%
- size - 1-5 mm
- filling - 90% carbonate, 10% layer silicates

UNIT 1.09 OVERALL DESCRIPTION

Upper contact - 13.20 m Ambiguous. No glass. Dip not clear.
Lower contact - 13.50 m Ambiguous. No glass. Dip not clear.
Unit thickness - 0.30 m

Sediment of fragments in clay matrix. No bedding. No sorting. Probably due to drilling.

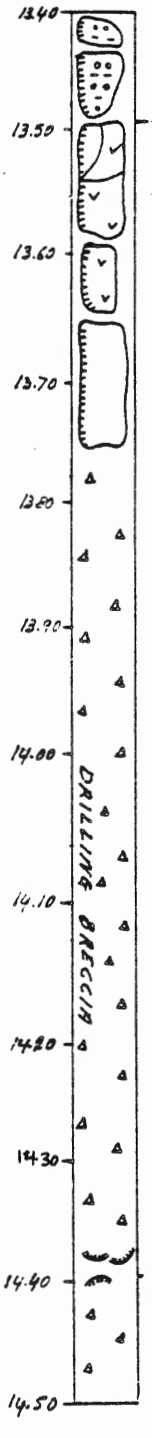
UNIT 1.09 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 1 Sheet 2

Visual Core Description Observer PTR

Depth Interval 13.40 m to 14.50 m



UNIT 1.09 cont. Description - see Box 1, Sheet 1c.

Sediment of fragments in clay matrix. No bedding. No sorting. Probably due to drilling.

UNIT 1.10 OVERALL DESCRIPTION

Upper contact - 13.50 m Ambiguous. No glass. Dip not clear.
Lower contact - 14.40 m Ambiguous. Altered glass in broken rubble. Dip not apparent.
Unit thickness - 0.90 m

Brownish-grey, very sparsely phyric, pillow (?) basalt.

Phenocrysts:- 1% evenly distributed
- size - 1 mm
- subhedral, olivine altered to iddingsite

Vesicles:- approximately 1%
- maximum size - 2 mm
- filling - 65% open, 25% carbonate, 10% layer silicates

Veins:- not discernible because of the broken condition except in upper 10 cm where they are 2 mm wide and filled with carbonate

UNIT 1.11 Description - see Box 1, Sheet 3.

Entire unit consists of broken fragments of brownish-grey, very sparsely olivine phyric basalt with a few masses of mud, probably due to drilling.

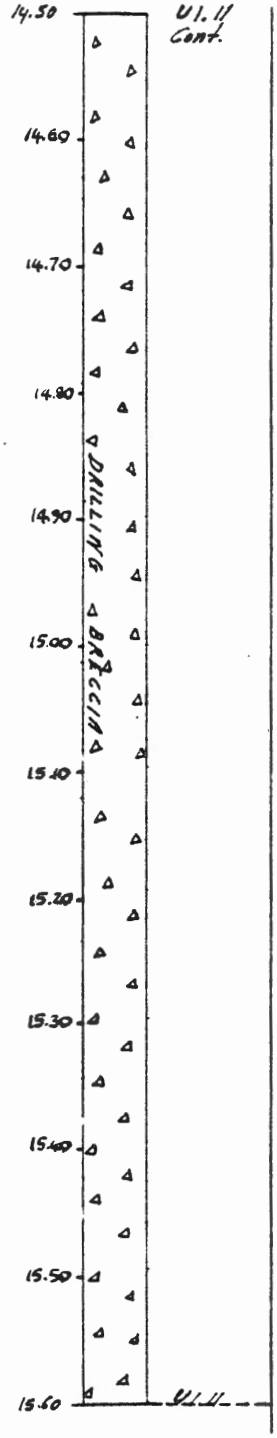
UNIT 1.11 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 1 Sheet 3

Visual Core Description Observer PTR

Depth Interval 14.50 m to 15.60 m



UNIT 1.11 OVERALL DESCRIPTION

Upper contact - 14.40 m Ambiguous. Altered glass in rubble. Dip not apparent.
Lower contact - 15.60 m Ambiguous. No glass. Dip not clear.
Unit thickness - 1.20 m

The entire unit consists of broken fragments of brownish-grey, very sparsely olivine phyric basalt with a few masses of mud, probably due to drilling.

Phenocrysts:- 1%
- size - 1 mm
- subhedral, olivine altered to iddingsite

Vesicles:- not apparent in rubble

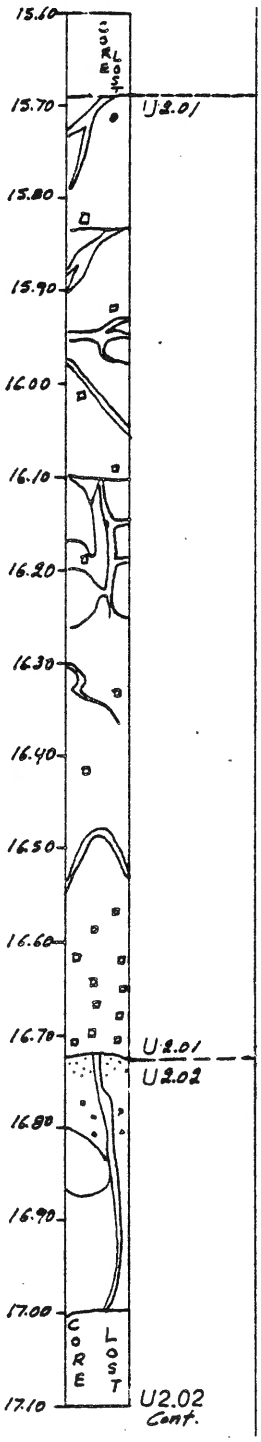
Veins:- not apparent in rubble

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 2 Sheet 1

Visual Core Description Observer M. Haller / S. Agrell

Depth Interval 15.60 m to 17.10 m



CORE LOSS - 15.60-15.70 m

UNIT 2.01 OVERALL DESCRIPTION

Upper contact - 15.70 m Missing. Dip of break - 10°.
Lower contact - 16.73 m Depositional. Pillow margin with altered glassy rim and fracture.
Unit thickness - 1.03 m Type of unit: pillow fragment breccia

Light olive brown, fine-grained, sparsely porphyritic, sparsely olivine phyric basalt with the phenocryst content increasing to the bottom (from <5% to about 5%).

Phenocrysts:- <5%
- size 2-3 mm
- oxidized, euhedral olivine phenocrysts replaced by limonite

Vesicles:- 1% from 15.70-16.65 m, evenly distributed
- round
- size - 2 mm
- 16.65-16.70 m - 20 mm x 4 mm pipe vesicles
- filling - 70% limonite and red oxide, 20% carbonate, 10% layer silicates

Veins:- 5-9% Non displacive. Evenly distributed.
- size - 2-10 mm
- filling - 85% carbonate, 10% layer silicates, 5% limonite (Lined with white carbonate, filled with grey-white milky carbonate in the centre of intersecting veins. There are greyish phases, sporadic films of red oxide, and greenish, waxy sheet silicates).

GMA:- 15% - to 50% layer silicates, 40% limonite, 10% carbonate

UNIT 2.02 OVERALL DESCRIPTION

Upper contact - 16.73 m Depositional. Chilled margins with narrow zone of olive green smectite, dip 0°.
Lower contact - 17.60 m Depositional? Irregular. Dip - 60°. Green smectite fragments.
Unit thickness - 0.87 m Type of unit: Brecciated pillow or flow.

Fine-grained, yellowish-brown to light olive-green, aphyric basalt with specks of dark reddish-brown and dark yellowish-green.

Vesicles:- 5% from 16.73-17.30 m
- small round vesicles with well defined outlines, incompletely filled with a layered silicate lining
- size - 4 mm
- 7-15% from 17.30-17.40m
- 7% at 17.30 m - mostly open
- 15% at 17.40 m - mostly with red oxide
- segregation vesicles permeated by red oxides
- size - 15 mm
- filling overall - 30% open, 40% layer silicates, 20% carbonate, 10% red oxide

Veins:- 14% non-displacive fracture veins
- average size - 2-10 mm
- filling - 85% grey carbonate with opaques (pyrolusite), 10% waxy layer silicate, 5% oxides

GMA:- 25%

CORE LOST - 17.00-17.10 m

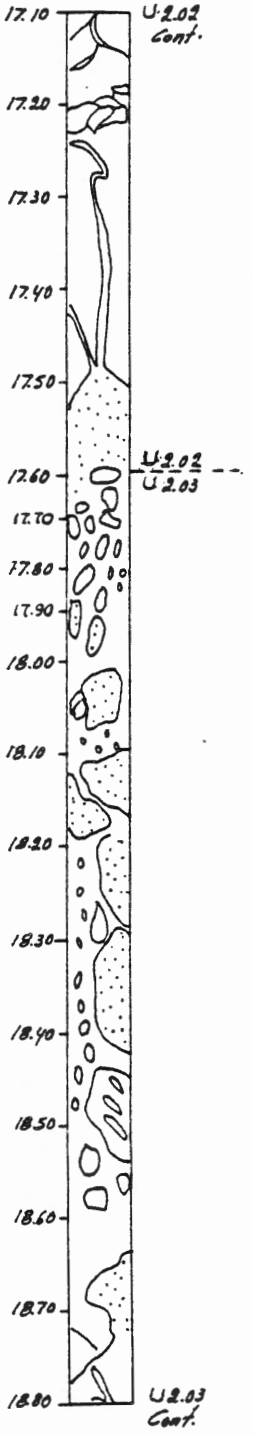
UNIT 2.02 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 2 Sheet 2

Visual Core Description Observer M. Haller/S. Agrell

Depth Interval 17.10 m to 18.80 m



UNIT 2.02 cont. Description - see Box 2, Sheet 1.

Fine-grained, yellowish-brown to light olive green, aphyric basalt with specks that are dark reddish-brown and dark yellowish-green.

UNIT 2.03 OVERALL DESCRIPTION

Upper contact - 17.60 m Depositional. Irregular. Dip - 60°. Altered glass: olive green layer silicates. Top partially displaced by veins.
Lower contact - 19.47 m Depositional. Irregular. 70% altered glass, dark green layer silicates. A 2 cm carbonate infilling separates it from unit 2.04.
Unit thickness - 1.87 m Type of unit: pillow fragment breccia - most fragments still fitting together

Fine-grained, aphyric basalt fragments of three types:
1) Large fragments, 10-20 cm, dusty yellow to moderate yellowish-brown, angular, with only a few chilled margins
2) Smaller fragments, 1-5 cm, light brown, often lobate with chilled margins.
3) Small fragments, <1 cm, light olive-brown, with altered glassy margins.

Carbonate veining separates the components of the breccia. All smaller fragments are vesicular. 50% of the fragments have partly chilled margins.

Vesicles:- 12% - but abundance varies
- pipe vesicles are present
- filling - 70% red oxide, 20% carbonate, 10% layer silicates

Veins:- 15%
- Non displacive
- Overall filling - 30% layer silicates, 70% carbonate
- 1) 17.70-18.60 m: the veins are more irregular and their form is controlled by the numerous small fragments they enclose
- filling - 50% layered silicates, 50% carbonate
- 2) 18.85-19.40 m: the veins are more straight sided, wider and their form is controlled by large fragments of solid rock which they separate
- filling - 10% layer silicates, 90% carbonate

GMA:- 50% in the top part, 25% in the lower part
- to 50% layer silicates, 40% red oxide, 10% carbonate

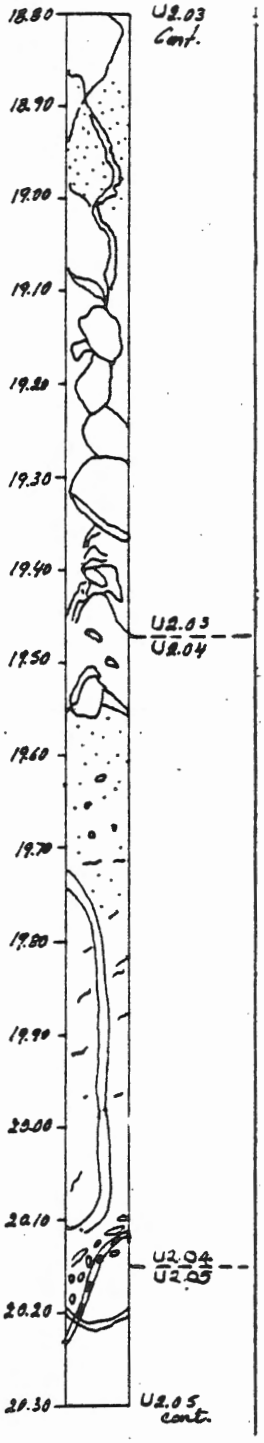
UNIT 2.03 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 2 Sheet 3

Visual Core Description Observer M. Haller / S. Agrell

Depth Interval 18.80 m to 20.30 m



UNIT 2.03 cont. Description - see Box 2, Sheet 2.

Fine-grained, aphyric basalt fragments of several types.

UNIT 2.04 OVERALL DESCRIPTION

Upper contact - 19.47 m Depositional. Pillow margin with altered green glass separated from overlying pillow by carbonate vein full of altered green glass and basalt fragments. Dip - 60°.
Lower contact - 20.15 m Depositional. Chilled, spalled off altered glassy rinds in carbonate rich matrix. Dip - 70°/160°. Approximately 8 cm oxidized zones top and bottom.
Unit thickness - 0.68 m Type of unit: pillow lava

Grey-green, fine-grained, sparsely porphyritic olivine basalt.

Phenocrysts:- <1%, oxidized, evenly distributed
- olivine

Vesicles:- 1%, rounded and segregation vesicles
- size - rounded ones - 1-2 mm
- segregation vesicles - 5 x 3 mm
- segregation veins and vesicles slightly greener, therefore richer in smectite
- glass often present - e.g. 19.65 m and 20.05 m, absent from margin of pillow
- filling -90% layer silicates, 10% carbonate

Veins:- 15%
- some small - one large fracture filling - 15 mm wide splits pillow in two
- growth-depositional features parallel to contact
- filling - 95% pink, white, grey carbonates, 4% layer silicates, 1% opaques
- segregation veins are are approximately parallel to core and are 1-5 mm wide

GMA:- 15% - to 80% layer silicates, 10% carbonate, 10% opaques

UNIT 2.05 OVERALL DESCRIPTION

Upper contact - 20.15 m Ambiguous.
Lower Contact - 20.35 m 0.5 cm altered glassy margin adjoining a few mms of chilled basalt. Dip - 65°.
5 mm vein of carbonate. In part interpillow altered glass and lithic fragments, 10 mm maximum.
Unit thickness - 0.20 m

Vesicles:- 4%
- filling - 70% open, 30% carbonate
- some brick red "splotches"

Veins: - 10% including margins
- filling - altered glass, carbonate, and layered green sheet silicates

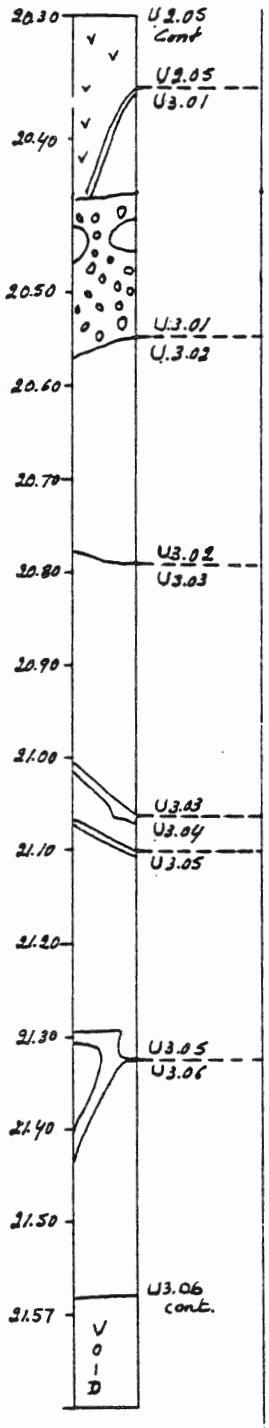
UNIT 2.05 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 3 Sheet 1a

Visual Core Description Observer R. Baragar

Depth Interval 20.30 m to 21.57 m



UNIT 2.05 cont. Description - see Box 2, Sheet 3.

Pillow margin.

UNIT 3.01 OVERALL DESCRIPTION

Upper contact - 20.35 m 1 cm altered glass (green layer silicates). 5% amydules - maximum size 2-3 mm - filled with a brick red indeterminate filling within a few cms of the contact. Grey-brown in colour grading to orange-brown. The contact zone is fine-grained to aphanitic with possibly 3% minute (<1 mm) olivine? pseudomorphs.
Lower contact - 20.58 m Ambiguous.
Unit thickness - 0.23 m

Confused zone of pillow breccia - altered hyaloclastite fragments in a carbonate matrix. The pillow fragments are encompassed by "glassy" rims in whole and in part. "Glass" of both rims and hyaloclastite fragments is composed of dark green layered silicates. The size of the pillow fragments is 5-7 cms and the hyaloclastite fragments are 1-1.5 cms.

UNIT 3.02 OVERALL DESCRIPTION

Upper contact - 20.58 m There is a 5.0 mm "glassy" (dark green layered silicate) rim followed by 10 mm chilled zone.
Lower contact - 20.78 m Ambiguous.
Unit thickness - 0.20 m

Unit is composed of greenish-brown, fine-grained lava with sparse phenocrysts <?> of "olivine" now totally removed by weathering. Size of possible phenocrysts 2-5 mm. The unit is amygdaloidal with about 10% amygdules.

UNIT 3.03 OVERALL DESCRIPTION

Upper contact - 20.78 m There is a zone 10-20 mm thick with altered glass fragments, embedded in a carbonate matrix, some braided on pillow edge. Dip - 50°.
Lower contact - 21.06 m Altered glass fragments, carbonate matrix 10-30 mm thick. Irregular attitude.
Unit thickness - 0.28 Type - mafic pillow lava

Greenish-brown, aphanitic, olivine basalt.

Phenocrysts:- 5-10% - distribution homogeneous
- size - 1-8 mm
- average maximum size 4-5mm
- olivine pseudomorphs 100% altered
- anhedral

Vesicles:- 1-2%
- average maximum size - 1 mm
- filling - limonitic
- irregular

Veins:- 30% - rectilinear networks throughout
- size - 40 mm to hairline
- filling - two varieties of carbonate in about equal proportions - i) buff to chalky ii) white, clouded with minute black specks - magnetite?

GMA:- extensive hematitic-limonitic stain and coatings - particularly adjoining veins and contacts
- probably extensive GMA to clay minerals

UNITS 3.04 and 3.05 Description - see Box 3, Sheet 1b.
UNIT 3.06 Description - see Box 3, Sheet 2a.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 3 Sheet 16

Graphic Representation | Sample

Visual Core Description Observer R Baragar

Depth Interval 20.30 m to 21.57 m

UNIT 3.04 OVERALL DESCRIPTION

Upper contact - 21.06 m Ambiguous.
Lower contact - 21.10 m Ambiguous.
Unit thickness - 0.04 m

Very narrow aphanitic unit with no recognizable phenocrysts. There are thick carbonated, altered glassy boundaries and soft, extensive limonite and hematite impregnation. There are probably abundant altered clay minerals. Minor carbonate veins.

UNIT 3.05 OVERALL DESCRIPTION

Upper contact - 21.10 m Carbonate impregnated, altered, braided glass and fragments 10 mm thick. Dip - 65°.
Lower contact - 21.32 m Altered glass fragments embedded in a predominantly carbonate matrix. Irregular contact includes the remnants of a neigbouring pillow and swings subparallel to the core.
Unit thickness - 0.22 m Type:- pillow, mafic lava

Green-brown, aphanitic olivine basalt.

Phenocrysts:- olivine psuedomorphs homogeneously distributed
- size range - 5-10 mm average
- average size 7 mm
- anhedral to subhedral shape
- total alteration

Vesicles:- 5% - more abundant at margins, including strings of vesicles subparallel to margins
- round to irregular in shape
- filling : major - soft, brown limonitic material
rare - calcite

Veins:- rectilinear network with larger blocks at intersections
- filling - predominantly carbonate of two types of about equal abundances: i) granular white carbonate - varying to buff and red with stain and ii) white clouded carbonate, with stellar pyrolusite dendrites(?) throughout (evidently younger)

GMA:- extensive limonitic alteration, soft - probably altered to clay minerals

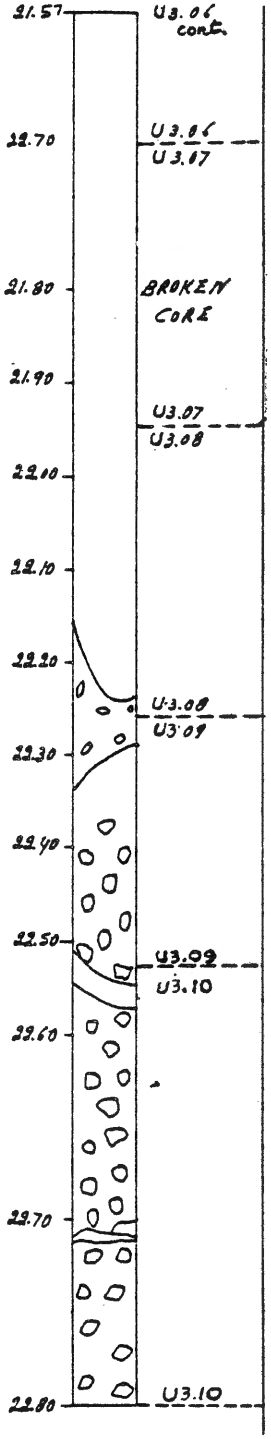
UNIT 3.06 Description - see Box 3, Sheet 2a.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole #CY-1

Core Box 3 Sheet 2a

Visual Core Description Observer SHALABY/HASSAN

Depth Interval 21.57 m to 22.80 m



UNIT 3.06 OVERALL DESCRIPTION

Upper contact - 21.32 m There is a zone 10-30 mm, in part subparallel to margin with 30-40% altered glass fragments embedded in carbonate. Some altered, braided glass adjoins lava.
Lower contact - 21.70 m Marginally present, altered glass and network of carbonate veins.
Unit thickness - 0.38 m Type of unit: mafic pillow lava

Greenish-brown, aphanitic lava.

Phenocrysts:- 3%
- homogeneous distribution except for phenocryst-free zone along the margins
- average maximum size - 5 mm
- anhedral to subhedral
- olivine pseudomorphs 100% altered

Vesicles:- distribution concentrated near rim
- average maximum size - 2 mm
- filling - soft limonite, rare carbonate
- irregular to round in shape

Veins:- 20% - rectilinear network
- filling - two varieties of carbonate i) granular white ii) white with pyroclastic dendrites

GMA:- extensive limonitic staining

UNIT 3.07 (+UNIT 3.08?) OVERALL DESCRIPTION

Upper contact - 21.70 m Depositional. Contains very minor altered, green coloured glass.
Lower contact - 22.26 m Similar to the upper contact. Glassy material and chilled margin 2 mm wide. The lower contact dips 40° with a zone 50 mm wide of hyaloclastite breccia fragments of glassy material in carbonates.
Unit thickness - 0.56 m Type of unit: pillow

Grey-brownish, fine-grained olivine basalt.

Phenocrysts:- 20%
- average size - 5 mm
- olivine totally altered to oxides and brown limonitic material

Vesicles:- approximately 20%
- size - 6x3 mm
- filling - opaques
- euhedral to subhedral, elongated

Veins:- 1% overall in the upper 10 cm
- size - 2 mm
- filling - 70% opaques, 30% sheet silicates
- there is a wider (20 mm) fracture at 22.10 m

GMA:- strong alteration

UNITS 3.09 and 3.10 Descriptions - see Box 3, Sheet 2b.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 3 Sheet 26

Graphic Representation | Sample

Visual Core Description Observer SHALABY/HASSAN

Depth Interval 21.57 m to 22.80 m

UNIT 3.09 OVERALL DESCRIPTION

Upper contact - 22.26 m Depositional with 50 mm of brecciated fragments of glass in carbonate matrix.
Lower contact - 22.53 m 5 mm of chilled margins and 10 mm of glassy material in carbonates. Dip - 30°.
Unit thickness - 0.27 m Type of unit: pillow

Brown, fine-grained, olivine phyric basalt.

Phenocrysts:- 20% - homogeneously distributed
- anhedral to subhedral

Vesicles:- 5%
- size - 6 mm x 3 mm (elongated)
- filling - 70% opaques, 30% sheet silicates and minor carbonate

Veins:- approximately 35%
- filling - 80% carbonate, 20% sheet silicates

GMA:- strong

Unit 3.10 OVERALL DESCRIPTION

Upper contact - 22.53 m Depositional. 2 mm chilled margin and 10 mm glass fragments in carbonates and silicates. Dip 30°.
Lower contact - 22.80 m Depositional. Dip - 50°. Glass approximately 20 mm.
Unit thickness - 0.27 m Type of unit: pillow

Brownish-grey, fine-grained, olivine phyric basalt.

Phenocrysts:- slightly olivine phyric
- average size - 2 mm
- highly altered to oxides

Vesicles:- approximately 4% increasing downwards
- size - 7x2 mm, elongated and rounded
- filling - 70% oxides, 30% silicates and minor carbonate

Veins:- 10%
- filling - 70% carbonate, 30% sheet silicates

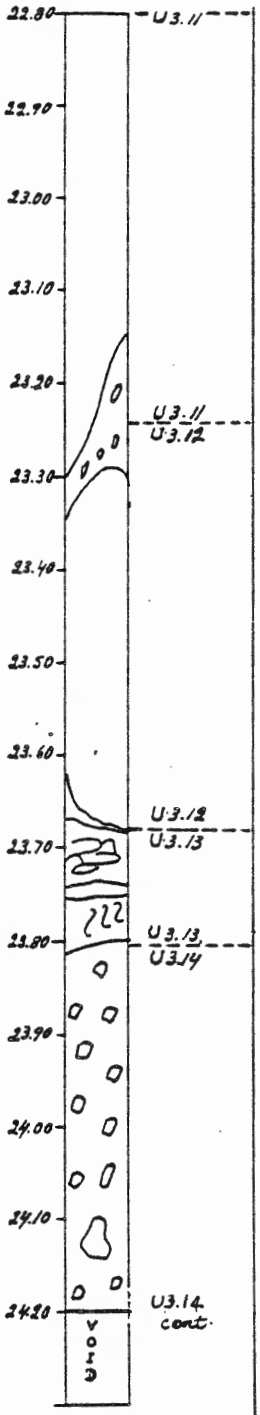
GMA:- less strongly altered

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole #Cy-7

Core Box 3 Sheet 3a

Visual Core Description Observer SHALABY

Depth Interval 22.80 m to 24.20 m



UNIT 3.11 OVERALL DESCRIPTION

Upper contact - 22.80 m Depositional. Dip 20°. Green glass.
Lower contact - 23.25 m Not very clear - represented by inter-pillow brecciated glass with carbonate veining.
Unit thickness - 0.45 m Type of unit: pillow

Fine-grained, olivine phyric basalt. The upper 22 cm are greenish-grey, the lower 22 cm are brownish.

Phenocrysts:- 25% - homogeneously distributed
- size - 2 mm
- altered completely to brown material
- euhedral to subhedral

Vesicles:- 4% in the upper part, 8% in the lower part
- size - 7x4mm (elongated)
- filling - 70% oxides, 30% sheet silicates

Veins:- 20%
- filling - milky coloured carbonates and sheet silicates

GMA:- upper portion is less altered while the lower portion is highly altered

UNIT 3.12 OVERALL DESCRIPTION

Upper contact - 23.25 m Not very clear - represented by inter-pillow breccia glass fragments and carbonate veins.
Lower contact - 23.67 m Depositional. Very clear. Dip 0°. No fresh glass. Sharp contact with sediments.
Unit thickness - 0.42 m Type of unit: pillow

Greenish-grey, fine-grained, olivine basalt with many white spots.

Phenocrysts:- homogeneously distributed
- size - about 1 mm
- 100% altered

Vesicles:- approximately 20%
- size - 2 mm and elongated 5x2mm
- filling - 90% white material (carbonates) and 10% opaques
- rounded

Veins:- <1%
- size - 1 mm
- filling - carbonates

GMA:- moderate

UNIT 3.13 OVERALL DESCRIPTION

Upper contact - 23.67 m Depositional. Sharp with the pillow lava. Dip 15°.
Lower contact - 23.80 m Depositional, with the breccia at the base. Dip - 10°.
Unit thickness - 0.13 m Type of unit: sedimentary

Brown, fine-grained, clayey material with some laminations.

UNIT 3.14 Description - see Box 3, Sheet 3b and Box 4, Sheet 1.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 3 Sheet 36

Graphic Representation | Sample

Visual Core Description Observer SHALABY

Depth Interval 22.80 m to 24.20 m

UNIT 3.14 OVERALL DESCRIPTION

Upper contact - 23.80 m Depositional. Dip - 0°.
Glassy material.
Lower contact - 27.85 m Ambiguous. Slickensides. No glass.
Unit thickness - 4.05 m

The rock is fragmental and multi-colored - green, brown, yellow and red. The fragments of olivine basalt are angular to subangular of one rock type with different degrees of alteration. They have glassy margins. Size ranges from 50 mm to 10 mm (poorly sorted).

Vesicles:- filling - 50% opaques and 50% zeolites

Veins:- <1%
- filling - carbonates and sheet silicates

GMA:- mainly glass

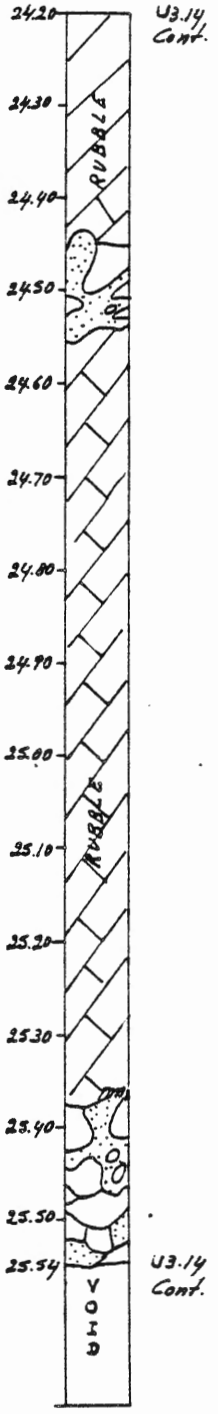
UNIT 3.14 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole #Cy-1

Core Box 4 Sheet 1

Visual Core Description Observer J. BOYLE/EATON

Depth Interval 24.20 m to 25.54 m



UNIT 3.14 cont. For some description - see Box 3, Sheet 3b.

Heterolithic volcanic breccia with angular clasts of:
1) Spherulitic, fine-grained, grey to brown basalt,
2) Fine-grained, yellow-brown to dark brown basalt which is more altered than the spherulitic basalt.

1) Spherulitic, fine-grained, aphyric basalt has fragments that are 20 to 80 mm. It is grey through yellow to brown, some with green palagonitic margins. Spherulites are brown.

Vesicles:- <5% not including segregation vesicles
- maximum size - 2 mm
- milky white

2) Fine-grained, yellow/brown, aphyric basalt has fragments from 10 to 60 cm. They are yellow-brown, sometimes grading to greyish towards the edge of fragments. Some palagonitic margins.

Vesicles:- <1% not including segregation vesicles
- maximum size - 0.5 mm
- white

Breccia texture: a) Grading absent
b) Grain supported (predominantly)
c) Some in situ brecciation

Matrix:- pink clay and palagonitic fragments grading down hole to brown clay and palagonitic fragments - variation probably related to alteration
- fragments of palagonite - granular

Veins:- 40%
- size - 5mm to 20mm
- prominant, subvertical veins at intervals 25.80-26.00 m, 27.20-27.30 m, 27.50-27.60 m
- also small fine white carbonate veins cutting the matrix throughout
- filling - 25% blue-white sheet silicates, 63% green smectite in margins and fragments, 12% calcite

GMA (in clasts):- average 50-60%, range 40-90%

Slickensides:	Depth/Dip		Azimuth		
	24.50/85°		250°		
	25.08/45°		unoriented		
	25.40/ ?		variable		
	26.75/15°		210°	Striations -	45°
	26.98/20°		Two orientations		
	27.10/75°	Excellent	030°	Striations	45°
	27.15/90°	Excellent	120°	"	45°
	27.85/45°	Good	155°	"	16°

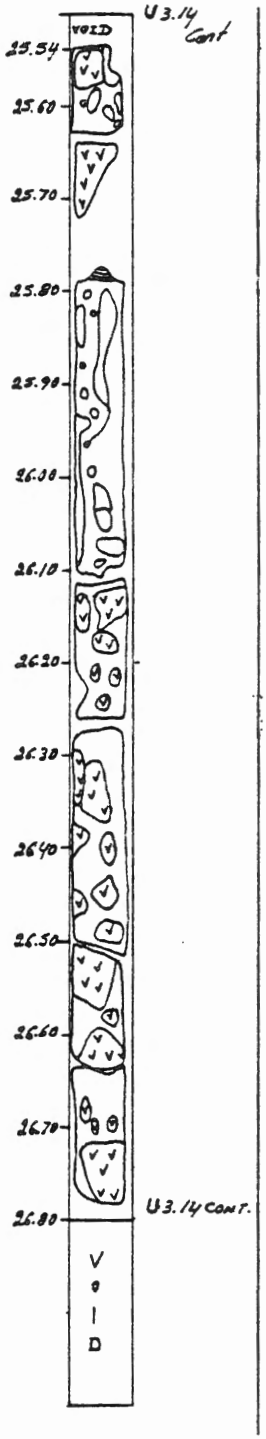
UNIT 3.14 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 4 Sheet 2

Visual Core Description Observer T. BOYLE / EATON

Depth Interval 25.54 m to 26.80 m



UNIT 3.14 cont. Description - see Box 4, Sheet 1.

Heterolithic volcanic breccia with angular clasts of:
1) Spherulitic, fine-grained, grey to brown basalt,
2) Fine-grained, yellow-brown to dark brown basalt which is more altered than the spherulitic basalt.

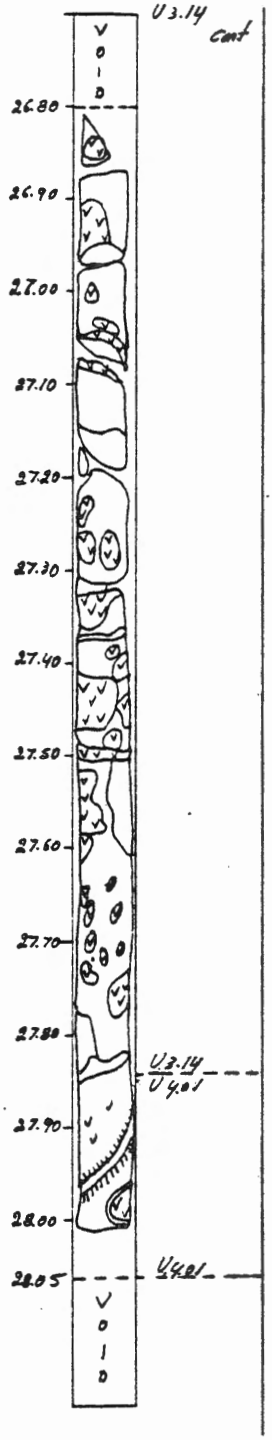
UNIT 3.14 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 4 Sheet 3

Visual Core Description Observer T. BOYLE/EATON

Depth Interval 26.80 m to 28.05 m



UNIT 3.14 cont. Description - see Box 4, Sheet 1.

Heterolithic volcanic breccia with angular clasts of:
1) Spherulitic, fine-grained, grey to brown basalt,
2) Fine-grained, yellow-brown to dark brown basalt which is more altered than the spherulitic basalt.

UNIT 4.01 OVERALL DESCRIPTION

Upper contact - 27.85 m Ambiguous. Slickensides. No glass.
Lower contact - 28.05 m Ambiguous. Altered glass.
Unit thickness - 0.20 m Type of unit: Pillow lobe breccia

Grey to ochre, fine-grained, slightly cpx phyric (microphyric), spherulitic basalt.

Phenocrysts:- <1%, homogeneously distributed
- size - 1 mm
- subhedral
- up to 50% altered - leaves boxwork skeletal structure

Vesicles:- 0.5%
- size - 1 mm but single large void 14 mm x 8 mm
- filling - 90% carbonate filling, 10% green layered silicates as lining
- one filled void is elliptical
- spherical

Veins:- 15%, 4 types throughout
1) green palagonitic margins surrounding all lava parts
2) fine carbonate - 1-3mm
3) white to pink sheet silicate, also in narrow subvertical veins
4) Soft brown clay-rich material occurs as matrix to interlava palagonitic debris.
- filling - 40% brown clay, 40% palagonite, 15% sheet silicates, 5% carbonate

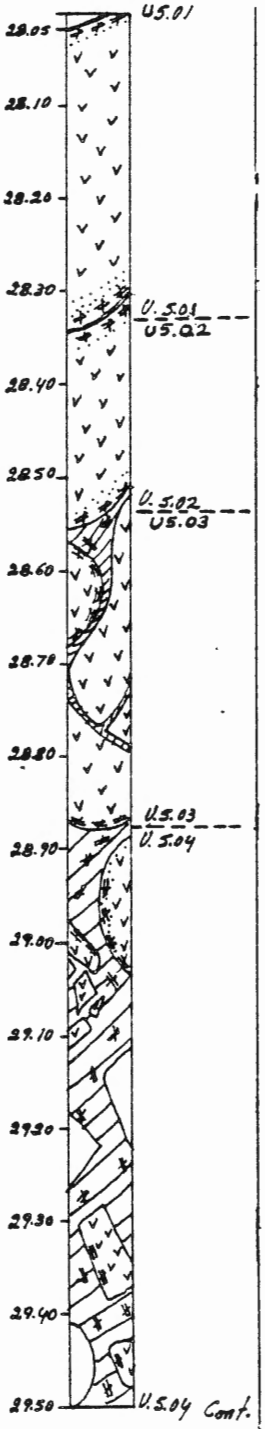
GMA:- average 40%, range 20-90% replaced

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 5 Sheet 1a

Visual Core Description Observer N.Gaglow / H.P.Johnson / M. Haller

Depth Interval 28.05 m to 29.50 m



UNIT 5.01 OVERALL DESCRIPTION

Upper contact - 28.05 m Pillow margin with altered glass. Dip 30°.
Lower contact - 28.32 m Pillow margin with altered glass but more interpillow broken glass. Dip 40°. Contact zone is 150 mm wide.
Unit thickness:- 0.27 m Type of unit: pillow lava

Very fine-grained, 20 mm chilled margin adjacent to glass with very slight yellow coloration, grades into greenish-grey, fine- to medium-grained, slightly olivine phyric basalt. Mottled aspect imparted by altered, large, brown grains (0.5-1 mm) together with some fresher clinopyroxenes, dark green and in 1 mm aggregates. Larger granular phases concentrated in pillow centre account for about half the rock. The olivines are subhedral to anhedral (sub-oval) and are completely altered.

Vesicles:- 1%
- 100% open

Veins:- 33% - including margins, none within
- filling - 80% sheet silicates, 10% carbonate
10% zeolite

GMA: - strong

UNIT 5.02 OVERALL DESCRIPTION

Upper contact - 28.32 m 150 mm wide zone of altered glass, interpillow broken glass. Dip 40°.
Lower contact - 28.53 m Pillow margin with altered glass (sheet silicates). Dip 70°.
Unit thickness - 0.21 m Type of unit: pillow

Greenish-grey, essentially aphyric, fine-grained basalt with chilled margins of slightly paler colour.

Phenocrysts:- random distribution
- size - <0.5 mm
- microphyric, brown olivine (?)
- rounded

Vesicles:- <1%
- 100% open

Veins:- 50% (all margins), most green altered glass
- filling - 70% sheet silicates, 15% carbonate,
15% zeolites

GMA:- strong

UNITS 5.03 and 5.04 Descriptions - see Box 5, Sheet 1b.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 5 Sheet 16

Graphic Representation | Sample

Visual Core Description Observer N. Beglow/H. Johnsen/M. Heller

Depth Interval 28.05 m to 29.50 m

UNIT 5.03 OVERALL DESCRIPTION

Upper contact - 28.53 m Pillow margin zone with altered glass. There is a zone of sheet silicates plus white material (carbonate?). Immediately above contact is a lobe (11 cm across) of a protruding pillow surrounded by altered glass and carbonate? Minor ochreous staining marks contact. Dip 40° 1-2 cm chill zone.
Lower contact - 28.88 m Pillow margin with sharp break (70°) 10-20 mm chill zone.
Unit thickness - 0.35 m Type of unit - pillow lava

Fine- to medium-grained, greenish-grey, slightly olivine-phyric basalt with about 10% mottled texture, approximately parallelling contacts. Rock is strongly mottled (olivine phyric) with phenocrysts concentrically distributed but also with sporadic altered but better defined anhedral olivine phenocrysts (1-2 mm).

Vesicles:- 1%
- 100% open

Veins:- 20%
- size - one 5mm at 28.76m (70°/220°) of soft waxy white material
- also irregular thin veins of reddened material
- filling - 65% sheet silicates, 25% zeolites, 10% carbonate

UNIT 5.04 OVERALL DESCRIPTION

Upper contact - 28.88 m Ambiguous.
Lower contact - 29.72 m Ambiguous but presumed to be depositional with much altered glass fragments - increasing above - rare below.
Unit thickness - 0.84 m

Unit is termed pillow lava breccia and has the appearance of including margins of a number of different pillows. Most of the unit comprises marginal zones with dark green altered glass associated with white and grey-white material accounting for some 30% of these marginal zones. There are angular to subrounded fragments of fine-grained aphyric basalt (greenish-grey to orangey-brown) 5-40mm across; plus slightly olivine-phyric mottled green-grey fragments approximately 70mm across. A larger piece is present at the base of the unit.

Veins:- 70%
- filling - 70% altered glass, 15% zeolites, 10% white sheet silicates, 5% carbonate

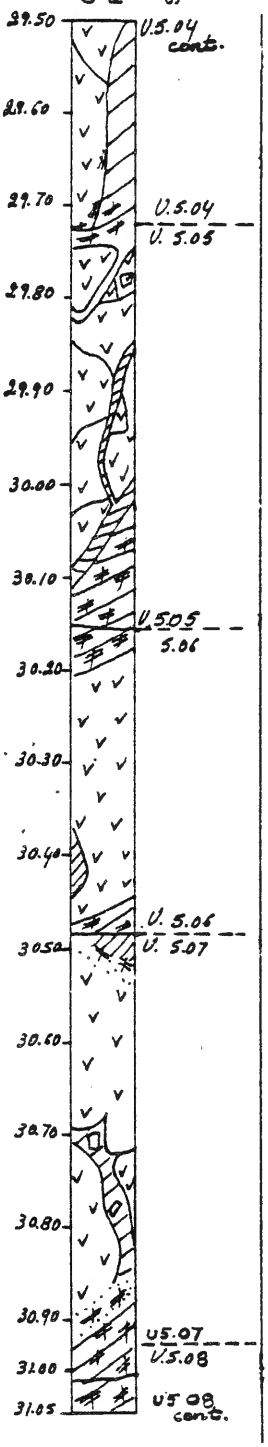
UNIT 5.04 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 5 Sheet 2a

Visual Core Description Observer N. Bagley / H.P. Johnson / M. Haller

Depth Interval 29.50 m to 31.05 m



UNIT 5.04 cont. Description - see Box 5, Sheet 1b.

Aphyric fragments invariably have alteration halo - greenish rims to orangey centres. Mottled basalt at 29.35 m - probably fragments from same pillow, separated by veins of white material. Distinct size gradation increasing away from chilled margin. Fragment at 29.60 m exhibits alteration halos (within main mass) controlled by random minor fractures.
Vesicles:- <1%
GMA:- highly altered throughout

UNIT 5.05 OVERALL DESCRIPTION

Upper contact - 29.72 m Ambiguous with much altered glass fragments; increasing above - rare below.
Lower contact - 30.15 m Glass-rich margin, 10 cm of loose unconsolidated material.
Unit thickness - 0.43 m

Basalt flow - brecciated unit, compact with dark green-grey to greyish-red fragments, separated by soft, white chalky and red waxy material as well as milky white waxy sheet silicates. Some closely spaced fragments are distinctly olivine phyric though adjacent fragments cannot be correlated with any degree of certainty. All strongly altered.
Vesicles:- <1%
Veins:- including infillings and margin constitute approximately 25-30% of unit
- filling - 60% sheet silicates, 40% carbonates and white zeolites
- 2 subparallel veins occur at 30.03 m (15 mm) and 30.10 m (8 mm) with milky white to blue-white waxy slickensided sheet silicates - dip 45°

UNIT 5.06 OVERALL DESCRIPTION

Upper contact - 30.15 m Glass-rich margin, 10 cm of loose, unconsolidated material.
Lower contact - 30.48 m Marked by 50 mm of broken, loose rock with abundant glass indicating a pillow margin.
Unit thickness - 0.33 m

Greenish-grey, slightly olivine phyric basalt, dominantly fine-grained but with strongly olivine phyric patches towards pillow centre. Coherent but with fracturing infilled with chalky white to greyish-white material. Angular fragments are 20 to 100 mm but with minor smaller fragments within the fracture material in addition to very minor altered glass.
Phenocrysts:- size - approximately 0.5-1 mm
- olivine altered to brown material
- all rounded
- in places plucked out - may be vesicles
Vesicles:- <1%
Veins:- 30% including fractures
- filling - 70% white to greenish-white sheet silicates, 30% carbonate
- margins are 50% glass

UNIT 5.07 Description - see Box 5, Sheet 2b.
UNIT 5.08 Description - see Box 5, Sheet 3a.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 5 Sheet 2b

Graphic Representation | Sample

Visual Core Description Observer N. Baglow/H. Johnson/M. Haller

Depth Interval 29.05 m to 31.05 m

UNIT 5.07 OVERALL DESCRIPTION

Upper contact - 30.48 m Unoriented. Pillow margin with abundant altered glass fragments. Chilled margin (15 mm) with ochreous alteration zones.
Lower contact - 30.96 m With 20 cm of glass-rich fragments, but beginning of contact zone marked by 15 mm chill zone with ochreous alteration.
Unit thickness - 0.48 m

Greenish-grey, slightly olivine phyric basalt; mottled with red to brown limonitic alteration concentrated away from pillow margins. Red alteration in centre of rounded, larger green remnants constitutes well over half the total rock as well as being present interstitially. Mottling is more abundant at the bottom of the unit.

Phenocrysts:- sporadic
- size - approximately 1 mm

Vesicles:- randomly distributed
- size - approximately 0.5 mm to pin-head
- open

Veins:- 25%
- filling - 70% white, chalky sheet silicates, 20% carbonates, 10% pale green zeolites

GMA:- 50% altered glass

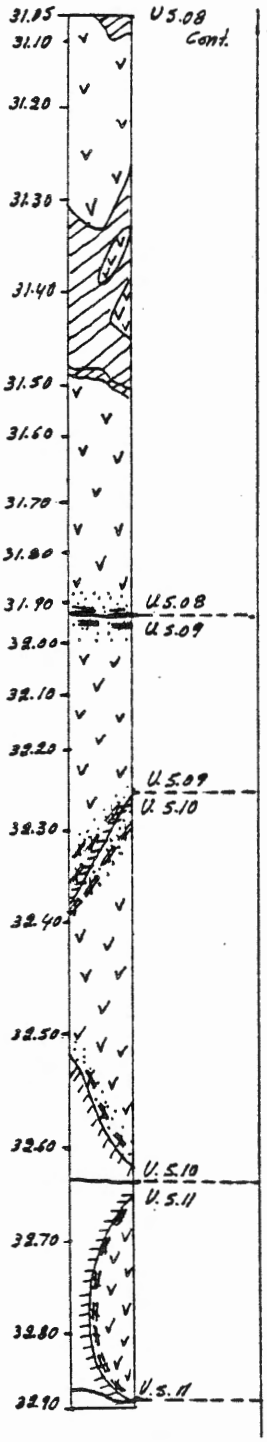
UNIT 5.08 Description - see Box-5, Sheet 3a.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 5 Sheet 3a

Visual Core Description Observer N. Baglow/H.P. Johnson/M. Heller

Depth Interval 31.05 m to 32.90 m



UNIT 5.08 OVERALL DESCRIPTION

Upper contact - 30.96 m Zone of glass-rich fragments (not definitely defined due to loss of chilled zone).
Lower contact - 31.92 m Pillow margin, 20 mm chilled contact with minor ochreous staining.
Unit thickness - 0.96 m

Greenish-grey, slightly olivine phyric basalt with irregular distribution of mottled textural zones with grains of average size 1-2 mm but a few reach 3 or 4 mm. Coloration affected by red and ochre oxidation products. Unusual feature at 31.49 m - 40 mm wide zone with bright green, apparently altered glass in "holly" shapes indicating residual interstitial liquids(?). There are alteration halos with 30 mm zones of 30% ochreous oxide material, followed by irregular red alteration products with relatively fresh, fine-grained groundmass e.g. at 31.59 m.

Vesicles:- 1% - irregular distribution
- generally round
- size - typically 0.5-1 mm
- filling - 90% open, 10% layer silicates

Veins:- 25%
- at 31.16 m - very thin fracture filling with minute unknown green crystals
- 15% from 31.10 m to 31.50 m
  - filling - 80% fine-grained chalky carbonate, 20% pale green zeolites(?)
- filling overall - 50% sheet silicates (mostly altered glass), 40% chalky carbonate, 10% zeolite

GMA:- variable over the unit as a whole

UNIT 5.09 OVERALL DESCRIPTION

Upper contact - 31.92 m 90% altered glass. 20 mm chilled zone.
Lower contact - 32.26 m Well defined altered glassy margin. 20-30 mm zone with about 30% non-altered glassy material. 15 mm chilled margin - initially ochreous.
Unit thickness - 0.34 m

Greenish-grey, sparsely olivine phyric basalt existing as lobe of a pillow i.e. probably only tip of a pillow.

Phenocrysts:- maximum size - 1 mm
- anhedral, olivine

Vesicles:- minor development
- size - 0.5 mm
- open
- vugs - 10 mm x 20 mm at 31.94 m and 32.07 m
  - arranged concentrically at chilled margins
  - 1 mm carbonate rims with zeolite and sheet silicate filling - red and white staining

Veins:- 25%
- 1 mm veins of purplish-brown carbonate seen in broken face at 32.03 m
- filling - 80% milky sheet silicates, 10% carbonates, 10% white zeolites(?)
- margins are 80% altered glass, 10% white and 10% pale green zeolites

GMA:- strongly altered

UNITS 5.10 and 5.11 Descriptions - see Box 5, Sheet 3b.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 5 Sheet 36

Graphic Representation | Sample

Visual Core Description Observer N.Baglow/N.Johnson/M.Haller

Depth Interval 31.05 m to 32.90 m

UNIT 5.10 OVERALL DESCRIPTION

Upper contact - 32.26 m Glassy margin. Dip - 80°.
Lower contact - 32.65 m With 15 mm chilled margin marked by ochreous staining. Unit thickness - 0.39 m

Mottled, greenish-grey, slightly olivine phyric basalt.

Vesicles:- sparsely distributed, possibly more abundant toward pillow margins
- size - pin-head to 0.5 mm

Veins:- 18% at margins of unit - negligible internally
- filling - 80% altered glass, 15% milky sheet silicates, 5% white zeolites

GMA:- pervasively altered

UNIT 5.11 OVERALL DESCRIPTION

Upper contact - 32.65 m Ambiguous.
Lower contact - 32.90 m The contact with its altered glass fragments and milky waxy sheet silicates can be traced to the right of reference line indicating that core has intersected the tip of a pillow. In the chilled zone, strong ochreous staining permeates for 1-1.5 cm from the glassy margin.
Unit thickness - 0.25 m

Greenish-grey, slightly olivine phyric basalt with concentric mottling not as well developed as in Unit 5.10.

Vesicles:- <1%

Veins:- 30% (N.B. accentuated by material at pillow margin)
- size - one 3 mm vein at 32.84 m
- filling - 80% sheet silicates, 10% carbonate, 10% zeolites

GMA:- pervasively altered

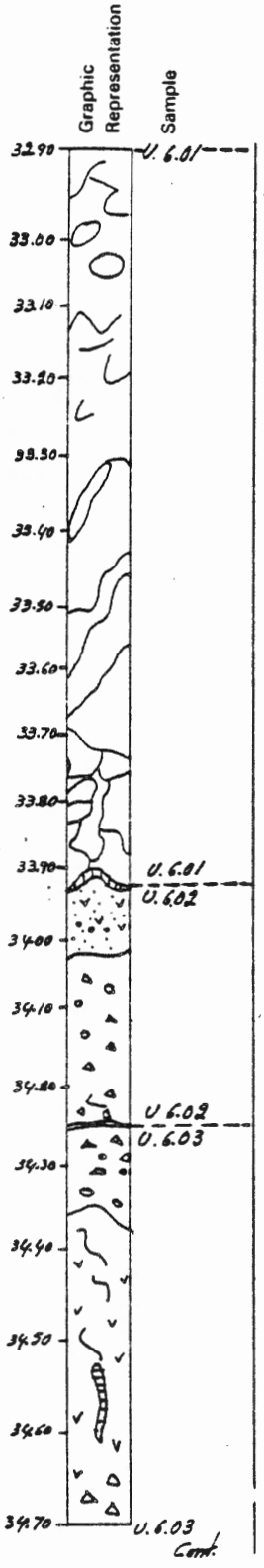
OVERALL The core from 28.05 m to 32.90 m has been divided into 11 cooling units, though lithologically it is probably one unit of pillowed basalts. The possibility of separating the volcanic breccia units (5.04 and 5.05) into a separate lithology exists. The degree to which the mottling texture is due to olivine segregation has not yet been determined.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 6 Sheet 1a

Visual Core Description Observer C.G. Richardson

Depth Interval 32.90 m to 34.70 m



UNIT 6.01 OVERALL DESCRIPTION

Upper contact - 32.90 m Altered glass fragments in rubble; probably contact. Ambiguous broken top contact, no glass. Lower contact - 33.92 m Depositional. No fresh glass. Dip 55-60° This contains no fresh glass but much altered glass to darkish green layer silicates with carbonate material.
Unit thickness - 1.02 m Type of unit - pillow?

Upper 350 mm of unit is mainly rubble with some glass altered to darkish green celadonite(?). Two larger fragments occur between 33.25 m and 33.55 m. Below this more rubble containing abundant altered glass and white friable material. (Description based on both large fragments). Unit is greenish-grey, fine- to medium-grained aphyric basalt. At 33.40 m-slickensides.

Vesicles:- 5-10% evenly distributed
- smaller ones tend to be subspherical, but larger ones are more irregular in shape
- most vesicles are empty but some are filled with weathering products - clays (?)
- average size - 1-1.5 mm
- filling - 90% open, 9% layer silicates, 1% carbonates

Veins:- 3%
- veins of carbonate occur in the two larger blocks
- abundance not determinable for whole unit but only for large pieces
- in the rubble, smectite is present in greater abundance than carbonate but quantification is difficult
- size - 1-5 mm
- filling - 90% carbonates, 10% layer silicates

GMA:- <5% - greenish-grey color probably due to high proportion of layer silicates
- also patches of red/brown material
- goethite(?) irregularly distributed
- altered to 80% layer silicates, 20% opaques

UNITS 6.02 and 6.03 Descriptions - see Box 6, Sheet 1b.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 6 Sheet 16

Graphic Representation | Sample

Visual Core Description Observer C.G. Richardson

Depth Interval 32.90 m to 34.70 m

UNIT 6.02 OVERALL DESCRIPTION

Upper contact - 33.92 m Depositional.
Lower contact - 34.25 m Ambiguous. Between 34.10 m and 34.30 m is rubble with altered glass, altered to darkish green layer silicates.
Unit thickness - 0.33 m Type of unit: not discernible

Greenish-grey, fine-grained, mottled, olivine phyric basalt.

Phenocrysts:- <2%, homogeneous distribution
- average size - 0.5 mm
- size - 1 mm
- subhedral, olivine phenocysts(?) with brown altered margins

Vesicles:- 5-10%, irregularly distributed
- average size - 1-1.5 mm
- filling - 90% open, 6% layer silicates, 4% opaques

Veins:- none in fragments except carbonate in the chilled margin at upper contact

GMA:- 25% - green/grey - probably rich in layer silicates
- to 90% layer silicates and 10% opaques

UNIT 6.03 OVERALL DESCRIPTION

Upper contact - 34.25 m Ambiguous.
Lower contact - 34.75 m Depositional. Dip 40° to 180.
Altered glass to layer silicates.
Unit thickness - 0.50 m

Large fragments, probably of pillow composition of slightly olivine phyric, greenish-grey, fine-grained basalt.
Groundmass is mottled.

Phenocrysts:- irregularly but randomly distributed except near bottom contact, where some concentric zoning is observed
- average size - 1-2 mm
- generally anhedral, altered around margins to light brown material, <2% olivine euhedral

Vesicles:- 5%
- generally irregularly shaped (weathering?)
- average size 0.5 mm
- filling - 90% open, 10% brown layer silicates

Veins:- 8% - of three types
i) green altered glassy margins - layer silicates
ii) carbonates cutting groundmass in margin
iii) thin (<2mm) veins of purple-brown iron oxides
- filling - 60% open, 30% layer silicates, 10% opaques

GMA:- 10% - to 90% layer silicates and 10% opaques

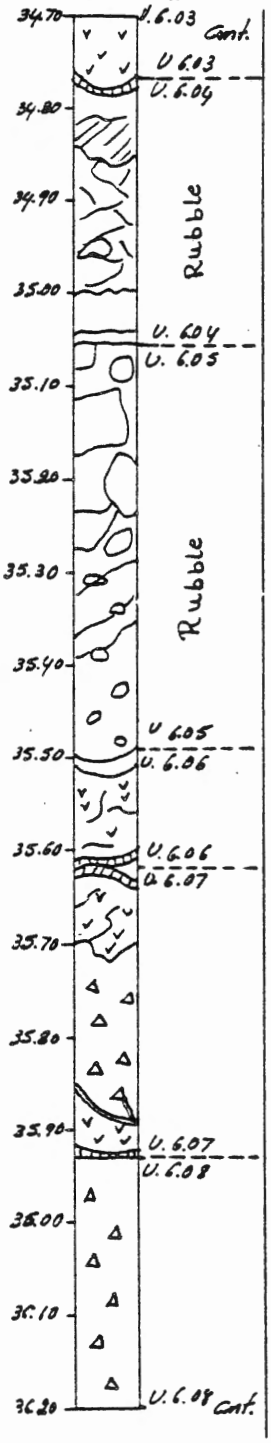
UNIT 6.03 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 6 Sheet 2a

Visual Core Description Observer C. G. Richardson

Depth Interval 34.70 m to 36.20 m



UNIT 6.03 cont. Description - see Box 6, Sheet 1b.

Greenish-grey, fine-grained, slightly olivine phyric pillow basalt fragments.

UNIT 6.04 OVERALL DESCRIPTION

Upper contact - 34.75 m Depositional.
Lower contact - 35.08 m Depositional. Dip steep.
Fragment at 35.05m has altered glass (green layer silicates) which defines contact.
Unit thickness - 0.33 m

Mainly rubble. Fragment at 34.85 m has mottled appearance with light brown olivine(?) phenocrysts in green-grey groundmass. Down hole margin of fragment is a carbonate rich vein, close to which alteration appears to be more intense. Fragment at 35.07 m has slickensides but is unoriented.

UNIT 6.05 OVERALL DESCRIPTION

Upper contact - 35.08 m Depositional.
Lower contact - 35.49 m Depositional. Dip ~10°.
Contains glass altered to green layer silicates.
Unit thickness - 0.41 m

35.12 m - fragment showing slickensides on all surfaces, unoriented but parallel to core length. Rest is rubble in which there is a high proportion of red-brown iron oxides (limonite?). Glass fragments altered to darkish green layer silicates are also present, together with some carbonate material, which occurs in vein fragments.

UNIT 6.06 OVERALL DESCRIPTION

Upper contact - 35.49 m Depositional.
Lower contact - 35.62 m Depositional.
Unit thickness - 0.13 m Type of unit - small pillow or pillow lobe

Green-grey, fine-grained dominantly aphyric basalt. However some small (<2 mm) anhedral pits containing orange-brown limonite(?) may be weathered out olivine phenocrysts. These are only sparingly developed.

Vesicles:- few scattered, irregular pits
- average size - 1.5-2 mm
- filling - most empty, some brownish clay

Veins:- 34% generally running parallel to core length, one at downhole end is horizontal
- size - 7.0-0.5 mm
- filling - 80% carbonate material, 20% other white material possibly zeolites
- varying proportions of different colored red-brown iron oxide stringers

GMA:- possibly rich in clay minerals

UNIT 6.07 Description - see Box 6, Sheet 2b.
UNIT 6.08 Description - see Box 6, Sheet 3.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 6 Sheet 26

Graphic Representation | Sample

Visual Core Description Observer C.G. Richardson

Depth Interval 34.70 m to 36.20 m

UNIT 6.07 OVERALL DESCRIPTION

Upper contact - 35.62 m Depositional.
Lower contact - 35.93 m Ambiguous.
Unit thickness - 0.31 m

Larger fragments occur at: 35.90 m - Green-grey, olivine-phyric, fine-grained basalt with some glass toward downhole margin.

Phenocrysts:- 5-10%
- olivine altered to orange-brown limonite

No vesicles.

Veins:- 3 mm on margin
- pink-white stained

UNIT 6.08 Description - see Box 6, Sheet 3.

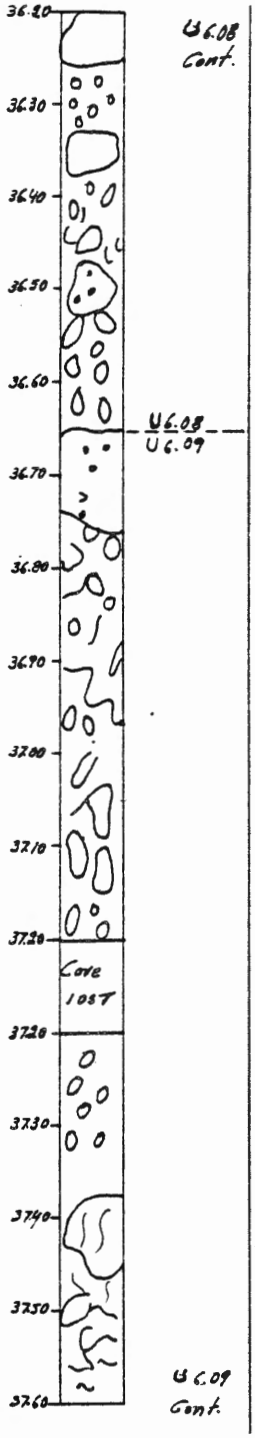
Grey to reddish-grey, slightly porphyritic basalt.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 6 Sheet 3

Visual Core Description Observer C.S. Richardson / PTR

Depth Interval 36.20 m to 37.60 m



UNIT 6.08 OVERALL DESCRIPTION

Upper contact - 35.93 m Ambiguous. Dip not apparent. No glass preserved.
Lower contact - 36.62 m Ambiguous. No glass preserved.
Dip not apparent. Drawn in altered crumbly zone.
Unit thickness - 0.69 m

Grey to reddish-grey, slightly porphyritic basalt.

Phenocrysts:- 2% - most abundant in lower 10 cm
- maximum size - 2 mm
- altered olivine

Vesicles:- approximately <1%
- size - approximately 1 mm
- filling - open or lined with smectite

No veins preserved, but core is very broken.

GMA:- 3-5% - red oxidized staining

UNIT 6.09 OVERALL DESCRIPTION

Upper contact - 36.62 m Ambiguous.
Lower contact - 37.96 m Ambiguous.
Unit thickness - 1.34 m

Rubbly material.

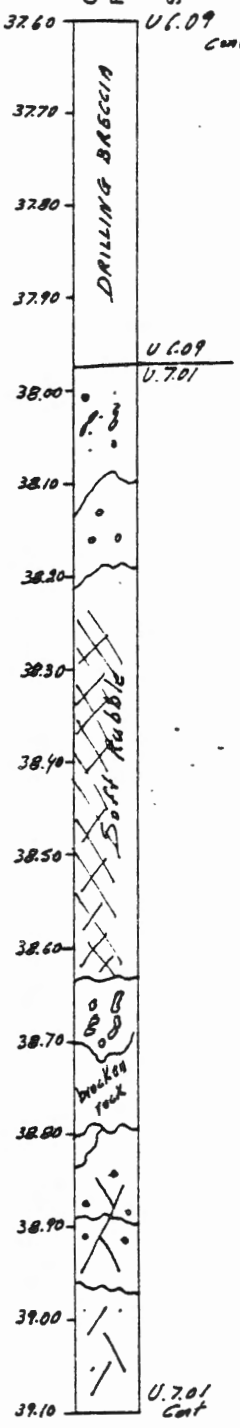
UNIT 6.09 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 7 Sheet 1

Visual Core Description Observer S. Agrell

Depth Interval 37.60 m to 39.10 m



UNIT 6.09 cont. Description - see Box 6, Sheet 3.

Rubbly material.

UNIT 7.01 OVERALL DESCRIPTION

Upper contact - 37.96 m Ambiguous. No glass, but chilled. Dip 0°.
Lower contact - 39.42 m Depositional. 10 mm green altered flakes rim glass. Dip 10°.
Unit thickness - 1.46 m Type of unit: pillow

Green-grey, fine-grained, massive, vesicular, porphyritic olivine basalt. Pillow contains two soft rubbly "argillic" zones of highly altered, brecciated basalt with a basal brecciated, but massive zone of porphyritic olivine basalt. At 39.36m - glomeroporphyritic olivine group contains dark spinel. There is some suggestion of more than one pillow in this unit as a solid fragment at 38.67 m has a concentration of pipe vesicles and possible pseudomorphs after 4 cm olivines.

Phenocrysts:- 5% - slight concentration at the base of the unit
- sparse, porphyritic, altered, brown, euhedral olivine
- alteration - 100% - to 40% layer silicates, 40% opaques, 20% carbonates

Vesicles:- 38.00 m to 38.20 m
- size - 1-4 mm
- filling - 50% calcite, 30% open, 20% smectite
- 38.20 m to 39.20 m
- 2-3%
- rubbly weathered zone
- filling - smectite, open - no carbonate
- 39.20 m to 39.42 m
- filling - 50% open, 30% smectite, 20% calcite
- some 4 cm pipe vesicles with oxidized smectite and calcite

Veins:- 1-50% including glassy margins (overall 13%)
- non displacive fracture veins 2 mm to 40 mm
- fracture fillings confined to 39.15 - 39.30 m
- rubbly zones between 38.20 m and 39.42 m
- ubiquitous fractures calcite filled, pink or red stained by oxides
- filling - 85% carbonate, 10% layer silicates, 5% opaques

GMA:- from 20% to 90% in rubble - mean 40%
- 60% layer silicates, 30% carbonate, 10% opaques

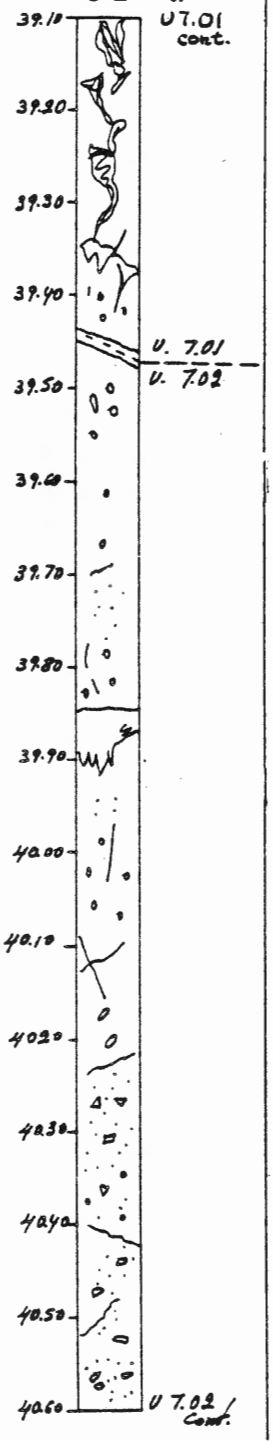
UNIT 7.01 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 7 Sheet 2

Visual Core Description Observer S. Agrell

Depth Interval 39.10 m to 40.60 m



Unit 7.01 cont. Description - see Box 7, Sheet 1.

Green-grey, fine-grained, vesicular, massive, olivine phyric basalt.

UNIT 7.02 OVERALL DESCRIPTION

Upper contact - 39.42 m Sharp. Depositional. Chilled with altered green glass of adjacent 1 cm pillow - flake origin. Dip 10°.
Lower contact - 41.02 m Pillow margin chilled, more green altered glass adjacent to rubble zone below. Dip 10°.

Unit thickness - 1.60 m Unit type:- Pillow basalt?

Olive grey to greyish-olive, fine-grained, hyalopilitic, microvesicular, massive, porphyritic olivine basalt with pyrite microlites in "glass".

Phenocrysts:- 5% - euhedral olivine
- size - 9 mm
- olivine altered at top and base to 60% brownish smectite, 40% calcite
- 40.70 m - 40.95 m - 10% phenocrysts with some settling

Vesicles:- 2%
- size - 2-5 mm
- 39.50 m - 39.90 m
  - size - 2mm
  - open or leached
- 40.00 m - 41.00 m
  - average size - 4 mm
- 40.60 m - 41.00 - to 3%
- filling - overall 55% layer silicates, 25% carbonate, 20% zeolites

Veins:- <1% narrow fractures
- size - 1-2 mm
- filling - carbonate, red film, zeolite possible

GMA:- overall 8% - top (39.50-39.90 m) and bottom (40.90 m-41.02 m) altered 15%; 40.00-40.90 m altered <5% (this corresponds to dark grey, olive-grey rock)
- altered to 50% layer silicates, 40% zeolites, 10% carbonate

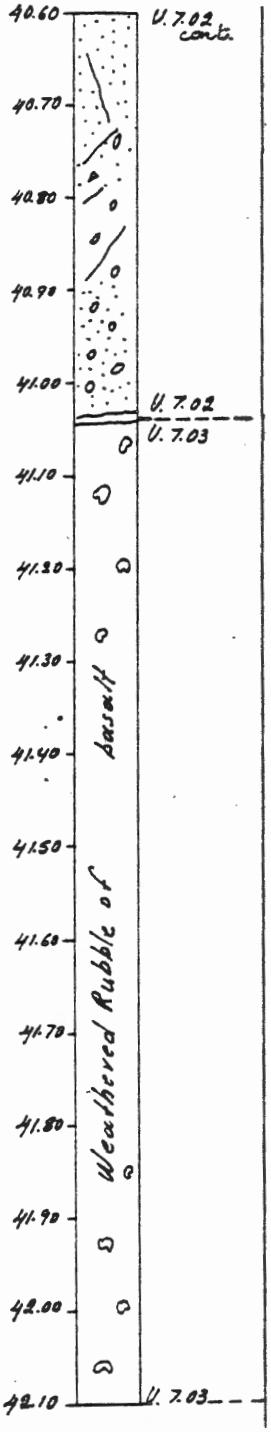
UNIT 7.02 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 7 Sheet 3

Visual Core Description Observer S. Agrell

Depth Interval 40.60 m to 42.10 m



Unit 7.02 cont. Description - see Box 7, Sheet 2.

Olive grey to greyish-olive, fine-grained, hyalopilitic, microvesicular, massive, olivine phyric basalt with pyrite microlites in "glass".

UNIT 7.03 OVERALL DESCRIPTION

Upper contact - 41.02 m Ambiguous. Not preserved. Small amount of very altered glass.
Lower contact - 42.10 m Ambiguous. Not preserved. Possible sedimentary material at this contact.
Unit thickness - 1.08 m

Soft grey, tinted red fragments of highly weathered basalt and associated fracture veins. Grey-green, fine-grained, slightly olivine phyric basalt.

Phenocrysts:- 1% subhedral olivine
- entirely altered/replaced by iron oxides

Vesicles:- 1% ovoid
- maximum size - 2 mm
- filling - 95% open, 5% layer silicates

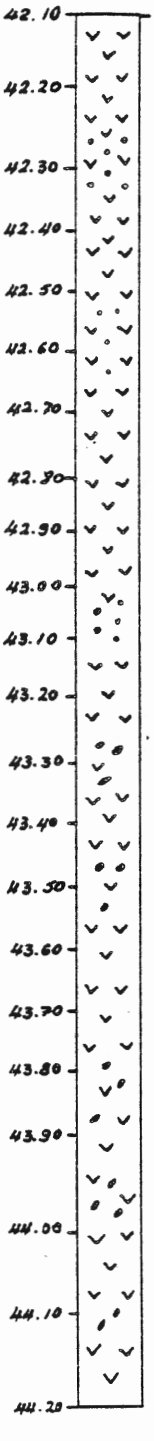
Veins:- 1%
- filling - 90% carbonates, 10% reddish iron oxides and layer silicates

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 8 Sheet 1

Visual Core Description Observer Hassan / Shalaby

Depth Interval 42.10 m to 44.20 m



UNIT 8.01 OVERALL DESCRIPTION

Upper contact - 42.10 m Ambiguous.
Lower contact - 44.22 m No clear upper or lower margins, all small fragments of the core.
Unit thickness - 2.12 m Type of unit: pillow

Dark brown-greyish to greenish, fine-grained, highly vesicular, slightly olivine phyric, homogeneous olivine basalt.

Phenocrysts:- 3%
- size - 2 mm
- subhedral, altered to brown material

Vesicles:- 15%
- round
- size - 3 mm
- filling - 30% smectite, 30% opaques, 20% zeolite 20% open

Veins:- <1%
- milky
- filling - 30% smectite, 30% opaques, 20% open, 20% zeolites

Veins and fractures:- 2%
- size - 10 mm wide
- filling - 50% carbonates, 30% layer silicates, 15% zeolites 5% opaques

GMA:- 60% - to mostly green smectite

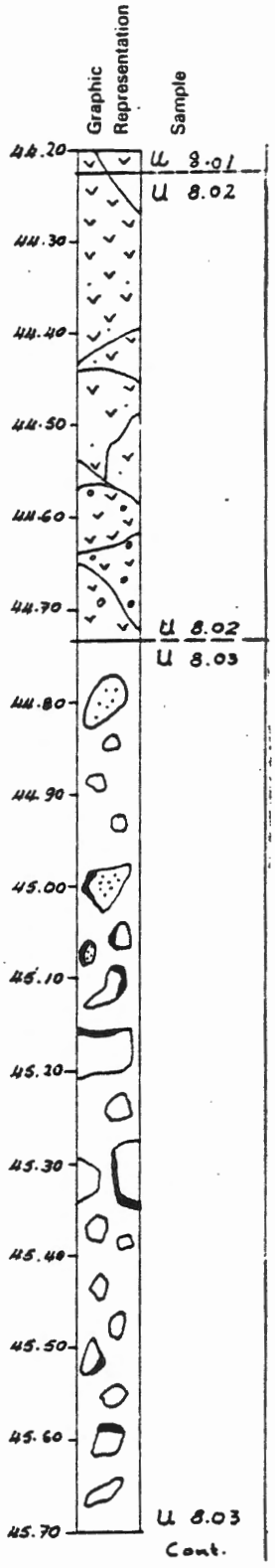
UNIT 8.01 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 8 Sheet 2

Visual Core Description Observer Hassan / Shalaby

Depth Interval 44.20 m to 45.70 m



UNIT 8.01 cont. Description - see Box 8, Sheet 1.

Dark greyish-brown to greenish, fine-grained, highly vesicular, slightly phyric, homogeneous pillow basalt.

UNIT 8.02 OVERALL DESCRIPTION

Upper contact - 44.22 m Ambiguous.
Lower contact - 44.73 m Broken due to drilling. A few pieces of altered glass are present.
Unit thickness - 0.51 m Type of unit: pillow

Greyish-green, fine-grained, slightly olivine phyric basalt.

Phenocrysts:- 1% - some settling
- size - 2 mm
- subhedral, altered olivine

Vesicles:- about 5% rounded
- size - 2 mm
- filling - 45% carbonates, 35% sheet silicates (smectite), 15% opaques, 5% zeolites

Veins:- filling - 50% carbonates, 40% zeolites, 5% smectite, about 4% milky material and <1% opaques

GMA:- 25% - mainly to green smectite

UNIT 8.03 OVERALL DESCRIPTION

Upper contact - 44.73 m Depositional. Contains glass.
Lower contact - 46.10 m Depositional. 10 cm of broken green glassy material.
Unit thickness - 1.37 m Type of unit: volcanic breccia

Brown, yellowish-brown, red, green and white breccia. The fragments are subrounded and do not contain much glass. They range in size from 7 to 10 cm and are poorly sorted - 30% are >63 mm, 60% are 2-63 mm and 10% are <2 mm. The fragments are matrix supported.

Veins:- milky veins, mainly around the fragments
- filling - 60% carbonates, 40% sheet silicates

GMA:- moderately altered, green glass present

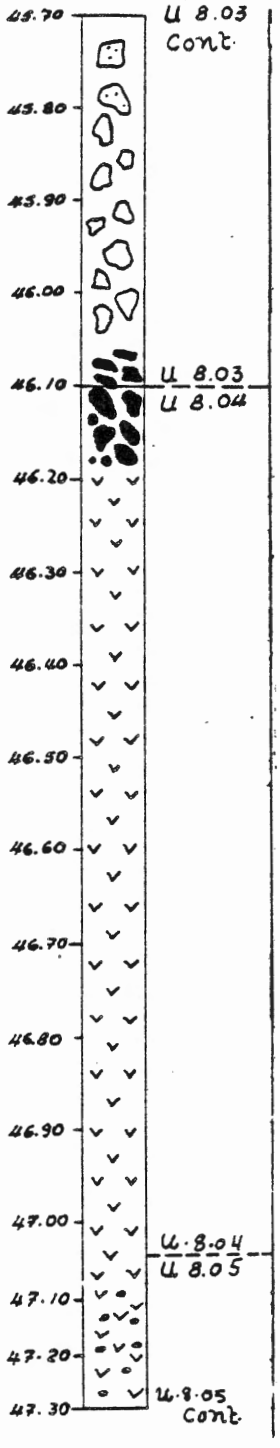
UNIT 8.03 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy - 1

Core Box 8 Sheet 3

Visual Core Description Observer Hassan / Shalaby

Depth Interval 45.70 m to 47.30 m



UNIT 8.03 cont. Description - see Box 8, Sheet 2.

Brown, yellowish-brown, red, green and white subrounded fragments of volcanic breccia.

UNIT 8.04 OVERALL DESCRIPTION

Upper contact - 46.10 m Depositional. Contains green glass fragments. Thickness of contact is approximately 10 cm.
Lower contact - 47.05 m Ambiguous - in rubble.
Unit thickness - 0.95 m Type of unit: Pillow olivine basalt

Greenish-grey to brown, fine-grained, slightly olivine phyric basalt rubble.

Phenocrysts:- homogeneous, average size - 3 mm
- 100% altered to oxides
- subhedral

Vesicles:- approximately 15%, mostly rounded
- size - 3 mm
- filling - 80% opaques, 20% carbonates (?)

Veins:- 10%, in the hard pieces of the core
- size - 2-5 mm
- filling - carbonate and sheet silicates

GMA:- 80%

UNIT 8.05 OVERALL DESCRIPTION

Upper contact - 47.05 m Ambiguous - in rubble.
Lower contact - 48.00 m (?) Ambiguous. Glassy brecciated material.
Unit thickness - 0.95 m Type of unit: pillow

The part of the unit in this section is mainly rubble of greyish-green, fine-grained, olivine phyric basalt.

Phenocrysts:- 5%
- size - 3 mm
- altered to oxides
- subhedral

Vesicles:- 15%

GMA:- 75%

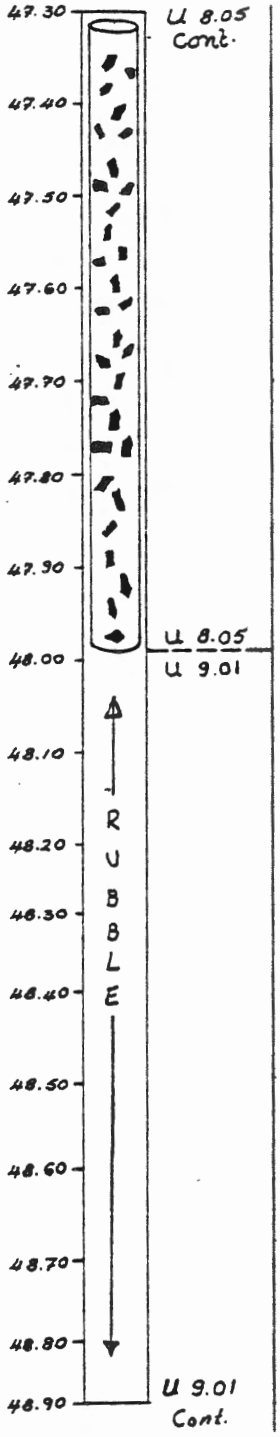
UNIT 8.05 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 9 Sheet 1

Visual Core Description . Observer Shalaby / Hassan

Depth Interval 47.30 m to 48.90 m



UNIT 8.05 cont. Description - see Box 8, Sheet 3.

Dark green, highly olivine phyric, picritic basalt.

Phenocrysts:- 5%
- subhedral to euhedral
- average size - 3 mm, range - 1-4 mm
- olivine altered to oxides

Vesicles:- 2%
- filling - carbonate

Veins:- 3%
- size - 1-2 mm
- filling - carbonate

GMA:- mild

UNIT 9.01 OVERALL DESCRIPTION

Upper contact - 48.00 m (?) Ambiguous.
Lower contact - 49.40 m Chilled margin.
Unit thickness - 1.40 m Type of unit: pillow basalt?

This unit is completely broken up. From 48.00 m to 48.90 m, it appears to be pillow breccia. From 48.90 m to 49.40 m, it is greyish-green, slightly olivine phyric basalt.

Veins:- approximately 30%
- size - 2 mm
- filling - 60% sheet silicates, carbonates 40%

GMA:- moderate

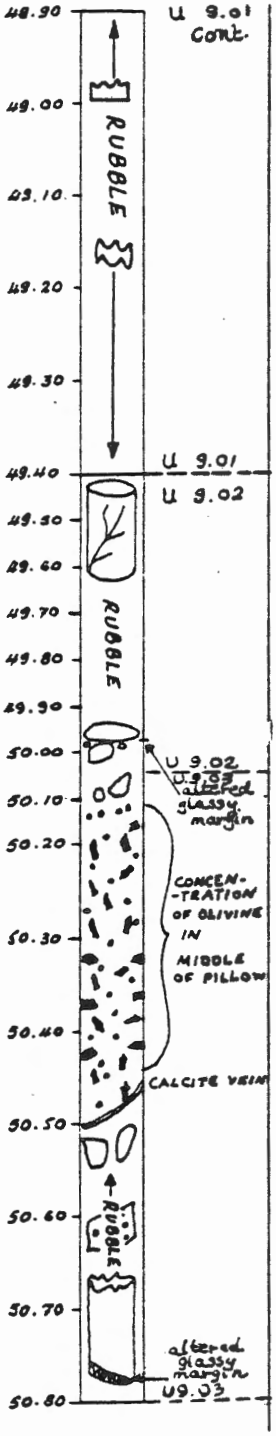
UNIT 9.01 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 9 Sheet 2

Visual Core Description Observer Shalaby / Hassan

Depth Interval 48.90 m to 50.80 m



UNIT 9.01 cont. Description - see Box 9, Sheet 1.

Greyish-green, slightly olivine phyric pillow? basalt.

UNIT 9.02 OVERALL DESCRIPTION

Upper contact - 49.40 m Depositional. 20 mm glass and 10 mm chilled margin and about 40 mm alteration zone. Dip almost 10°.
Lower contact - 50.05 m Depositional. Dip-20°. With 20 mm of glass and 20 mm of chilled margin.
Unit thickness - 0.65 m Type of unit: pillow

Greyish-green, fine-grained basalt which is mostly aphyric at the contact and slightly porphyritic in the center of the unit.

Phenocrysts:- approximately 4%
- size - 2 mm
- olivine, altered to yellowish oxides

Vesicles:- 10%
- size - 2 mm
- filling - 80% opaques, 10% carbonates 10% zeolites

Veins:- 2%
- size - 1-3 mm
- filling - 40% carbonates, 40% silica, 10% opaques, 10% sheet silicates

GMA:- 50%

UNIT 9.03 OVERALL DESCRIPTION

Upper contact - 50.05 m Depositional. Dip-20. 10 mm of glass and 10 mm of chilled margin.
Lower contact - 50.80 m Not clear because of broken core. Represented by fine-grained part adjacent to the highly phyric pillow.
Unit thickness - 0.75 m Type of unit: pillow

Greenish-grey, fine-grained, olivine phyric basalt.

Phenocrysts:- 30%, euhedral to subhedral
- size - 4 mm in the upper part, 90mm in the lower
- olivine altered completely to oxides

Vesicles:- 15%, mostly rounded
- size - 2 mm
- filling - 40% opaques, 30% white carbonates, 20% zeolites, 10% sheet silicates

Veins:- 2%
- size - one 10 mm one at 50.48 m
- others are in the range of 1-2 mm
- filling - 50% carbonates, 20% sheet silicates 10% opaques, 20% quartz

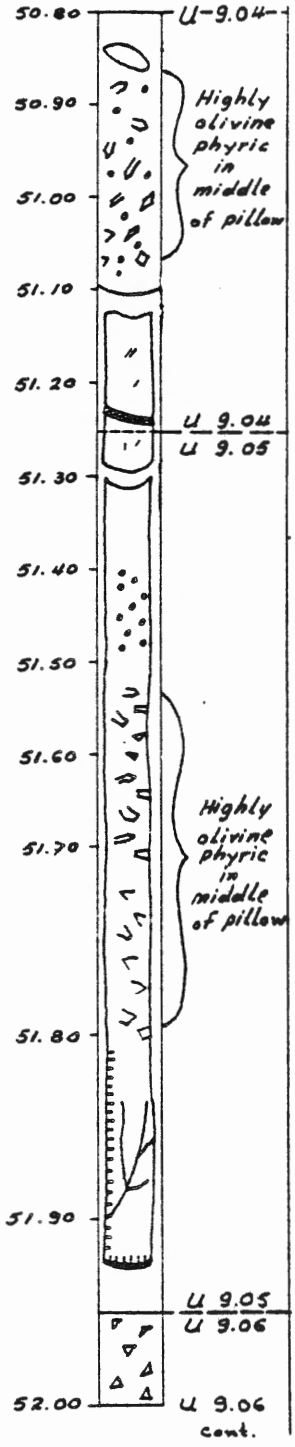
GMA:- 10% - to 70% opaques, 10% carbonate, 10% quartz, 10% zeolites

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 9 Sheet 3a

Visual Core Description Observer Hassan / Shalaby

Depth Interval 50.80 m to 52.00 m



UNIT 9.04 OVERALL DESCRIPTION

Upper contact - 50.80 m Depositional. No clear dip because of the broken pieces.
Lower contact - 51.25 m Depositional. Contains altered glass. Dip 50°.
Unit thickness - 0.45 m Type of unit: pillow

Greyish-green, with white and brown spots, fine-grained, highly olivine phyric basalt.

Phenocrysts:- 25%, homogeneous distribution except at the edges of pillow
- size - 4 mm
- olivine altered to brown material
- euhedral to subhedral

Vesicles:- >20%, rounded
- size - approximately 2 mm
- filling - 80% with white material - zeolites (natrolite?) and 20% opaques

Veins:- 2%, few milky veins
- size - 1 mm and 5 mm
- filling - 70% carbonates, 10% sheet silicates 10% zeolites, 10% quartz

GMA:- slightly altered - to opaques, zeolites, quartz - not clearly determined.

UNIT 9.05 OVERALL DESCRIPTION

Upper contact - 51.25 m Depositional. Contains glass with an alteration zone of approximately 50 mm.
Lower contact - 51.95 m Depositional. With chilled margin, glass is not present. Dip 20°.
Unit thickness - 0.70 m Type of unit: pillow

Greenish-grey with white and brown spots, fine-grained, highly olivine phyric basalt.

Phenocrysts:- 30%, the amount and size increase with depth
- average size - 9 mm
- range - 5 mm in the upper part and reaches 15 mm at the bottom
- olivine altered to brown material
- euhedral to subhedral

Vesicles:- >20%, rounded and elongated
- size - 5 mm
- filling - 70% zeolites, 20% opaques, and 10% carbonate

Veins:- 3%, milky
- size - 2-4 mm
- filling - 60% carbonates, 20% silica, 10% sheet silicate, 10% quartz

GMA:- slightly altered with two distinct alteration zones at the edges of pillow

UNIT 9.06 Description - see Box 9, Sheet 3b.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 9 Sheet 36

Graphic Representation | Sample

Visual Core Description Observer Hassan / Shalaby

Depth Interval 50.80 m to 52.00 m

UNIT 9.06 OVERALL DESCRIPTION

Upper contact - 51.95 m Depositional. Dip and inclination unknown.
Lower contact - 52.10 m Depositional. Chilled. Green altered glass passes into green altered pillow speck breccia. Dip 70°.
Unit thickness - 0.15 m Type of unit: Pillow

Grey-green to reddish-grey, fine-grained, vesicular, porphyritic, olivine basalt.

Phenocrysts:- 6%
- size - 8 mm
- olivine replaced by limonite and smectite
- subhedral

Vesicles:- 12%, rounded
- size - 4 mm
- filling - 40% zeolites, 30% carbonates, 15% open, 10% opaques, 5% sheet silicates

Veins:- 3%, more intense in the upper rubbly zone
- size - 2 mm
- filling - 60% calcite, 15% sheet silicates, 15% zeolites(?), 10% reddish brown oxides

GMA:- 30% - to 40% layer silicates, 40% opaques, 10% carbonates, 10% zeolites

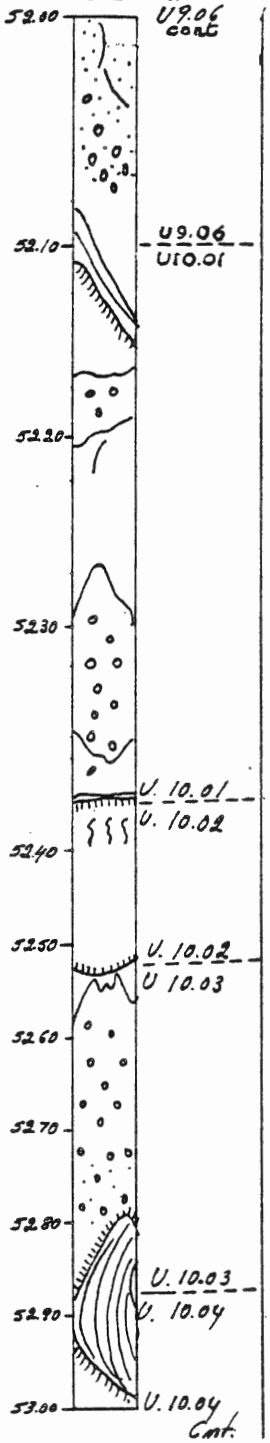
UNIT 9.06 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 10 Sheet 1a

Visual Core Description Observer S. Agrell

Depth Interval 52.00 m to 53.00 m



U9.06 cont.

UNIT 9.06 cont. Description - see Box 9, Sheet 3b.

Vesicular, grey-green, fine-grained, porphyritic olivine basalt with a variolitic groundmass.

Vesicles:- 12%, rounded
- size - 3 mm (largest in pillow center)
- filling - 40% open, 40% zeolites, 10% carbonate, 10% layer silicates

Veins:- 2%, narrow fracture
- filling - 40% zeolites, 30% carbonate, 20% layer silicates, 10% opaque red oxide stain

GMA:- 40% - to 60% layer silicates, 40% zeolites

U9.06 / U10.01

UNIT 10.01 OVERALL DESCRIPTION

Upper contact - 52.10 m Depositional. 20 mm zone of green altered glassy rim fragment breccia. Dip - 70°.
Lower contact - 52.34 m Depositional. Glass altered.
Dip - 0°.
Unit thickness - 0.24 m Type of unit: pillow

Pale grey-green, fine-grained, porphyritic olivine basalt which is broken, rubbly and discontinuous.

Phenocrysts:- 4%, some settling
- size - 6 mm
- olivine
- euhedral

U. 10.01 / U. 10.02

Vesicles:- 3-5%
- maximum size - 3 mm
- filling - 50% layer silicates, 30% open, 20% carbonate

Fractures:- 10%, irregular, white
- size - 2-10 mm wide
- filling - 60% carbonate, 20% layer silicates, 20% zeolites

U. 10.02 / U 10.03

Veins:- 15% total including margins

GMA:- 15-30% - to 70% layer silicates, 20% zeolites
10% carbonate

U. 10.03 / U. 10.04

UNITS 10.02 and 10.03 Descriptions - see Box 10, Sheet 1b.
UNIT 10.04 Description - see Box 10, Sheet 2a.

U. 10.04 Cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 10 Sheet 16

Graphic Representation | Sample

Visual Core Description Observer S. Agrell

Depth Interval 52.00 m to 53.00 m

UNIT 10.02 OVERALL DESCRIPTION

Upper contact - 52.34 m Depositional. Chilled.
Dip - 0°.
Lower contact - 52.54 m Depositional. Chilled against green altered glassy rim fragment breccia (30-60 mm).
Dip - 30°.
Unit thickness - 0.20 m Type of unit: pillow

Grey-brown, fine-grained, aphyric basalt.

Vesicles:- 5%
- size - 1-2 mm
- filling - 50% layer silicates, 50% open

Veins:- 2% narrow, irregular fracture veins including margins
- filling - 50% carbonate, 50% layer silicates

UNIT 10.03 OVERALL DESCRIPTION

Upper contact - 52.54 m Depositional. Very irregular. Filled with green altered glassy rim fragment breccia, penetrated up to 50 mm into fragmented margin of pillow with increasing amount of calcite matrix. Dip - 30°.
Lower contact - 52.88 m Irregular. Broad zone of altered rim fragment breccia extends to 52.95 m adjacent to Unit 10.04. Dip - 70°.
Unit thickness - 0.34 m Type of unit: pillow

Pale grey-green; fine-grained, porphyritic olivine pillow basalt.

Phenocrysts:- 3% olivine
- maximum size - 5 mm
- sheet silicates and limonite subhedral pseudomorphs

Vesicles:- 8%
- maximum size - 3 mm
- filling - rusty - 50% layer silicates, 50% carbonates altered to limonite

Veins:- 10%
- filling - 70% carbonates, 10% layer silicates, 10% zeolites, 10% opaques
- from 52.60-52.75 m - occasional vapour pipes

GMA:- >25% - to 50% layer silicates, 30% opaques, 20% zeolites

UNIT 10.04 cont. Description - see Box 10, Sheet 2a.

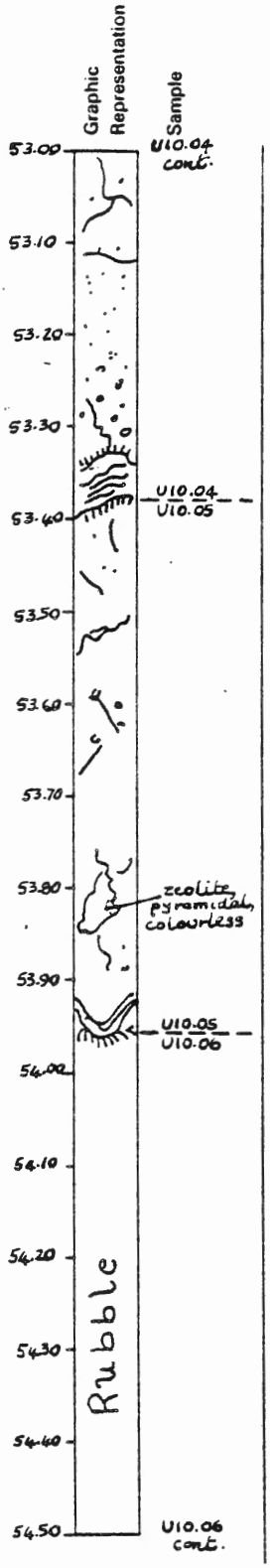
Pale grey with red speckles, fine-grained, sparsely porphyritic olivine pillow basalt.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 10 Sheet 2a

Visual Core Description Observer S. Agrell

Depth Interval 53.00 m to 54.50 m



UNIT 10.04 OVERALL DESCRIPTION

Upper contact - 52.88 m Depositional. Chilled, green altered glass replacement, fragmented. Dip 70°.
Lower contact - 53.38 m Depositional. Chilled, thin zone replaces pillow. Altered glassy zone between pillows - 25 mm. Dip 70°.
Unit thickness - 0.50 m Type of unit: pillow

Pale grey, vesicular, fine-grained, sparsely porphyritic olivine basalt with red speckles.

Phenocrysts:- 2%, distribution homogeneous?
- maximum size - 4 mm
- limonite replacement
- subhedral

Vesicles:- 10%
- maximum size - 5 mm
- filling - 40% open, 20% carbonate, 20% layer silicates, 20% zeolites

Veins:- 10%, total veins and glassy margins 12%
- fracture veins
- marked fragmentation at the top of the pillow
- size - 2-5 mm
- filling - 80% carbonate, 10% zeolites, 5% layer silicates, 5% opaques

GMA and phenocryst alteration:- 25%
- to 60% layer silicates, 20% opaques, 20% zeolites

UNIT 10.05 OVERALL DESCRIPTION

Upper contact - 53.38 m Depositional. Chilled, some altered green glass. Dip 70°.
Lower contact - 53.98 m Depositional. Chilled, much altered green glass (10 mm). Dip 40°.
Unit thickness - 0.60 m Type of unit: pillow

Fine-grained, olive grey, vesicular, sparsely porphyritic olivine basalt.

Phenocrysts:- 5%
- size - 5 mm
- replaced by limonite

Vesicles:- 10%
- maximum size - 3 mm
- filling - 65% open, 20% zeolites, 10% layer silicates, 5% carbonates

Veins:- total veins and glassy margins - 14%
- about 12%, fracture veins
- size - 2-15 mm
- filling - red stained on broken surfaces, 65% zeolites, 25% carbonate, 10% opaques

GMA and phenocryst alteration:- 25%
- to 40% layer silicates, 30% oxide "limonite", 20% zeolite, 10% carbonate

UNIT 10.06 Description - see Box 10, Sheet 2b.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 10 Sheet 26

Graphic Representation | Sample

Visual Core Description Observer S. Agrell

Depth Interval 53.00 m to 54.50 m

UNIT 10.06 OVERALL DESCRIPTION

Upper contact - 53.98 m Chilled. Depositional. Some altered green glass. Dip - 40°.
Lower contact - 54.68 m Chilled. Depositional. Some altered green glass. Dip - 0°. 6 cm of green breccia fragments between Units 10.06 and 10.07.
Unit thickness- 0.70 m Type of unit - pillow rubble

Rubbly broken pillow with approximately 5 cm of solid material at the contact. Fine-grained, green-grey, sparsely porphyritic olivine basalt.

Phenocrysts:- <5% olivine
- size - 3 mm
- altered to smectite and limonite

Vesicles:- 12%
- maximum size - 3 mm
- filling - 45% open, 20% layer silicates, 20% zeolites, 10% opaques, 5% carbonate

N.B. - Variolitic texture of the groundmass is observable in rubble. Varioles - pale brown glass altered to greenish smectite. Varioles - 25%, altered glass - 75%. Varioles are probably still fresh cpx. This texture is common in all smaller pillows I think, but is only easily seen where appropriately sectioned. So much of the groundmass is strictly hemihyaline in small pillows.

Veins:- 8%
- size - 3-5 mm
- filling - 50% carbonate, 25% zeolite, 20% layer silicates, 5% opaques (red stain)

GMA and phenocryst alteration:- extensive, up to 75% in rubble where varioles are the only fresh material
- altered to 60% layer silicates, 20% zeolites, 10% carbonate, 10% opaques

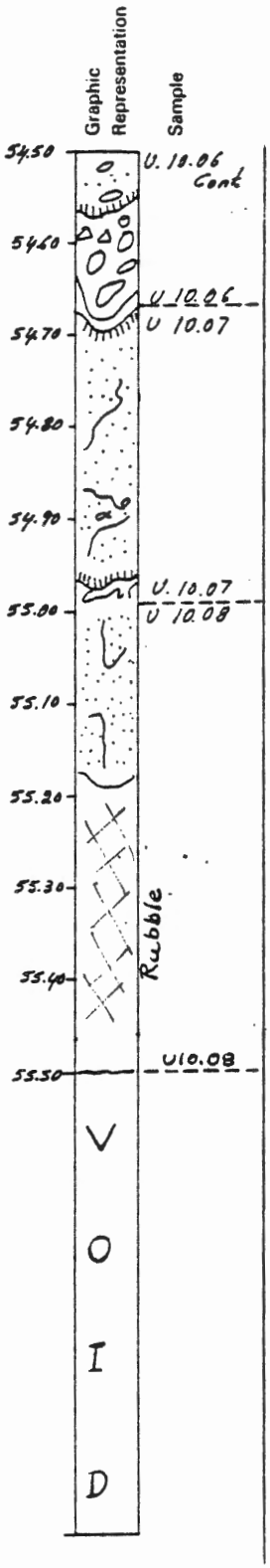
UNIT 10.06 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 10 Sheet 3

Visual Core Description Observer S. Agrell

Depth Interval 54.50 m to 55.50 m



UNIT 10.06 cont.

Grey-green, fine-grained, slightly porphyritic olivine pillow basalt rubble.

UNIT 10.07 OVERALL DESCRIPTION

Upper contact - 54.68 m Depositional. Chilled, altered green glass zone. Dip - 55°.
Lower contact - 55.00 m Depositional. Chilled, altered green glass, fractured. Dip - 45°.
Unit thickness - 0.32 m Type of unit: pillow lava

Green-brown, vesicular, fine-grained variolitic and porphyritic olivine basalt.

Phenocrysts:- 6%
- size - 3-4 mm
- altered limonite and some olivine settling

Variolitic texture:- pale brown pyroxene spherulites in green glass, now smectite

Vesicles:- 20% to 35% in the top half of the pillow
- size - <3 mm
- some segregation vesicles lined with smectite
- filling - 50% open, 20% layer silicates, 20% zeolites, 10% carbonates
- spherical

Veins and glassy margins:- 10%, fracture veins
- size - 2-4 mm
- filling - 70% zeolites 15% carbonate, 10% layer silicates, 5% opaques

GMA and phenocryst alteration:- 60%

UNIT 10.08 OVERALL DESCRIPTION

Upper contact - 55.00 m Ambiguous - in rubble
Lower contact - 55.50 m Ambiguous - in rubble
Unit thickness - 0.50 m Type of unit: Pillow

Fine-grained, grey-brown, vesicular, sparsely porphyritic, variolitic olivine basalt. Crumbly. The groundmass is variolitic. Below 55.15 m, the rock is soft altered rubble of altered porphyritic, vesicular basalt.

Phenocrysts:- 3%
- size - 4 mm
- olivine, limonitic alteration

Vesicles:- variable (60% around 55.10 m), average 20%
- some segregation vesicles
- maximum size - 3mm
- filling - 60% open, 30% layer silicates, 10% zeolites

Veins:- veins and glass 5%
- size - <3 mm
- filling - 40% carbonates, 40% zeolites, 10% layer silicates, 10% opaques
- irregular fractures

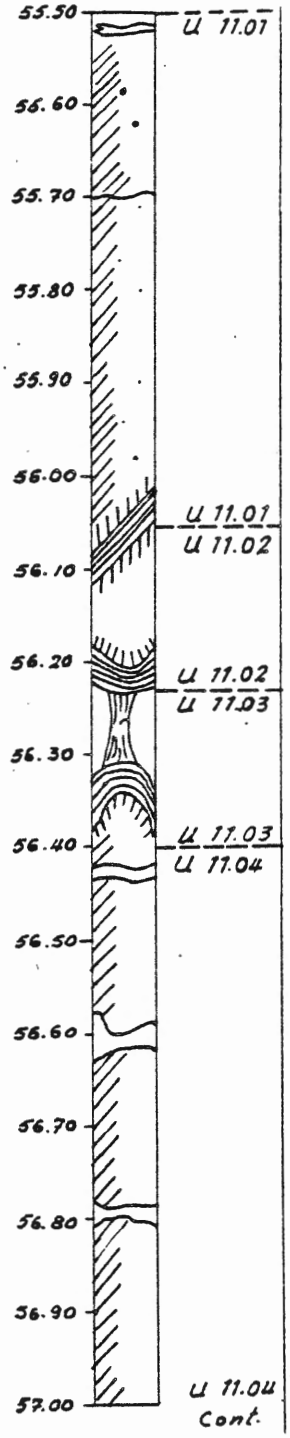
GMA and phenocryst alteration:- 60%
- to 70% layer silicates, 30% zeolites

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 11 Sheet 1a

Visual Core Description Observer J. Boyle

Depth Interval 55.50 m to 57.00 m



UNIT 11.01 OVERALL DESCRIPTION

Upper contact - 55.50 m Altered glass. Dip - 45°.
Lower contact - 56.05 m Altered glass. Dip - 60°.
Unit thickness - 0.55 m Type of unit: pillow

Grey, fine-grained, slightly phyric basalt with small (approximately 10 mm) patches of red brown.

Phenocrysts:- distribution - irregular, patchy
- most are euhedral
- size - 3-4 mm long axis
- replaced by orange and brown "goethitic" material

Vesicles:- 5-10%
- average size - 3 mm
- filling - most are lined by blue green sheet silicates - some are filled by white zeolites and calcite

Veins:- total abundance including palagonite - 8%
- veins are related to partial autobrecciation
- powdery zeolite and calcite surround slightly separated fragments
- filling - 90% palagonite, 10% zeolite and calcite

GMA:- 60% blue to brown sheet silicates

UNIT 11.02 OVERALL DESCRIPTION

Upper contact - 56.05 m Altered glass (depositional igneous contacts). Dip - 60°.
Lower contact - 56.23 m Altered glass (depositional igneous contacts). Dip - 70°.
Unit thickness - 0.18 m Type of unit: pillow

An edge of an olivine phyric basalt pillow.

Phenocrysts:- size - 1-9 mm (long axis)
- pseudomorphs seem to be of two different materials - a chocoloate brown one and "geothite"

Vesicles:- filling - mostly open, possibly lined by sheet silicates, some by zeolites

Veins:- 25%
- zeolite veins separating autobreccia, also calcite
- veins of transparent, colorless zeolite
- filling - 90% palagonite, 5% carbonate, 5% zeolite

UNITS 11.03 and 11.04 Descriptions - see Box 11, Sheet 1b.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-7

Core Box 11 Sheet 16

Graphic Representation | Sample

Visual Core Description Observer J. Boyle

Depth Interval 55.50 m to 57.00 m

UNIT 11.03 OVERALL DESCRIPTION

Upper contact - 56.23 m Depositional. Altered glass. Dip - 45°.
Lower contact - 56.40 m Depositional. Altered glass. Dip - 45°.
Unit thickness - 0.17 m

In all respects similar to Unit 11.02 except with slightly higher vesicularity.

UNIT 11.04 OVERALL DESCRIPTION

Upper contact - 56.40 m Depositional. Marked by altered glass. Dip - 20°.
Lower contact - 58.00 m Ambiguous owing to shattering.
Unit thickness - 1.60 m Type of unit: pillow

Fine-grained, granular, slightly olivine phyric basalt.

Phenocrysts:- up to 5% near margins, <1% in center
- phenocrysts concentrically arranged, concentrated at the margins
- size - 5 mm long axis
- random orientations

Vesicles:- 3%, sparse and seldom filled
- filled only where cut by fine veins
- maximum size - 2 mm
- filling - 95% open, 5% calcite and white zeolite

Veins:- 3%, zeolite veins between fragments of autobrecciation
- filling - 90% palagonite, 10% zeolites and carbonate

GMA:- 50% - to sheet silicates
- slickensides preserved in green smectite material
- surface - 75°/150°, striae - 90°

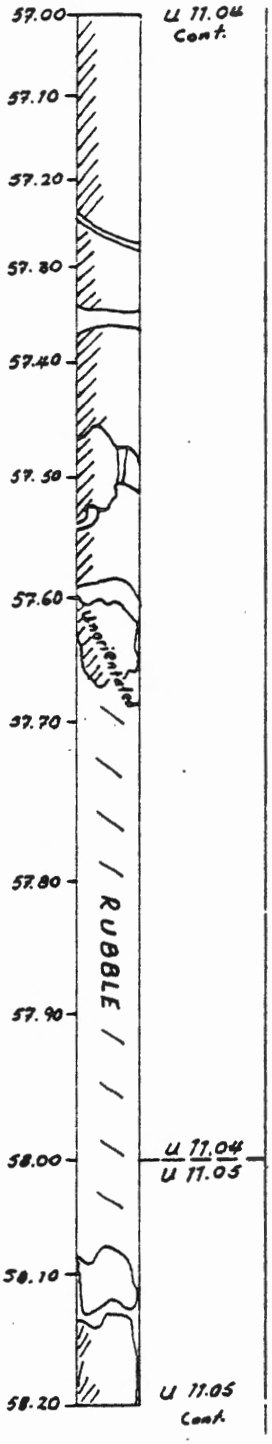
UNIT 11.04 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 11 Sheet 2

Visual Core Description Observer J. Boyle

Depth Interval 57.00 m to 58.20 m



UNIT 11.04 cont. Description - see Box 11, Sheet 1b.

Fine-grained, granular, slightly olivine phyric basalt.

UNIT 11.05 OVERALL DESCRIPTION

Upper contact - 58.00 m Ambiguous - in rubble.
Lower contact - 58.65 m Depositional. Altered glass and good gradational chill. Dip - 50°
Unit thickness - 0.65 m Type of unit: pillow

Slightly porphyritic, pillow basalt with a greenish-grey centre and with a 20 mm wide ochre coloured layer at margins. Margins are aphanitic.

Phenocrysts:- up to 3% - concentrated just inside the pillow margin
- concentrically arranged
- size - 5 mm (long axis)
- 95% olivine, 5% clinopyroxene

Vesicles:- 5%
- maximum size - 3 mm (systematically finer toward margins)
- filling - 90% open, 5% layer silicates, 5% zeolites and carbonates

Veins:- 5% - white zeolites fill fractures of autobreccia
- palagonite margin
- size - 5-10 mm
- filling - 50% palagonite and 50% zeolites and carbonate

GMA:- 50% - to blue-green sheet silicates
- goethite at the margin (?)

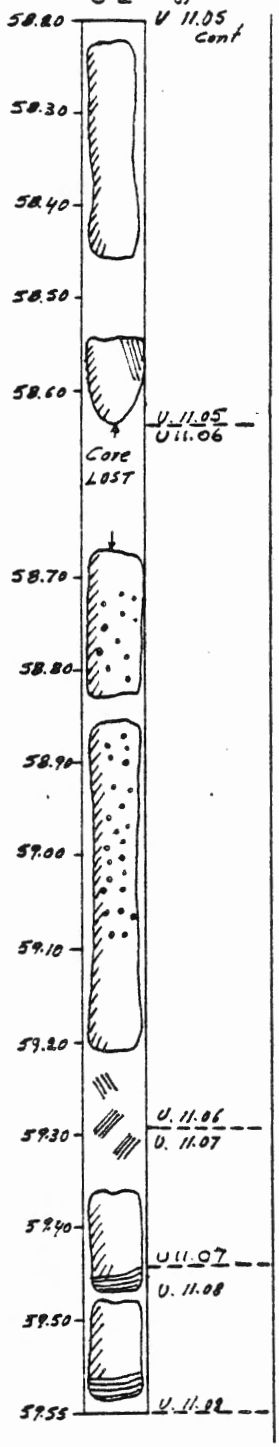
UNIT 11.05 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 11 Sheet 3a

Visual Core Description Observer J. BOYLE

Depth Interval 58.20 m to 59.55 m



UNIT 11.05 cont. Description - see Box 11, Sheet 2.

Slightly porphyritic, pillow basalt with a greenish-grey centre and with a 20 mm wide ochre coloured layer at margins. Margins are aphanitic.

Unit 11.06 OVERALL DESCRIPTION

Upper contact - 58.65 m Ambiguous.
Lower contact - 59.28 m Ambiguous - in rubble. Palagonitic debris in rubble indicates boundary.
Unit thickness - 0.63 m Type of unit: pillow

Very porphyritic, olivine rich basalt which is fine-grained near the margins and aphanitic at the centre.

Phenocrysts:- 50% centre, 10% near margin
- concentrically arranged
- higher density and greater size in core of pillow
- maximum size - 12 mm (long axis) at center of pillow, 8 mm (long axis) at margin of pillow
- 95% altered olivine and 5% fresh clinopyroxene
- random orientation
- euhedral to subhedral

Vesicles:- <<1%, also segregation vesicles
- maximum size - 4 mm
- filling - 50% green smectite, 50% white carbonate and zeolite

Veins:- 5%, powdery white
- filling - 90% palagonite, 10% white zeolite and calcite

GMA:- 40% at the margins, 20% at the center
- olivines altered to white layer silicate and oxides

UNITS 11.07 and 11.08 Description - see Box 11, Sheet 3b.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 11 Sheet 36

Graphic Representation | Sample

Visual Core Description Observer J. Boyle

Depth Interval 58.20 m to 59.55 m

UNIT 11.07 OVERALL DESCRIPTION

Upper contact - 59.28 m Ambiguous - in rubble.
Lower contact - 59.45 m Depositional. Altered glass.
Dip not clear.
Unit thickness - 0.17 m Type of unit: pillow

Fine-grained, grey but ochre toward the margin, slightly olivine phyric basalt with chilling toward the edges.

Phenocrysts:- 2%, homogeneous distribution
- maximum size - 4 mm (long axis)
- 95% altered olivine, 5% fresh clinopyroxene
- random orientation

Vesicles:- 5%, abundant segregation vesicles
- most open, filled ones include zeolites, brown and green sheet silicates
- maximum size - 2.5 mm
- filling - 90% open, 5% carbonates and zeolites, 5% sheet silicates

Veins:- 10%, white zeolite veins cut both basalt and palagonite
- filling - 80% palagonite, 20% carbonate and zeolite

GMA:- 50% - to sheet silicates
- olivine has altered to oxide, clinopyroxene is fresh

UNIT 11.08 OVERALL DESCRIPTION

Upper contact - 59.45 m Depositional. Altered glass.
Lower contact - 59.55 m Depositional. Dip - 50°.
Unit thickness - 0.10 m

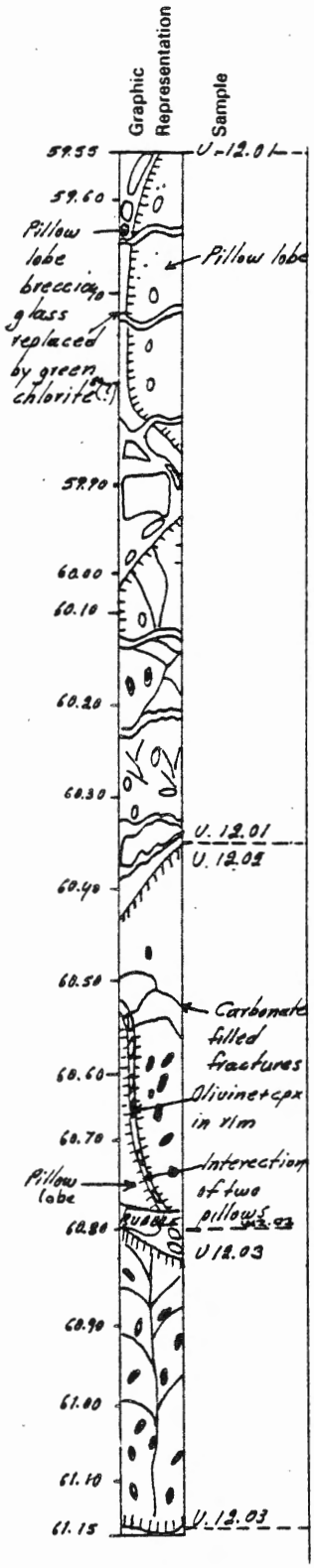
Same as Unit 11.07.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 12 Sheet 1a

Visual Core Description Observer T. Purcell

Depth Interval 59.55 m to 61.15 m



UNIT 12.01 OVERALL DESCRIPTION

Upper contact - 59.55 m Depositional. Altered glass.
Lower contact - 60.35 m Depositional. Altered glass.
Unit thickness - 0.80 m Type of unit: pillow

Brown, fine-grained, olivine and clinopyroxene phyric basalt. This pillow unit has a thick rim in which spalling has occurred. Pillow rim is sub-parallel to core axis hence parts of two separate pillows are included in this unit.

Phenocrysts:- 10-15%, randomly distributed olivine
- occasionally there are clinopyroxene phenocrysts
- euhedral to subhedral
- all phenocrysts are totally altered

Vesicles:- <1%
- size - <<1 mm

Veins:- <1%, random
filling - carbonate

GMA:- approximately 50%

UNIT 12.02 OVERALL DESCRIPTION

Upper contact - 60.35 m Depositional.
Lower contact - 60.80 m Depositional. Chilled margin and altered glass.
Unit thickness - 0.45 m Type of unit: pillow

A pillow lobe is intersected at 60.50 m. This is a brown olivine and clinopyroxene phyric, fine-grained basalt.

Phenocrysts:- 15%, olivine concentrated towards the base (spinel phases in some phenocrysts)
- euhedral to subhedral
- 100% altered to ferric iron clay minerals
- 1-2% clinopyroxene, randomly distributed
- size - mostly minute with 1 or 2 larger (1 mm) phenocrysts
- anhedral

Vesicles:- <1%
- size - <1 mm
- filling - 100% carbonate

Veins and fractures:- filled with carbonate and smectite or chlorite(?)
- olivine and clinopyroxene phases can be found in the pillow rims where spalling has also occured

GMA:- approximately 50%

UNIT 12.03 Description - see Box 12, Sheet 1b.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 12 Sheet 16

Graphic Representation | Sample

Visual Core Description Observer T. Purcell

Depth Interval 59.55 m to 61.15 m

UNIT 12.03 OVERALL DESCRIPTION

Upper contact - 60.80 m Depositional.
Lower contact - 61.15 m Chilled margin and altered glass.
Unit thickness - 0.35 m Type of unit: pillow

Brown-grey, fine-grained, olivine and clinopyroxene phyric basalt.

Phenocrysts:- 15% olivine, randomly distributed
- size - 1-2 mm
- 100% altered to ferric clay minerals
- 1% clinopyroxene, randomly distributed
- size - minute
- anhedral

Vesicles:- 1%, randomly distributed
- size - 10 mm
- filling - carbonate

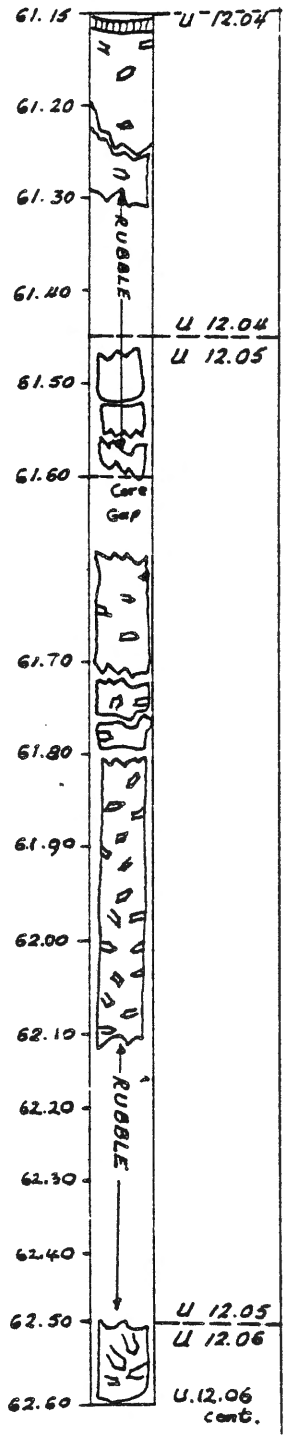
GMA:- about 40%

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 12 Sheet 2

Visual Core Description Observer T. Purcell

Depth Interval 61.15 m to 62.60 m



UNIT 12.04 OVERALL DESCRIPTION

Upper contact - 61.15 m Depositional. Glassy chilled margin.
Lower contact - 61.45 m Ambiguous. Glassy fragments in the rubble.
Unit thickness - 0.30 m Type of unit: pillow

Brown, fine-grained, olivine and clinopyroxene phyric basalt.

Phenocrysts:- olivine - again wholly replaced by iron clays
- size - 2-20 mm
- subhedral to euhedral
- clinopyroxene phenocrysts
- size - minute to 1mm
- anhedral

Vesicles:- 1%
- 100% open

Veins and fractures:- approximately 5%
- filling - lined by carbonate and some dog tooth spar, difficult to estimate as this unit is completely broken
- original chill altered to smectite

GMA:- about 40%

UNIT 12.05 OVERALL DESCRIPTION

Upper contact - 61.45 m Ambiguous.
Lower contact - 62.50 m Ambiguous - in rubble.
Unit thickness - 1.05 m Type of unit: pillow

Pale green-grey, olivine and clinopyroxene phyric basalt.

Phenocrysts:- olivine slightly less abundant than in Unit 12.04, randomly distributed
- size - 2-3 mm
- 100% altered
- about 1% clinopyroxene
- size - minute

Vesicles:- 2%
- filling - thinly lined with pale blue clay minerals

Veins:- 5%, randomly distributed
- filling - carbonate

GMA:- about 40%

UNIT 12.06 Description - see Box 12, Sheet 3.

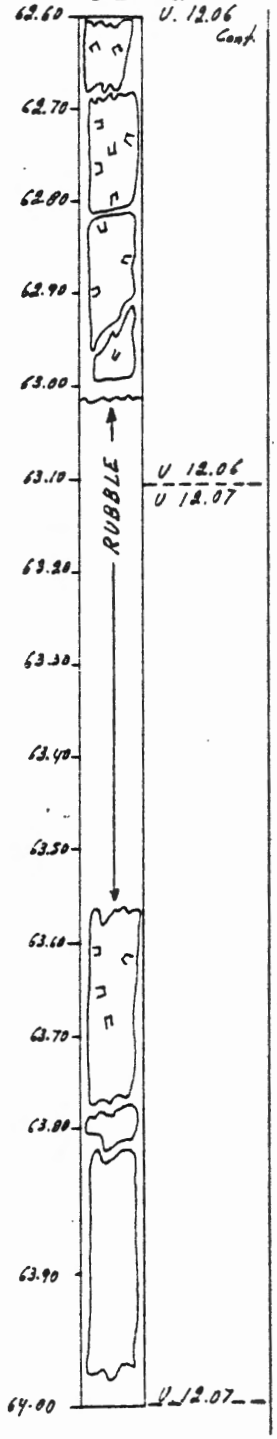
Pale green, olivine and clinopyroxene phyric basalt.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 12 Sheet 3

Visual Core Description Observer T. Purcell

Depth Interval 62.60 m to 64.00 m



UNIT 12.06 OVERALL DESCRIPTION

Upper contact - 62.50 m Ambiguous. Glassy fragments in rubble.
Lower contact - 63.10 m Altered glass in rubble.
Unit thickness - 0.60 m Type of unit: pillow

Pale green, olivine and clinopyroxene phyric basalt.

Phenocrysts:- 15-20%
- much of the olivine contains fresh spinel which is also found in the groundmass
- size - 4-10 mm
- locally altered

Vesicles:- 3%
- filling - 100% carbonate

Fractures:- approximately 7%
- filling - altered glass and carbonate

GMA:- about 40%

UNIT 12.07 OVERALL DESCRIPTION

Upper contact - 63.10 m Ambiguous. Altered glass in rubble
Lower contact - 64.00 m Ambiguous. Some glassy fragments in rubble.
Unit thickness - 0.90 m Type of unit: pillow

Pale grey-green olivine and clinopyroxene phyric basalt.

Phenocrysts:- olivine
- randomly distributed with inclusions of spinel (which is present in the groundmass)
- size - 3-20 mm
- 1% clinopyroxene
- size - minute

Veins:- 1%
- filling - 100% carbonate

Vesicles:- 1%, concentrated at the bottom of the unit
- filling - 70% carbonate, 20% open, 10% blue clay

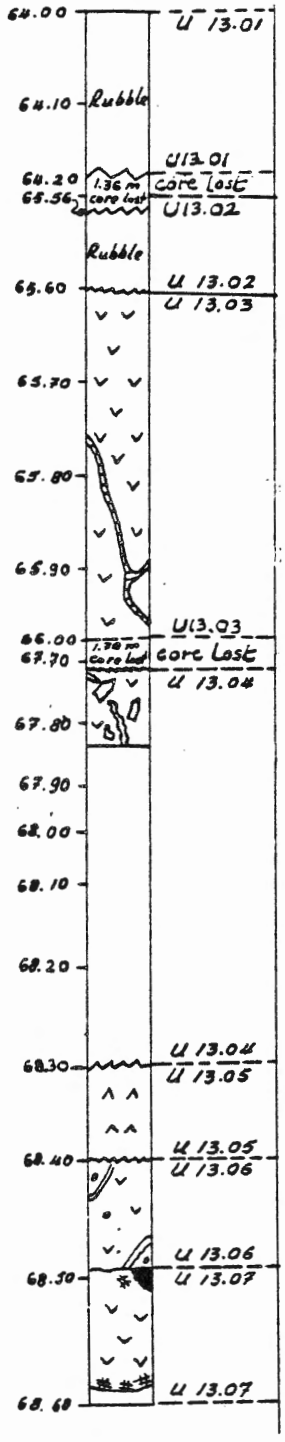
GMA:- about 40%

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 13 Sheet 1a

Visual Core Description Observer M. Haller

Depth Interval 64.00 m to 68.60 m



UNIT 13.01 OVERALL DESCRIPTION

Upper contact - 64.00 m Ambiguous. Glassy fragments in rubble.
Lower contact - 64.20 m Ambiguous. Drawn at the top of a zone of lost core.
Unit thickness - 0.20 m

Rubble of highly altered, greyish-green clinopyroxene basalt with a fine-grained groundmass.

Phenocrysts:- 20%
- bright green clinopyroxene (weathered)
  - size - 1-2 mm
  - euhedral to subhedral
- olivine replaced by limonite
  - size - 1 mm
  - euhedral to subhedral

Vesicles:- size - 4-8 mm
- filling - ochreous material

CORE LOST - 64.20-65.56 m - 1.36 m

UNIT 13.02 OVERALL DESCRIPTION

Upper contact - 65.56 m Ambiguous. Drawn at the base of a zone of lost core.
Lower contact - 65.60 m Ambiguous. Drawn at the base of a highly altered rubble zone.
Unit thickness - 0.04 m

Rubble of extremely altered greyish-brown basalt, also altered green glassy particles. Vesicles (or replaced phenocrysts?) filled by limonitic material.

UNIT 13.03 OVERALL DESCRIPTION

Upper contact - 65.60 m Ambiguous. Drawn at the top of an extremely altered zone.
Lower contact - 66.00 m Ambiguous. Drawn at the top of a zone of lost core.
Unit thickness - 0.40 m

Larger fragments of very porphyritic, grey, olivine basalt with a fine-grained groundmass.

Phenocrysts:- 80% olivine
- size - 6-10 mm, olivine aggregates
- <1% small (<1 mm) subhedral spinel inclusions
- 14% clinopyroxene, also well developed
  - size - 1-2 mm
  - euhedral

Vesicles:- approximately 5%
- size - 2-4 mm
- filling - 100% white material (zeolites?)
- round

Veins:- approximately 5%
- size - 2-4 mm
- filling - 75% open, 15% opaques, 10% zeolites

GMA:- 60%, highly altered

CORE LOST - 66.00-67.70 m - 1.70 m

UNITS 13.04 and 13.05 Descriptions - see Box 13, Sheet 1b.
UNITS 13.06 and 13.07 Descriptions - see Box 13, Sheet 1c.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 13 Sheet 16

Graphic Representation | Sample

Visual Core Description Observer M Haller

Depth Interval 64.00 m to 68.60 m

UNIT 13.04 OVERALL DESCRIPTION

Upper contact - 67.70 m Ambiguous. Drawn at the base of a zone of lost core.
Lower contact - 68.30 m Drawn at the top of a pale diabase zone.
Unit thickness - 0.60 m

One fragment (approximately 90 mm) of greyish-green, fine-grained, highly olivine phyric basalt.

Phenocrysts:- 40%
- olivine aggregates replaced by 80% ochreous material (limonite?)
- size - 5 mm
- subhedral
- 20% bright greenish clinopyroxene
- size - 2-3 mm
- euhedral

Vesicles:- 10%, mostly round
- filling - zeolites (?)

Veins:- 10%
size - 2-4 mm
- filling - 50% open, 30% opaques, 20% zeolites(?)

GMA:- 50%

UNIT 13.05 OVERALL DESCRIPTION

Upper contact - 68.30 m Top of diabase.
Lower contact - 68.40 m Base of diabase.
Unit thickness - 0.10 m

Several fragments of pale greyish, fine-grained diabase. Plagioclase (50%) in small subhedral grains (>1mm) and clinopyroxene/uralite (45%) in small (>0.5mm) aggregates are evident. There are also a few subhedral magnetite crystals smaller than 0.5 mm.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 13 Sheet 1c

Graphic Representation | Sample

Visual Core Description Observer M. Haller

Depth Interval 64.00 m to 68.60 m

UNIT 13.06 OVERALL DESCRIPTION

Upper contact - 68.40 m Drawn at the base of a diabase zone.
Lower contact - 68.50 m Altered glass.
Unit thickness - 0.10 m

Greyish-green, fine-grained, highly olivine phyric basalt.

Phenocrysts:- 25%
- 80% olivine in well developed phenocrysts and aggregates randomly distributed in the rock replaced by limonite
  - size - 7-8 mm
  - euhedral
- 15% clinopyroxene
  - size - 2 mm
  - euhedral to subhedral

Vesicles:- 15%
- size 2-4 mm
- mainly rounded
- filling - white waxy material (zeolite?)

Veins:- 4%, few thin veins
- filling - zeolite?

UNIT 13.07 OVERALL DESCRIPTION

Upper contact - 68.50 m Pillow margin with altered glass and fine-grained rock. Dip - 60°.
Lower contact - 68.60 m Pillow margin. Dip - 0°.
Unit thickness - 0.10 m Type of unit: pillow

Greyish-green, fine-grained, phyric olivine basalt.

Phenocrysts:- 20%, randomly distributed
- 85% olivine in aggregates, mostly replaced by ochreous material (limonite?)
  - size 2-7 mm
  - round
  - 15% bright green clinopyroxene
  - size - 2 mm
  - subhedral

Vesicles:- average size - 2 mm
- filling - white waxy material (zeolite?)

Veins:- about 30%
- filling - 70% sheet silicates, 30% zeolite

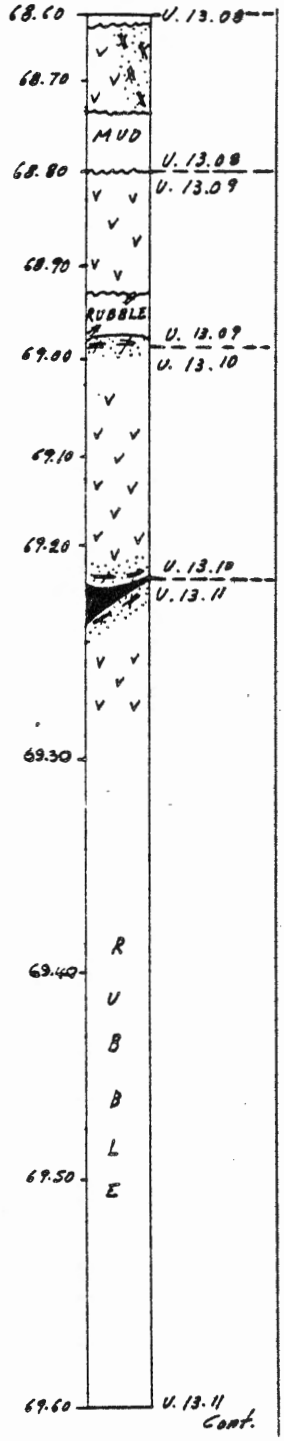
GMA:- about 25%

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 13 Sheet 2a

Visual Core Description Observer M. Haller

Depth Interval 68.60 m to 69.60 m



HIGH CORE LOSS in this section hence the expanded scale.

UNIT 13.08 OVERALL DESCRIPTION

Upper contact - 68.60 m Ambiguous.
Lower contact - 68.80 m Ambiguous.
Unit thickness - 0.20 m Type of unit: pillow lobe(?)

Pillow lobe with a chilled margin parallel to the core, constituted by altered glass and sheet silicates. Greyish-brown, phyric basalt which is quite fine-grained in the chilled margin, with an ochreous zone given by Fe-oxides.

Phenocrysts:- 15%
- 80% olivine in aggregates altered to ochreous material (limonite?)
  - size - 1-2 mm
- 18% bright green clinopyroxene
  - size - <1 mm
  - subhedral
- 2% magnetite in small crystals
  - size - <0.5 mm
  - euhedral

Vesicles:- 5%, ovoid
- filling - white material (zeolite?)

Veins:- 15%
- size - <1.5 mm
- filling - 75% sheet silicates, 25% zeolites(?)

GMA:- approximately 40%

UNIT 13.09 OVERALL DESCRIPTION

Upper contact - 68.80 m Ambiguous.
Lower contact - 68.98 m Rubble of pillow chilled margin with altered glassy material. Dip - 0°.
Unit thickness - 0.18 m Type of unit: probably a pillow

Greyish-green, fine-grained, phyric basalt.

Phenocrysts:- 20%, homogeneous distribution
- 85% olivine aggregates replaced by limonite(?)
  - size - 2-5 mm
  - irregularly shaped
- 15% bright green clinopyroxenes
  - size - 1 mm

Vesicles:- 10%, concentrated at the base of the unit
- filling - white zeolites?
- mostly round

Veins:- approximately 10%
- filling - 60% sheet silicates and 40% zeolites(?)

GMA:- approximately 30%

UNITS 13.10 and 13.11 Descriptions - see Box 13, Sheet 2b.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 13 Sheet 26

Graphic Representation | Sample

Visual Core Description Observer M: Haller

Depth Interval 68.60 m to 69.60 m

UNIT 13.10 OVERALL DESCRIPTION

Upper contact - 68.98 m 10 mm chilled margin with glass altered in silicates and fine-grained rock. Dip - 0°.
Lower contact - 69.24 m 25 mm chilled margin with 10 mm altered glass into a dark green sheet silicate and fine-grained rock. Dip - 0°.
Unit thickness - 0.26 m Type of unit: pillow

Greyish-green, fine-grained, phyric basalt.

Phenocrysts:- 20%, settling
- 90% olivine altered to limonite
  - size - 4.7 mm
  - subhedral
- 10% bright green clinopyroxene
  - size - 1-1.5 m
  - euhedral

Vesicles:- 10%, concentrated near the margins
- filling - white waxy material (zeolite?)
- round and oval shaped

Veins:- 5%
- size - 3 mm
- filling - 80% sheet silicates and 20% zeolites

GMA:- approximately 25%

UNIT 13.11 OVERALL DESCRIPTION

Upper contact - 69.24 m Probably pillow margin with green waxy sheet silicates and fine-grained rock (10 mm thick). Dip - 80°.
Lower contact - 69.88 m Rubble of altered glassy material.
Unit thickness - 0.64 m Type of unit: pillow

Grey-greenish, fine-grained, phyric basalt.

Phenocrysts:- 15%
- 65% olivine aggregates replaced by ochreous material
  - size - 1-2 mm
  - anhedral
- 35% bright green clinopyroxene
  - size - 0.5-1.5 mm
  - subhedral

Vesicles:- 20%
- filled - zeolite(?)
- irregularly shaped

Veins:- 10%, longitudinal
- size - 1-5 mm
- filling - approximately 75% sheet silicates and 25% zeolite (?)

GMA:- approximately 50%

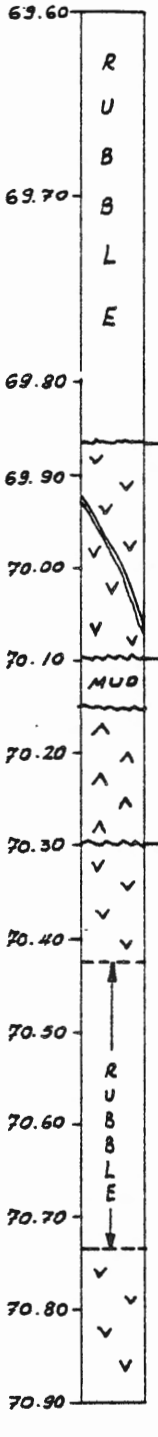
UNIT 13.11 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 13 Sheet 3a

Visual Core Description Observer N. Haller

Depth Interval 69.60 m to 70.90 m



High Core Loss in this section hence the expanded scale.

UNIT 13.11 cont. Description - see Box 13, Sheet 2b.

Grey-greenish, fine-grained, phyric basalt pillow.

UNIT 13.12 OVERALL DESCRIPTION

Upper contact - 69.88 m Ambiguous in rubble.
Lower contact - 70.10 m Ambiguous.
Unit thickness - 0.22 m Type of unit: probably pillow

Greyish-green, fine-grained, phyric basalt. This unit is one solid core fragment.

Phenocrysts:- 10%, concentrated and better developed in the upper part of the fragment
- 85% olivine
  - size - 1-5 mm
  - subhedral
- 15% green clinopyroxene
  - size - 1-2 m
  - subhedral

Vesicles:- 10%
- size - 0.5-4 mm
- filling - white material (zeolite?)
- round

Veins:- one vein - 45°.
- size - 1.5 mm
- filling - zeolite?
- a fracture with approximately same dip is filled with 40% zeolite?, 40% chalk, 20% sheet silicates
- few other thin (<0.5 mm) veins with various dips
- total abundance of veins and vugs - 13%
- overall vein and vug filling - 80% zeolite, 15% carbonate, 5% sheet silicate

GMA:- approximately 30%

UNIT 13.13 OVERALL DESCRIPTION

Upper contact - 70.10 m Ambiguous.
Lower contact - 70.30 m Ambiguous.
Unit thickness - 0.20 m

70.10-70.20 m - buff coloured clay.
70.20-70.30 m - several fragments of grey-green, quite fine-grained diabase with 60% very small (<0.2 mm) subhedral plagioclase crystals and 40% small (<0.2 mm)cpx/uralite crystals.

UNIT 13.14 Description - see Box 13, Sheet 3b.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 13 Sheet 36

Graphic Representation | Sample

Visual Core Description Observer M. Haller

Depth Interval 69.60 m to 70.90 m

UNIT 13.14 OVERALL DESCRIPTION

Upper contact - 70.30 m Ambiguous.
Lower contact - 71.00 m Depositional. Dip - 45°. Altered glass.
Unit thickness - 0.70 m Type of unit - probably pillow

This whole unit is unoriented. It consists of a few large fragments and several smaller fragments of grey, fine-grained, phyric basalt changing to ochre aphanitic to green palagonite at the base of the unit.

Phenocrysts:- 25% in this section decreasing to <10% in the next section
- 80% olivine altered to limonite
  - maximum size - 10 mm
  - subhedral
- 20% green clinopyroxene
  - size - smaller
  - subhedral

Vesicles:- 10%
- average size - 2 mm
- maximum size - 5 mm
- filling-45-50% white zeolite, 30-40% open, 20-25% colourless material with single perfect cleavage (heulandite)

Veins:- 25%
- maximum size - 4 mm
- filling - 80% zeolites, 20% carbonate
- fractures with coating of blue palagonite
- 80% zeolite, 10% carbonate, 10% colourless material (heulandite)

GMA:- 40% increasing to 60% at the base of unit
- altered to layer silicates - ochre coloured
- olivine altered to brown smectite and oxide

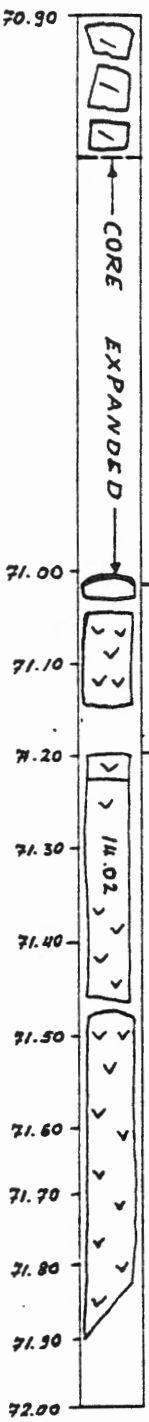
UNIT 13.14 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 14 Sheet 1

Visual Core Description Observer J. Boyle

Depth Interval 70.90 m to 72.00 m



UNIT 13.14 cont. Description - see Box 13, Sheet 3b.

This unit is completely unoriented. It is made up of a few large fragments and several smaller pieces of grey, fine-grained, phyric pillow? basalt.

UNIT 14.01 OVERALL DESCRIPTION

Upper contact - 71.00 m
Lower contact - 71.20 m
Unit thickness - 0.20 m

Pillow fragment breccia. Main fragment type (20-70 mm across) is slightly olivine phyric basalt. There are many small fragments of palagonite. The breccia is thoroughly mixed, not autobrecciated. The breccia is coarsest in the middle, but core is not continuous enough to prove or disprove grading. The matrix is buff to pink clayey debris. There is no fabric or structure.

UNIT 14.02 OVERALL DESCRIPTION

Upper contact - 71.20 m Depositional but unorientated. Altered glass and chill.
Lower contact - 72.15 m Depositional with altered glass and chill. Dip - 20°.
Unit thickness - 0.95 m

Slightly porphyritic, greenish-grey (going to ochre at 15 mm from the margin), fine-grained, pillow basalt with the margin itself dark green to black. In the middle of the pillow several vesicles with dark green sheet silicates occur. Superficially these resemble celadonite segregation.

Phenocrysts:
- olivine and white and brown sheet silicates, mainly brown at base and white higher up
- 5% olivine at the base and <1% at the top
  - partially settled
  - maximum size - 10 mm
  - anhedral to euhedral
- <1% clinopyroxene anywhere and more common at the base
  - maximum size - 6 mm

Vesicles:
- homogeneously distributed, but concentrated at the top - band of maximum concentration (approximately 10%) occurs 150 mm from the top of the unit - middle has <1%
- filling - 40% open, 30% milky white zeolite, and 30% transparent cleaved zeolite (possibly heulandite)

Veins:
- 5%
- meandering milky white veins occupy <1% of the rock
- soft blue-white clay veins occupy 4% of rock
  - three of these occur between 71.92 m and 72.15 m
  - orientations as follows - 70°/315°, 70°/335°, 45°/345°

GMA:
- 50% - to sheet silicates

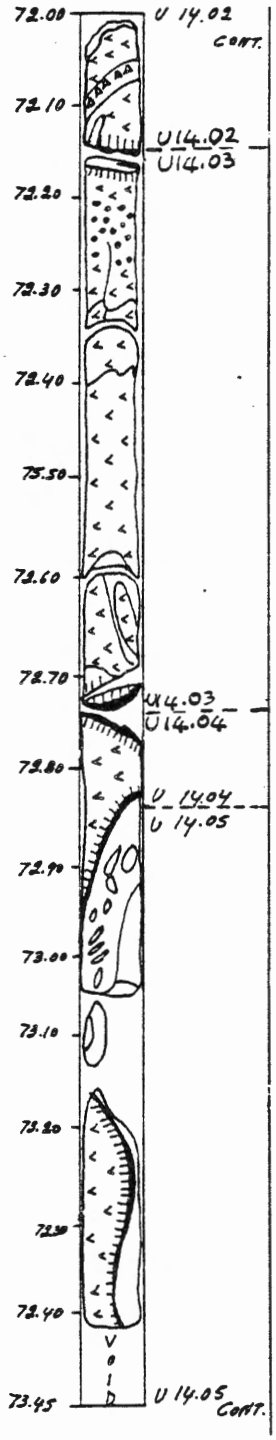
UNIT 14.02 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 14 Sheet 2a

Visual Core Description Observer J. BOYLE

Depth Interval 72.00 m to 73.45 m



UNIT 14.02 cont. Description - see Box 14, Sheet 1.

Greenish-grey, going to ochre near margin (dark green to black at margin), fine-grained, slightly porphyritic pillow basalt.

UNIT 14.03 OVERALL DESCRIPTION

Upper contact - 72.15 m Depositional. Chill - 20°.
Lower contact - 72.74 m Depositional. Chill - 45°.
Unit thickness - 0.59 m

Slightly porphyritic, fine-grained pillow basalt with marginal chills. Colour changes from grey (homogeneous) to 30 mm zone of ochre at margins. Narrow (5 mm) green black chill. This unit is continuous core.

Phenocrysts:- exhibit marked settling but with slight tendency to be concentrically distributed
- top - 1% olivine
  - maximum size - 3 mm
- upper middle - <1% olivine
  - maximum size - <2 mm
- bottom - 5% olivine
  - maximum size - 6 mm
- very low concentration of clinopyroxene (subhedral and fresh)

Vesicles:- 0-10%
- concentrically distributed in center, but slightly higher concentration at the top
- a number of large (approximately 10 mm) irregular amygdules occur
- maximum size - 10 mm
- filling - 60% milky white zeolites and 40% open

Veins:- 1-2%
- meandering milky white zeolite veins (0.1 to 2 mm) make up <1% of rock
- soft blue clay veins 10 mm thick, cut directly across at 72.60 m
- orientation - 45°.
- palagonite - 0.5% of thickness

GMA:- 40%
- olivine altered to brown sheet silicates

UNITS 14.04 and 14.05 Descriptions - see Box 14, Sheet 2b.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1
Core Box 14 Sheet 26

Graphic Representation | Sample

Visual Core Description Observer J. Boyle
Depth Interval 72.00 m to 73.45 m

UNIT 14.04 OVERALL DESCRIPTION

Upper contact - 72.74 m Depositional. Dip - 45°.
Altered glass. Good chill.
Lower contact - 72.84 m Depositional. Dip - 60°.
Altered glass. Good chill.
Unit thickness - 0.10 m
Green-grey to ochre at the margins, fine-grained, slightly phyric, olivine basalt in pillow with good chills.

Phenocrysts:- sparse and small - homogeneously distributed
- <0.5% olivine
- maximum size - approximately 2 mm
- subhedral
- one or two crystals of clinopyroxene
- size - 3 mm
- subhedral

Vesicles:- 5% and some segregation vesicles occur
- some elongate pipe vesicles occur perpendicular to the margin
- the segregation vesicles are larger and more irregular than the others
- maximum size - 4 mm
- filling - 50% open, 30% zeolites, 20% layer silicates

Veins:- 3%, accounts for partial autobrecciation
- filling - principally milky white zeolite and some calcite

GMA:- altered to blue and green layer silicates mostly
- more oxidized at the rim
- patches of oxidized purple
- olivine phenocrysts altered to oxide

UNIT 14.05 OVERALL DESCRIPTION

Upper contact - 72.84 m Depositional. Altered glass.
Chill - 85°.
Lower contact - 73.56 m Depositional. Altered glass.
Chill - 90°.
Unit thickness - 0.72 m Type of unit: pillow
This unit appears to be a section skimming through the edge of a pillow and it may be the same pillow as Unit 14.04.
Fine-grained, green-grey, slightly phyric olivine basalt with good chills and ochre margins.

Phenocrysts:- 2-3%, olivine settled at base decreasing upwards
- euhedral to subhedral
- size - 8 mm

Vesicles:- 5%
- principally large irregular segregation vesicles
- the segregated material has oxidized to purple
- looks like bubbles in segregation, though possibly zeolite replacement
- size - 6 mm

Veins:- 40% veins, but much hyaloclastite debris occurs between this unit and the one above
- filling - 95% layer silicates, 5% zeolites

GMA:- 40%, blue clays at center and brown clays at margin
- olivine altered to oxide

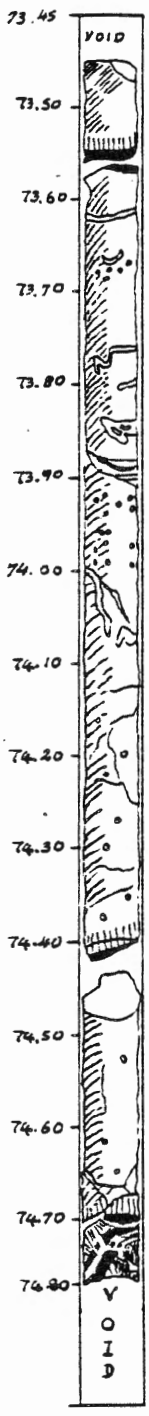
UNIT 14.05 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 14 Sheet 3a

Visual Core Description Observer J. BOYLE

Depth Interval 73.45 m to 74.80 m



UNIT 14.05 cont. Description - see Box 14, Sheet 2b.

Green-grey to ochre at margins, fine-grained, slightly phyric pillow basalt with good chills.

UNIT 14.06 OVERALL DESCRIPTION

Upper contact - 73.56 m Depositional. Dip - 0°.
Altered glass margins and chill.
Lower contact - 74.40 m Depositional. Dip - 30°.
Altered glass margins and chill.
Unit thickness - 0.84 m Type of unit: pillow

Grey-green (altered to ochre near the margin), slightly olivine phyric basalt with a narrow, dark margin. This unit is solid core.

Phenocrysts:- settled, with largest at base
- no numerical change in abundance, but size increases toward the base
- top - <0.5%
  - average size - approximately 2 mm
  - maximum size - 5 mm
  - euhedral
- base - <1%
  - average size - approximately 5 mm
  - maximum size - 8 mm
  - euhedral

Vesicles:- 4%, distributed in zones
- one 10 cm zone approximately 5 cm from top
- another 10 cm zone 35 cm from the top
- average size - approximately 6 mm, but some much larger ones occur
- filled by at least 2 zeolites - one radiating, the other with a single good cleavage
- filling - 80% filled, 20% open

Veins:- 6%
- vein fill largely the same as vesicle fill, as can be seen by amygdules continuous with veins
- both radiating and planar cleaved zeolites occur in veins
- also a soft, pale green-blue clay filling voids and fractures occurs
- filling - 50% sheet silicates, 25% zeolites, 25% palagonite

GMA:- mainly blue sheet silicates
- chills have ochre brown sheet silicates
- some fractures are surrounded by zones of purple alteration millimeters thick, others are surrounded by darker green alteration about 1 mm thick
- phenocrysts altered to brown clay, and subsequently oxides
- total clay abundance - 40%

UNIT 14.07 Description - see Box 14, Sheet 3b.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 14 Sheet 3b

Graphic Representation | Sample

Visual Core Description Observer J. Boyle

Depth Interval 73.45 m to 74.80 m

UNIT 14.07 OVERALL DESCRIPTION

Upper contact - 74.40 m Broken. No glass or chill in rubble.
Lower contact - 74.80 m Depositional. Altered glass and chill. Dip - 40°.
Unit thickness - 0.40 m Type of unit: pillow

Fine-grained, grey (going to ochre at the bottom chill), slightly phyric basalt. This short section of pillow is broken at the top.

Phenocrysts:- <1%, patchy distribution
- maximum size - approximately 4 mm
- olivine pseudomorphs
- subhedral

Vesicles:- 15%, patchy distribution
- more at the top than at the bottom
- maximum size - 6 mm
- filling - two zeolites, one radiating, the other with good single cleavage
- 60% empty, 39% zeolite, 1% layer silicates

Veins:- 10%, a few meandering white zeolite veins
- soft pale blue-green layer silicates veins
- palagonite at lower contact
- filling - 55% palagonite, 40% clay, 5% zeolite

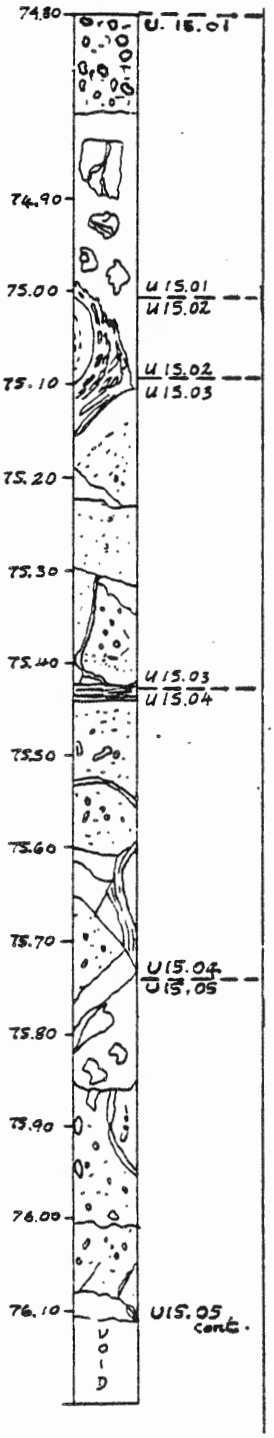
GMA:- 40% - to blue-green layer silicates in most of rock
- ochre brown in chill, purple alteration associated with segregation vesicles and fine fractures
- dark green alteration 1 mm wide associated with some fractures
- olivine altered to oxide

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 15 Sheet 1a

Visual Core Description Observer N. Baglow

Depth Interval 74.80 m to 76.10 m



UNIT 15.01 OVERALL DESCRIPTION

Upper contact - 74.80 m Ambiguous. Scattered glass fragments enclosed in what appears to be compacted, fresh, brown mud.
Lower contact - 75.00 m Depositional. Thin zone of altered glass adjacent to aphanitic chilled margin. Overall unit is fragmented and poorly defined.
Unit thickness - 0.20 m

Fine-grained, greenish-grey, olivine phyric basalt showing some degree of mottling, accentuated by red oxide alteration.

Vesicles:- 5%
- basalt is vesicular, being punctuated throughout by pinhead vesicles
- size - 0.2-1 mm

Veins:- 40%, including margins
- internal examples comprise 40% chalky carbonates, 30% waxy sheet silicates (white or red oxide filmed) and 30% white to pale green clays
- filling - 70% sheet silicates (predominantly altered glass), 25% carbonate, 5% zeolite

GMA:- approximately 40%

UNIT 15.02 OVERALL DESCRIPTION

Upper contact - 75.00 m Depositional. Altered glassy margin. 10 mm chilled margin, with only mild ochreous alteration.
Lower contact - 75.09 m Depositional. As above.
Unit thickness - 0.09 m

Fine-grained, greenish-grey, slightly olivine phyric basalt. Minor red oxide alteration defines interstitial areas, but this feature is poorly represented throughout the rock. Sporadic, completely replaced olivines (0.5-1.0mm) are sub- to anhedral in shape. Larger depressions filled with light brown material are probably mud filled vesicles.

Vesicles:- 10%
- average size - 0.1-1 mm
- maximum size - 5 mm
- irregularly shaped voids
- approximately 50% of tiny vesicles are filled with a green sheet silicate (palagonite?) - this filling is preferentially found in the chilled margin zones - in addition, pervasive segregation of irregular white material (1-2 mm), possibly interstitial carbonate

Veins:- 20%, minor internal carbonate veins
- filling - 80% sheet silicates (dark green and translucent white (iron stained)), 10% carbonate, 10% white zeolite

GMA:- approximately 40%

UNIT 15.03 Description - see Box 15, Sheet 1b.
UNITS 15.04 and 15.05 Descriptions - see Box 15, Sheet 1c.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 15 Sheet 16

Graphic Representation | Sample

Visual Core Description . Observer N. Baglow

Depth Interval 74.80 m to 76.10 m

UNIT 15.03 OVERALL DESCRIPTION

Upper contact - 75.09 m Depositional. Dip - 80°.
Altered glass fragments, with 30-40 mm chilled margin exhibiting a greater degree of alteration than the unit as a whole.
Lower contact - 75.43 m Depositional. Dip - 80°.
Well defined contact with altered glass (15 mm total) and 20 mm chilled zone.
Unit thickness - 0.34 m

Fine-grained, greenish-grey, very slightly olivine phyric pillow basalt.

Phenocrysts:- 1-7%, very sporadic
- size - 0.5-2 mm
- olivine completely replaced by brown material usually plucked out to some degree
- slight degree of red oxide replacing grain interstices
- poorly shaped ochre/red altered segregations just outside chilled margin are ambiguous - olivine or infilled vesicles (up to 4 mm, 1% of unit)

Vesicles:- 20%
- size - 1-7 mm
- filling - 70% white carbonates, 25% open or perhaps clays removed, 5% green sheet silicates
- pin head vesicles in chilled zone largely infilled with green sheet silicates; larger vesicles appear just outside this margin
- often rusty goethite is associated with the larger carbonate vesicles, these tending to be irregular in shape compared to the smaller, more rounded vesicles
- voids tend to be of same order of size (0.5-2mm) and shape as these smaller features

Veins:- 5% - up to 9% including margins
- filling - 50% white zeolite (similar to vesicles), 50% pale green and darker green probably clay minerals
- fracture at 75.21 m is rusty goethite filled
- overall filling including margins - 80% sheet silicates (mainly glass) and 20% carbonates

GMA:- approximately 25%
- away from the margins, the alteration patches are irregularly distributed

UNITS 15.04 and 15.05 Descriptions - see Box 15, Sheet 1c.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 15 Sheet 1c

Graphic Representation | Sample

Visual Core Description Observer N. Baglow

Depth Interval 74.80 m to 76.10 m

UNIT 15.04 OVERALL DESCRIPTION

Upper contact - 75.43 m Depositional. 20-30 mm chilled margin.
Lower contact - 75.75 m Depositional. Chilled margin.
Unit thickness - 0.32 m
Fine-grained, greenish-grey, very slightly olivine phyric pillow basalt.

Phenocrysts:- average size - 3-4mm
- subhedral olivine
- no obvious preferred distribution
- pale brown alteration, product preferentially weathered out

Vesicles:- 20%
- filling - 50% open, 50% white carbonate
- carbonate is usually in the larger cavities, averaging 7 mm, though almost half the smaller, rounded vesicles (1-3 mm) are also carbonate and goethite filled
- microvesicles at upper chilled boundary filled with green sheet silicates

Veins:- 20%
- filling - 60% sheet silicates (altered glass slickensided blue-green milky material (e.g. fracture at 75.66 m) and pale green clay) and 40% white to pinkish carbonate

GMA:- approximately 15%, patchy distribution

UNIT 15.05 OVERALL DESCRIPTION

Upper contact - 75.75 m Depositional. Approximately 30 mm chilled margin adjacent to glass, but gradation into pillow is poorly defined.
Lower contact - 76.34 m Depositional. Chilled margin preserved but 100 mm fragmented portion links the 2 units. Fresh glass?
Unit thickness - 0.59 m
Fine-grained, greenish-grey, sparsely olivine phyric, pillow basalt.

Phenocrysts:- olivine replaced and plucked out with no preferred distribution
- size - 1-3 mm

Vesicles:- 25%
- average size of 10 largest - 6 mm
- size - typically 0.5-2 mm and well rounded
- filling - 50% white carbonate, 50% open
- N.B. - greater proportion of voids apparent in fresh faces as opposed to core surface
- tend to be corroded, sometimes with goethite
- amalgamations of vesicles occur
- vug-like features are found between 77.85-77.95 m
- some could be core intersections of vertical veining - most convincing is 15 mm across with iron stained external rim but carbonate filled

Veins:- 15%
- filling - 60% sheet silicates (glass and iron stained, milky) and 40% carbonates

GMA:- approximately 25-30%, preferentially at contacts and along veins (up to 10 mm)

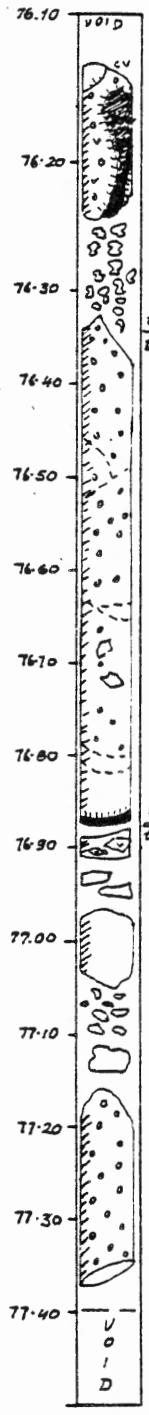
UNIT 15.05 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY 1

Core Box 15 Sheet 2

Visual Core Description Observer N.Baglow/J.Mehegan

Depth Interval 76.10 m to 77.40 m



UNIT 15.05 cont. Description - see Box 15, Sheet 1c.

Greenish-grey, fine-grained, sparsely olivine phyric pillow basalt.

UNIT 15.06 OVERALL DESCRIPTION

Upper contact - 76.34 m Depositional?
Lower contact - 76.87 m Depositional contact with altered green glass.
Unit thickness - 0.53 m Type of unit: pillow

Fine-grained to aphanitic, greyish-black, olivine porphyritic basalt.

Phenocrysts:- 5%
- size - 6 mm
- olivine replaced by red-brown clay
- euhedral

Vesicles:- 20%
- size - 4 mm
- filling - lined by blue layer silicate and filled or partially filled with calcite crystals
- 10% large (15 mm) glassy segregations, 15% empty

Veins:- 1-2%
- size - 2 mm
- filling - calcite

GMA:- 10-15%

UNIT 15.07 OVERALL DESCRIPTION

Upper contact - 76.87 m Depositional. No glass.
Lower contact - 77.62 m Depositional. Fresh glass.
Unit thickness - 0.75 m Type of unit: pillow

Brownish-grey, fine-grained, sparsely olivine phyric basalt.

Phenocrysts:- 1-2%
- size - 3 mm
- olivine altered to reddish-brown material
- subhedral to euhedral

Vesicles:- 20%
- filling - 70% partially and totally filled with calcite, 25% open, 5% lined with blue clay

Veins:- 1%
- size - 1 mm
- filling - calcite

GMA:- 10%

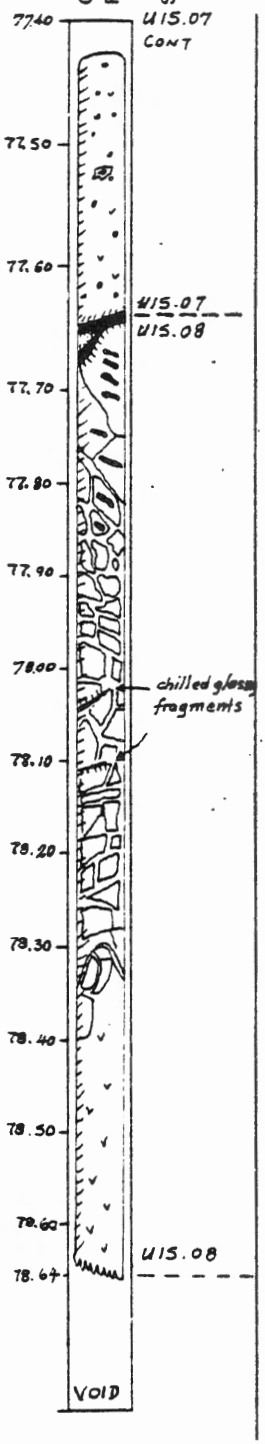
UNIT 15.07 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY 1

Core Box 15 Sheet 3

Visual Core Description Observer N. Baglow / J. Mehegan

Depth Interval 77.40 m to 78.64 m



UNIT 15.07 cont. Description - see Box 15, Sheet 2.

Brownish-gray, fine-grained, sparsely olivine phyric pillow basalt.

UNIT 15.08 OVERALL DESCRIPTION

Upper contact - 77.62 m Depositional. Fresh glass.
Lower contact - 78.64 m Depositional. Fresh and altered glass.
Unit thickness - 1.02 m

Type of unit: volcanic breccia which may be a flow or a breccia flow with a massive top and bottom

Red, aphyric basalt with abundant segregation vesicles at the top and bottom of the unit.

Vesicles:- 25%, segregation vesicles
- size 10 mm-2 mm
- glass(?) altered to brown iron oxides and green clays

Veins:- 30-20%, calcite cementing breccia fragments between depths at 77.50-78.40 m
- calcite veining below 78.40 m

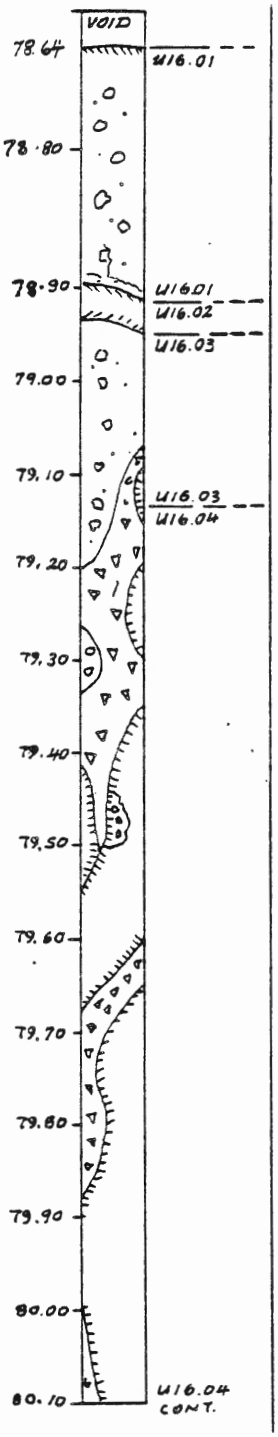
GMA:- 30-40%

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY 1

Core Box 16 Sheet 1a

Visual Core Description Observer J. A. Pearce

Depth Interval 78.64 m to 80.10 m



UNIT 16.01 OVERALL DESCRIPTION

Upper contact - 78.64 m Ambiguous.
Lower contact - 78.91 m Intruded by Unit 16.02
Unit thickness - 0.27 m Type of unit: pillow (?) but could be massive flow or intrusion

Fine-grained, grey-green, sparsely olivine phyric basalt with uniform alteration.

Phenocrysts:- 1-5%
- olivine microphenocrysts, subhedral, pseudomorphed by Fe oxy-hydroxides
- maximum size - 5 mm

Vesicles:- 1-5%, more abundant near upper margin
- average size - 1 mm
- maximum size - 5 mm
- filling - (especially near unit top) of green smectite and iron oxy-hydroxides
- (especially at unit center and base) calcite
- spherical

Veins:- 5-10%, irregular veins common at the base and top
- filling - four main infilling minerals:
(i) white calcite and another;
(ii) pink manganese/iron(?) stained calcite;
(iii) pale green clay and calcite(?);
(iv) dark green smectite
- also brown (iron oxy-hydroxides) alteration patches in groundmass

UNIT 16.02 OVERALL DESCRIPTION

Upper contact - 78.91 m .Intrusive. Glassy chilled margin approximately 5 mm wide; irregular.
Lower contact - 78.95 m As upper contact. Both dip 0°.

Unit thickness - 0.04 m Type of unit: intrusive sheet

Fine-grained, olivine phyric basalt with glassy margins.

Phenocrysts:- 15-20%
- size - quite uniform size approximately 0.5 mm
- olivine microphenocrysts pseudomorphed by iron oxy-hydroxides
- subhedral

Vesicles:- 5-10%
- maximum size - 1.5 mm
- filling - greenish rim (smectite?), white (calcite?) interior and sometimes hollow center
- spherical

Veins:- 5 veins (<5 mm wide) containing white, purple and green calcite and glass/smectite fragments cut vertically across sheet and are planes along which displacement has occurred
- horizontal veins also occur above and below the intrusive sheet (same infillings)

GMA:- pervasive alteration - grey green colour at center; then brown zone; dark green margin

UNITS 16.03 and 16.04 Descriptions - see Box 16, Sheet 1b.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1
Core Box 16 Sheet 16

Graphic Representation | Sample

Visual Core Description Observer J. A. Pearce
Depth Interval 78.70 m to 80.10 m

UNIT 16.03 OVERALL DESCRIPTION

Upper contact - 78.95 m Intruded by Unit 16.02.
Lower contact - 79.13 m Ambiguous.
Unit thickness - 0.18 m

This unit appears to be the same as and equivalent to Unit 16.01.

UNIT 16.04 OVERALL DESCRIPTION

Upper contact - 79.13 m Highly irregular and brecciated.
Lower contact - 80.17 m Highly irregular and brecciated.
Unit thickness - 1.04 m Type of unit: probably a pillow breccia

This unit is probably a pillow breccia made up of rounded pillow fragments within hyaloclastite material. The pillow fragments are olivine phyric basalt similar to Unit 16.02, some with glassy margins, some without. Hyaloclastite component consists of glassy fragments now entirely altered to dark-green smectite. Spaces between fragments are infilled by white, green (clay-rich) and pink (manganese/iron - rich?) carbonate. Size of fragments is very variable, the pillow fragments at the base being larger and more coherent than those at the more brecciated top, perhaps comprising almost complete pillows.

Vesicles:- 5% in individual clasts

Veins:- both components are strongly veined
- maximum size - 20 mm
- filling - carbonate
- no obvious systematic orientation

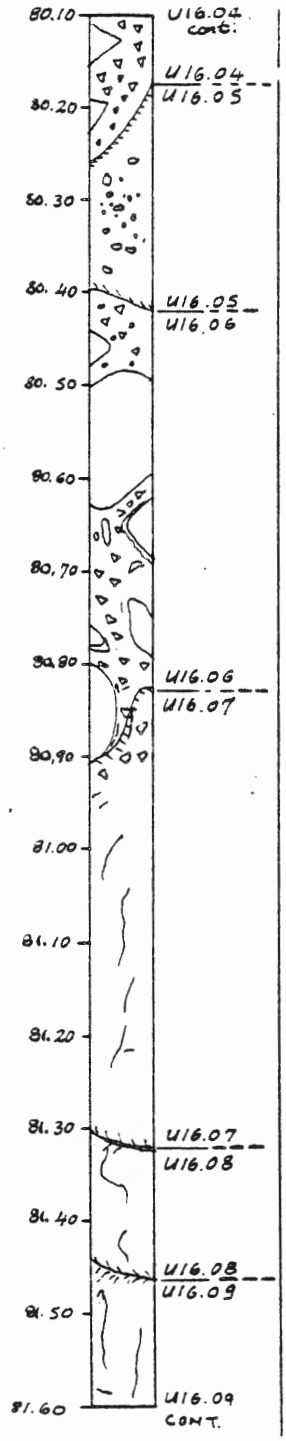
UNIT 16.04 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY 1

Core Box 16 Sheet 2a

Visual Core Description Observer J.A. Pearce

Depth Interval 80.10 m to 81.60 m



UNIT 16.04 cont. Description - see Box 16, Sheet 1b.

Pillow breccia? made up of rounded pillow fragments of olivine phyric basalt within hyaloclastite material.

UNIT 16.05 OVERALL DESCRIPTION

Upper contact - 80.17 m Depositional. Chilled.
Dip - 45°.
Lower contact - 80.42 m Depositional. Chilled.
Dip - 45°.
Unit thickness - 0.25 m Type of unit: pillow lava

Fine-grained, grey sparsely olivine phyric basalt with brown blotches at the center and brown to dark green chilled margins with pervasive alteration.

Phenocrysts:- <2%, subhedral
- maximum size - 5 mm
- olivine (pseudomorphed)

Vesicles:- 20% (more abundant and larger in the centre)
- maximum size - 5 mm
- filling - calcite and/or green smectite
- generally spherical

Veins:- average spacing - 30 mm
- filling - calcite

GMA:- brown alteration patches in groundmass
- pervasive alteration

UNIT 16.06 OVERALL DESCRIPTION

Upper contact - 80.42 m Depositional.
Lower contact - 80.82 m Depositional.
Unit thickness - 0.40 m

Complex zone comprising fragments of pillow interiors and glass margins intensely veined by carbonate or an intimate mixture of carbonate and clay(?).

No vesicles.

Veins:- maximum size - 40 mm

GMA:- pervasive alteration as in Unit 16.05.

UNITS 16.07 and 16.08 Descriptions - see Box 16, Sheet 2b.
UNIT 16.09 Description - see Box 16, Sheet 3.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1
Core Box 16 Sheet 26

Graphic Representation | Sample

Visual Core Description Observer J. A. Pearce
Depth Interval 80.10 m to 81.60 m

UNIT 16.07 OVERALL DESCRIPTION

Upper contact - 80.82 m Depositional. Chilled and brecciated. Dip - 45°.
Lower contact - 81.32 m Depositional. Chilled. Dip - 45°/90°.
Unit thickness - 0.50 m Type of unit: pillow lava

Sparsely phyric, olivine basalt with grey core and dark green margins.

Phenocrysts:- <2%
- olivine pseudomorphed by Fe-hydroxides
- subhedral

Vesicles:- 5-10%
- filling - mostly calcite and sometimes smectite

Veins:- abundant, random
- average spacing - 10 mm
- maximum size - 20 mm
- filling - calcite

GMA:- pervasive alteration with brown blotches; glass to green smectite

UNIT 16.08 OVERALL DESCRIPTION

Upper contact - 81.32 m Ambiguous.
Lower contact - 81.46 m Chilled. Dip - 30°.
Unit thickness - 0.14 m

Poorly preserved, sparsely olivine phyric basalt.

Phenocrysts:- 2-5% olivine

Vesicles:- tube-shaped at the base
- filling - sometimes filled with calcite

Veins:- intensely veined
- filling - calcite

UNIT 16.09 OVERALL DESCRIPTION - see Box 16, Sheet 3.

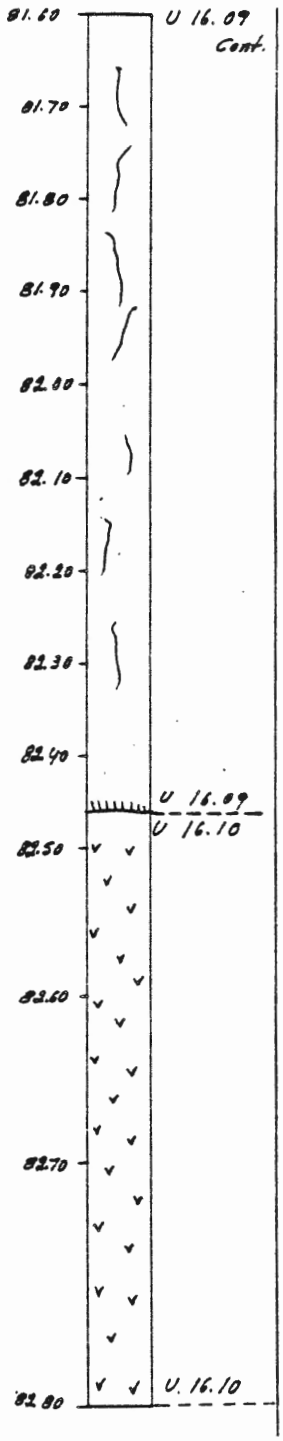
Grey-green to brown, sparsely olivine phyric basalt flow.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy1

Core Box 16 Sheet 3

Visual Core Description Observer J. A. Pearce

Depth Interval 81.60 m to 82.80 m



UNIT 16.09 OVERALL DESCRIPTION

Upper contact - 81.46 m Depositional? Chilled.
Dip - 30°.
Lower contact - 82.46 m Ambiguous. Chilled.
Dip - 10°.
Unit thickness - 1.00 m Type of unit: probably massive flow but possibly intrusive sill

Grey-green to brown, sparsely olivine basalt.

Phenocrysts:- <2%
- olivine pseudomorphed by Fe-O-OH

Vesicles:- highly vesicular at the upper margin (approximately 20%) but less vesicular (approximately 5%) at center
- tube vesicles formed by gas streaming at the base
- filling - some vesicles contain calcite, few contain smectite and many are rimmed or contain brown altered glass

Veins:- strongly veined by calcite and hematite
- average spacing - approximately 35 mm
- maximum size - approximately 10 mm

GMA:- predominantly grey-green with brown blotches; brown near margins and dark green altered glass (5 mm) chilled margin

UNIT 16.10 OVERALL DESCRIPTION

Upper contact - 82.46 m Obscured.
Lower contact - 82.80 m Chilled.
Unit thickness - 0.34 m Type of unit:- Probably a massive flow

Grey-green, fine-grained, sparsely phyric olivine basalt.

Phenocrysts:- 1-2%
- maximum size - 5 mm
- olivine pseudomorphed by Fe-O-OH
- subhedral

Vesicles:- 15% in certain zones, elsewhere much less
- filling - mainly calcite
- spherical

Veins:- carbonate rich veins
- irregular orientation
- maximum size - 20 mm
- average spacing - 30 mm
- filling - carbonate, other material in the veins is difficult to identify, but probably includes clays
- one vein contains native copper, clinopyroxene, pyrite

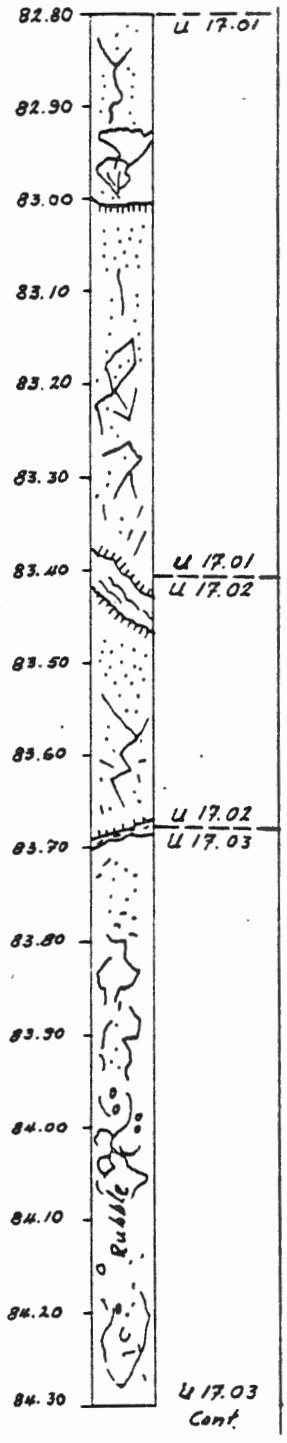
GMA:- pervasive alteration

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 17 Sheet 1

Visual Core Description Observer S. Agrell

Depth Interval 82.80 m to 84.30 m



UNIT 17.01 OVERALL DESCRIPTION

Upper contact - 82.80 m Depositional. Chilled. No glass. Dip - 10°.
Lower contact - 83.40 m Depositional. Chilled. Altered glass. Dip - 45°. A 25 mm altered green glass seam and pillow margin flake breccia exists between Units 17.01 and 17.02.
Unit thickness - 0.60 m Type of unit: pillow lava

Fine-grained, grey-green, aphyric basalt with ochreous chilled margin.

Vesicles:- 2%
- maximum size - 2 mm
- filling - 60% open, 20% zeolite, 10% layer silicates, 10% carbonate
- 3% rock rusty - staining along heeled fractures, schlieren etc.

Veins and Fractures:- 25% depositional features and chills
- size - 5-10 mm
- parallel to contacts
- filling - 60% carbonate, 30% zeolite, 10% layer silicates, some pink stain

GMA:- 50%? - to 70% layer silicates, 30% zeolites (difficult to estimate)

UNIT 17.02 OVERALL DESCRIPTION

Upper contact - 83.40 m Depositional. Chilled. Altered glass. Dip - 45°
Lower contact - 83.68 m Depositional. Chilled. Altered glass. Dip - 20°.
Unit thickness - 0.28 m Type of unit: pillow lava

Sparsely porphyritic, fine-grained, olivine basalt with grey, green and brown mottling.

Phenocrysts:- 3%
- size - 2-3 mm
- olivine, altered hydroxide

Vesicles:- 2%, some segregation vesicles
- rounded
- size - 3 mm
- filling - 40% layer silicates, 25% open, 15% calcite, 10% opaques, 10% zeolites

Veins and glass:- 15% angular fracture veins 1 mm - 10 mm banded parallel to edge
- filling - 70% calcite, 15% zeolite, 10% layer silicates, 5% opaques (brown mottling, segregation patches and schlieren roughly aligned)

GMA:- 25% - to dominantly smectite, 80% layer silicates, and 20% opaques

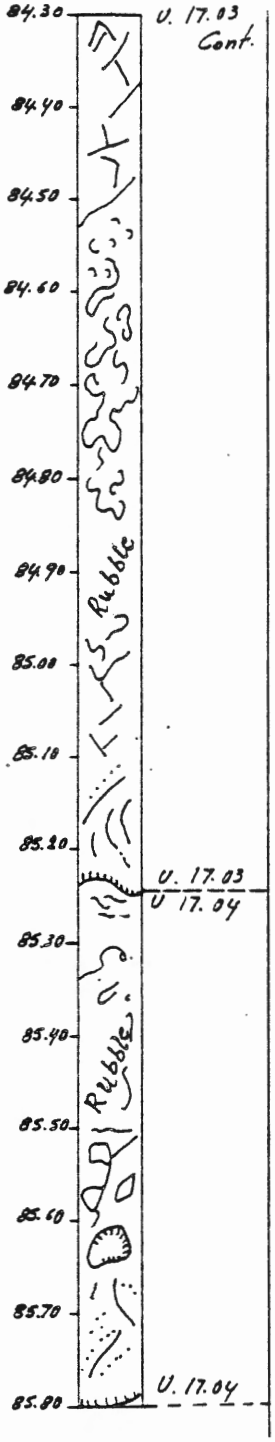
UNIT 17.03 Description - see Box 17, Sheet 2.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 17 Sheet 2

Visual Core Description Observer S Agrell

Depth Interval 84.30 m to 85.80 m



UNIT 17.03 OVERALL DESCRIPTION

Upper contact - 83.68 m Depositional. Trace altered glass. Dip - 20°.
Lower contact - 85.24 m Depositional. Chilled. Trace altered glass. Green flake spall breccia hyaloclastite in carbonate matrix separates Units 17.03 and 17.02.
Unit thickness - 1.56 m Type of unit: pillow lava

Green-grey, fine-grained, aphyric, vesicular basalt - highly rotted and fractured along vein system with much rubble.

Vesicles:- 17%, pipe-like at base, elsewhere spherical up to 50% in some rotted samples
- uneven distribution - zoning(?) or hidden unit in rubble?
- maximum size - 4 mm
- filling - 60% open, 20% layer silicates, 10% calcite, 10% opaques

Veins:- 18%, sharp and angular in fresh rock, rubbly zone, smeared and filling less coherent
- rubbly rock - pink, fresh rock - white
- filling - 65% carbonate, 20% zeolites, approximately 10% layer silicates, 5% opaques

Veins and chilled glass:- 20%

GMA:- 80% - rubbly zone, 25% - fresher zones
- mean 50%
- to 50% layer silicates, 20% carbonate, 20% zeolite, 10% opaques

UNIT 17.04 OVERALL DESCRIPTION

Upper contact - 85.24 m Ambiguous. Trace glass and spall present.
Lower contact - 85.80 m Depositional. Chilled. Altered glass.
Unit thickness - 0.56 m Type of unit: pillow lava or breccia

Vesicular, fine-grained, green-grey variolitic (hemihyaline?) basalt with its interior highly altered and rubbly.

Vesicles:- 15%
- maximum size - 5 mm
- filling - 55% open, 30% layer silicates, 10% zeolites, 5% carbonate
- mostly rounded
- some segregation vesicles

Veins:- 20%
- carbonate dominant, pinker in mottled, rubbly rock
- filling - 60% carbonate, 20% layer silicates, 15% zeolites, 5% opaques

Veins and glass:- 21%

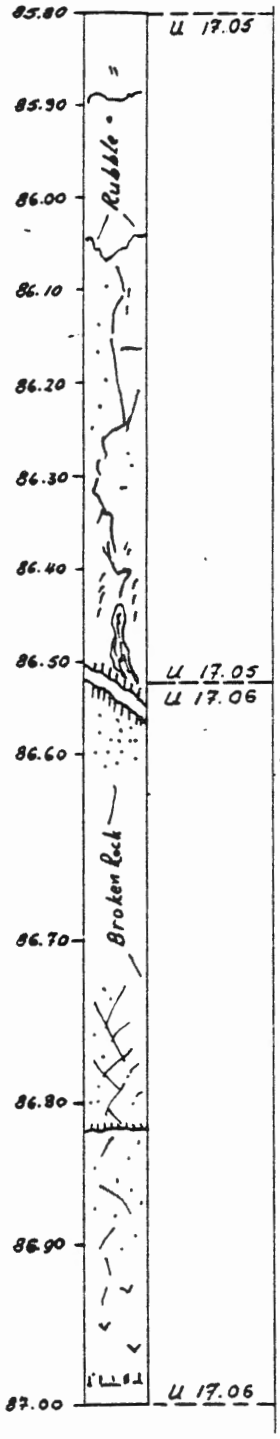
GMA:- 50% - to 50% layer silicates, 20% carbonate, 20% zeolites, 10% opaques

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 17 Sheet 3

Visual Core Description Observer S. Agrell

Depth Interval 85.80 m to 87.00 m



UNIT 17.05 OVERALL DESCRIPTION

Upper contact - 85.80 m Ambiguous.
Lower contact - 86.51 m Depositional. Chilled. Some altered green glass. Dip - 20°.
Unit thickness - 0.71 m Type of unit: pillow lava

Fine-grained, vesicular, grey-green, aphyric basalt which is hemihyaline(?) or divitrified in part.

Vesicles:- 10-15%
- some pipe amygdules or vapor tubes near the base, brown oxide stains
- size - 2 mm
- filling - 55% open, 20% layer silicates, 10% carbonates, 10% zeolites, 5% opaques

Veining:- 12%
- size - 1-10 mm
- highly fractured, composite veins banded parallel to the contact
- some calcite bands stained pink
- filling - 50% carbonates, 20% layer silicates, 20% zeolites, 10% opaques

GMA:- 45%(?) - smectite dominant(?)

UNIT 17.06 OVERALL DESCRIPTION

Upper contact - 86.51 m Depositional. Chilled. Zone of altered green glass. Dip - 20°.
Lower contact - 87.00 m Depositional. Chilled, irregular, some altered glass. Inclination ambiguous.
Unit thickness - 0.49 m

Brown-grey, speckled, fine-grained, aphyric basalt. There are vapour alteration zones and cracks, patches, threads or ovoid vesicles, along potential hydration zones. Variolitic texture or devitrification is observed around some of vesicles(?). Much of the rock is broken.

Vesicles:- 10%
- maximum size - 4 mm
- filling - 50% layer silicates, 30% open, 10% zeolites, 10% carbonate

Fractures:- 10%
- fractures and glass total 12%
- angular fractures 1 mm- 10 mm, more angular and whiter in fresher rock, pinker and more diffuse in weathered broken fragments
- filling - 70% carbonate, 15% layer silicates, 10% zeolites, 5% opaques

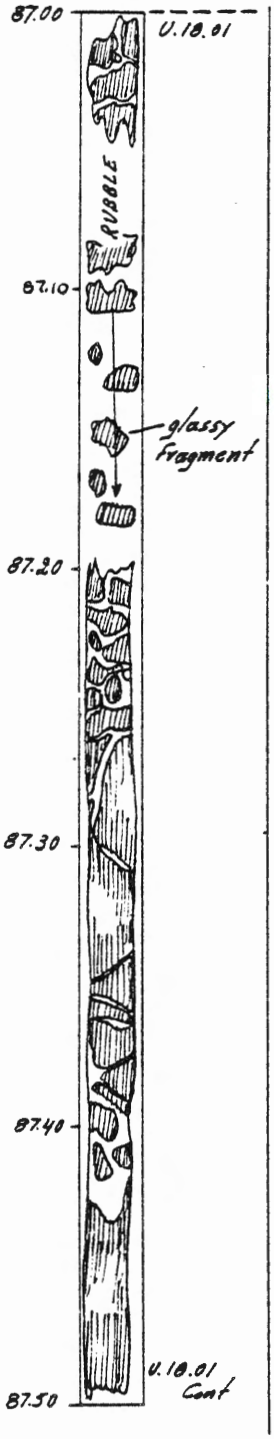
GMA:- 25%, smectite dominant

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 18 Sheet 1

Visual Core Description Observer T. Purcell

Depth Interval 87.00 m to 87.50 m



UNIT 18.01 OVERALL DESCRIPTION

Upper contact - 87.00 m Ambiguous. Chilled. Contact is irregular with some altered glass.
Lower contact - 87.90 m Ambiguous. Some altered glass in the rubble.
Unit thickness - 0.90 m Type of unit: pillow and volcanic breccia

Groundmass of breccia is carbonate material, volcanic fragments show no chilling. The unit is fine-grained, green-brown, aphyric basalt (a few of the volcanic fragments are medium-grained). Grain size and vesicle density are variable between clasts (only a few fragments are vesicular). Clasts are separated by carbonate with some smectite (pinkish in places).

Veins:- 30%

GMA:- 50%

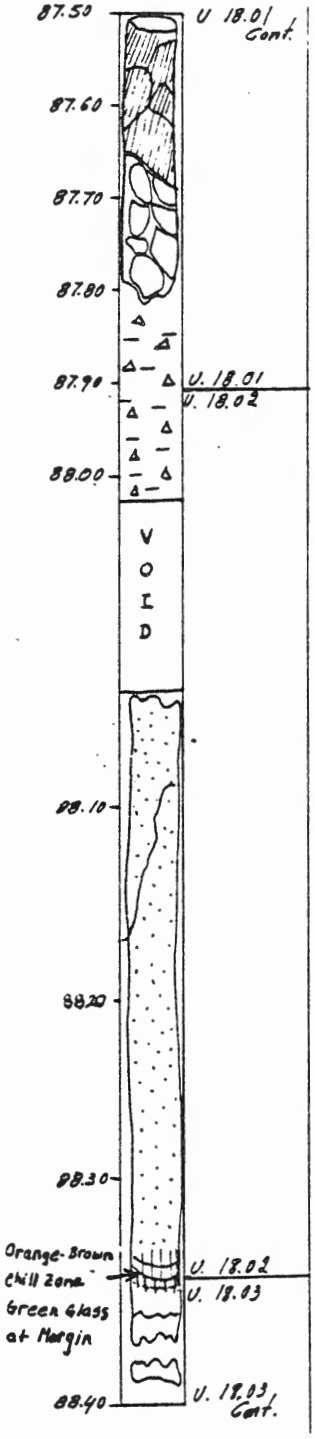
UNIT 18.01 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 18 Sheet 2

Visual Core Description Observer T. Aurell

Depth Interval 87.50 m to 88.40 m



UNIT 18.01 cont. Description - see Box 18, Sheet 1.

Green-grey, fine-grained, aphyric pillow basalt and breccia. A few fragments are medium-grained. Grain size and vesicle density varies between clasts. Clasts are separated by carbonate with some smectite (pinkish in places).

UNIT 18.02 OVERALL DESCRIPTION

Upper contact - 87.90 m Ambiguous. Some altered glass in the rubble.
Lower contact - 88.35 m Depositional. Distinct chilled margin and altered glass.
Unit thickness - 0.45 m Type of unit: pillow

Grey-brown, fine-grained, vesicular, aphyric basalt.

Vesicles:- 15%
- filling - 90% carbonate, 10% open

Veins:- sparse, carbonate filled

GMA:- 50% - rusty brown patches (1 mm)

UNIT 18.03 Descriptions done for each section.

Brown-grey, fine- to medium-grained, aphyric, vesicular basalt.

UNIT 18.03 cont.

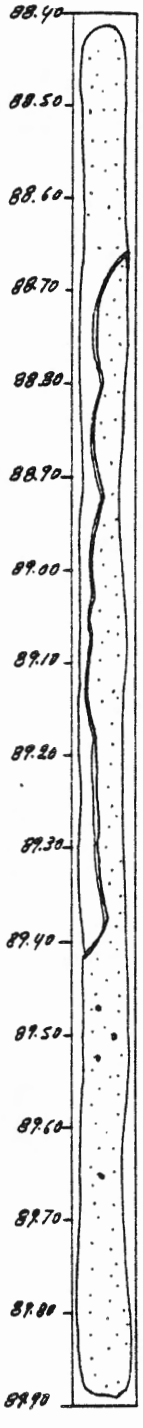
CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 12 Sheet 3

Graphic Representation | Sample

Visual Core Description Observer T. Purcell

Depth Interval 88.40 m to 89.90 m



U 18.03 Cont.

U. 18.03 Cont.

UNIT 18.03 Description done for each section.

Upper contact - 88.35 m Ambiguous.
Lower contact - 96.33 m Ambiguous in brecciated, altered glass and chilled lithic fragments from margin of unit.
Unit thickness - 7.98 m Type of unit: massive flow

Fine- to medium-grained, brown-grey, aphyric vesicular basalt.

Vesicles:- 5%
- filling - carbonate

Veins:- one large 20 mm fracture
- subparallel to unit and carbonate filled
- rusty brown patches are randomly distributed throughout the unit

GMA:- 50%

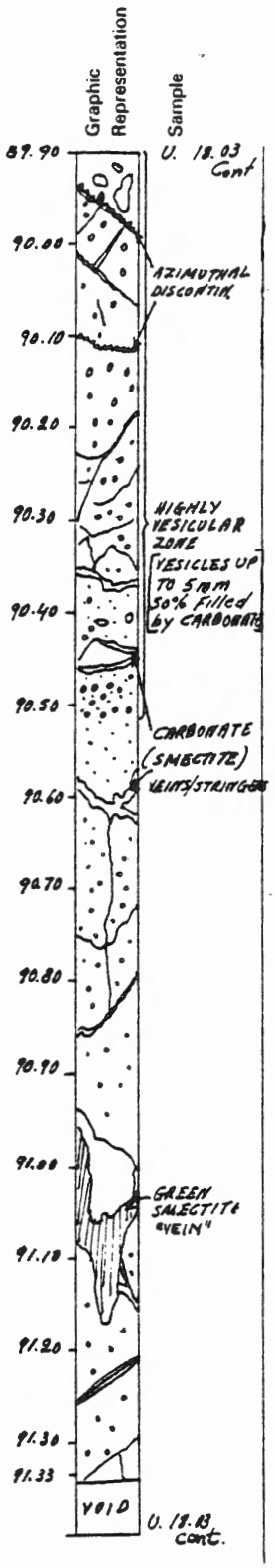
UNIT 18.03 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 19 Sheet 1

Visual Core Description Observer Hassan/BAILEY

Depth Interval 89.90 m to 91.33 m



UNIT 18.03 cont. Description for this section only.

Upper contact - 88.35 m (Box 18, Sheet 3)
Lower contact - 96.33 m (Box 20, Sheet 2)
Unit thickness - 7.98 m Type of unit: massive flow

Brown-grey, fine-grained to aphanitic, slightly phyric and highly vesicular (over the interval 89.90-90.51 m) olivine basalt.

Phenocrysts:- olivine - approximately 3% settling over entire unit, however, not clearly visible over interval described
- average maximum size - approximately 1 mm (olivine common; but fine-grained compared to lower in unit)
- olivine common in groundmass along with clinopyroxene
- alteration: total replacement by oxides and smectites
- subhedral to anhedral

Vesicles:- approximately 15% from 89.90-90.51 m
- maximum size - 4 mm
- approximately 8% from 90.51-91.33 m
- maximum size - 2 mm
- filling - 85% carbonate, 10% oxides, 5% smectites, zeolites (?)

Veins:- minor - 3%(?)
- predominantly thin (1/4-3mm) carbonate veins with no distinct orientation
- large (10-20 mm) vein of light green smectite/carbonate, located at 90.80 to 91.10 m
- filling - 50% carbonate, 50% smectite

GMA:- approximately 55%
- to 65% sheet silicates, 20% oxides, 15% carbonates

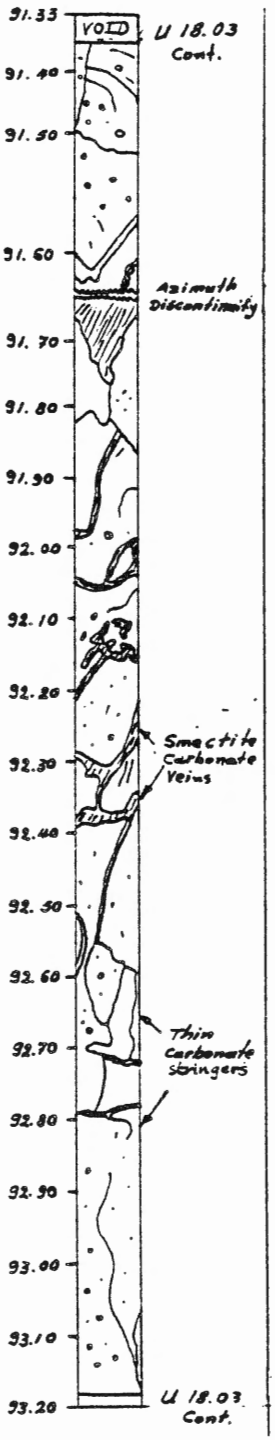
UNIT 18.03 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 19 Sheet 2

Visual Core Description Observer D. Bailey

Depth Interval 91.33 m to 93.20 m



UNIT 18.03 cont. Description for this section only.

Upper contact - 88.35 m (Box 18, Section 3)
Lower contact - 96.33 m (Box 20, Section 2)
Unit thickness - 7.98 m Type of unit: massive flow

Grey-green, fine-grained, olivine phyric basalt.

Phenocrysts:- approximately 4% subhedral olivine
- homogeneous over interval 91.33-92.78 m
- Note: settling concentration at the bottom of unit
- average maximum size - approximately 1 mm
- alteration: total replacement; oxides (limonite?)

Vesicles:- 10-15%
- smaller than upper portion of unit - 2 mm
- filling - 80% carbonate, 15% oxides, 5% sheet silicates, zeolites ?

Veins:- approximately 6%
- carbonate/smectite veins are common
- numerous thin carbonate stringers throughout
- larger 2-12 mm veins at: 91.56 m, 92.60 m, 92.12 m, 92.32 m
- filling - 60% carbonate(?), 40% sheet silicates(?)

GMA:- approximately 40%
- less extensive than in upper portion

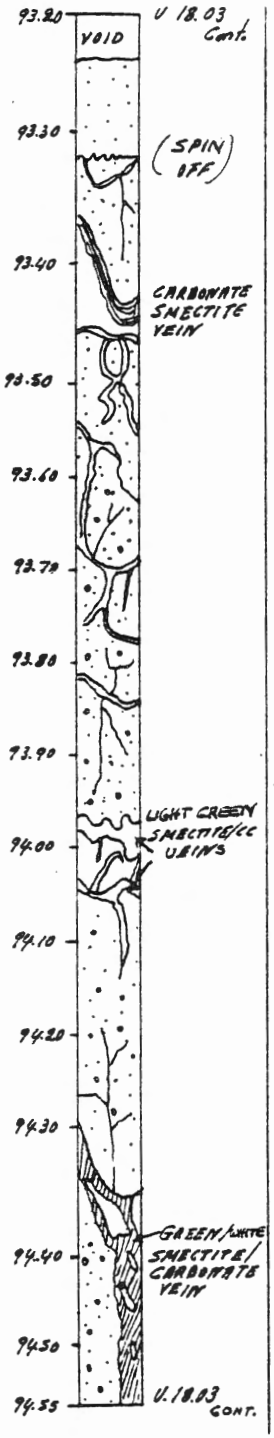
UNIT 18.03 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 19 Sheet 3

Visual Core Description Observer BAILEY

Depth Interval 93.20 m to 94.55 m



UNIT 18.03 cont. Description for this section only.

Fine-grained, grey-green, olivine phyric basalt with subhedral, altered phenocrysts (olivine abundant in groundmass with clinopyroxene).

Phenocrysts:- approximately 8%
- relatively homogeneous over interval, slight concentration at the bottom of the section
- average maximum size - 1-2 mm (slightly larger than in previous section)
- olivine, no clinopyroxene phenocrysts but cpx is present in groundmass
- alteration - complete (oxides; sheet silicates)
- subhedral to euhedral

Vesicles:- approximately 5-10%, variable
- vesicles common but smaller than in upper section (approximately 90.00 m)
- average maximum size - approximately 1 mm
- filling - predominantly carbonates
- two varieties:
1) white, massive filling thin fractures and vesicles
2) chalky to beige; fine-grained, massive commonly found in larger fractures along with sheet silicates
- minor sheet silicates (smectites); intimately associated with second type of carbonate in large fractures
- overall - 65% carbonate, 25% oxides, 10% sheet silicates

Veins:- approximately 5-10%
- veining more extensive (increases down section)
- numerous thin stringers with carbonate
- common large veins with carbonate and smectites at 93.40-93.55 m, 93.95-94.03 m, 94.35-94.50 m
- note: minor altered glass at approximately 93.60 m

GMA:- fairly low, approximately 40%?
- note: around 93.20 m there is a zone of clay and gravel in between a section of continuous core: material probably picked up during reentrance of drill

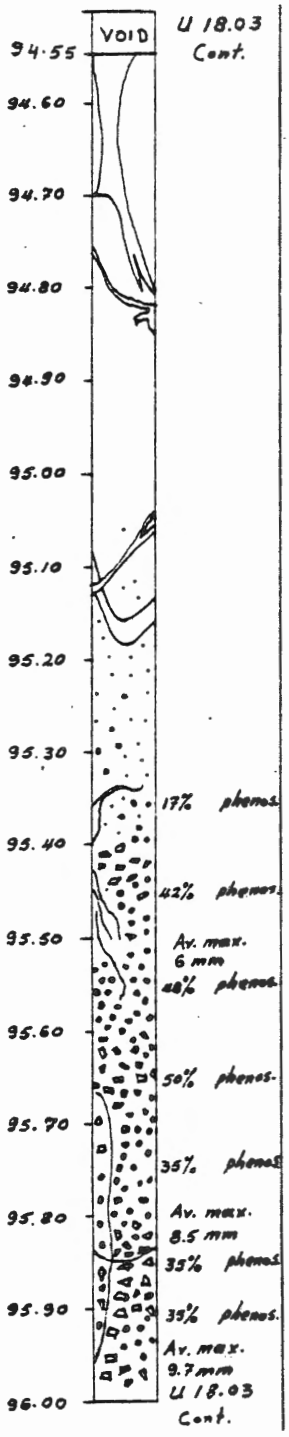
UNIT 18.03 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 20 Sheet 1

Visual Core Description Observer R. Baragar

Depth Interval 94.55 m to 96.00 m



UNIT 18.03 cont. Description for this section only.

Greenish-grey, non-porphyritic basalt with medium to coarse grain size -(± 2 mm) from 94.55-95.40 m. From 95.40-96.00 m, the rock is greenish-grey picrite.

Phenocrysts:- 10% from 95.20-95.30 m
- average maximum size - 1-3 mm
- 20% from 95.30-95.40 m
- average maximum size - 3-4 mm
- increasing size and abundance downwards
- 95-99% olivine pseudomorphs
- anhedral-subhedral, rounded
- 1-4% clear dark green, clinopyroxene
- irregular
- from 95.40-96.00 m, there are only close packed olivine pseudomorphs which have a slight preferred orientation approximately perpendicular to the core
- size and abundance - see sketch
- anhedral to subhedral, elongate, prismatic

Vesicles:- 2-3%
- average maximum size - 1.5 mm
- filling - predominantly chalky carbonate
- round to irregular

Veins:- 10%
- composite thickness - 65 mm
- filling - predominantly carbonate but two varieties:
i) 60% chalky white
ii) 40% greenish grey in vein centers
- younger

GMA:- from 95.20-95.40 m
- to 60% brownish layer silicate (iddingsite?), 30% carbonate, 10% green layer silicate
- from 95.40-96.00 m
- to 65% iddingsite?, 30% carbonate, 4% green layer silicate, 1% hematite

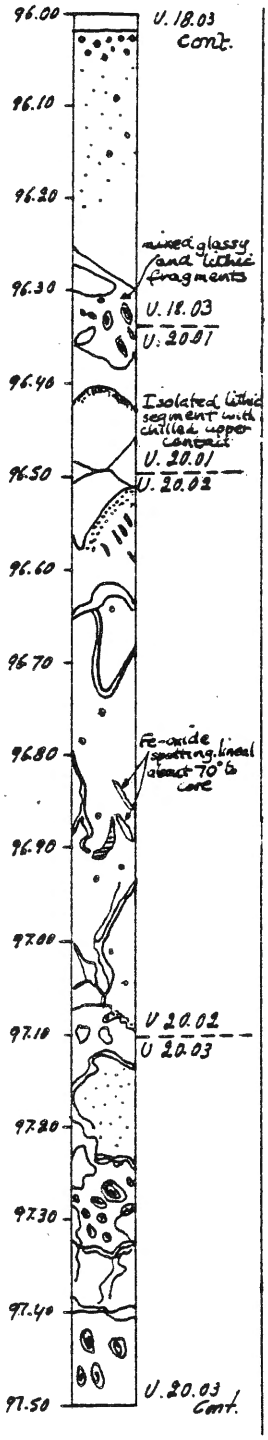
UNIT 18.03 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 20 Sheet 2a

Visual Core Description Observer R Baragar

Depth Interval 96.00 m to 97.50 m



UNIT 18.03 cont. Description for this section only.

Upper contact - 88.35 m (Box 18, Sheet 3)
Lower contact - 96.33 m Ambiguous - in brecciated altered glass and chilled lithic fragments from margin of unit. Inclination of contact judging from i) distribution of vesicles ii) variation of grain size iii) distribution of phenocrysts is 20°.
Unit thickness - 7.98 m

Fine-grained (to aphanitic at the base), grey-green to buff, sparsely olivine phyric basalt.

Phenocrysts:- 5% declining to 0% at the base
- average maximum size - 4 mm
- olivine pseudomorphs 2-7 mm
- phenocrysts decline very rapidly below 96.00 m in both size and abundance
- subhedral to anhedral

Vesicles:- 5%
- average size - 1.5 mm
- maximum size - 2 mm
- filling - dominantly white carbonate

Veins:- 2%
- one vein 10-20 mm width (not shown on sketch - underside of core)
- filling - two varieties of carbonate
1) 90% pale greenish-grey carbonate in the center, also contains minute strings of native copper
2) 10% chalky white carbonate at margins of vein

UNIT 20.01 OVERALL DESCRIPTION

Upper contact - 96.33 m Altered glassy boundary and mixed altered glass and lithic fragments.
Lower contact - 96.50 m
Unit thickness - 0.17 m

This is a unit of uncertain significance. At least part of it may be due to mixing of core fragments.

UNITS 20.02 and 20.03 Descriptions - see Box 20, Sheet 2b.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1
Core Box 20 Sheet 2b

Graphic Representation | Sample

Visual Core Description Observer R. Bacagar
Depth Interval 96.00 m to 97.50 m

UNIT 20.02 OVERALL DESCRIPTION

Upper contact - 96.50 m Irregular inclination - incomplete in core. 20 mm thick altered glassy rim composed mainly of green smectites and lava chilled against altered glassy rim.
Lower contact - 97.10 m Irregular and fragmented. Chilled basalt rim can be traced through a number of discrete, slightly offset and related fragments.
Unit thickness - 0.60 m

Fine, even-grained; slightly greenish-grey, amygdaloidal, aphyric basalt.

Vesicles:- 5%, greater at margins
- at upper margin elongated vesicles - up to 10 mm long and 3 mm wide, approximately 20 mm from margin and radiating
- maximum average size - 3 mm in the center of the pillow
- shape - elongate at upper margin
- round to irregular but equidimensional in interior
- filling - carbonate predominantly, but larger vesicles have a halo of limonitic stain and those appear as poorly defined spots up to 3-5 mm diameter, even where no carbonate appears in the core of the vesicle
- Fe oxide spotting - possibly 5%, some spotting up to 30 mm long x 4 mm thick - subparallel (70°) to core axis

Veins:- 5-10%
- 10% including glassy margin
- no evident orientation - very irregular, may be slight tendency to parallel core axis
- size - hairline to 10 mm
- filling - 2 varieties of carbonate
i) 60% chalky white, granular
ii) 40% denser, greenish grey in centers of veins, probably younger

UNIT 20.03 OVERALL DESCRIPTION

Upper contact - 97.10 m Evidently depositional.
Lower contact - 98.52 m At base of HQ core.
Unit thickness - 1.42 m Type of unit: pillow breccia

Contains about 20-25% mini pillows, 50-100 mm in diameter, slightly disaggregated with chilled boundaries in a matrix of predominantly 5-20 mm green altered glass. Some fragments show marked onion-skin layering and are cemented by carbonate.

GMA:- cementing material mainly carbonate - 15-20%
- approximately 60% of remainder is green layered silicates after glass

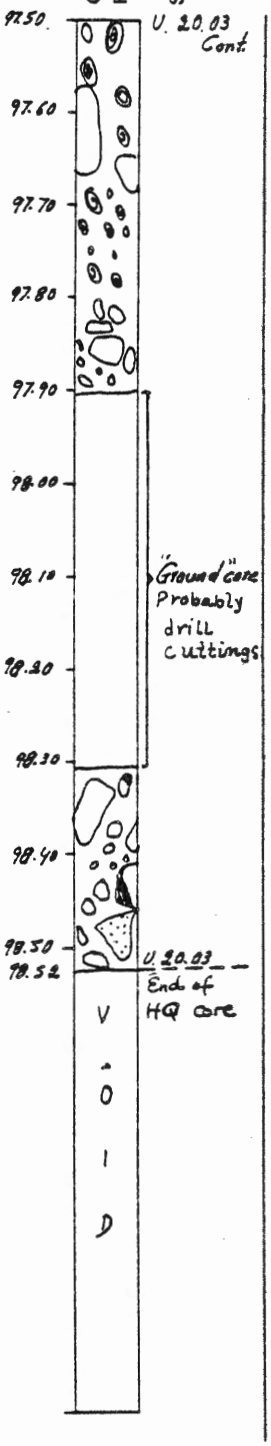
UNIT 20.03 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 20 Sheet 3

Visual Core Description Observer R. Barragan

Depth Interval 97.50 m to 98.52 m



UNIT 20.03 cont. Description - see Box 20, Sheet 2b.

This lower part of the unit is made up of fragments which are mainly sharp edged lithic fragments with no chilled contacts.

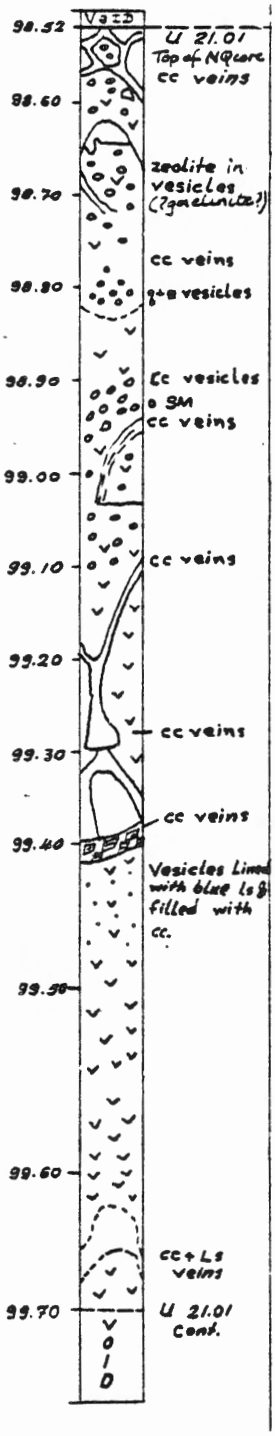
98.52 m - End of HQ core.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 21 Sheet 1

Visual Core Description Observer J. Mehegan

Depth Interval 98.52 m to 99.70 m



98.52 m - Change from HQ to NQ core.

UNIT 21.01 OVERALL DESCRIPTION

Upper contact - 98.52 m Depositional/ambiguous. No glass.
Lower contact - 111.62 m In shattered zone with altered glass.
Unit thickness - 13.10 m Type of unit: massive flow

Reddish-brown, medium-grained to aphanitic basalt with a subophitic(?)-hyalophitic groundmass.

The upper 20 cm of this unit is a thin flow top breccia which rapidly grades into a vesicular portion. The unit extends into boxes 22 and 23 where it shows some flow banding along with a fresher, greyer, slightly olivine phyric interior, an olivine phyric basal zone, and a reddish-brown basal breccia.

Phenocrysts:- <1%
- 1% altered olivine, <1% fresh clinopyroxene

Vesicles:- 15-20%
- vesicles distributed in zones of increased concentration
- round to irregular in shape
- average size - 4 mm
- 98.60-98.75 m - an orange-pink tabular zeolite partially fills the vesicles
- 98.80 m - dipyramidal quartz partially fills vesicles
- 98.80-99.20 m calcite fills vesicles
- below 99.20 m vesicles are lined with blue layer silicates (celadonite?) and filled with coarse calcite
- filling - 50% carbonate, 25% open, 10% zeolite, 10% clay, 5% quartz

Veins:- 5%
- both irregular and planar veins
- size - 10 mm - 1 mm
- filling - carbonate and some white to lilac sheet silicates

GMA:- 30%
- groundmass olivine is altered to brown-red clay; interstitial glass altered to blue clay
- groundmass clinopyroxene and plagioclase may also be altered

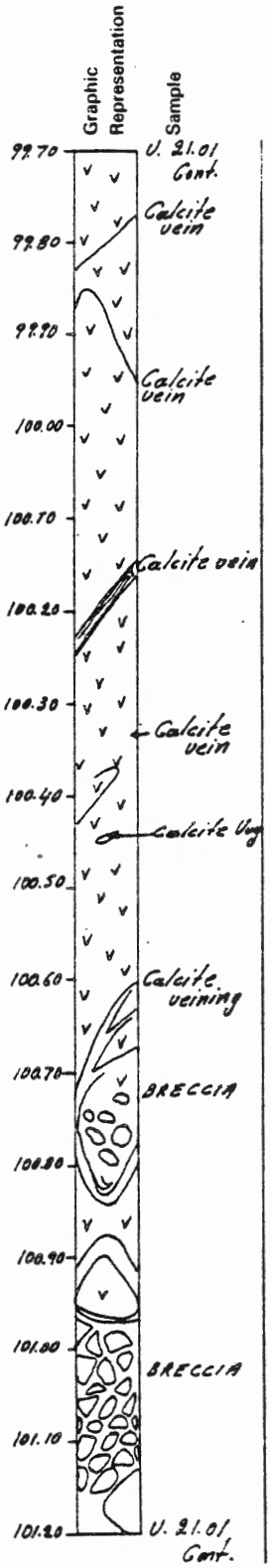
UNIT 21.01 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 21 Sheet 2

Visual Core Description Observer Jim Mehegan

Depth Interval 99.70 m to 101.20 m



UNIT 21.01 cont. Description - see Box 21, Sheet 1.

Reddish-brown, medium-grained to aphanitic, subophitic? - hyalophitic massive basalt flow. This part of the flow contains smaller vesicles and is brecciated at 100.70 m and 100.95-101.20 m.

Phenocrysts:- <<1%
- size - 2-3 mm
- altered olivine

Vesicles:- 20%
- average size - 2 mm
- filling - 80% open, 20% anhedral calcite

Veins:- 2-5%
- size - 15-1 mm
- filling - calcite and white layer silicates, also darker coloured carbonate

GMA:- 30% - based on colour

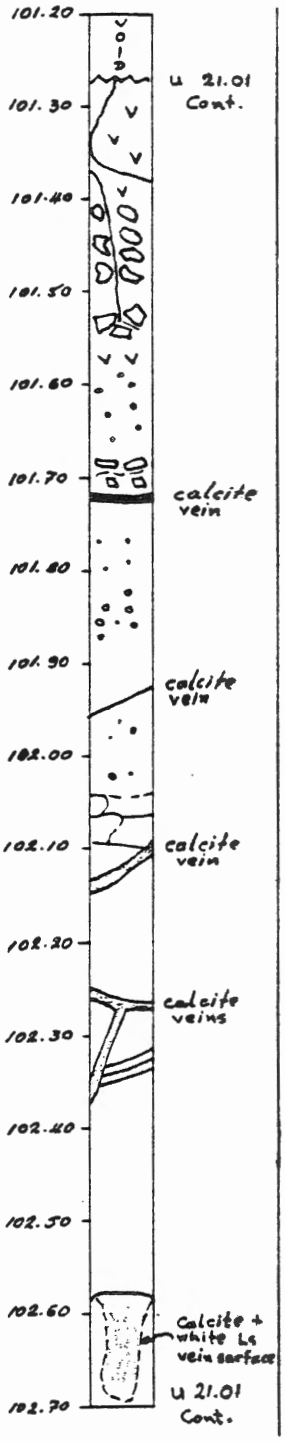
UNIT 21.01 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 21 Sheet 3

Visual Core Description Observer J. Mehegan

Depth Interval 101.20 m to 102.70 m



UNIT 21.01 cont. Description - see Box 21, Sheet 1.

Reddish-brown, medium-grained to aphanitic massive basalt flow. The groundmass has a very open, porous texture (hyalophitic). There is a brecciated zone at 101.40-101.70 m.

Vesicles:- round
- maximum size - 3 mm
- filling - 50% open, 50% calcite, trace of quartz dipyramids

Veins:- size - 20-1 mm
- filling - carbonate and white layer silicate
- both planer and irregular

GMA:- 30%
- groundmass olivine and glass altered to brown-red clay

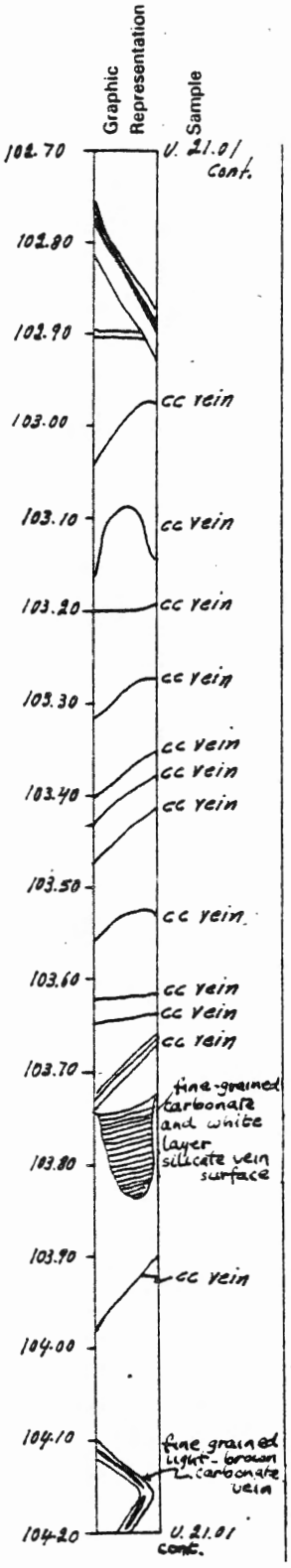
UNIT 21.01 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 21 Sheet 4

Visual Core Description Observer Jim McHegan

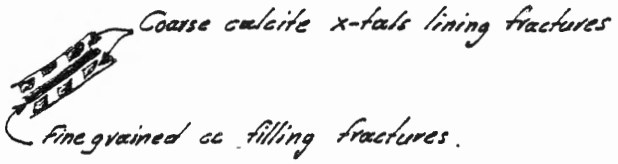
Depth Interval 102.70 m to 104.20 m



UNIT 21.01 cont. Description - see Box 21, Sheet 1.

Reddish-brown, medium-grained to aphanitic massive basalt flow as in the last three sections, down to 103.40 m. There the rock becomes greyer in colour and fresher in appearance. Some blue-green layer silicates occur in vesicles. The groundmass is slightly coarser-grained.

UNIT 21.01 cont.

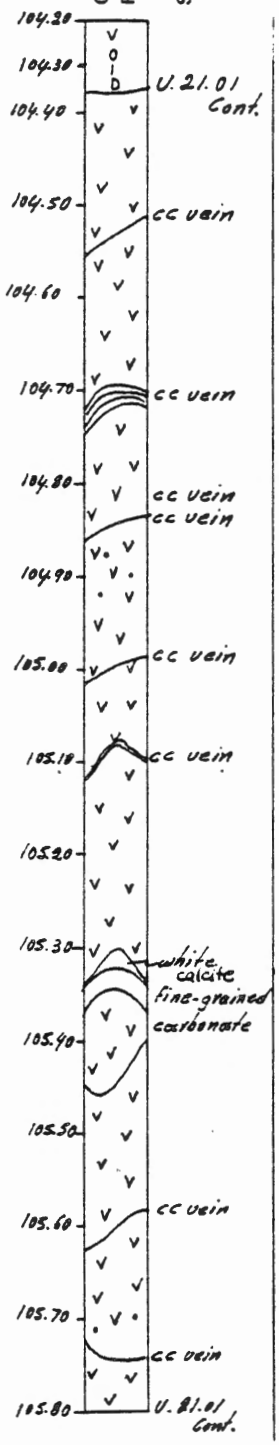


CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 22 Sheet 1

Visual Core Description Observer Jim Mehegan

Depth Interval 104.20 m to 105.80 m



UNIT 21.01 cont. Description - see Box 21, Sheet 1.

Grey to bluish-grey, massive, aphanitic? basalt flow with a medium-grained groundmass and very sparse olivine phenocrysts except near the base of the flow where there is a marked zone of olivine and plagioclase accumulation.

Vesicles:- 5-10% (less abundant than Box 21)
- filling - 80% calcite and 20% blue and brown clay

Veins:- 5%
- size - 1-30 mm
- filling - 80% calcite and 20% intergrown layer silicates

GMA:- 10%

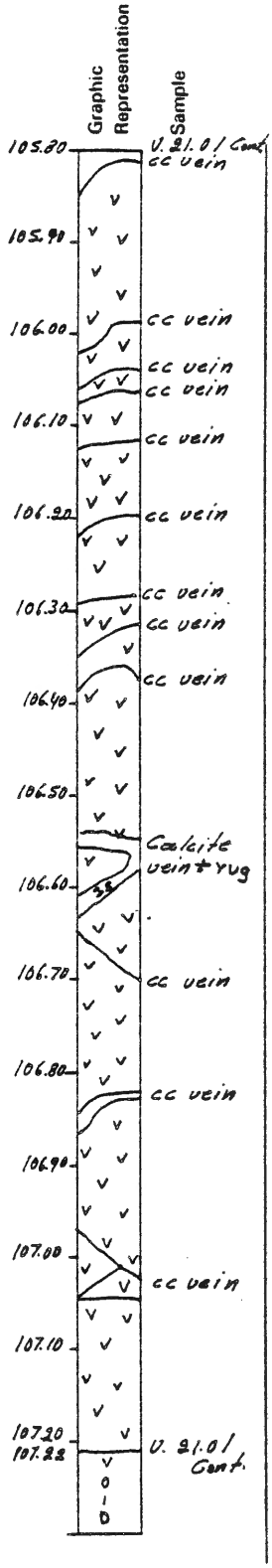
UNIT 21.01 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 22 Sheet 2

Visual Core Description Observer Jim Mehegan

Depth Interval 105.80 m to 107.22 m



UNIT 21.01 cont. Description - see Box 21, Sheet 1.

Massive basalt flow with aphanitic?, grey, medium-grained groundmass.

Vesicles:- 10%
- filling - lined with dark smectite and filled with crystalline carbonate

Veins:- 5%
- both planer and irregular
- size - 1-15 mm
- filling - 90% crystalline calcite, 5% bright green clay linings, 5% open
- rock is less porous than in Box 21

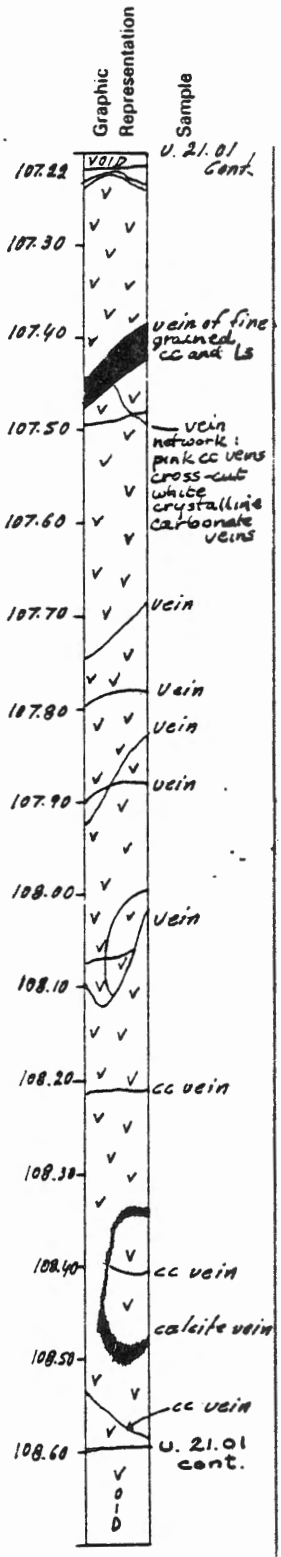
UNIT 21.01 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 22 Sheet 3

Visual Core Description Observer Jim Mehegan

Depth Interval 107.22 m to 108.60 m



UNIT 21.01 cont. Description - see Box 21, Sheet 1.

Grey, massive basalt flow.

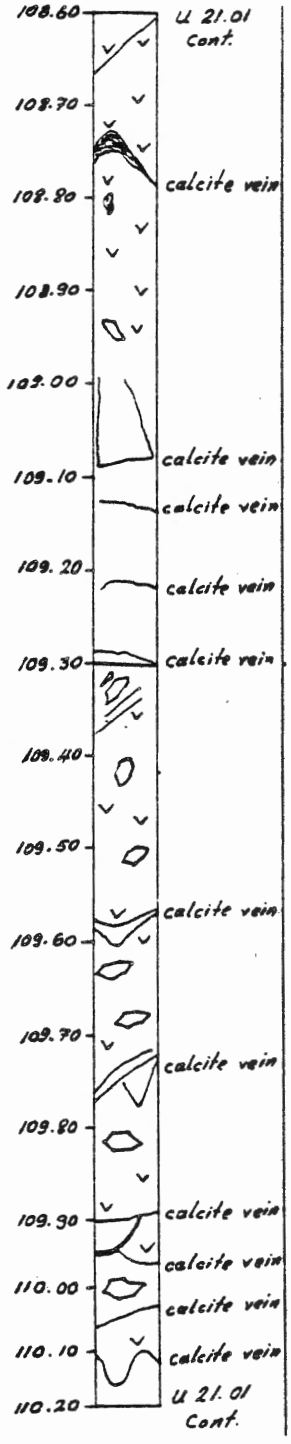
UNIT 21.01 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 22 Sheet 4

Visual Core Description Observer J. Mehegan

Depth Interval 108.60 m to 110.20 m



UNIT 21.01 cont. Description - see Box 21, Sheet 1.

108.60-109.30 m - Bluish-grey, massive basalt flow with a subophitic, medium-grained aphanitic texture - only a sparse amount of olivine is present. At 109.30 m - phenocrystic olivine starts to become abundant.

Phenocrysts:- 2-10% with settling
- abundance increases from about 2% at 109.30 m to 5-10% at 110.00 m
- size - 1-2 mm
- altered to reddish-brown clay
- euhedral

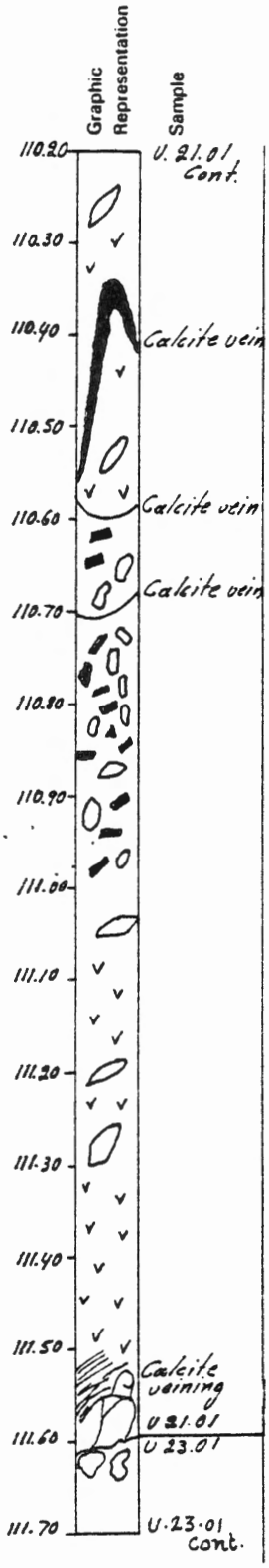
UNIT 21.01 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 23 Sheet 1

Visual Core Description Observer Jim Mehegan

Depth Interval 110.20 m to 111.70 m



UNIT 21.01 cont. Description - see Box 21, Sheet 1.

Grey, medium-grained, non-vesicular, olivine phyric massive basalt flow.

110.60-110.98 m - Very porphyritic, olivine-plagioclase-spinel zone; 15% euhedral altered olivine phenocrysts 1-4 mm; 10-15% subhedral white altered plagioclase phenocrysts 1-2 mm; trace black euhedral spinel crystals.

110.98-111.62 m - Olivine porphyritic, 5% altered olivine phenocrysts, 5 mm in diameter; some spinel inclusions. This is a slightly vesicular zone and the rock of this zone is reddish-brown in colour.

The base of the flow is slightly brecciated along with fresh? glassy margin. The base is depositional on Unit 23.01.

UNIT 23.01 OVERALL DESCRIPTION - see Box 23, Sheet 2.

Grey to pinkish- and yellowish-grey, layered basalt flow with an autobrecciated zone at the top.

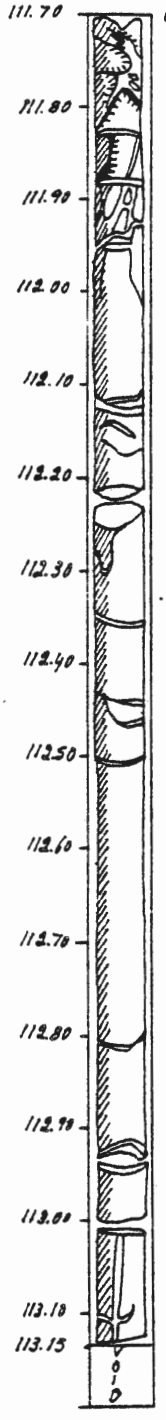
UNIT 23.01 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 23 Sheet 2

Visual Core Description Observer J BOYLE

Depth Interval 111.70 m to 113.15 m



UNIT 23.01 OVERALL DESCRIPTION

Upper contact - 111.62 m Altered glass, shattered and shot by veins. Lower part of Unit 21.01 also shattered. Contact essentially perpendicular to core.
Lower contact - 114.90 m Some altered glass but entirely broken into rubble and little can be seen.
Unit thickness - 3.28 m Type of unit: Layered flow with a 40 cm autobrecciated zone on top

Layered basalt with a fine-grained groundmass of feldspar and clinopyroxene.
The rock is grey to pinkish- and yellowish-grey. Towards the top chill, the colour becomes distinctly ochre. Colour generally darkens towards picritic band at base.
Olivine phenocrysts are absent through most of core and are concentrated in the lower 25 cm. A small patch of subhedral olivine rich basalt (approximately 50 mm across) occurs at 113.55-113.60 m.
The brecciated top is autobreccia with fragments approximately 2-15 cm long. They are chilled at fractures, thus fragments all have a palagonitic margin.

Phenocrysts:- sparse fresh green clinopyroxene occur in very low concentration and small size
- olivine occurs at only two places:
  1) a patch in the middle at approximately 113.58-113.60 m
  - maximum abundance - 5% in this patch
  - maximum size - 3 mm
  2) picritic base where olivine pseudomorphs occur in a 60 cm zone at the base of the unit, decreasing in quantity upwards
  - at the base, 50% phenocrysts
  - size - 8 mm
  - upwards there is a decrease in size and abundance
  - upwards there is a change in alteration from layer silicates to carbonate

Vesicles:- occur in narrow linear zones, generally parallel to the core
- on average an increase in abundance upwards but those in the middle are larger than those at the top - very few in the picritic zone
- maximum size - 4 mm
- filling - principally calcite, but also white zeolites

Veins:- 5%
- simple, narrow, white calcite veins cut through the rock, along with wider 10-30 mm more complex ones with several generations of pink and brown stained calcite
- palagonite and calcite veins

GMA:- total approximately 50% with little variation
- olivines are all altered to sheet silicates

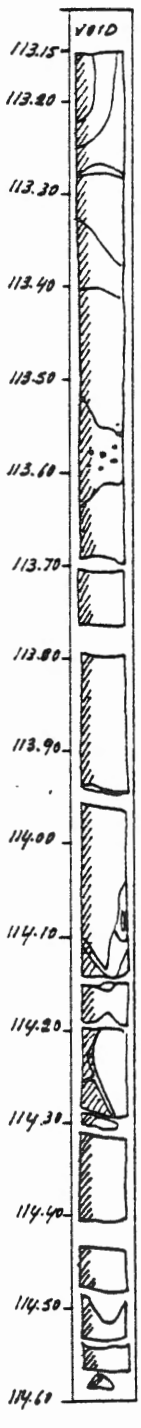
UNIT 23.01 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 23 Sheet 3

Visual Core Description Observer J BOYLE

Depth Interval 113.15 m to 114.60 m



UNIT 23.01 cont. Description - see Box 23, Sheet 2.

Grey to pinkish- and yellowish- grey, fine-grained, layered basalt flow. A small patch of subhedral olivine rich basalt occurs at 113.55-113.60 m.

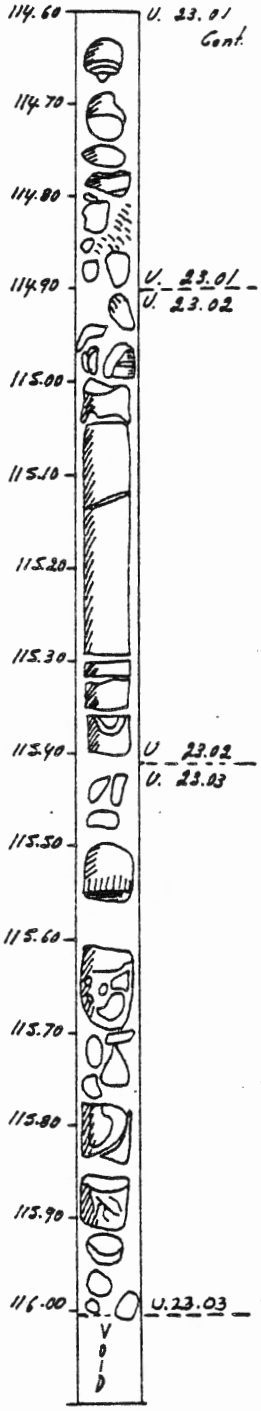
UNIT 23.01 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 23 Sheet 4

Visual Core Description Observer J. BOYLE

Depth Interval 114.60 m to 116.00 m



UNIT 23.01 cont. Description - see Box 23, Sheet 2.

Grey to pinkish- and yellowish-grey, fine-grained, layered basalt flow. The bottom of the unit is picritic and ends in debris. Just beyond 114.90 m are fragments of yellow chill which may be the top of the next unit.

UNIT 23.02 OVERALL DESCRIPTION

Upper contact - 114.90 m Debris of chill with altered glass.
Lower contact - 115.42 m Chill in situ, altered glass debris.
Unit thickness - 0.52 m Type of unit: pillow

Ochre-grey, slightly olivine phyric basalt with ochre chills and various hematite red patches.

Phenocrysts:- <0.5%
- homogeneously distributed
- maximum size - 2 mm
- olivine pseudomorphs
- subhedral

Vesicles:- sparse, slightly more concentrated at top than bottom
- a number of segregation vesicles occur
- maximum size - 2 mm
- filling - 70% open, 30% calcite

Veins:- 10%, including palagonitic debris
- meandering, narrow 1-2 mm calcite veins
- maximum size - 6 mm

GMA:- 50% - to sheet silicates
- patches of purple Fe oxide alteration of significant size throughout

UNIT 23.03 OVERALL DESCRIPTION

Upper contact - 115.42 m Indeterminable.
Lower contact - 116.00 m Ambiguous.
Unit thickness - 0.58 m Type of unit: Volcanic breccia

Basalt fragments up to 10 cm across, surrounded by calcite and palagonite debris. Fragments show autobrecciation. Some are olivine phyric. Vesicularity is variable.

Phenocrysts:- average 2% but up to 10% olivine
- size - 5 mm

Vesicles:- 7%
- some large segregation vesicles occur
- some fragments - 20% vesicular (mostly void), others - non vesicular
- filling - 85% open, 15% calcite

Veins:- approximately 10%
- filling - 60% calcite, 40% palagonite

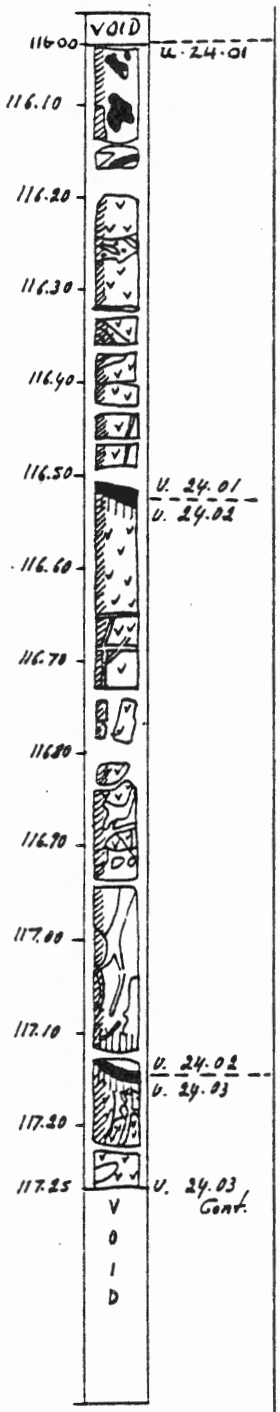
GMA:- average 65% - to mostly layer silicates but also calcite and iron oxides

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 24 Sheet 1

Visual Core Description Observer J. BOYLE

Depth Interval 116.00 m to 117.25 m



UNIT 24.01 OVERALL DESCRIPTION

Upper contact - 116.00 m Broken. No glass.
Lower contact - 116.51 m Broken. No glass.
Unit thickness - 0.51 m Type of unit: volcanic breccia

Grey and grey-ochre, veined and autobrecciated basalt with rare olivine phenocrysts. The fragments are in a carbonate matrix (vein network). Palagonite fragments up to 12 cm also occur. Some have chills as if there was rapid (or early) autobrecciation.

Phenocrysts:- <0.5%, patchy distribution
- maximum size - 6 mm
- pseudomorphs of olivine

Vesicles:- 1%
- fair density of irregular segregation vesicles
- maximum size - 2.5 mm
- filling - 80% open, 20% zeolite and calcite

Veins:- 20%
- carbonate in two main zones, one 60 mm thick at the top and one 25 mm thick at 116.26 m
- filling - 90% carbonate, 10% palagonite

GMA:- 50% - to 90% layer silicates, 10% Fe oxides
- Fe-oxide patches in the groundmass

UNIT 24.02 OVERALL DESCRIPTION

Upper contact - 116.51 m. Depositional. Altered glass. Good chill. Dip - 60°.
Lower contact - 117.13 m Depositional. No glass. Good chill. Dip - 65°.
Unit thickness - 0.62 m

Grey to grey-ochre (becoming more ochre towards the margin), slightly olivine phyric, partially autobrecciated basalt.

Phenocrysts:- approximately 1% olivine at the base
- distinct settling, aphyric at top
- maximum size - olivine - 5 mm, clinopyroxene - 3 mm
- goethite pseudomorphs after olivine and rare green clinopyroxene

Vesicles:- 1% concentrated to 5% in 13 cm thick band, 4 cm from the top
- average size - 3-4 mm
- maximum size - 10 mm in concentrated band
- filling - 99% open, 1% calcite
- some segregation vesicles

Veins:- 7%
- narrow calcite veins parting blocks of basalt
- filling - 80% calcite, 20% palagonite

GMA:- 50% - to 95% sheet silicate and 5% brick red Fe-oxide in patches related to vesicles

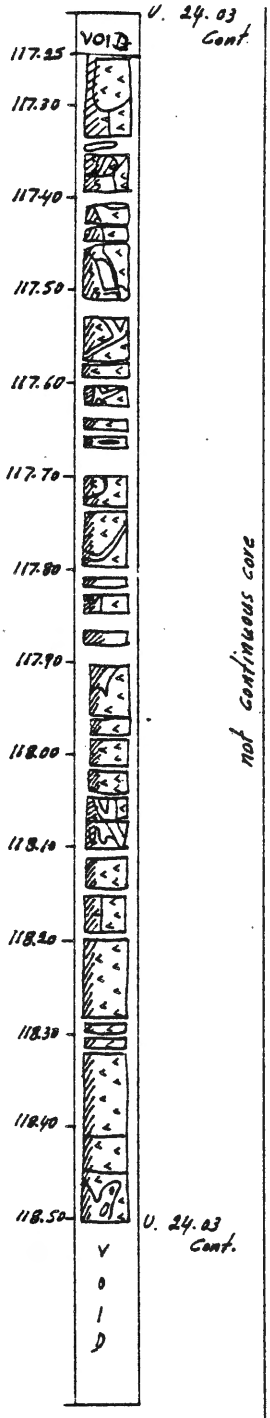
UNIT 24.03 Description - see Box 24, Sheet 2.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 24 Sheet 2

Visual Core Description Observer I. BOYLE

Depth Interval 117.25 m to 118.50 m



UNIT 24.03 OVERALL DESCRIPTION

Upper contact - 117.13 m Depositional. Altered glass.
Dip - 60°.
Lower contact - 119.10 m Ambiguous. Contact is in a rubble zone between 118.95-119.20 m. A change in lithology and altered glass suggest a contact.
Unit thickness - 1.97 m Type of unit: pillow basalt

Brownish-grey, medium- to fine-grained basalt with olivine phenocrysts (5 mm) occurring in the basal zone and very sparsely distributed throughout the rest of the section. The unit has an ?ophitic, flow banded groundmass.

Phenocrysts:- 1%
- maximum size - 5 mm long
- pseudomorphs of olivine

Vesicles:- 1%, at the top of the unit
- size - 1-3 mm
- filling - 50% calcite, 50% open

Veins:- 2%
- irregular and planer except at base where vugs and veins are 50%
- size - 1-5 mm
- filling - calcite

GMA:- 30-50%

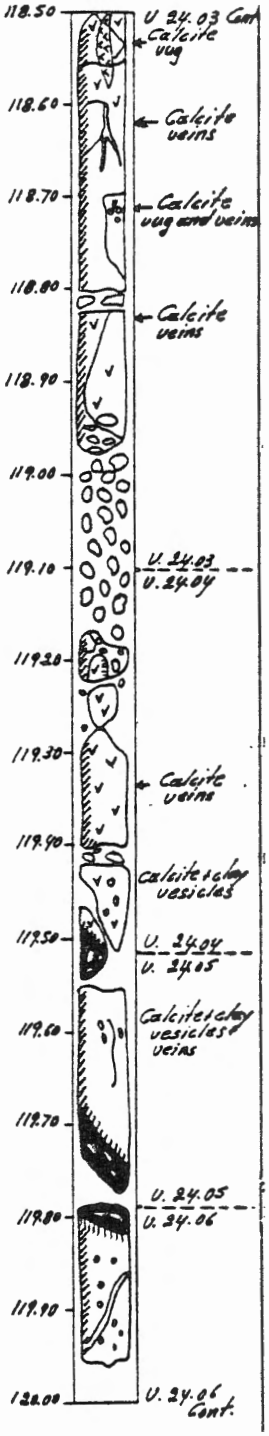
UNIT 24.03 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 24 Sheet 3

Visual Core Description Observer Jim Mehegan

Depth Interval 118.50 m to 120.00 m



UNIT 24.03 cont. Description - see Box 24, Sheet 2.

In this section is the olivine phyric basal zone of Unit 24.03 (10% pseudomorphs of olivine). The rock is a brownish-grey, medium-grained, flow banded basaltic lava flow.

UNIT 24.04 OVERALL DESCRIPTION

Upper contact - 119.10 m Ambiguous - in rubble.
Lower contact - 119.52 m Depositional. Altered glass.
Unit thickness - 0.42 m Type of unit: pillow margin

Brown, aphanitic, aphyric pillow margin unit with abundant altered glass zones.

Vesicles:- 5-10%
- size - 4 mm
- filling - calcite

Veins:- 20%
- size - 1-3 mm
- filling - calcite

GMA:- 50%

UNIT 24.05 OVERALL DESCRIPTION

Upper contact - 119.52 m Depositional.
Lower contact - 119.79 m Depositional. Altered glass.
Unit thickness - 0.27 m Type of unit: pillow

Brown, aphanitic, aphyric pillow basalt.

Vesicles:- 2%
- calcite

Veins:- 5%
- filling - calcite

GMA:- 50%

UNIT 24.06 Overall Description - see Box 24, Sheet 4.

Upper contact - 119.79 m Depositional. Altered glass.
Dip - 50°.

Sparsely olivine phyric massive basalt flow.

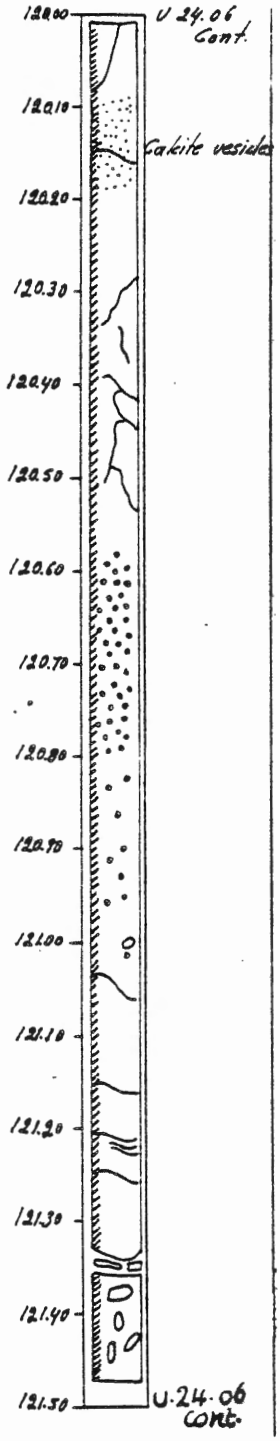
UNIT 24.06 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 24 Sheet 4

Visual Core Description Observer Jim Mehegan

Depth Interval 120.00 m to 121.50 m



UNIT 24.06 OVERALL DESCRIPTION

Upper contact - 119.79 m Depositional. Altered glass.
Dip - 50°.
Lower contact - 122.10 m Depositional. Altered glass.
Dip - 70°.
Unit thickness - 2.31 m Type of unit: massive flow

Type of unit and rock type:
a) Sparsely olivine phyric basalt to 121.35 m
b) Picritic-very porphyritic olivine basalt zone from 121.35-121.49 m
c) Sparsely olivine phyric basalt from 121.49-121.55 m
d) Very porphyritic olivine basalt from ↑21.55-121.75 m
e) Sparsely olivine phyric basalt from 121.75-122.10 m

This grey, fine-grained unit is interpreted to be a non-pillowed lava flow with internal compositional banding due to flowage. It has a glassy quenched upper margin and a brecciated finer-grained lower margin. At 121.36 m, there is an internal flow contact with altered glass above a picritic base. The rock below is still considered part of Unit 24.06.

Vesicles:- 20%
- filling - calcite from 120.60-120.80 m
- size - 3 mm
- open from 120.60-120.80 m
- size - 4 mm
- calcite below ↑20.80 m
- size - 5 mm

Veins:- 5%
- size - 1-5 mm
- filling - calcite

GMA:- 20%

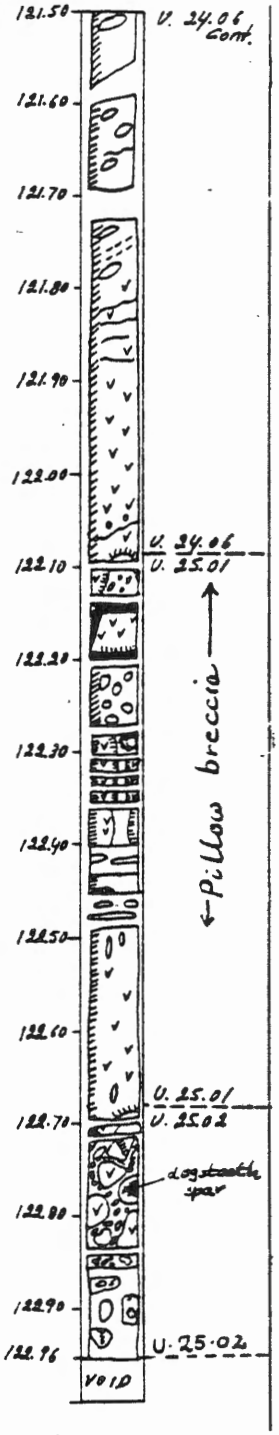
UNIT 24.06 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 25 Sheet 1

Visual Core Description Observer Jim Mehegan/ T. Purcell

Depth Interval 121.50 m to 122.96 m



UNIT 24.06 cont. Description - see Box 24, Sheet 4.

This grey, fine-grained massive flow unit varies in this section as follows:
a) 121.50-121.55 m - sparsely olivine phyric basalt
b) 121.55-121.75 m - very porphyritic olivine basalt
c) 121.75-122.10 m - sparsely olivine phyric basalt.

UNIT 25.01 OVERALL DESCRIPTION

Upper contact - 122.10 m Depsitional. 40 cm zone of pillow breccia which contains chilled pillow fragments and spalled altered glass fragments with carbonate groundmass.
Lower contact - 122.70 m Depositional. Altered glass. Chilled margin.
Unit thickness - .0.60 m Type of unit: pillow

Grey, fine-grained, aphyric basalt. A breccia zone from 122.10-122.50 m, is 40% fragments, 35% sheet silicates, 25% carbonates.

Vesicles:- <1%
- size - pinhead or smaller
- filling - 100% open

Veins:- 5%
- the unit is randomly cut by carbonate veins
- size - 2-5 mm
- filling - 90% carbonate, 10% sheet silicates

GMA:- moderate

UNIT 25.02 OVERALL DESCRIPTION

Upper contact - 122.70 m Depositional.
Lower contact - 122.96 m Depositional. Altered glassy margins.
Unit thickness - 0.26 m Type of unit - volcanic breccia

The volcanic fragments are grey, fine-grained, aphyric basalt. Two or three fragments at the contacts show chilling. The groundmass for the breccia is 70% carbonate and 30% sheet silicates.

No vesicles but there is a 2 x 3 cm cavity filled with dogtooth spar at 127.75 m.

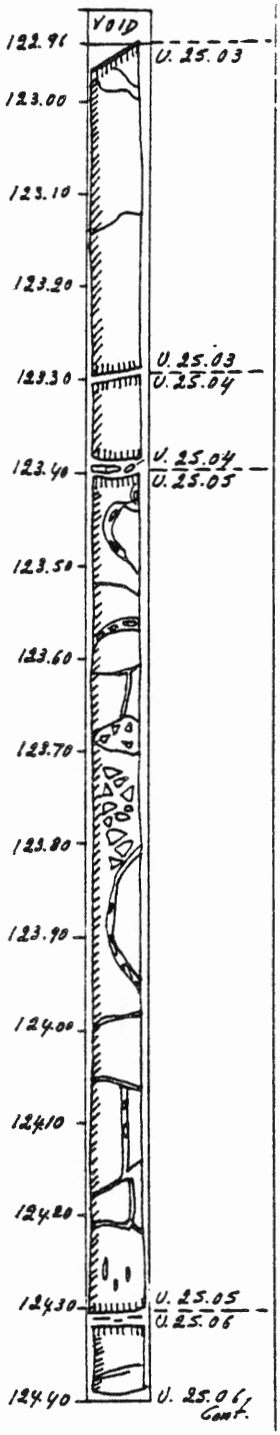
GMA:- moderate

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 25 Sheet 2a

Visual Core Description Observer Jim Mehegan/T.Porcell

Depth Interval 122.96 m to 124.40 m



UNIT 25.03 OVERALL DESCRIPTION

Upper contact - 122.96 m Depositional. Chilled margin and altered glass.
Lower contact - 123.30 m Depositional. Altered glass and chilled margin.
Unit thickness - 0.34 m Type of unit: pillow basalt

Fine-grained, slightly vesicular, grey basalt unit which has been somewhat fractured. There are rusty brown patches randomly distributed throughout. It appears that the pillow has fractured after cooling and carbonate has precipitated along the fractures.

Vesicles:- 3%
- filling - 98% carbonate, 2% open

Veins:- 4%
- filling - 100% carbonate

GMA:- moderate

UNIT 25.04 OVERALL DESCRIPTION

Upper contact - 123.30 m Altered glass. Chilled margin.
Lower contact - 123.40 m Pillow breccia. Altered glass. Chilled margin.
Unit thickness - 0.10 m Type of unit: pillow

Grey brown, slightly vesicular, fine-grained basalt. Breccia (5 cm) at the lower contact is made up of 60% carbonate and 40% sheet silicates.

Vesicles:- 10%
- size - 2 mm
- filling - 55% open, 40% layer silicates, 5% carbonates

Veins:- 2%

GMA:- moderate

UNIT 25.05 OVERALL DESCRIPTION

Upper contact - 123.40 m Depositional.
Lower contact - 124.30 m Depositional. Chilled margin, altered glass, 30 mm of pillow breccia.
Unit thickness - 0.90 m Type of unit: volcanic breccia

Fine-grained, slightly olivine phyric basalt. Rusty brown patches are randomly distributed throughout.

Phenocrysts:- <1%
- size - 1 mm
- completely altered olivines

Vesicles:- 3% concentrated in the upper 25 cm
- filling - 100% pale blue film of clay minerals

GMA:- moderate

UNIT 25.06 Description - see Box 25, Sheet 2b.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 25 Sheet 26

Graphic Representation | Sample

Visual Core Description Observer J. Mehegan / T. Purcell

Depth Interval 122.96 m to 124.90 m

UNIT 25.06 OVERALL DESCRIPTION

Upper contact - 124.30 m Altered glass. 3 cm pillow breccia.
Lower contact - 124.45 m Altered glass. 3 cm pillow breccia.
Unit thickness - 0.15 m

Fine-grained, vesicular, brown basalt. This small unit is distinctly more altered than previous units.

Veins and fractures:- 20%
- filling - 100% carbonate

GMA:- high

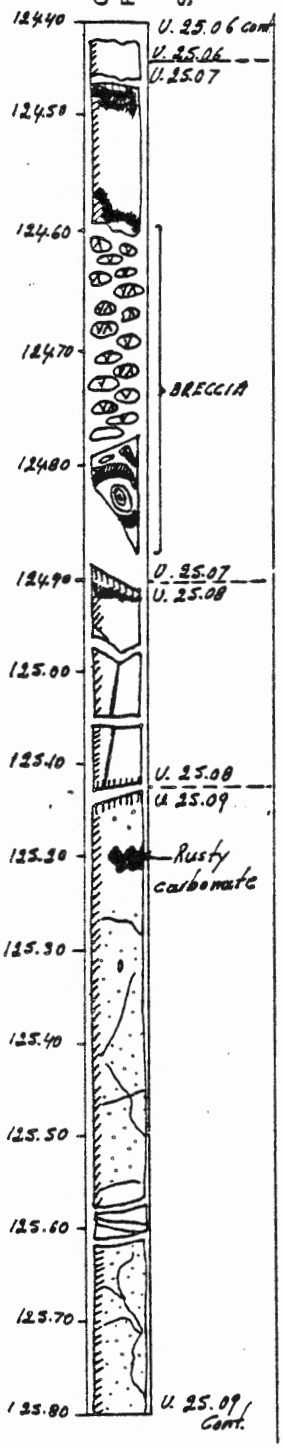
UNIT 25.06 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 25 Sheet 3

Visual Core Description Observer J. Mehegan / T. Purcell

Depth Interval 124.40 m to 125.80 m



UNIT 25.06 cont. Description - see Box 25, Sheet 2b.

Brown, fine-grained, vesicular, highly altered basalt.

UNIT 25.07 OVERALL DESCRIPTION

Upper contact - 124.45 m Depositional. Altered glass. Chilled margin.
Lower contact - 124.90 m Depositional. Altered glass. Chilled margin.
Unit thickness - 0.45 m Type of unit: pillow

Except for 10 cm of solid basalt at the top, this unit is completely broken and rubbled but appears to be a volcanic breccia with unchilled fragments and altered glass set in a carbonate matrix. The rock is brown-grey, fine-grained, aphyric basalt with rusty brown patches randomly distributed throughout the volcanic fragments. The matrix of the breccia is 60% carbonates and 40% sheet silicates.

UNIT 25.08 OVERALL DESCRIPTION

Upper contact - 124.90 m Chilled
Lower contact - 125.12 m Chilled margin. 10 mm zone of altered glass.
Unit thickness - 0.22 m Type of unit: pillow

Fine-grained, slightly vesicular, grey basalt.

Vesicles:- 2%
- lining - thin film of pale blue clay

Veins and fractures:- 2%
- filling - 100% carbonate

GMA:- moderate

UNIT 25.09 OVERALL DESCRIPTION

Upper contact - 125.12 m
Lower contact - 125.85 m Chilled margin and altered glass.
Unit thickness - 0.73 m Type of unit: pillow

Fine-grained, grey, vesicular, olivine phyric basalt. Rusty brown patches are distributed randomly throughout the unit. At the top, they contain abundant carbonate.

Phenocrysts:- <<1%
- size - 1 mm
- olivine totally altered to ferric clays

Vesicles:- 4%
- filling - 90% pale blue film of clays
10% carbonate

Veins and fractures:- 10%
- one larger 20 mm vein at 125.60 m
- filling - 100% carbonate

GMA:- moderate

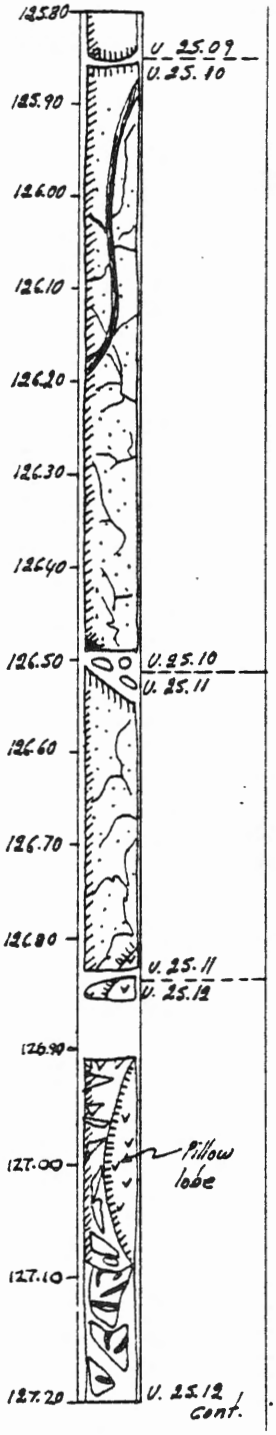
UNIT 25.09 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 25 Sheet 4

Visual Core Description Observer J. Mehegian T. Purcell

Depth Interval 125.80 m to 127.20 m



UNIT 25.09 cont. Description - see Box 25, Sheet 3.

Grey, fine-grained, vesicular, slightly olivine phyric basalt pillow.

UNIT 25.10 OVERALL DESCRIPTION

Upper contact - 125.85 m Depositional.
Lower contact - 126.50 m Altered glass and chilled margin.
Unit thickness - 0.65 m Type of unit: pillow

Grey, vesicular, olivine phyric, fine-grained basalt. Rusty brown patches are distributed randomly throughout the unit.

Phenocrysts:- <<1%
- size - <1 mm
- olivine completely altered to iron rich clays

Vesicles:- 4%
- filling - 100% carbonate

Veins and fractures:- 4%
- filling -100% carbonate
- one large fracture at 125.90-126.20 m (subparalled to core axis) 20 mm in thickness and 100% cc filled

GMA:- moderate

UNIT 25.11 OVERALL DESCRIPTION

Upper contact - 126.50 m Depositional.
Lower contact - 126.84 m Depositional. Altered glass.
Unit thickness - 0.34 m Type of unit: pillow

Grey, fine-grained, clinopyroxene-olivine phyric, vesicular pillow basalt. Rusty brown patches are distributed throughout the unit.

Phenocrysts:- <<1%
- size - <1 mm
- olivine completely altered, clinopyroxene fresher

Vesicles:- 2%
- filling - 60% carbonate, 40% open

Veins and fractures:- 4%

GMA:- moderate

UNIT 25.12 OVERALL DESCRIPTION

Upper contact - 126.84 m Depositional.
Lower contact - 127.45 m Ambiguous. The drill has intersected a pillow lobe and contains the glassy margins of three pillows.
Unit thickness - 0.61 m Type of unit: pillow lobe

Fine-grained, brown, vesicular basalt. Carbonate and glassy altered fragments make up 50% of the unit.

Vesicles:- 7%, in lobe
- filling - 60% greenish-blue layer silicates as lining, 40% open

Veins:- negligible
GMA:- moderate to strong

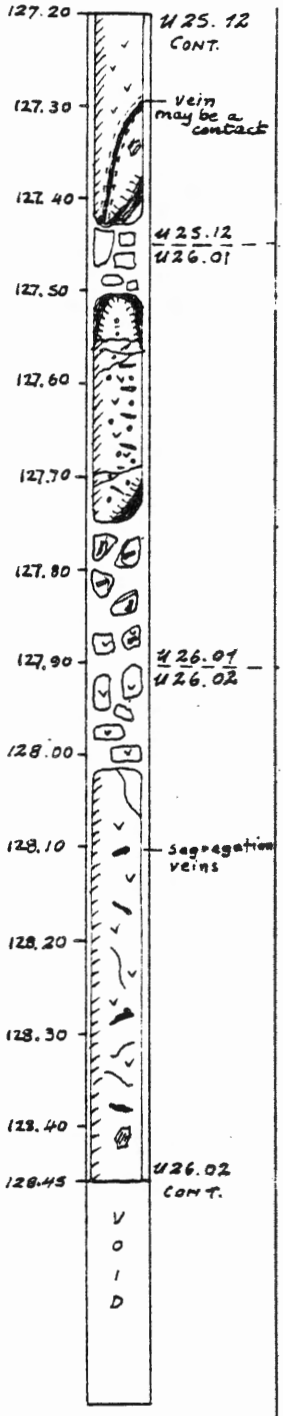
UNIT 25.12 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 26 Sheet 1

Visual Core Description Observer Jim Mahegan

Depth Interval 127.20 m to 128.45 m



UNIT 25.12 cont. Description - see Box 25, Sheet 4.

Brown, fine-grained, vesicular basalt. Carbonate and glassy altered fragments make up 50% of the unit. A vein starting at 127.30 m may be a contact(?).

UNIT 26.01 OVERALL DESCRIPTION

Upper contact - 127.45 m Depositional. Chilled. Some fresh? glass. Dip - 60°.
Lower contact - 127.90 m Ambiguous.
Unit thickness - 0.45 m Type of unit: pillow

Fine-grained, brown, aphyric pillow basalt. From 127.73-127.90 m, there are fragments of interpillow material and aphyric basalt fragments between Units 26.01 and 26.02. There is also altered glass.

Phenocrysts:- <1%
- size - 2 mm
- pseudomorphs of olivine

Vesicles:- 20% overall
- 50% brown smectite-lined segregation vesicles perpendicular to pillow wall
  - size - 1 mm x 10 mm
- 25% calcite filled vesicles
  - size - 1 mm
- 25% open vesicles
  - size - 1 mm

Veins:- 1%
- size - 2-3 mm
- filling - carbonate

GMA:- 30%

UNIT 26.02 OVERALL DESCRIPTION

Upper contact - 127.90 m Depositional. Ambiguous.
Lower contact - 128.65 m Depositional. Fragments of altered glass, bleached rock and intense calcite veining.
Unit thickness - 0.75 m Type of unit: pillow basalt

Fine-grained, greyish-green, sparsely olivine phyric pillow basalt which is reddish-brown near the base.

Phenocrysts:- 1% concentrated at the base of unit
- pseudomorphs of olivine

Vesicles:- 4%
- 80% reddish-brown segregation vesicles with glass altered to smectite, very irregular in shape
- 20% calcite filled, blue clay lined round vesicles

Veins:- 3%
- size - 1-5 mm
- filling - calcite

GMA:- 20%

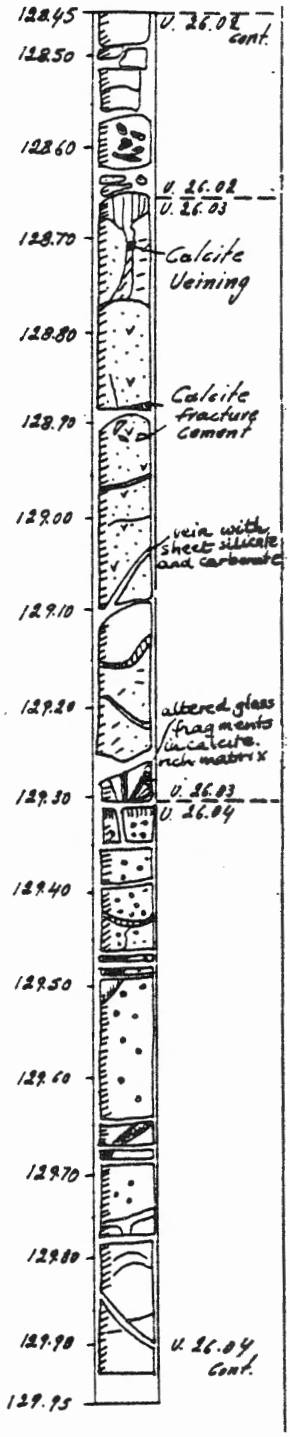
UNIT 26.02 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 26 Sheet 2

Visual Core Description Observer Jim Mehegan

Depth Interval 128.45 m to 129.95 m



UNIT 26.02 cont. Description - see Box 26, Sheet 1.

Greyish-green, fine-grained, sparsely olivine phyric pillow basalt? which is more reddish-brown near the base.

UNIT 26.03 OVERALL DESCRIPTION

Upper contact - 128.65 m Depositional. Irregular. Altered glass.
Lower contact - 129.30 m Depositional. Altered glass.
Unit thickness - 0.65 m Type of unit: pillow basalt

Greyish-brown, fine-grained, aphyric pillow basalt with abundant segregation veins and vesicles.

Vesicles:- 10-15% irregularly shaped segregation vesicles
- altered to reddish-brown
- size - 0.5-3 mm
- filling - clay and white calcite

Veins:- 10%
- size - 0.5-20 mm
- filling - calcium carbonate and same layer silicate
- at 129.05-129.10 m a vein filled with white sheet silicate and fine-grained carbonate along its margin shows some bleaching of rock

GMA:- 50% - to clay

UNIT 26.04 OVERALL DESCRIPTION

Upper contact - 129.30 m Depositional. Altered glass, red oxidised. Dip - 60°.
Lower contact - 130.55 m Depositional. Altered glass, red oxidized.
Unit thickness - 1.25 m Type of unit: pillow basalt

Fine-grained, brownish-grey, aphyric pillow basalt with abundant (10-15%) brown segregation vesicles and veins. There may be a trace of altered olivine phenocrysts at the base of the unit in the next section.

Vesicles:- 10-15%
- round vesicles
- size - 1-3 mm
- filling - 80% open, 5-10% calcite, 5-10% clay
- 15% segregation vesicles
  - size - 1-10 mm
  - filling - 90% reddish-brown clay, 10% white calcite

Veins:- veins and vugs(?) filled with euhedral calcite crystals, random patterns
- size - 1-20 mm
- veins at or near the lower contact contain crystalline calcite, quartz and zeolite(?) with reddish-brown iron oxide and chalcopyrite(?)

GMA:- 40%

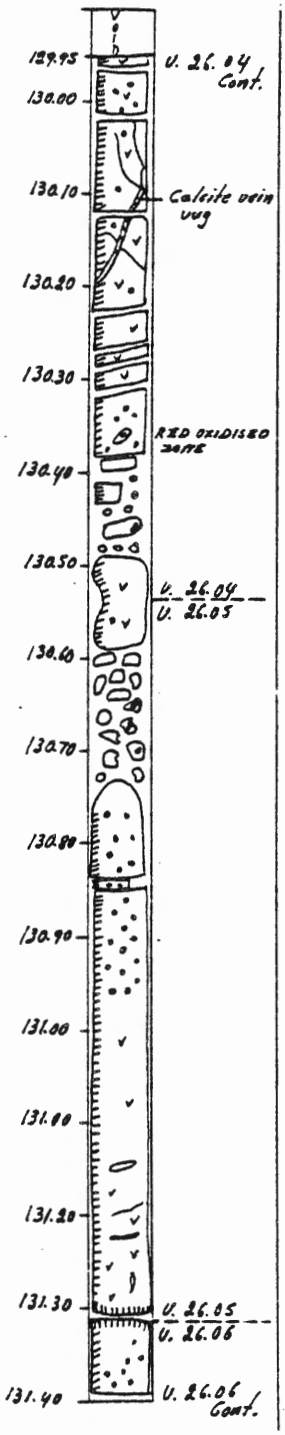
UNIT 26.04 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 26 Sheet 3

Visual Core Description Observer Jim Mehegan

Depth Interval 129.95 m to 131.40 m



UNIT 26.04 cont. Description - see Box 26, Sheet 2.

Brownish-grey, fine-grained, aphyric pillow basalt with abundant brown segregation vesicles and veins. There may be a trace of altered olivine phenocrysts at the base of the unit in this section.

UNIT 26.05 OVERALL DESCRIPTION

Upper contact - 130.55 m Ambiguous.
Lower contact - 131.32 m Depositional. Planar, altered glass.
Unit thickness - 0.77 m Type of unit: pillow

Fine- to medium-grained lava flow (pillow) with vesicular top grading to a less vesicular zone and a fine-grained base. The unit has a felty groundmass.

Vesicles:- 20%
- filling - 80% open, 10% calcite, 10% blue-green lining of celadonite, trace of white zeolite (?)

Veins:- 2%, white
- size - 0.5-8 mm
- filling - carbonate

Note: It is not clear if Units 26.05, 26.06, 26.07, 27.01 and 27.02 are pillows, sheet flows or intrusive units. However, based on the vesicular nature of these units, it is assumed that they are extrusive and possibly pillowed units.

UNIT 26.06 OVERALL DESCRIPTION - see Box 26, Sheet 4.

Upper contact - 131.32 m Chilled. Altered glass.

Greenish-grey, fine-grained to felty, aphyric to very sparsely phyric olivine basalt.

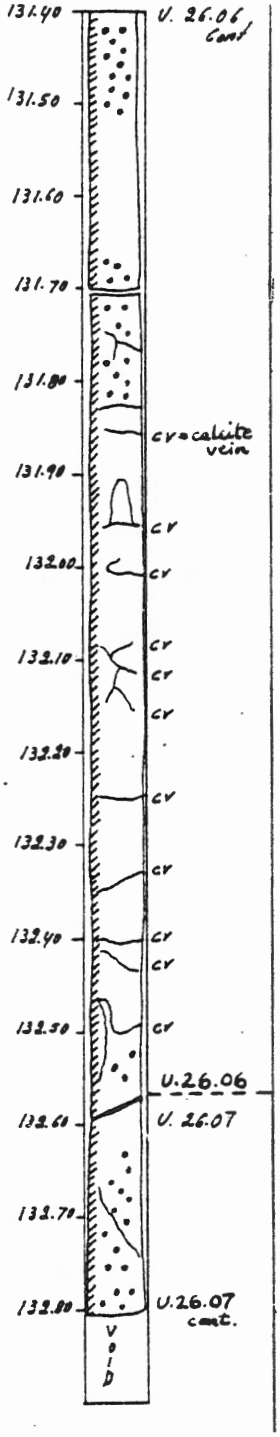
UNIT 26.06 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 26 Sheet 4

Visual Core Description Observer Tim Mehegan

Depth Interval 131.40 m to 132.80 m



UNIT 26.06 OVERALL DESCRIPTION

Upper contact - 131.32 m Chilled. Altered glass.
Lower contact - 132.57 m Chilled. May be an internal contact, with Unit 26.07 being part of Unit 26.06.
Unit thickness - 1.25 m

Fine-grained to felty, greenish-grey, aphyric to very sparsely olivine phyric basalt. From 131.82-132.50 m is a massive, very sparsely phyric section which is cut by irregular, calcite veins (1%, 1 mm), and vesicles (1%) with blue clay lining. There are also some reddish-brown, irregular patches. From 132.50-132.57 m, the groundmass is slightly coarser and there are small calcite filled vesicles.

Vesicles:- 2% from 131.68-131.82 m
- size - 0.5 mm - 1.5 cm
- filling - 70% open, 20% calcite, 10% lined by blue celadonite

Veins:- 1%
- irregular
- size 0.5-4 mm
- filling - calcite

UNIT 26.07 OVERALL DESCRIPTION - see Box 27, Sheet 1.

Upper contact - 132.57 m Depositional. Altered glass.

Greyish-green, fine-grained to aphanitic, slightly phyric pillow lava? with a vesicular zone at the top of the unit.

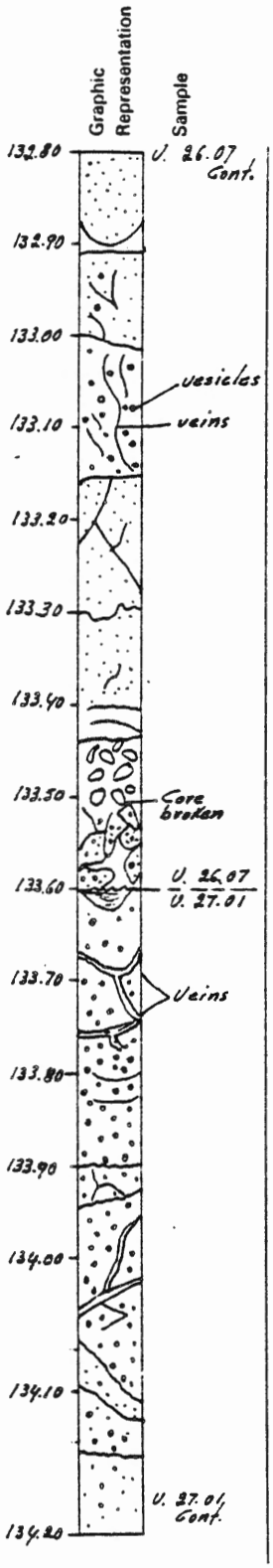
UNIT 26.07 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 27 Sheet 1

Visual Core Description Observer Hassan

Depth Interval 132.80 m to 134.20 m



UNIT 26.07 cont. OVERALL DESCRIPTION

Upper contact - 132.57 m Depositional? Altered glass. Dip - 0°.
Lower contact - 133.60 m Depositional? Altered glass. The dip is not clear due to broken core.
Unit thickness - 1.03 m Type of unit: pillow lava(?)

Greyish-green, fine-grained to aphanitic, homogeneous, slightly phyric basalt.

Phenocrysts:- subhedral
- size - 3 mm
- 10% pyroxene, 7% olivine

Vesicles:- 10%
- size - 1 mm
- filling - 60% carbonates, 30% open, 10% sheet silicates (smectite)

Veins:- 1% milky veins
- size - 1-2mm
- filling - 80% carbonate, 20% open

GMA:- 15% - to 90% smectite, 10% opaques

UNIT 27.01 OVERALL DESCRIPTION

Upper contact - 133.60 m Depositional. Altered glass. Dip - 85°.
Lower contact - 134.31 m Depositional. Altered glass. Dip - 50°.
Unit thickness - 0.71 m Type of unit: pillow

Greyish-green, fine-grained to aphanitic, homogeneous, slightly phyric basalt.

Phenocrysts:- subhedral
- size - 2 mm
- 5% pyroxene, 6% olivine

Vesicles:- 20%
- size - 1 mm
- filling - 50% open, 40% carbonate, 10% sheet silicates

Veins:- 1% milky veins
- size - 2 mm
- filling - 80% carbonate, 20% open

GMA:- 20% - to 10% opaques, 90% sheet silicates

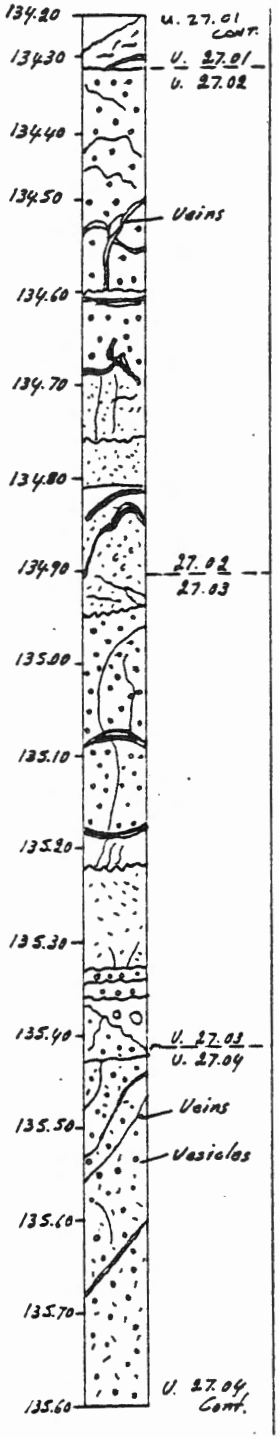
UNIT 27.01 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 27 Sheet 2

Visual Core Description Observer Hassan

Depth Interval 134.20 m to 135.60 m



UNIT 27.01 cont. Description - see Box 27, Sheet 1.

Greyish-green, fine-grained to aphanitic, homogeneous, slightly phyric pillow lava?.

UNIT 27.02 OVERALL DESCRIPTION

Upper contact - 134.31 m Depositional. Altered glass. Dip - 50°.
Lower contact - 134.90 m Depositional. Altered glass. Dip - 80°.
Unit thickness - 0.59 m Type of unit - pillow

Greyish-green, fine-grained to aphanitic, homogeneous basalt.

Phenocrysts:- subhedral
- size - 2 mm
- 7% pyroxene, 9% olivine

Vesicles:- 10%
- size - 1 mm
- filling - 70% carbonates, 30% open

Veins:- 1% milky veins
- size - 4 mm
- filling - 80% carbonate, 20% open

GMA:- 20% - to 95% smectite, 5% opaques

UNIT 27.03 OVERALL DESCRIPTION

Upper contact - 134.90 m Depositional. Altered glass. Dip - 85°.
Lower contact - 135.41 m Depositional. Altered glass. Dip - 50°.
Unit thickness - 0.51 m Type of unit: pillow

Greyish-green, fine-grained to aphanitic, homogeneous basalt.

Phenocrysts:- subhedral
- size - 3 mm
- 10% pyroxene, 6% olivine

Vesicles:- 15%
- size - 2 mm
- filling - 70% carbonate, 30% open

Veins:- 5% milky veins
- size - 4 mm
- filling - 70% carbonate, 15% open, 10% green clay, after glass, 5% sheet silicates

GMA:- 40%

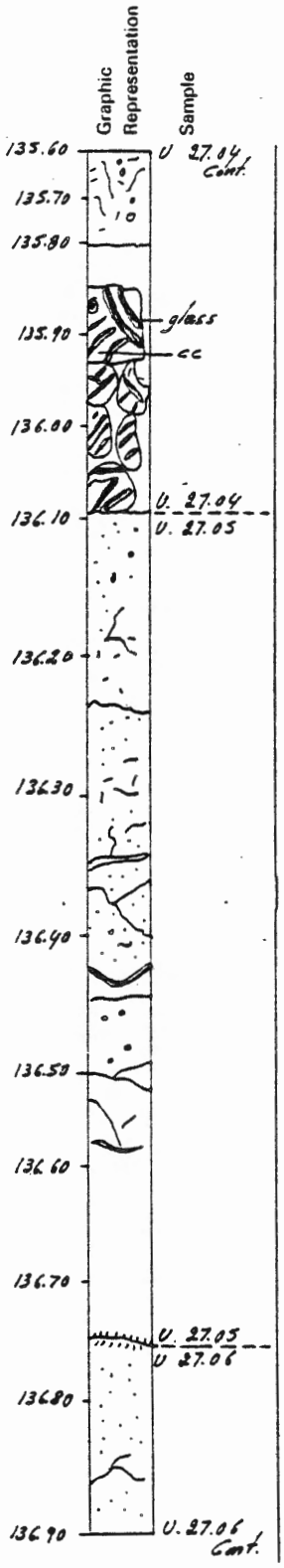
UNIT 27.04 Description - see Box 27, Sheet 3.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 27 Sheet 3

Visual Core Description Observer Hassan

Depth Interval 135.60 m to 136.90 m



UNIT 27.04 OVERALL DESCRIPTION

Upper contact - 135.41 m Depositional. Altered glass. Dip - not clear as the core is broken.
Lower contact - 136.10 m Depositional. Altered glass. Dip - not clear as the core is broken.

Unit thickness - 0.69 m Type of unit: pillow and pillow fragment breccia

Greyish-green, fine-grained to aphanitic, homogeneous basalt.

Phenocrysts:- subhedral
- size - 2 mm
- 5% pyroxene, 6% olivine

Vesicles:- 10%
- size - 2 mm
- filling - 50% carbonate, 25% open, 20% sheet silicates, 5% opaques

Veins:- 5% milky veins
- size - 2 mm
- filling - 70% carbonate, 20% open, 10% sheet silicates

GMA:- 20%

UNIT 27.05 OVERALL DESCRIPTION

Upper contact - 136.10 m Depositional. Altered glass. Dip - 50°.
Lower contact - 136.75 m Depositional. Altered glass. Dip - 40°.
Unit thickness - 0.65 m Type of unit: pillow

Greyish-green, fine-grained to aphanitic, homogeneous basalt.

Phenocrysts:- subhedral
- size - 2 mm
- 5% pyroxene, 2% olivine

Vesicles:- 5%
- size - 1 mm
- filling - 60% carbonate, 35% open, 5% opaques

Veins:- 1% milky veins
- size - 4 mm
- filling - 70% carbonate, 30% open

GMA:- 20%

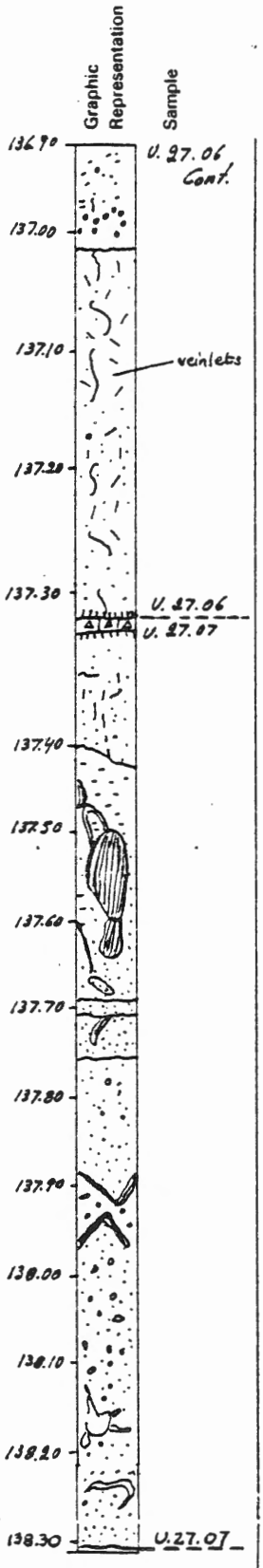
UNIT 27.06 Description - see Box 27, Sheet 4.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 27 Sheet 4

Visual Core Description Observer Hassan

Depth Interval 136.90 m to 138.30 m



UNIT 27.06 OVERALL DESCRIPTION

Upper contact - 136.75 m Depositional. Altered glass.
Dip - 10°.
Lower contact - 137.31 m Depositional. Altered glass.
Dip - 10°.
Unit thickness - 0.56 m Type of unit: pillow

Greyish-green, fine-grained to aphanitic, homogeneous basalt.

:- subhedral
- size - 2 mm
- 5% pyroxene, 1% olivine

Vesicles:- size - 1 mm
- filling - 70% carbonate, 25% open, 5% opaques

Veins:- 1% milky veins
- size - 4 mm
- filling - 70% carbonate, 20% open, 10% opaques

GMA:- 20%

UNIT 27.07 OVERALL DESCRIPTION

Upper contact - 137.31 m Depositional. Altered glass. Dip - 40°.
Lower contact - 138.30 m Depositional. Altered glass. The dip is not clear because of the broken core.
Unit thickness - 0.99 m Type of unit: pillow

Greyish-green, fine-grained to aphanitic, homogeneous basalt.

Phenocrysts:- subhedral
- size - 2 mm
- 2% clay minerals, 1% olivine

Vesicles:- 5%
- size - 1 mm
- filling - 75% open, 20% carbonate, 5% sheet silicate

Veins:- 1% milky veins
- size - 4 mm
- filling - 60% carbonate, 30% open, 10% opaques

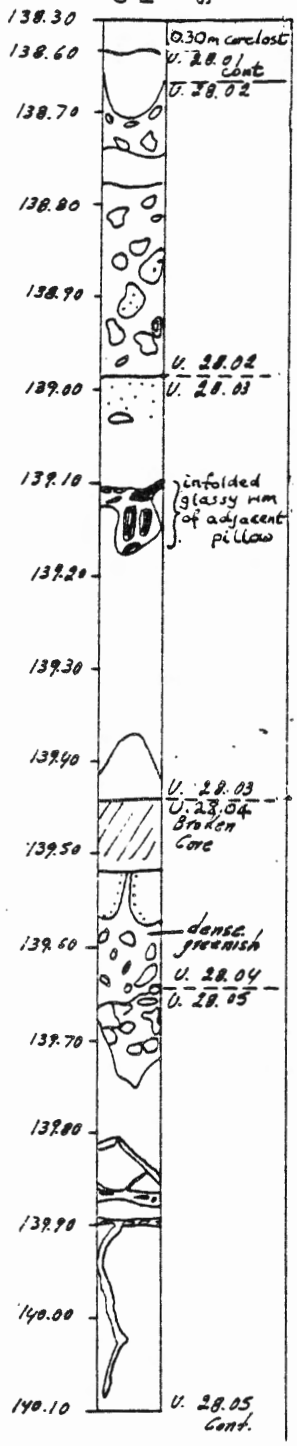
GMA:- 25%

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 28 Sheet 1a

Visual Core Description Observer R. Barager

Depth Interval 138.30 m to 140.10 m



CORE LOSS - 138.30-138.60 m

UNIT 28.01 OVERALL DESCRIPTION

Upper contact - 138.60 m Ambiguous.
Lower contact - 138.66 m Altered braided glassy rim with intercalated calcite veins. Dip - 75°.
Unit thickness - 0.06 m

Small wedge of brownish-grey pillow isolated from other units. Not possible to sample. Appears to be aphyric.

Veins:- about 20%
- filling - calcite
- slightly vuggy(?)

UNIT 28.02 OVERALL DESCRIPTION

Upper contact - 138.66 m Ambiguous.
Lower contact - 138.98 m Ambiguous.
Unit thickness - 0.32 m

Breccia - sharp edged lithic and altered glassy fragments embedded in a mainly carbonate matrix. Breccia fragments are 5-60 mm across and average 20-40 mm - 60% altered glassy fragments with onion skin(?) texture, 40% lithic fragments. Lithic fragments are greenish and aphanitic.

Vesicles:- 10% in lithic fragments
- maximum size - 1-2 mm

GMA:- 40%, matrix of breccia almost entirely granular carbonate

UNIT 28.03 OVERALL DESCRIPTION

Upper contact - 138.98 m Mostly missing, evidently chilled to altered glass. Dip - 0°.
Lower contact - 139.44 m Incomplete. Altered glassy, replaced green layer silicate. 10-20% intercalated carbonate.
Unit thickness - 0.46 m

Fine-grained to aphanitic, grey-green, aphyric pillow lava.

Vesicles:- 1% concentrated near contacts
- irregular to rounded in shape
- maximum average size - 1.5-2.0 mm
- one cavity 10-30 mm
- filling - predominantly carbonate

Veins:- sparse
- center of unit: infold of altered glassy margin from adjoining pillow
- size - generally ranging from <1 mm to 5 mm
- filling - 60% green layer silicate replacing glass, 40% carbonate
- total vein alteration - <10% -about half green layer silicate after glass, remainder carbonate

GMA:- iron oxide-red to brownish spotting
- rounded to vaguely defined spots 1-3mm across distributed throughout forming 1%(?) of rock

UNITS 28.04 and 28.05 Descriptions - see Box 28, Sheet 1b.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole = Cy-1

Core Box 28 Sheet 16

Graphic Representation | Sample

Visual Core Description Observer R Baragar

Depth Interval 138.30 m to 140.10 m

UNIT 28.04 OVERALL DESCRIPTION

Upper contact - 139.44 m Ambiguous.
Lower contact - 139.65 m Ambiguous.
Unit thickness - 0.21 m

139.44-139.52 m - broken core - not really part of the unit.

Isolated interpillow-comprises lobes of two pillows and some interpillow breccia formed of altered glass (green layer silicate) in carbonate cement.

Pillow lobes: grey-green ranging to reddish-brown spotted near the contact with incipient crystallization spherules.

Interpillow breccia: Fragment size - 1-3 mm - commonly platy fragments due to spallation from glass rinds. Glasses all altered to green layer silicates. Impregnated carbonate cement (±60%) comprising:
i) granular white carbonate
ii) dense greenish material - probably mix of carbonate and fine layer silicates.

UNIT 28.05 OVERALL DESCRIPTION

Upper contact - 139.65 m At least 20-30 mm of broken but tightly packed, altered, glassy fragments of green layer silicate. Dip irregular but average about 65°.
Lower contact - 140.17 m Incomplete. 20-30 mm thick-composed of close packed platy fragments, green altered glass with minor carbonate veining. Dip about 65°.

Unit thickness - 0.52 m Type of unit: pillow

Fine-grained, greenish-grey, aphyric, basalt lava pillow.

Vesicles:- 5% or less
- maximum average size - 2 mm
- filling - predominantly carbonate - minor green smectite
- Fe oxide spotting, at least in part related to vesicles - near contacts elongate (± 10mm) with green smectite cores
about 10% spotting altogether
- most semirounded and about 1-3 mm diameter
- rounded or irregular

Veins:- 7-10% fracture fillings
- rectalinear fracture pattern-fracturesrange from 2 mm to 15 mm in width
- filling: a) carbonates-predominantly
i) white crystalline calcite
ii) dense pale green mix carbonate and possibly smectite-generally at the centers of veins
b) fragments of green altered glass which seem to have dropped into fractures from glassy margin
- total filling including altered glassy rims:
i) altered glass 60-70%
ii) carbonates 30-40%

GMA:- little except for Fe-oxide spotting noted under vesicles

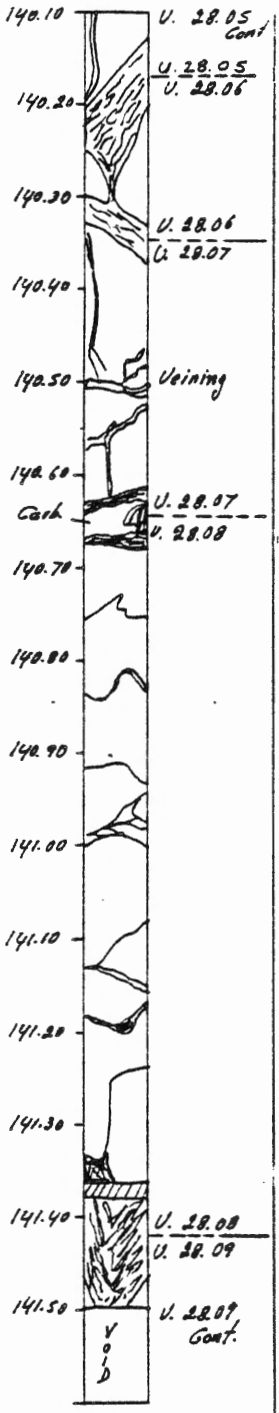
UNIT 28.05 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 28 Sheet 2a

Visual Core Description Observer R. Barragan

Depth Interval 140.10 m to 141.50 m



UNIT 28.05 cont. Description - see Box 28, Sheet 1b.

Greenish-grey, fine-grained, aphyric pillow basalt.

UNIT 28.06 OVERALL DESCRIPTION

Upper contact - 140.17 m Ambiguous.
Lower contact - 140.35 m Depositional.
Unit thickness - 0.18 m

Mixed unit - includes lobes of two separate pillows and thick, altered glassy rims. The pillows are grey-green, aphyric basalt.

Vesicles:- about 50%
- maximum average size - about 2 mm with the exception of 2 or 3 elongate ones with average length of 3 mm
- filling - green smectite
- Fe oxide spotting halos around vesicles

Veins:- 5%
- filling - carbonate

UNIT 28.07 OVERALL DESCRIPTION

Upper contact - 140.35 m 20-40 mm total thickness (double rims). Slightly fragmented platy green smectite after glass - braided structure - minor carbonate.
Lower contact - 140.65 m 40-50 mm total (double rim) of 50% altered glass and 50% intercalated and vein white carbonate. Glass now braided green smectite.
Unit thickness - 0.30 m

Grey-green, aphanitic to fine-grained, aphyric pillow basalt.

Vesicles:- 1-2%
- most abundant - fine-grained adjoining margins
- minute strings subparallel to margin
- average maximum size - 1 mm; rarely reaches 3-4mm
- filling - carbonate mainly, also green smectite

Spotting:- 5-10% Fe-oxide spotting -probably related to vesicles
- elongate and up to 6-7 mm long perpendicular to margin - otherwise irregular, equidimensional, non distinct boundaries - commonly 3-6 mm across

Veins:- 5-7%
- rectilinear
- size - 1-7 mm
- filling - white carbonate, rare smectite, about 10% clay mineral

GMA:- minor visible smectite in groundmass adjoining margins
- also Fe-oxide spotting as above

UNIT 28.08 Description - see Box 28, Sheet 2b.

UNIT 28.09 Description - see Box 28, Sheet 3a.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 28 Sheet 26

Graphic Representation | Sample

Visual Core Description Observer R Baragar

Depth Interval 140.10 m to 141.50 m

UNIT 28.08 OVERALL DESCRIPTION

Upper contact - 140.65 m Altered glassy rim with intercalated carbonate - see lower contact above. Dip 25°.

Lower contact - 141.42 m Altered glassy pillow rim. Incomplete braided green smectite.
Unit thickness - 0.77 m Type of unit: pillow

Grey-green, fine- to medium-grained (in the centre of the pillow) pillow basalt.

Vesicles:- 5-10% within 10-20 cm of margins
- <1% in center
- 2-3% overall
- maximum average size - 2 mm, < 1 mm adjoining margin
- filling - 50% carbonate and 50% green smectite

Spotting:- irregular, poorly defined Fe oxide-rich spots 3-10 mm across
- within 10 cm of contact tend to be elongated perpendicular to contact

Veins:- <5% - spidery network
- size - 1-5 mm
- filling - carbonate veins but locally iron-oxide stained

GMA:- minor evident

UNIT 28.09 OVERALL DESCRIPTION.- see Box 28, Sheet 3a.

Upper contact - 141.42 m Incomplete. Minimum of 3-4 cms interlayered, braided plates and sheets of green smectite (after glass) and carbonate.

Greenish-grey, aphyric pillow lobe.

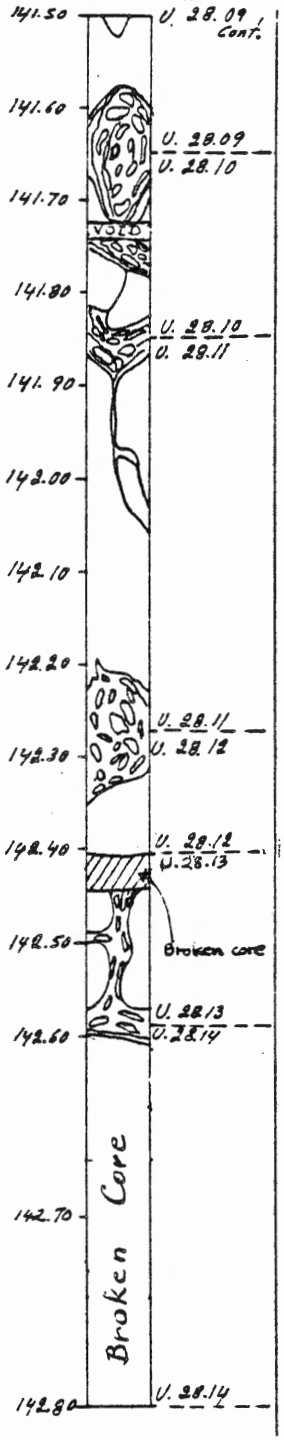
UNIT 28.09 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 28 Sheet 3a

Visual Core Description Observer R. Barragar

Depth Interval 141.50 m to 142.80 m



UNIT 28.09 OVERALL DESCRIPTION

Upper contact - 141.42 m Incomplete. Minimum of 3-4 cm of interlayered, braided plates and sheets of green smectite (after glass) and carbonate.
Lower contact - 141.65 m Incomplete. Minimum 3 cm (total i.e double rim) of mainly braided onion skin, slightly disunited blocks of green smectite (after glassy rim) cemented by minor carbonate. Dip - 35°.
Unit thickness - 0.23 m Type of unit: pillow lobe

Greenish-grey, aphyric basalt.

Vesicles:- 1-2%
- maximum average size - 1mm
- filling - green smectite and lesser carbonate

Veins:- minor
- maximum size - 2-3 mm
- filling - carbonate

GMA:- minor

UNIT 28.10 OVERALL DESCRIPTION

Upper contact - 141.65 m Altered glassy rim - see lower contact above.
Lower contact - 141.85 m .4 cm thick (total i.e. double rim) braided, platy fragments - slightly disorientated with respect to contact, altered glass (green smectite) and minor intercalated carbonate.
Unit thickness - 0.20 m Type of unit: pillow with a very minor pillow lobe as a mini pillow

Greenish, aphanitic basalt pillow with (only chilled parts involved) aphanitic, green matrix dotted with minute reddish incipient crystallization spherules.

Vesicles:- 1-2%
- maximum average size - 1 mm
- filling - mainly smectite

Veins:- minor carbonate and clay minerals

UNITS 28.11 and 28.12 Descriptions - see Box 28, Sheet 3b.
UNITS 28.13 and 28.14 Descriptions - see Box 28, Sheet 3c.

CYPRUS RESEARCH DRILLING PROJECT Drill Hole # Cy-1

Core Box 28 Sheet 36

Graphic Representation | Sample

Visual Core Description Observer R. Baragar

Depth Interval 141.50 m to 142.80 m

UNIT 28.11 OVERALL DESCRIPTION

Upper contact - 141.85 m Altered glass rim. See lower contact above.
Lower contact - 142.27 m Incomplete but evidently 50-80 mm thick (total - double rim). Composed of 50% disoriented, braided and onion skin green smectite blocks (after glass) cemented by 30% carbonate and 20% smooth, hard clay minerals.
Unit thickness - 0.42 m Type of unit: pillow

Grey-green, fine-grained, aphyric, basalt pillow.

Vesicles:- 1-2%
- maximum average size - 1-1.5 mm
- filling - mainly smectite, lesser carbonate

Spotting - 5-10% Fe oxide spotting
- ill defined, mainly equidimensional 3-7 mm diameter brown limonite spotting
- in part related to vesicles
- near margins elongated perpendicular to margin

Veins:- 5% or less
- maximum size - 6-7 mm
- filling - carbonate and smooth, friable clay mineral

UNIT 28.12 OVERALL DESCRIPTION

Upper contact - 142.27 m As for lower above.
Lower contact - 142.40 m Incomplete. Altered glassy rim probably continuous with pillow rim that roughly parallels core in Unit 28.13.
Unit thickness - 0.13 m Type of unit: pillow lobe

Grey-green, aphanitic, aphyric pillow lobe.

Vesicles:- 1-2%
- average maximum size - <1 mm
- maximum size - 2 mm
- filling - mainly green smectite; larger have carbonate
- irregular to rounded

Spotting:- 5-10% poorly defined
- brownish spotting at least in part related to vesicles
- maximum size - 2-3 mm

Veins:- minor
- filling - carbonate

CYPRUS RESEARCH DRILLING PROJECT Drill Hole # CY-1

Core Box 28 Sheet 3c

Graphic Representation | Sample

Visual Core Description Observer R. Baragar

Depth Interval 141.50 m to 142.80 m

UNIT 28.13 OVERALL DESCRIPTION

Upper contact - 142.40 m Ambiguous.
Lower contact - 142.59 m Parallels side of unit and base where broken and incomplete. Altered glass present, braided green smectite broken and disoriented, cemented by 50% carbonate and 50% clay minerals. Thickness of rim - minimum 3 cm.
Unit thickness - 0.19 m Type of unit: pillow lobe

142.40-142.45 m - broken core not really part of unit

Aphyric, mainly chilled basalt pillow lobe with dotted incipient crystallization spherules.

Vesicles:- minor

Veins:- 5-10%
- filling - mainly carbonate

UNIT 28.14 OVERALL DESCRIPTION

Upper contact - 142.59 m (See lower above).
Dip - 10°.
Lower contact - 142.80 m Ambiguous. At least 40 mm fragmented altered glass, cemented minor carbonate.
Unit thickness - 0.21 m Type of unit: pillow

Grey-green, fine-grained, broken, aphyric basalt pillow.

Vesicles:- 1% or less
- maximum average size - <1 mm
- filling - carbonate and smectite

Spotting - 2-5% brown Fe-oxide
- poorly-outlined brownish spotting, in part related to vesicles
- within 4 cm of upper contact, elongate (10 mm) perpendicular to contact, remainder equidimensional - up to 5 cm

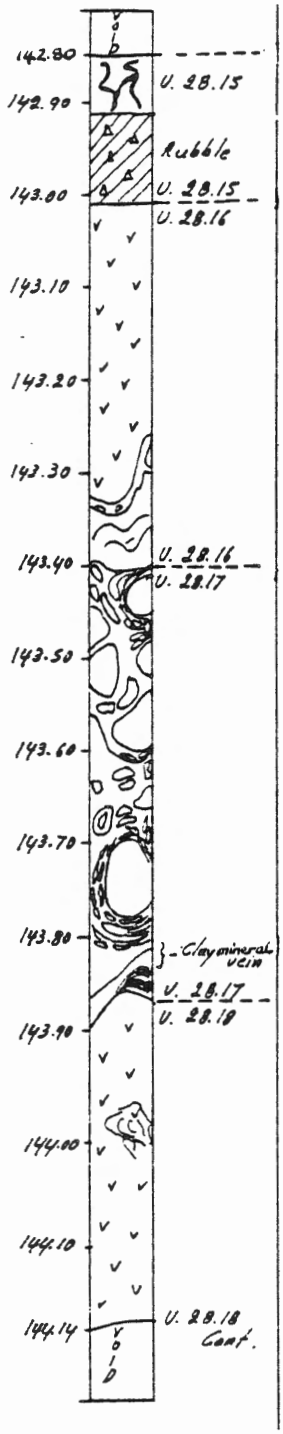
Veins:- <5%
- maximum size - 8 mm
- filling - 60% granular white carbonate and 40% dense, brownish-green clay minerals

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 28 Sheet 4

Visual Core Description Observer R. Barragar

Depth Interval 142.80 m to 144.14 m



UNIT 28.15 OVERALL DESCRIPTION

Upper contact - 142.80 m Ambiguous.
Lower contact - 143.01 m Ambiguous.
Unit thickness - 0.21 m

Isolated segment of pillow lobe - similar to above.

UNIT 28.16 OVERALL DESCRIPTION

Upper contact - 143.01 m Missing.
Lower contact - 143.40 m Altered glassy margin that is continuous with branch which swings parallel to the core and separates pillow lobes on either side of core below <Unit 28.17>. Margin 1-22 cm thick comprises braided green smectite and intercalated clay minerals and carbonate (minor).
Unit thickness - 0.39 m Type of unit: pillow

Dark grey-green with purplish overlay, fine-grained, aphyric basalt pillow.

Vesicles:- 2-5%
- average maximum size - 1 mm
- filling - mostly smectite, minor carbonate

Spotting:- brown iron oxide spotting with ill-defined margins - elongate adjoining contact and approximately perpendicular
- elongate spots about 5-10% - 10 mm or less - otherwise 3-4 mm in diameter

Veins:- 3-4%
- maximum size - 10 mm
- filling - mainly carbonate but larger veins contain some inclusions of altered glassy margin - evidently dropped in from pillow surface

GMA:- minor

UNIT 28.17 OVERALL DESCRIPTION

Upper contact - 143.40 m Depositional.
Lower contact - 143.87 m Depositional.
Unit thickness - 0.47 m

Pillow lobes and thick altered glassy rims - about 40% basaltic lobes, 30% vuggy carbonate intercalations 30% braided green smectite after glass - latter in part fragmented and enclosed in carbonate cement (143.80 m) of dense buff clay mineral.

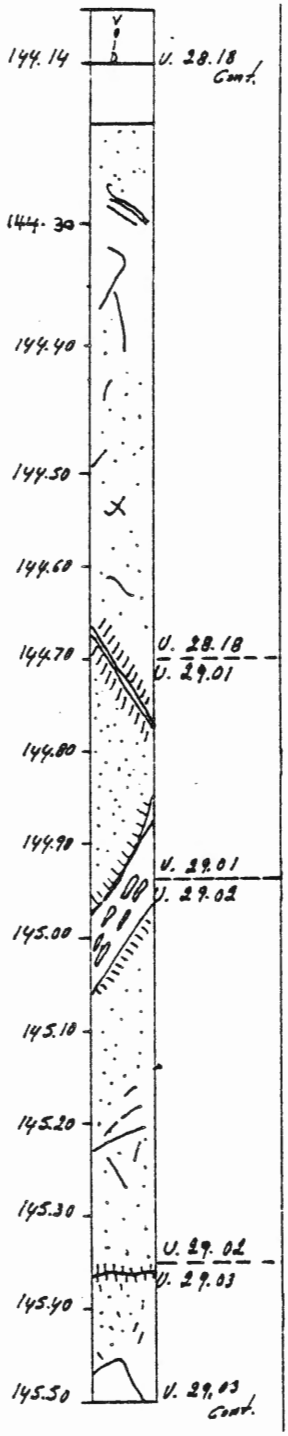
UNIT 28.18 Description - see Box 29, Sheet 1a.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 29 Sheet 1a

Visual Core Description Observer S. Agrell.

Depth Interval 144.14 m to 145.50 m



UNIT 28.18 OVERALL DESCRIPTION

Upper contact - 143.87 m Surmounted by pillow lobe and margin in breccia described above. Dip - 35°.
Lower contact - 144.70 m Depositional.
Unit thickness - 0.83 m

Fine-grained, grey-green phyric basalt pillow which is pink at the upper end.

Vesicles:- 2-3%
- maximum average size - 2 mm
- filling - carbonate

Spotting:- 10%
- at least in part vesicles
- brownish Fe oxide elongated to elliptical to equidimensional
- average maximum size 5-6 mm
- many of these have distinct boundaries and look as if they could be segregation vesicles
- some contain both brown weathering lithic material and carbonate

Veins:- 5-10%
- rectilinear
- size - ranging 1-10 mm
- filling - predominantly carbonate

UNIT 29.01 OVERALL DESCRIPTION

Upper contact - 144.70 m Depositional. Chilled, altered glass. Dip - 55°. 20 mm of pillow margin spall breccia.
Lower contact - 144.95 m Depositional. Chilled, altered glass. Lower margin is banded by a 5 cm spall breccia zone of altered, glassy fragments in calcite.
Unit thickness - 0.25 m Type of unit - pillow

A pillow of fine-grained, aphanitic, brown-green, vesicular basalt.

Vesicles:- 15%
- size - 1 mm
- filling - 60% open, 20% layer silicates, 10% calcite, 10% opaques

Fractures and glass:- 6%
- size - <3mm
- filling - 70% carbonate, 30% layer silicates

GMA:- 20%
- layer silicates > calcite > oxides

Note - all features within 50 mm of a pillow margin

UNITS 29.02 and 29.03 Descriptions - see Box 29, Sheet 1b.

CYPRUS RESEARCH DRILLING PROJECT , Drill Hole # Cy-1
Core Box 29 Sheet 16

Graphic Representation | Sample

Visual Core Description Observer S. Agrell
Depth Interval 144.14 m to 145.50 m

UNIT 29.02 OVERALL DESCRIPTION

Upper contact - 144.95 m Depositional. Chilled, altered glass. Dip - 70°.
Lower contact - 145.35 m Depositional. Thin chill. No glass. Dip - 70°.
Unit thickness - 0.40 m Type of unit - pillow

Fine-grained, aphanitic, brown-green mottled basalt.

Vesicles:- 12%
- mostly spherical
- size - <2 mm
- filling - 50% open, 30% layer silicates, 10% calcite, 10% opaques

Cracks:- few (<4%)

GMA:- 20% possibly
- brown mottling oxidation and hydration

UNIT 29.03 OVERALL DESCRIPTION

Upper contact - 145.35 m Depositional. Chilled. Dip - 70°.
Lower contact - 145.90 m Depositional. Chilled. Dip - 50°.
Unit thickness - 0.55 m Type of unit - pillow

The top of the pillow is fragmented and partially altered to green smectite in carbonate and Fe hydroxide. The core of the pillow is broken up and altered with altered veins.
Fine-grained, aphanitic, grey-brown basalt.

Vesicles:- <5%
- spherical
- average size - 2-3 mm
- filling - 45% open, 30% layer silicates, 15% carbonate, 10% opaques

Veins:- sharp in part, in rubbly material

Veins and glass:- 14%
- filling - 75% carbonate, 15% layer silicates, 10% opaques

GMA:- 20-60%, average 30%
- to layer silicates > carbonates > opaques
- brown oxidation and hydration patches scattered throughout

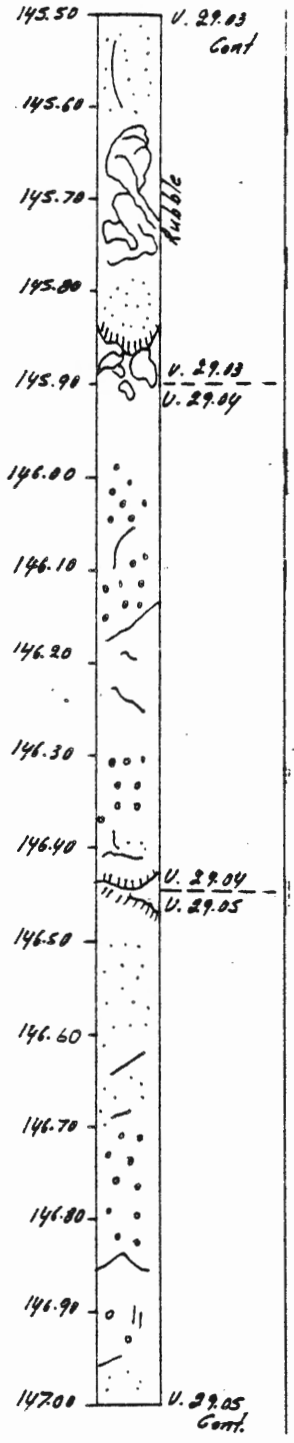
UNIT 29.03 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 29 Sheet 2

Visual Core Description Observer S. Agrell

Depth Interval 145.50 m to 147.00 m



UNIT 29.03 cont. Description - see Box 29, Sheet 1b.

Grey-brown, fine-grained to aphanitic, pillow basalt.

UNIT 29.04 OVERALL DESCRIPTION

Upper contact - 145.90 m Depositional. Chilled altered glass, irregular. Dip - 15°.
Lower contact - 146.45 m Depositional. Chilled smectite, altered glass. Dip - 0°.
Unit thickness - 0.55 m Type of unit - pillow

Vesicular, fine-grained, grey, aphanitic basalt.

Vesicles:- 18%
- 10% in small 1 mm vesicles, 8% in 2-5 mm vesicles
- filling - 40% carbonate, 30% open, 20% layer silicates, 10% opaques

Veins:- 2%, sparse fracture type
- maximum size - 3 mm

Veins and glass:- 3%
- filling - 80% carbonate, 10% layer silicates, 10% opaques

GMA:- 20% - 50% layer silicates, 50% carbonate

UNIT 29.05 OVERALL DESCRIPTION

Upper contact - 146.45 m Ambiguous. Chill, irregular. Glass? Dip - 0°.
Lower contact - 147.35 m Depositional. Chill, altered glass. Dip - 5°.
Unit thickness - 0.90 m Type of unit - pillow

Fine-grained, dark grey, vesicular, aphanitic basalt with brown speckling? microvariolitic?

Vesicles:- 20%
- spherical
- maximum size - 3 mm
- filling - 50% carbonate, 20% open, 20% layer silicates, 10% opaques

Veins and fractures:- 1%
- maximum size - 4 mm
- filling - 90% carbonate, 10% layer silicates, <1% opaques

GMA:- freshest lava so far - <12%
- to 60% layer silicates, 30% carbonate, 10% opaques

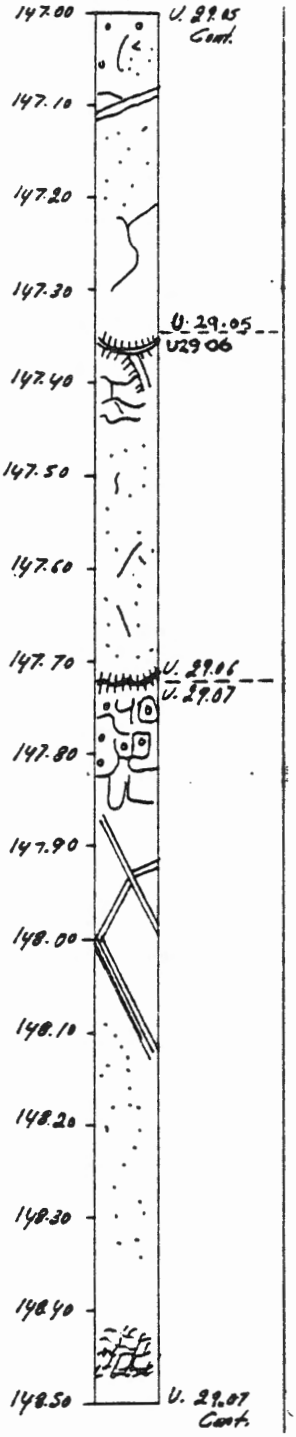
UNIT 29.05 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 29 Sheet 3

Visual Core Description Observer S. Agrell

Depth Interval 147.00 m to 148.50 m



UNIT 29.05 cont. Description - see Box 29, Sheet 2.

Dark grey, fine-grained to aphanitic, vesicular pillow basalt with brown speckling?

UNIT 29.06 OVERALL DESCRIPTION

Upper contact - 147.35 m Depositional. Irregular.
Dip - 20°.
Lower contact - 147.72 m Green smectite zone and altered basalt and glass. Dip - 0°.
Unit thickness - 0.37 m Type of unit - pillow

Fine-grained, aphanitic basalt, microvesicular, grey, slightly red mottled.

Vesicles:- 15%
- size - 3 mm
- filling - 65% open, 20% layer silicates, 10% carbonate, 5% opaques

Veins:- <1% fractures and cracks
- filling - 95% carbonate, 5% layer silicates

GMA:- 15% - to layer silicates >> carbonate

UNIT 29.07 OVERALL DESCRIPTION

Upper contact - 147.72 m Irregular. Dip - 20°.
Lower contact - 148.75 m Irregular, rotted.
Unit thickness - 1.03 m Type of unit - pillow

"Box work" of altered basalt fragment 10 cm wide at the top of a pillow. Zoned smectite development with carbonate. Olive grey, aphanitic basalt. Yellower at lower contact. Fluid or vapour oxidation trails evident.

Vesicles:- 10%
- filling - 55% open, 20% layer silicates, 20% carbonate, 5% opaques

Veins and glass:- 15%

Veins:- pale pink, colouress fracture vein later than fine veins
- banded parallel to contact
- some "palygorskite" - waxy, fine fibrous
- filling - 79% carbonate, 20% layer silicates, 1% opaques

GMA:- 15% in fresh part, 35% in crumbly part - 20% overall
- layer silicates > carbonates

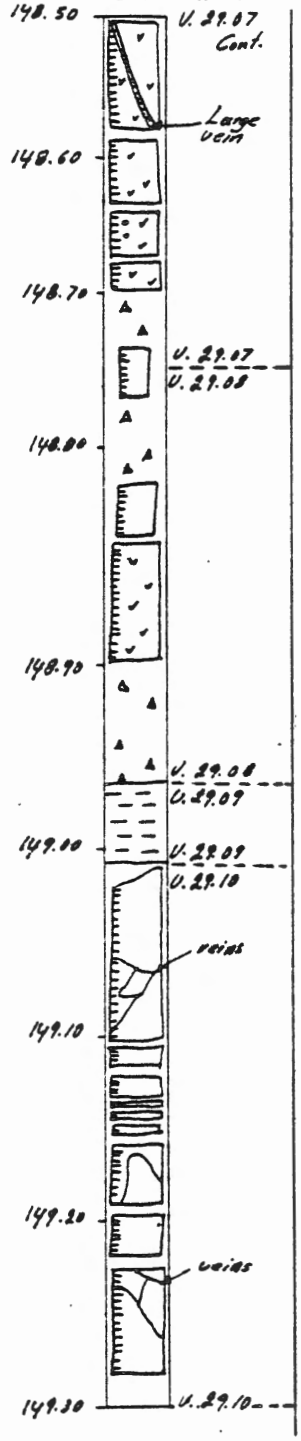
UNIT 29.07 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 29 Sheet 4

Visual Core Description Observer S. Agrell / PTR

Depth Interval 148.50 m to 149.30 m



UNIT 29.07 cont. Description - see Box 29, Sheet 3.

Olive-grey to yellowish at lower contact, aphanitic pillow basalt.

UNIT 29.08 OVERALL DESCRIPTION

Upper contact - 148.75 m Ambiguous. Altered glass, pillow fragments.
Lower contact - 148.97 m Ambiguous. Altered glass, pillow rind.
Unit thickness - 0.22 m Type of unit: pillow

Light reddish-grey, very fine-grained, aphyric basalt.

Vesicles:- 1-2% concentrated just inside the pillow rind
- size - 1-2 mm
- filling - 45% open, 30% layer silicates, 20% carbonate, 5% opaques

Veins:- approximately 5%
- filling - 80% calcite, 20% opaques

GMA:- 12-20%
- highest in glassy pillow rinds to approximately 30%
- overall - 60% layer silicates, 30% carbonates, 10% opaques

UNIT 29.09 OVERALL DESCRIPTION

Upper contact - 148.97 m Ambiguous. No glass.
Lower contact - 149.01 m Ambiguous. No glass.
Unit thickness - 0.04 m

Broken fragments of light brown, fine-grained, carbonate sediment-like material. May be vein filling or interpillow material but not clear because rock is so broken.

UNIT 29.10 OVERALL DESCRIPTION

Upper contact - 149.01 m Ambiguous. Chilled, altered glass against fine-grained sediment; not obviously chilled.
Lower contact - 149.30 m Ambiguous. Altered glass.
Unit thickness - 0.29 m

Brownish-grey, fine-grained, aphyric lava.

No vesicles.

Veins:- 2-3%
- size - 1-10 mm
- filling - white carbonate and zeolite(?)

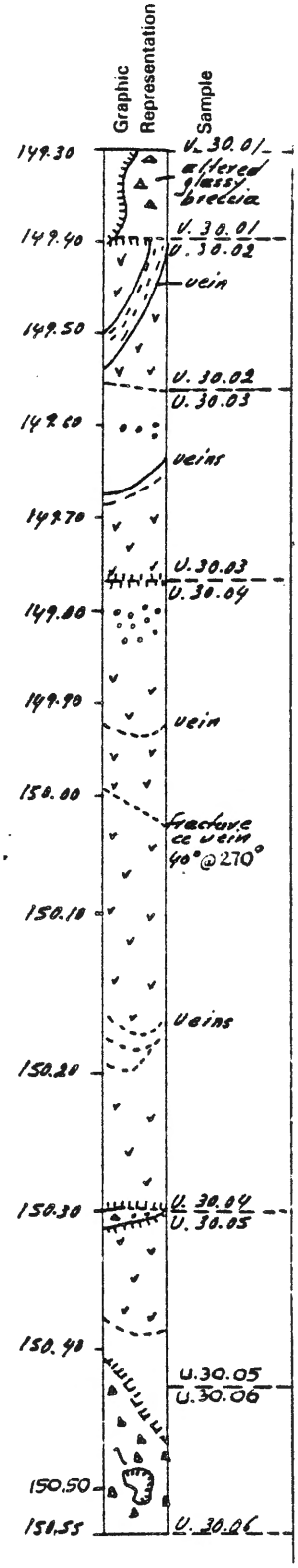
GMA:- relatively fresh but reddish speckled

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 30 Sheet 1a

Visual Core Description Observer P T Robinson

Depth Interval 149.30 m to 150.55 m



UNIT 30.01 OVERALL DESCRIPTION

Upper contact - 149.30 m Ambiguous.
Lower contact - 149.40 m Quenched, glassy margin altered with some brecciation. Dip - 80°.
Unit thickness - 0.10 m

Reddish-grey, aphyric, fine-grained basalt.

Vesicles:- <1%
- size - <1 mm
- filling - green smectite

Veins:- <1%
- size - <1 mm
- filling - 100% white carbonate

UNIT 30.02 OVERALL DESCRIPTION

Upper contact - 149.40 m Ambiguous. Probably quenched.
Dip - 90°.
Lower contact - 149.56 m Chilled pillow margin.
Dip - 10°.
Unit thickness - 0.16 m Type of unit - pillow

Reddish-grey, aphyric, fine-grained, pillow lava basalt.

No vesicles.

Veins:- 15%
- filling - 90% carbonate, 10% altered glass fragments

GMA:- discoloured

UNIT 30.03 OVERALL DESCRIPTION

Upper contact - 149.56 m Chilled, glassy (altered).
Dip - 10°.
Lower contact - 149.77 m Chilled. Altered glassy rind.
Dip - 10°.
Unit thickness - 0.21 m Type of unit - pillow

Light reddish-grey, aphyric, fine-grained pillow basalt.

Vesicles - mostly at 149.60 m
- round
- size - 1 mm
- filling - 100% carbonate

Veins:- 2%
- size - 1 mm
- filling - 100% carbonate

Glassy rinds, <10 mm, of green smectite? Groundmass has some brown staining but no obvious alteration.

UNITS 30.04, 30.05 and 30.06 Descriptions - see Box 30, Sheet 1b.

Graphic Representation | Sample

Visual Core Description Observer P.T. Robinson
Depth Interval 149.30 m to 150.55 m

UNIT 30.04 OVERALL DESCRIPTION

Upper contact - 149.77 m Chilled, altered, glassy rind.
Dip - 10°.
Lower contact - 150.30 m Chilled, altered, glassy rind.
Dip - 0°.
Unit thickness - 0.53 m

Light reddish-grey, aphyric, fine-grained basalt.

Vesicles:- 2%
- abundant between 149.80 - 149.90 m
- size - 1-2 mm
- filling - 80% carbonate, 20% layer silicates, green smectite(?), filling small irregular vesicles

Veins:- 2%
- size - <1 mm to 2 mm
- filling - 100% carbonate

Glassy rinds <10 mm thick, altered to green smectite.
Groundmass fresh expect for small red blotches, 5% opaques.

UNIT 30.05 OVERALL DESCRIPTION

Upper contact - 150.30 m Chilled, altered glassy rind.
Dip - 45°.
Lower contact - 150.42 m Chilled, altered glassy rind.
Dip - 45°.
Unit thickness - 0.12 m

Light reddish-grey, aphyric, fine-grained basalt.

Vesicles:- 1%
- size - 1 mm
- filling - 90% carbonate, 10% opaques

Veins:- 3%
- size - 1-2 mm
- filling - 80% carbonate, 20% zeolite

Upper grassy rind, <10 mm, green layer silicates, lower rind ambiguous.

GMA:- 5%
- to 80% opaques, 10% layer silicates, 10% carbonates

UNIT 30.06 OVERALL DESCRIPTION

Upper contact - 150.42 m Ambiguous. Chilled margin.
Lower contact - 150.55 m Chilled, altered glassy rind.
Unit thickness - 0.13 m

Mostly glassy, interpillow breccia with one small piece of aphyric, fine-grained glass altered to layer silicates, with some carbonate matrix.

No vesicles.

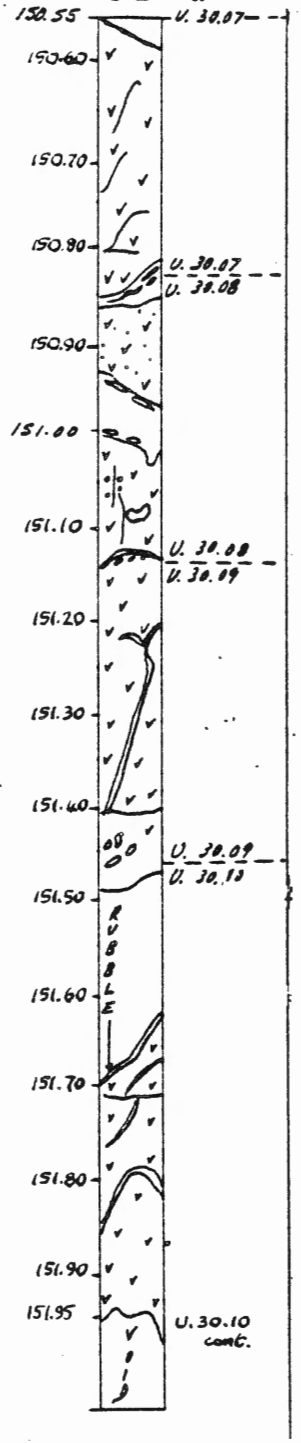
No veins.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 30 Sheet 2a

Visual Core Description Observer H. Elsbree

Depth Interval 150.55 m to 151.95 m



UNIT 30.07 OVERALL DESCRIPTION

Upper contact - 150.55 m Presumed to be depositional. Chill margin, small amount of altered glass. Dip - 45o.
Lower contact - 150.83 m Depositional. Small chill margin and a small amount of altered glass. Dip - 50o. 10 mm of carbonate, with altered glassy fragments.
Unit thickness - 0.28 m Type of unit - pillow

Fine-grained, grey, slightly phyric basalt.

Phenocrysts:- 1%
- sparsely scattered throughout the pillow
- subhedral
- average size - 1 mm
- maximum size - 2 mm
- olivine 100% altered to Fe oxide and one 1 mm green clinopyroxene phenocryst

Vesicles:- 3%, concentrated at 150.65 m
- size - 1 mm
- filling - 50% open, 30% clay, 20% carbonate

Veins:- 3% of carbonate and material at contact (carbonate and altered glass)
- size - approximately 1 mm

GMA:- reddish splotches (up to 7 mm). probably Fe oxides
- 40% alteration to 70% clays, 30% carbonate

UNIT 30.08 OVERALL DESCRIPTION

Upper contact - 150.83 m Depositional.
Lower contact - 151.14 m Depositional. Altered glass and chill margin. Dip - 55o. Narrow margin - 50 mm wide of glass and carbonate.
Unit thickness - 0.31 m Type of unit - pillow

Fine-grained, grey, pillow basalt. At 150.95-151.00 m there is a wide (20 mm) vein, or small dyke with glassy margins (5 mm wide) and carbonate. This unit is essentially aphyric (1 small 1.5 mm olivine phenocryst observed).

Vesicles:- 4% concentrated at 150.90 m
- size - 3 mm
- filling - 40% carbonate, 30% open, 30% clays
- empty vesicles towards the bottom of the pillow

Veins:- 1%
- filling - carbonate and margin material
- large vug of carbonate at 151.10 m

GMA:- 40% - to 70% clays, 30% carbonates
- some reddish splotches (Fe oxides)

UNIT 30.09 Description - see Box 30, Sheet 2b.
UNIT 30.10 Description - see Box 30, Sheet 3.

CYPRUS RESEARCH DRILLING PROJECT Drill Hole # Cy-1

Core Box 30 Sheet 26

Graphic Representation | Sample

Visual Core Description Observer H. Elsdon

Depth Interval 150.55 m to 154.95 m

UNIT 30.09 OVERALL DESCRIPTION

Upper contact - 151.14 m Depositional.
Lower contact - 151.46 m Depositional. Altered glass in carbonate. One side of the contact is cut by a later greenish-white vein of clay. Dip - 25o. Margin is 10-15 mm wide.
Unit thickness - 0.32 m Type of unit - pillow

Grey-green, fine-grained, aphyric basalt. One (1 mm) green clinopyroxene phenocryst observed.

Vesicles:- 2%, slightly concentrated at 151.27 m
- size - 2 mm
- filling - 70% open, 15% clays, 15% carbonates

Veins:- 5%
- filling - 90% carbonates, 10% clays

GMA:- 40% - to 70% clays, 30% carbonates
- reddish splotches at base of unit

UNIT 30.10 OVERALL DESCRIPTION - see Box 30, Sheet 3.

Upper contact - 151.46 m

Grey-green, fine-grained, sparsely olivine phyric pillow or flow basalt.

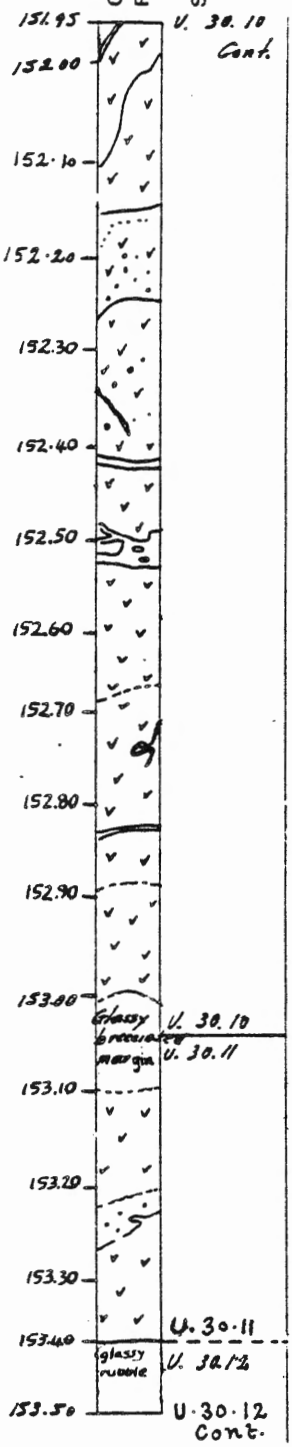
UNIT 30.10 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 30 Sheet 3

Visual Core Description Observer H. Elsbree

Depth Interval 151.95 m to 153.50 m



UNIT 30.10 OVERALL DESCRIPTION

Upper contact - 151.46 m Depositional.
Lower contact - 153.05 m Depositional. Altered glass and a little calcite. Small chill margin. Dip and orientation ambiguous. Several centimeters of altered glassy fragments.
Unit thickness - 1.59 m Type of unit: large pillow or flow basalt

Fine-grained, grey-green, very sparsely olivine phyric basalt.

Phenocrysts:- <1% olivine, e.g. at 152.50 m
- average size - 3 mm
- maximum size - 5 mm
- all altered to an orange Fe oxide
- subhedral

Vesicles:- 5%, concentrated between 152.00-152.15 m
- size - 2 mm
- filling - 40% carbonates, 30% open, 30% clays

Veins:- 3%, concentrated between 152.60-152.90 m
- common throughout this unit
- filling - 90% carbonates, 10% clay

Between 152.60-152.90 m there is an area of autobrecciation, carbonate veining, and what appear to be tiny (<1 mm) vesicles and red splotches. It may be the "side" of a chill margin (but no new unit) - alteration is more intense here. The unit becomes more reddish towards the bottom, from 152.82-153.03 m.

GMA:- 30%, probably more intense in some zones
- to 70% clays, 30% carbonate

UNIT 30.11 OVERALL DESCRIPTION

Upper contact - 153.05 m Depositional.
Lower contact - 153.40 m Depositional. Orientation ambiguous. Altered glass with a small amount of carbonate.
Unit thickness - 0.35 m Type of unit - pillow

Fine-grained, grey-green, very sparsely olivine phyric basalt.

Phenocrysts:- olivine altered to orange Fe oxide
- size - 2 mm
- subhedral

Vesicles:- 1%, concentrated at 153.20 m
- size - 1 mm
- filling - 50% carbonates, 30% open, 20% clays

Veins:- 5%, concentrated at 153.25 m
- maximum size - 5 mm
- filling - 90% carbonates, 10% clays

GMA:- 40% - to 70% clays, 30% carbonates
- some red splotches

UNIT 30.12 Overall Description - see Box 30, Sheet 4.
Upper contact - 153.40 m Depositional.

Green-grey, fine-grained pillow fragment breccia with some aphanitic glass fragments.

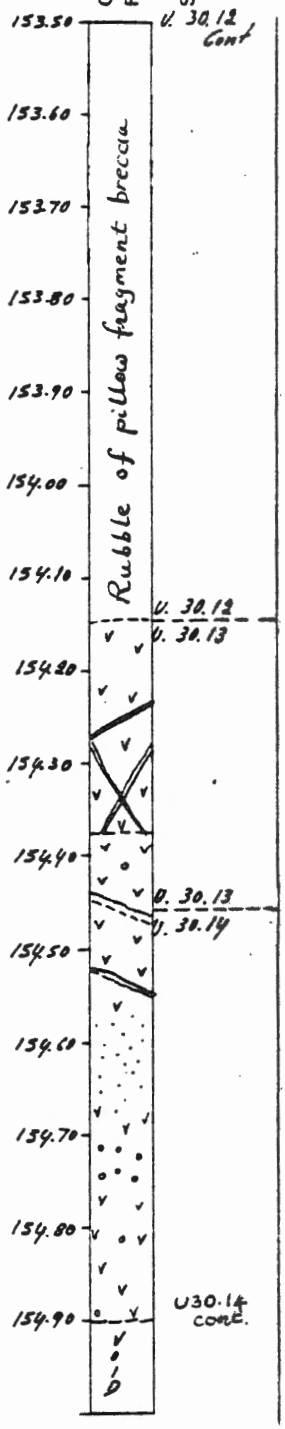
UNIT 30.12 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 30 Sheet 4

Visual Core Description Observer H.Elsbree

Depth Interval 153.50 m to 154.90 m



UNIT 30.12 cont. OVERALL DESCRIPTION

Upper contact - 153.40 m Depositional.
Lower contact - 154.15 m Depositional. Brecciated, with altered glass and a small amount of carbonate. Orientation ambiguous.
Unit thickness - 0.75 m

Green pillow fragment breccia with fragments of aphanitic glass. Unit consists of 7% carbonate (as veins), 40% glass and 53% fine-grained, green-grey basalt. Fragments have a wide size range and average is bimodal, 5 mm, and 40 mm.

No vesicles.
Veins:- 7%, scattered throughout unit
- filling - carbonate
GMA:- probably high due to brecciation - 70%
- to 60% clays and 40% carbonate

UNIT 30.13 OVERALL DESCRIPTION

Upper contact - 154.15 m Depositional.
Lower contact - 154.45 m Depositional. There is a small amount of altered glass and chill margin. Dip - 30°.
Unit thickness - 0.30 m Type of unit - pillow

Fine-grained, grey-green, slightly olivine phyric basalt.

Phenocrysts:- 1% olivine
- size - 1 mm
- subhedral
- altered to orange Fe oxide
Vesicles:- 3%, concentrated at 154.35 m
- size - 3 mm
- filling - 40% open, 40% carbonate, 20% clays
Veins:- 3%, concentrated at 154.30 m
- filling - 100% carbonates
GMA:- 40% - to 70% clays, 30% carbonate
- red splotches common near margins and some within

UNIT 30.14 OVERALL DESCRIPTION

Upper contact - 154.45 m Depositional.
Lower contact - 156.00 m Depositional. Altered glass. Dip - 5°.
Unit thickness - 1.55 m Type of unit: flow or pillow

Grey-green, fine-grained, very sparsely olivine phyric basalt.

Phenocrysts:- <1% olivine
- size - 2 mm
- altered to orange Fe oxide
Vesicles:- 5%
- size - 3 mm
- filling - 80% carbonates, 10% open, 10% clays
Veins:- 1%, concentrated at 154.50 m
- filling - 95% carbonates, 5% clays
GMA:- 50% - to 80% clays, 20% carbonate
- reddish tint at upper contact, brownish yellow at 154.70 m

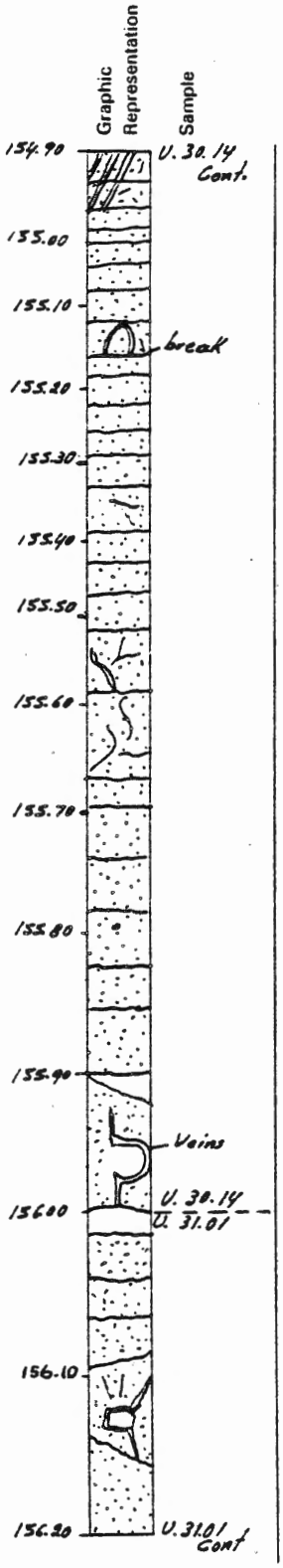
UNIT 30.14 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 31 Sheet 1

Visual Core Description Observer Hassan

Depth Interval 154.90 m to 156.20 m



UNIT 30.14 cont. Description - see Box 30, Sheet 4.

Greyish-green, fine-grained, aphanitic, homogeneous basalt.

Phenocrysts:- subhedral
- size - 1 mm
- 1% olivines

Vesicles:- 3%
- size - 1 mm
- filling - 50% carbonates, 35% open, 10% sheet silicates, 5% opaques

Veins:- 1%, milky veins
- size - 3 mm
- filling - 90% fibrous silicates inside the veins and 10% carbonates outside the veins

GMA:- 60%

UNIT 31.01 OVERALL DESCRIPTION

Upper contact - 156.00 m Depositional. Altered glass. Dip - 50°.
Lower contact - 157.20 m Depositional. Altered glass. Dip - 5°.
Unit thickness - 1.20 m Type of unit: pillow

Brown, fine-grained, aphanitic, homogeneous basalt.

Phenocrysts:- subhedral
- size - 2 mm
- 3% pyroxene, 1% olivine

Vesicles:- 1%
- size - 1 mm
- filling - 65% open, 20% carbonates, 10% opaques, 5% sheet silicates

Veins:- milky veins
- size - 2 mm
- filling - 90% carbonates, 5% opaques, 5% sheet silicates

GMA:- 30%

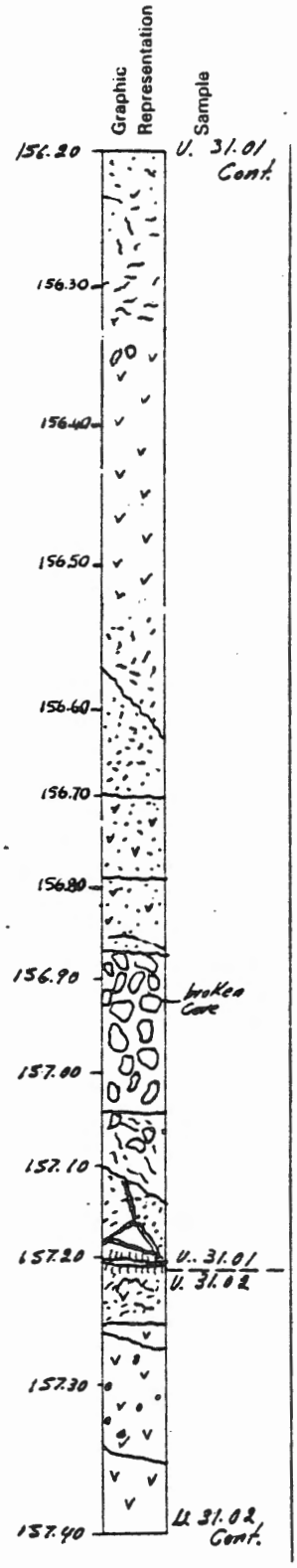
UNIT 31.01 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 31 Sheet 2

Visual Core Description Observer Hassan

Depth Interval 156.20 m to 157.40 m



UNIT 31.01 cont. Description - see Box 31, Sheet 1.

Brown, fine-grained, aphanitic, homogeneous basalt.

UNIT 31.02 OVERALL DESCRIPTION

Upper contact - 157.20 m Depositional. Altered glass. Dip - 0°.
Lower contact - 157.80 m Depositional. Altered glass. Dip - 50°.
Unit thickness - 0.60 m Type of unit: pillow

Greyish-green, fine-grained, aphanitic, homogeneous basalt.

Phenocrysts:- subhedral
- size - 2 mm
- 3% pyroxene, 2% olivine

Vesicles:- 1%
- size - 1 mm
- filling - 90% open, 5% carbonates, 5% opaques

Veins:- 1% milky veins
- size - 2 mm
- filling - 80% carbonates outside the core, 5% fibrous silicates inside the core, 15% open

GMA:- 20%

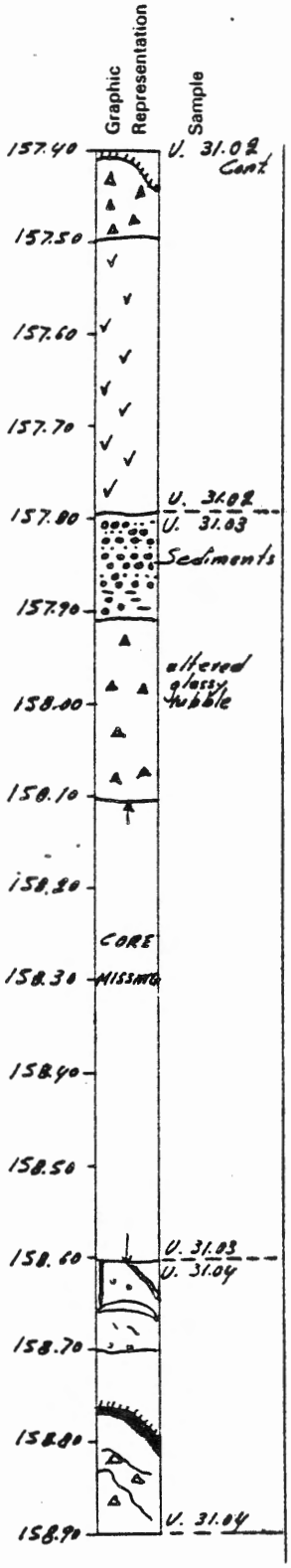
UNIT 31.02 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 31 Sheet 3

Visual Core Description Observer Hussam

Depth Interval 157.40 m to 158.90 m



UNIT 31.02 cont. Description - see Box 31, Sheet 2.

Greyish-green, fine-grained, aphanitic, homogeneous basalt.

UNIT 31.03 OVERALL DESCRIPTION

Upper contact - 157.80 m Depositional.
Lower contact - 158.60 m Ambiguous. Drawn at the base of a zone of lost core.
Unit thickness - 0.80 m

Light reddish-grey, medium- to coarse-grained, poorly bedded sediment (157.80-157.92 m) with underlying green, altered, glassy breccia.

CORE LOST - 158.10-158.60 m

UNIT 31.04 OVERALL DESCRIPTION

Upper contact - 158.60 m Ambiguous. No glass.
Lower contact - 158.90 m Depositional. Altered glass.
Unit thickness - 0.30 m Type of unit: pillow

Greyish-green, fine-grained, aphanitic, homogeneous basalt.

Phenocrysts:- subhedral
- size - 1 mm
- <1% olivine

Vesicles:- 1-2%
- size - 1 mm
- filling - 55% open, 40% carbonates, 5% opaques

Veins:- 5%
- size - 3 mm
- filling - 95% carbonates, 5% opaques

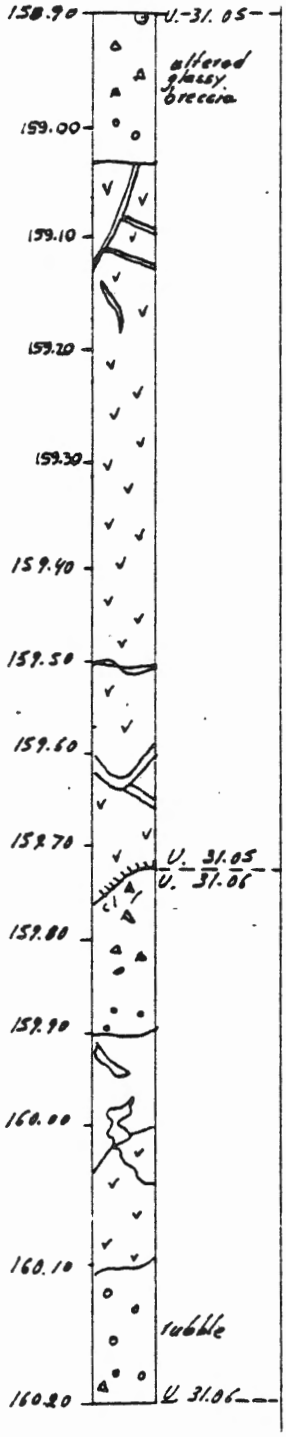
GMA:- 15% - stained

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 31 Sheet 4

Visual Core Description Observer Hassan

Depth Interval 158.90 m to 160.20 m



UNIT 31.05 OVERALL DESCRIPTION

Upper contact - 158.90 m Depositional. Altered glass.
Lower contact - 159.72 m Depositional. Altered glass.
Unit thickness - 0.82 m Type of unit: pillow basalt

Phenocrysts:- 1% clinopyroxene
- anhedral
- size - 1 mm

Vesicles:- 2% overall
- up to 10% in upper 10 cm beneath glassy rim
- filling - 50% open, 40% carbonates, 10% clays

Veins:- 3%
- size - 1-4 mm, thickest in altered glassy rind
- filling - 90% carbonates, 10% clays

GMA:- 3-5% - iron oxide staining
- glass altered to green clays and carbonates

UNIT 31.06 OVERALL DESCRIPTION

Upper contact - 159.72 m Depositional. Altered glass. Dip - 50°.
Lower contact - 160.20 m Ambiguous. Altered glass.
Unit thickness - 0.48 m Type of unit: pillow

Greyish-green, fine-grained, aphanitic, homogeneous basalt.

Phenocrysts:- subhedral
- size - 2 mm
- 2% clinopyroxene

Vesicles:- 1%
- size - 1 mm
- filling - 50% carbonates, 50% opaques

Veins:- 1%
- size - <2 mm
- filling - 60% carbonates, 35% open, 5% sheet silicates

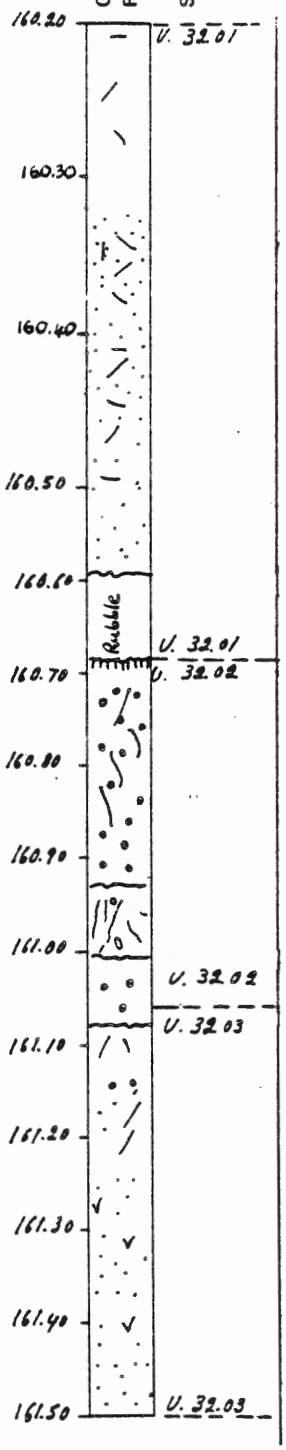
GMA:- 15%, mostly spotty iron oxide staining

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 32 Sheet 1a

Visual Core Description Observer S. Agrell

Depth Interval 160.20 m to 161.50 m



UNIT 32.01 OVERALL DESCRIPTION

Upper contact - 160.20 m Depositional. Chilled, altered glass. Dip - 40°.
Lower contact - 160.68 m Chilled, fractured, broken in rubble.
Unit thickness - 0.48 m

Pillow of fine-grained, aphyric, grey-green basalt with brown mottling (microspherulitic?)

Vesicles:- 6%
- spherical
- size - 1 mm
- filling - 45% open, 30% layer silicates, 20% carbonates, 5% opaques

Veins:- 7%
- size - 3-4 mm - give angular fragments
- narrow fractures
- filling - 90% carbonates, 10% layer silcates
- fissures often thread-like from water vapour with oxidized glass to smectite and Fe hydroxides

GMA:- 25%, rubbly base more altered
- to 70% layer silicates, 30% carbonates

UNIT 32.02 OVERALL DESCRIPTION

Upper contact - 160.68 m Depositional. Chilled, altered green glass. Dip - 10°.
Lower contact - 161.05 m Irregular. Chilled, some altered glass.
Unit thickness - 0.37 m Type of unit - pillow

Vesicular, aphanitic, fine-grained, green-grey basalt.

Vesicles:- 12%
- spherical
- size - 4 mm
- filling - 40% carbonates, 30% open, 20% layer silicates, 10% opaques
- some brownish layer silicates to Fe hydroxide

Veins:- 3% (veins and glass 4%)
- irregular angular fracture veins 10-30 mm wide
- some zoned parallel to the edge
- filling - 85% carbonates, 10% layer silicates, 5% opaques

GMA:- 20% - to 50% layer silicates, 40% carbonates, 10% opaques

UNIT 32.03 Description - see Box 32, Sheet 1b.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 32 Sheet 16

Graphic Representation | Sample

Visual Core Description Observer S. Agrell

Depth Interval 160.20 m to 161.50 m

UNIT 32.03 OVERALL DESCRIPTION

Upper contact - 161.05 m Irregular, rubbly, altered basalt and glass fragments.
Lower contact - 161.50 m Depositional. Chilled, altered glass. Dip - 45°.
Unit thickness - 0.45 m Type of unit - pillow

Greenish-grey, aphyric, fine-grained, vesicular basalt with slight brown mottling.

Vesicles:- maximum - 18%, average - 10%
- decrease in size and amount downwards
- size - 2 - 4 mm
- filling - 70% carbonates, 20% layer silicates, 10% open
- red brown mottling hydration and oxidation through which original textures are still visible

Veins:- 6% (veins and glass 7%)
- angular
- size - 2 mm
- filling - 85% carbonates, 10% layer silicates, 5% opaques

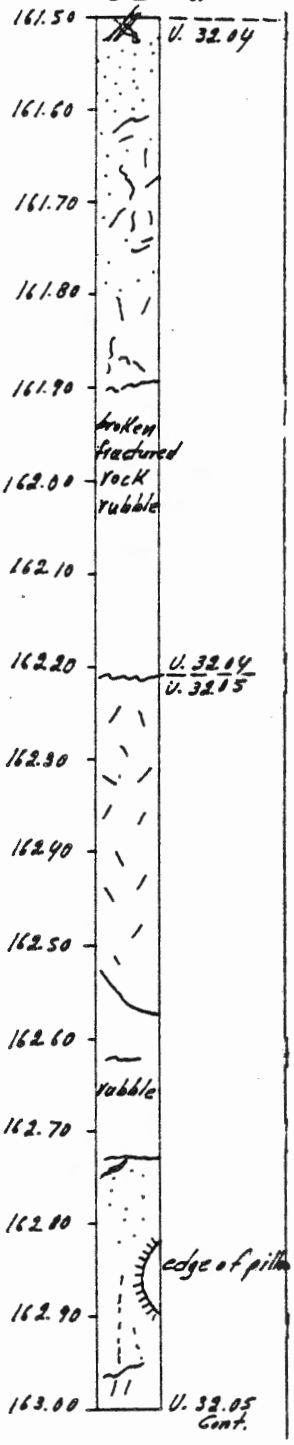
GMA:- 20% - to 60% layer silicates, 30% carbonates, 10% opaques

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 32 Sheet 2

Visual Core Description Observer S. Agrell.

Depth Interval 161.50 m to 163.00 m



UNIT 32.04 OVERALL DESCRIPTION

Upper contact - 161.50 m Depositional. Chilled. Dip - 35°.
Lower contact - 162.20 m Depositional. Chilled. Spall of fragments, green, altered glass, orientation ambiguous, rough.
Unit thickness - 0.70 m Type of unit - pillow

Brownish-grey, fine-grained, aphanitic basalt with chilled top - rotted and broken from 161.90-162.20 m.

Vesicles:- 5%
- size - <1 mm
- filling - 70% open, 20% layer silicates, 10% carbonates

Veins:- 4%
- size - 2 mm
- filling - 90% carbonates, 10% layer silicates

GMA:- 30% - to 60% layer silicates, 20% carbonate, 10% opaques

UNIT 32.05 OVERALL DESCRIPTION

Upper contact - 162.20 m Depositional. Altered glass. Dip - 0°.
Lower contact - 163.94 m Depositional. Chilled, altered to milky green soft rock. Dip - 40°.
Unit thickness - 1.74 m Type of unit - pillow

Very fine-grained, aphyric, brown-grey, vesicular, mottled orange-brown basalt. There are alternating rubbly and fragmented zones with fresher rock in the middle of the unit becoming pale grey in colour near 163.20 m. Near the edges of the pillow, around 163.85 m, the rock becomes fine-grained and chilled at the base around 163.80-163.94 m.

Vesicles:- 5%
- size - <1 mm
- filling - 40% layer silicates, 40% open, 10% carbonates, 10% opaques

Veins and fractures:- narrow and altered in a rubbly zone

Veins and glass:- 5%
- one large 10 mm wide vein parallel to the core at 163.00-163.30 m
- filling - 80% carbonates, 20% layer silicates

GMA:- 30%

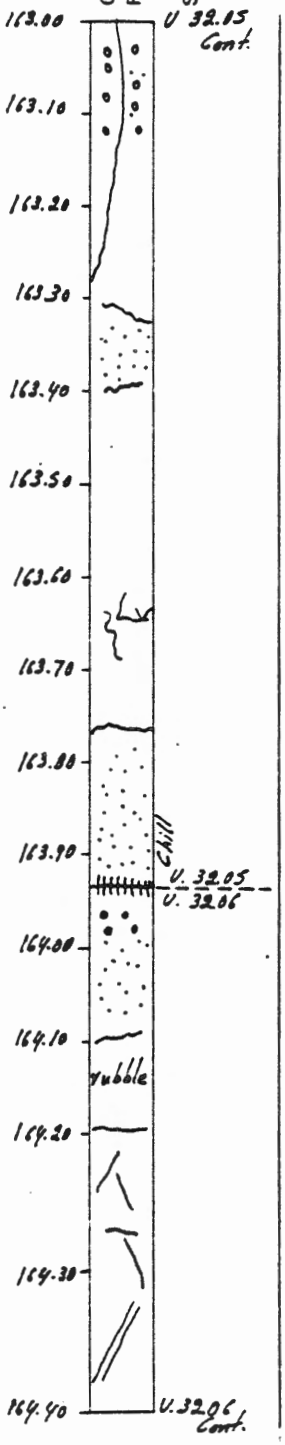
UNIT 32.05 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 32 Sheet 3

Visual Core Description Observer S. Agrell.

Depth Interval 163.00 m to 164.40 m



UNIT 32.05 Description - see Box 32, Sheet 2.

Very fine-grained, phyric, brown-grey, vesicular, also mottled orange-brown basalt pillow.

UNIT 32.06 OVERALL DESCRIPTION

Upper contact - 163.94 m Depositional. Chilled. Dip - 15°.
Lower contact - 166.22 m Chilled, irregular, green.
Smectite replacement of chilled basalt into box structure controlled by polygonal fractures. Dip ambiguous.
Unit thickness - 2.28 m

Chill zone 163.94-164.40 m which is yellow-brown to 164.10 m and olive-grey to grey-green to 164.40 m. Very fine-grained, aphyric basalt.

Vesicles:- <10%
- size - <1 mm
- filling - 45% open, 30% layer silicates, 20% carbonates, 5% opaques

GMA:- 30% - to 60% carbonate, 40% layer silicates

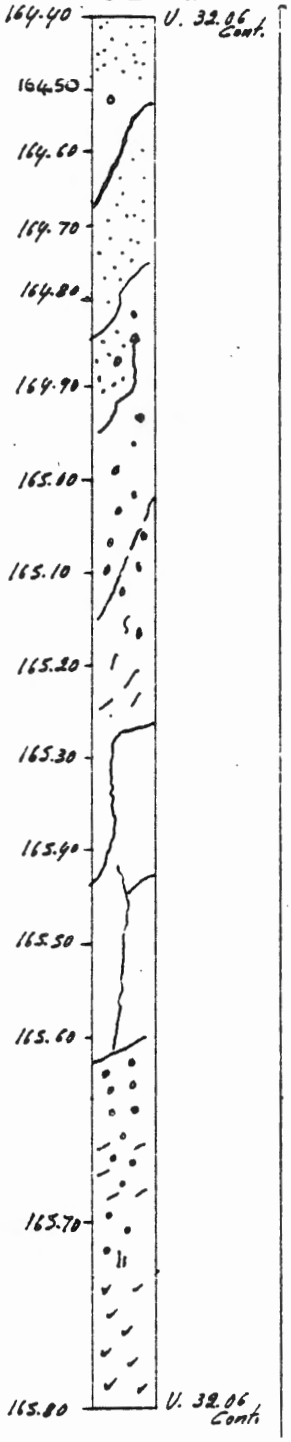
UNIT 32.06 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 32 Sheet 4

Visual Core Description Observer S. Agrell.

Depth Interval 164.40 m to 165.80 m



UNIT 32.06 cont. Description - see Box 32, Sheet 3.

164.50-165.10 m: upper intermediate zone, grey-green, fine-grained, aphyric basalt. Lava becomes darker towards the base of this zone.

Vesicles:- 10%
- size - 4 mm
- two types: white carbonate, green smectite
- filling - 50% layer silicates, 50% carbonate

GMA:- 25% - to 60% carbonate?, 40% layer silicates

165.10-165.40 m: central zone, grain size coarser (2 mm), non-vesicular, aphyric, grey-brown lava. Paler? boninitic andesite or basalt, possibly see pyroxene or plagioclase in glassy devitrified matrix.

GMA:- <20% - to 60% layer silicates, 40% carbonate?

165.40-165.80 m: lower intermediate zone, grain size decreases from 2 mm to 1 mm, aphyric lava.

Vesicles:- 10%
- unevenly distributed
- size - 2-4 mm
- filling - 35% opaques, 30% carbonates, 20% open, 15% layer silicates

GMA:- 25% - to 60% carbonate, 40% layer silicates

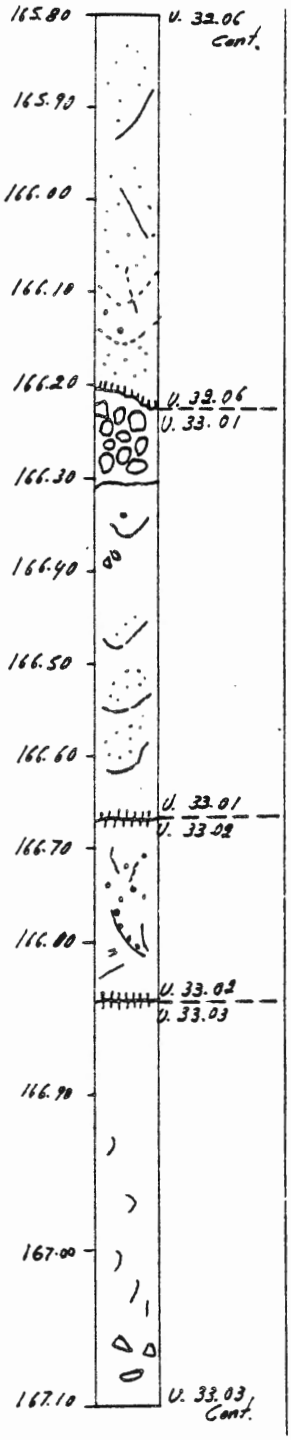
UNIT 32.06 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 33 Sheet 1a

Visual Core Description Observer S. Agrell.

Depth Interval 165.80 m to 167.10 m



UNIT 32.06 cont. Description - see Box 32, Sheets 3 and 4.

Very fine-grained, aphyric basalt. Colour varies from grey-brown to green-grey mottled.

165.80-166.20 m: lower chill zone, vesicular, very fine-grained (0.5 mm), aphyric lava with the following colour variations:
165.90-166.10 m: grey-brown
166.10-166.13 m: brown mottled
166.13-166.20 m: green-grey mottled

GMA:- 7% - to 60% carbonate?, 40% layer silicates

UNIT 33.01 OVERALL DESCRIPTION

Upper contact - 166.22 m Ambiguous.
Lower contact - 166.66 m Depositional. Chilled, altered green glass. Dip - 30°.
Unit thickness - 0.44 m Type of unit - pillow

166.20-166.28 m - rubble of chilled basalt with 10 mm sized box mottling to green smectite with veins by calcite.

Grey, olive, mottled brown, fine-grained, aphyric, vesicular basalt.

Vesicles:- 3%
- size - <3mm
- filling - 65% open, 15% carbonates, 15% layer silicates, 5% opaques

Cracks: veins and glass:- 1%
- size - few 2 mm
- filling - 90% carbonates, 10% layer silicates

GMA:- 20% - to 80% layer silicates, 20% carbonate
- brown-red mottling patches richer in oxidized smectite

UNIT 33.02 OVERALL DESCRIPTION

Upper contact - 166.66 m Altered, green glass. Dip - 40°.
Lower contact - 166.84 m Altered, green glass. Dip - 0°.
Unit thickness - 0.18 m Type of unit - pillow

Grey, olive, mottled brown, fine-grained, aphyric, vesicular basalt.

Vesicles:- 10%
- concentrated in the center of the pillow
- size - 2 mm
- filling - 40% open, 20% opaques, 20% carbonates, 20% layer silicates

Veins:- cracks 1% and glass 2%
- filling - 90% carbonates, 10% layer silicates

GMA:- 30% - to 70% layer silicates, 20% opaques, 10% carbonate

UNIT 33.03 Description - see Box 33, Sheet 1b.

CYPRUS RESEARCH DRILLING PROJECT Drill Hole # Cy-1

Core Box 33 Sheet 16

Graphic Representation | Sample

Visual Core Description Observer S. Agrell

Depth Interval 165.80 m to 167.10 m

UNIT 33.03 OVERALL DESCRIPTION

Upper contact - 166.84 m Altered, green glass. Dip - 0°.
Lower contact - 167.48 m Very irregular box structure of altered basalt (green altered glass) passing into pillow spall breccia, veined and supported by calcite with basalt and altered glass fragments.
Unit thickness - 0.64 m

Grey, fine-grained, aphyric basalt. Grey-brown, mottly spherulites at the base.

Vesicles:- 5%
- filling - 60% open, 20% carbonates, 20% layer silicates

Glass and veins:- 1% carbonate

GMA:- 20%

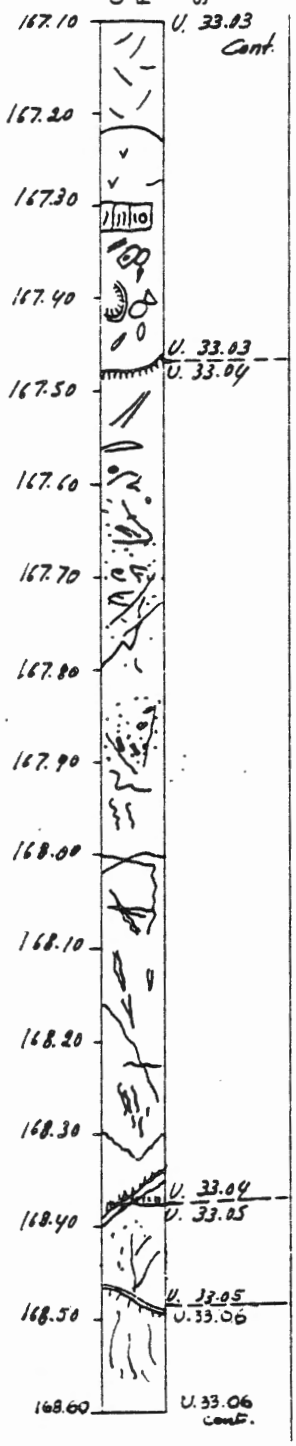
UNIT 33.03 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 33 Sheet 2

Visual Core Description Observer S. Agrell

Depth Interval 167.10 m to 168.60 m



UNIT 33.03 cont. Description - see Box 33, Sheet 1b.

Grey, fine-grained, aphyric basalt with grey-brown, mottly spherulites at base. At the base of the unit, there is spall and flake pillow breccia in a calcite matrix and altered glassy fragments with green basaltic cores. At 167.34 m - small black acicular blocks with botryoidal surface - geothite or manganese oxide.

UNIT 33.04 OVERALL DESCRIPTION
Upper contact - 167.48 m Depositional. Chilled, altered glass. Dip - 45°.
Lower contact - 168.38 m Depositional. Chilled, altered glass. Dip - 10°.
Unit thickness - 0.90 m Type of unit - pillow

Fine-grained, aphyric, sparsely vesicular, grey-brown basalt with yellow-red-brown mottling and oxidation zones marking vapour pathways through the pillow and independant of brecciation veining (older than brecciation).
Near the lower contact there are two components - development of microspherulites which are "yellower" and oxidation of groundmass smectite(?) - browner spherulites which are pyroxene or plagioclase.

Vesicles:- uneven distribution
- maximum size - 2 mm
- filling - 40% layer silicates, 30% open, 20% carbonate, 10% opaques

Fracture veins:- 2%
- veins and glass 4%
- angular, sharp, even the core of the pillow may contain a few green altered glass fragments
- filling - 85% carbonates, 10% layer silicates, 5% opaques

GMA:- average 20%
- to 60% layer silicates, 30% opaques (opaques include component in brown mottling), 10% carbonate
- green alteration above Unit 33.05 is smectite alteration of finely jointed vitreous pillow margin

UNIT 33.05 OVERALL DESCRIPTION
Upper contact - 168.38 m Depositional. Chilled, altered glass. Dip - 40°.
Lower contact - 168.48 m Depositional. Chilled, altered glass. Dip - 30°.
Unit thickness - 0.10 m Type of unit - pillow

Brown-grey, chilled basalt. There is a 2 cm zone of fine smectite alteration of finely jointed vitreous pillow margin.

Vesicles:- 3%
- filling - mostly layer silicates

Veins:- 1%
- filling - 100% carbonate

UNIT 33.06 OVERALL DESCRIPTION - see Box 33, Sheet 3a.
Small pillow lava edge.

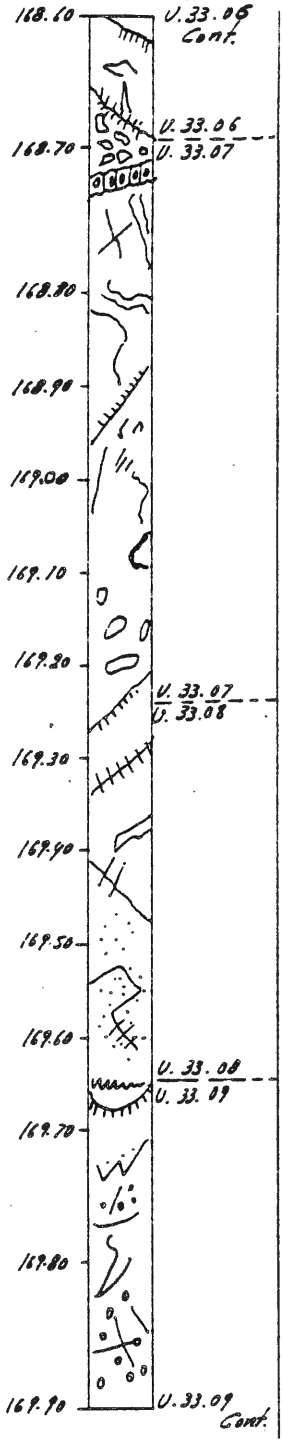
UNIT 33.06 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 33 Sheet 3a

Visual Core Description Observer S. Agrell

Depth Interval 168.60 m to 169.90 m



UNIT 33.06 OVERALL DESCRIPTION

Upper contact - 168.48 m Depositional. Chilled, replaced green glass. Dip - 20°.
Lower contact - 168.70 m Depositional. Chilled, replaced green glass. Dip - 20°.
Unit thickness - 0.22 m

Small pillow lava edge with Unit 33.05.

UNIT 33.07 OVERALL DESCRIPTION

Upper contact - 168.70 m Depositional. Chilled, altered glass of basalt box work. Dip - 20°.
Lower contact - 169.25 m Depositional. Chilled, small rather oxidized pillow, chilled edge. Dip - 80°.
Unit thickness - 0.55 m

Fine-grained, aphanitic, grey-red brown basalt. Clay zone of cracks. Localized zones and patches of brown Fe hydroxide enriched in red brown oxide between brown zone and basalt.

Vesicles:- <1%
- size - 1 mm
- filling - layer silicates and oxidized layer silicates

Veins:- 5%
- veins and glass - 6%
- filling - 90% carbonates, 10% layer carbonates

GMA:- 50%
- to 50% layer silicates, 40% opaques, 10% carbonates

From 168.95 m to 169.25 m - zone of interpillow "vein" fill - composed of fragments of basalt, green altered glass, spall chips and ends tending to be surrounded by a zone of sparry calcite passing into a mixed calcite, clay mineral zone in which small fragments of altered basalt minerals occur. The cream coloured clay and carbonate mud is a little recrystallised and has silt sized grains of igneous origin, and pyrolusite or geothite threads (-monofilament dendrites).

UNITS 33.08 and 33.09 Descriptions - see Box 33, Sheet 3b.

CYPRUS RESEARCH DRILLING PROJECT Drill Hole # CY-1

Core Box 33 Sheet 36

Graphic Representation | Sample

Visual Core Description Observer S. Agrell

Depth Interval 168.60 m to 169.90 m

UNIT 33.08 OVERALL DESCRIPTION

Upper contact - 169.25 m Chilled, altered green glass. Dip - 80°.
Lower contact - 169.65 m Rotted, green glass. Dip - 30°.
Unit thickness - 0.40 m Type of unit - pillow

Fine-grained, aphyric, vesicular, basalt - brownish-grey in colour - yellow brown mottling at streams of devitrified spherulites, zones of spherulites and isolated spherulites near the bottom contact.

Vesicles:- 5%, mostly in the center of the pillow
- rounded
- size - 2 mm
- filling - 45% open, 30% layer silicates, 15% carbonate, 10% opaques

Cracks:- 3%
- angular sets
- size - 1-5 mm
- filling - 90% carbonates, 10% layer silicates

GMA:- 15%
- to 80% layer silicates, 10% carbonates, 10% opaques

UNIT 33.09 OVERALL DESCRIPTION

Upper contact - 169.65 m Depositional. Chilled, green altered glass. Dip - 30°.
Lower contact - 170.10 m Chilled, altered glass. Dip - 80°.
Unit thickness - 0.45 m Type of unit - pillow

Fine-grained, brownish-grey, aphyric, vesicular basalt with brown mottling, spherulites and alteration.

Vesicles:- 5%, variable distribution
- average size - 2 mm
- filling - 50% carbonates, 20% layer silicates, 20% open, 10% opaques

Cracks:- 3%
- size - 2 mm
- filling - 90% carbonates, 10% layer silicates

GMA:- 15%

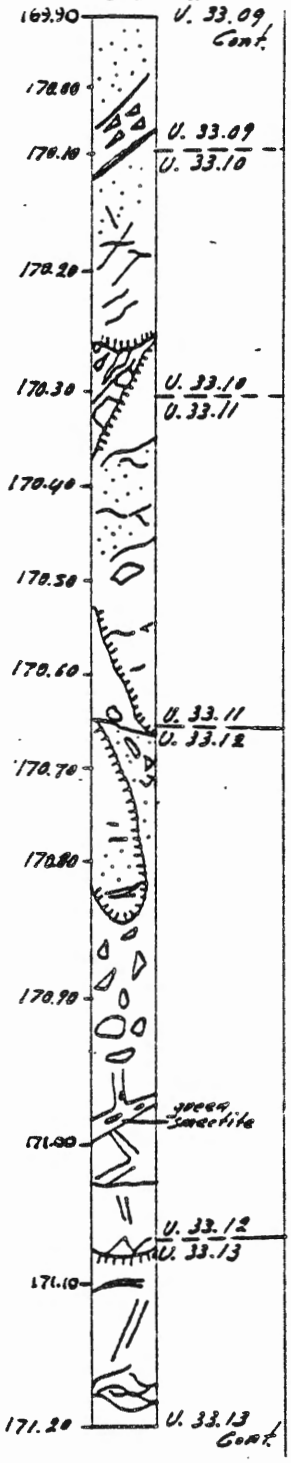
UNIT 33.09 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 33 Sheet 4a

Visual Core Description Observer S. Agrell

Depth Interval 169.90 m to 171.20 m



UNIT 33.09 cont. Description - see Box 33, Sheet 3b

Brownish-grey, aphyric, vesicular, fine-grained, pillow basalt with brown mottling.

UNIT 33.10 OVERALL DESCRIPTION

Upper contact - 170.10 m Depositional. Chilled, green altered glass. Dip - 80°. Microspherulitic.
Lower contact - 170.30 m Chilled, irregular, altered green glass. Dip - 90°. Microspherulitic.
Unit thickness - 0.20 m Type of unit - pillow

Grey-brown, fine-grained, sparsely vesicular basalt.

Vesicles:- 1%
- size - 1 mm
- filling - 50% open, 50% layer silicates

Veins:- 2%
- angular
- size - 1-3 mm
- filling - 90% carbonates, 10% layer silicates
- some hair-line cracks where broken and with olive smectite
- between units, green altered glass pillow spall breccia, matrix - calcite 40%

GMA:- 25%
- layer silicates >> carbonate

UNIT 33.11 OVERALL DESCRIPTION

Upper contact - 170.30 m Depositional. Chilled, green altered glass. Dip - 90°.
Lower contact - 170.67 m Depositional. Chilled, altered green glass. Dip - 75°.
Unit thickness - 0.37 m Type of unit - pillow

Brown-grey, chilled, aphyric basalt.

Vesicles:- <10%
- filling - 60% carbonates, 30% layer silicates, 10% opaques

Veins:- 7%
- filling - 80% carbonates, 20% layer silicates

GMA:- 20%
- layer silicates > carbonate >> opaques

UNITS 33.12 and 33.13 Descriptions - see Box 33, Sheet 4b.

Graphic Representation | Sample

Visual Core Description Observer S Agrell
Depth Interval 169.90 m to 171.20 m

UNIT 33.12 OVERALL DESCRIPTION

Upper contact - 170.67 m Depositional. Chilled, altered green glass. Dip - 30°.
Lower contact - 171.08 m Depositional. Chilled, altered green glass. Dip - 30°.
Unit thickness - 0.41 m

Vesicles:- 5%
- size - 1 mm
- filling - layer silicates > carbonates

Fracture veins:- 4%
- veins and glass - 5%
- altered glass fragments in some
- filling - 80% carbonate, 15% layer silicates, 5% opaques

GMA:- 15%

On either side of Unit 33.12 is a zone of carbonate rich pillow spall breccia - fragments of green altered glass and altered basalt "boxes". Fragments are set in sparry calcite with film of white clay minerals.

UNIT 33.13 OVERALL DESCRIPTION

Upper contact - 171.08 m Depositional. Chilled, irregular, green chilled glass. Dip - 45°.
Lower contact - 171.83 m Depositional. Chilled. Dip - 40°.
Unit thickness - 0.75 m Type of unit - pillow

Fragmented, fine-grained, grey-brown, aphyric basalt. From 171.70-171.83 m - interpillow breccia, altered glass fragments and black umber sediment in a calcite and white layer silicate matrix.

Vesicles:- <10%
- size - <1 mm
- filling - 70% open, 20% layer silicates, 10% carbonates

Veins:- 18%
- filling - 75% carbonates, 20% layer silicates, 5% opaques ("pyrolusite" threads)

GMA:- 15%
- to 80% layer silicates, 10% carbonates, 10% opaques

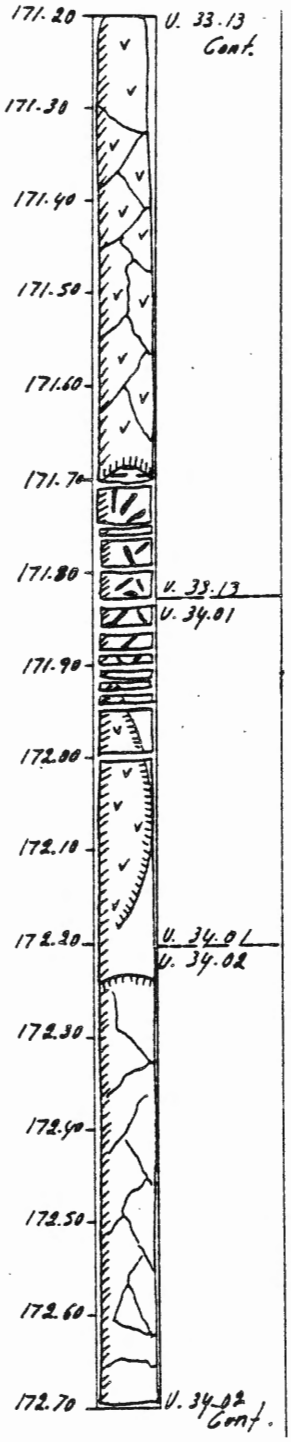
UNIT 33.13 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 34 Sheet 1

Visual Core Description Observer Hassan & Mehegan

Depth Interval 171.20 m to 172.70 m



UNIT 33.13 cont. Description - see Box 33, Sheet 4b.

Fragmented, fine-grained, grey-brown, aphyric basalt. From 171.70-171.83 m - interpillow breccia, altered glass fragments and black umber sediment in a calcite and white layer silicate matrix.

UNIT 34.01 OVERALL DESCRIPTION

Upper contact - 171.83 m Depositional. Altered glass.
Lower contact - 172.20 m Depositional. Altered glass. Dip - 80°.
Unit thickness - 0.37 m Type of unit - pillow

Brown, aphyric basalt.

Vesicles:- 1%
- size - 1 mm
- filling - 80% carbonates, 15% open, 5% opaques

Veins:- 10%
- filling - 70% carbonates, 24% open, 5% calcite, 1% opaques

GMA:- 70% - to 90% calcite, 10% opaques

UNIT 34.02 OVERALL DESCRIPTION

Upper contact - 172.20 m Depositional. Dip - 50°.
Lower contact - 172.87 m Ambiguous - in broken core.
Unit thickness - 0.67 m Type of unit: pillow

Brown, fine-grained, homogeneous basalt.

Phenocrysts:- 1%
- size - 1 mm
- pyroxene

Vesicles:- 20%
- size - 1 mm
- filling - 60% carbonates, 40% opaques

Veins:- 1% milky
- size - 4 mm
- filling - 80% carbonates, 15% sheet silicates, 5% clay minerals

GMA:- 10% - to 60% smectite, 30% pyroxene, 10% opaques

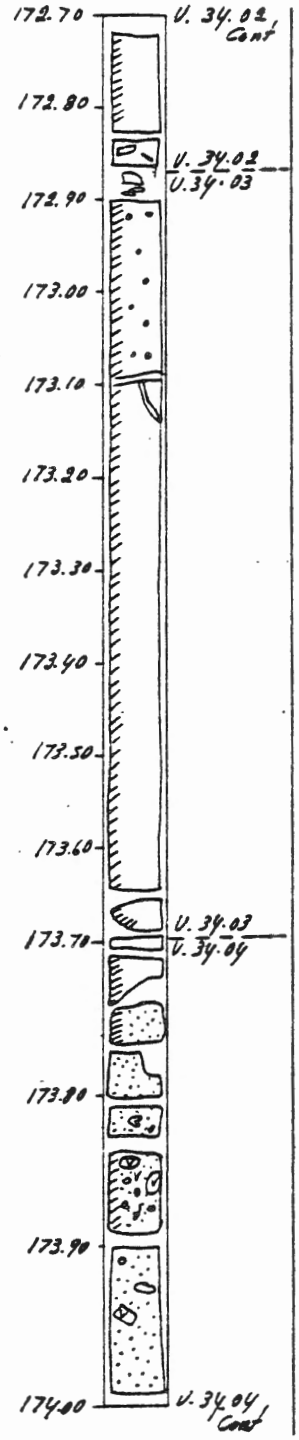
UNIT 34.02 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 34 Sheet 2

Visual Core Description Observer Hassan & Mehegan

Depth Interval 172.70 m to 174.00 m



UNIT 34.02 cont. Description - see Box 34, Sheet 1.

Brown, homogeneous, fine-grained pillow basalt.

UNIT 34.03 OVERALL DESCRIPTION

Upper contact - 172.87 m Depositional. Dip - 10°.
Lower contact - 173.70 m Depositional. Dip - 5°.
Unit thickness - 0.83 m Type of unit: pillow

Greenish brown, fine-grained, homogeneous basalt.

Phenocrysts:- 2%, pyroxene

Vesicles:- 20%
- size - 1 mm
- filling - 60% carbonates, 35% open, 5% sheet silicates

Veins:- size - 4 mm
- filling - 60% carbonates, 20% open, 10% sheet silicates, 5% manganese oxide, 5% opaques

GMA:- 10% - to 70% smectite, 30% opaques

UNIT 34.04 OVERALL DESCRIPTION

Upper contact - 173.70 m Depositional. Dip - 0°.
Lower contact - 174.60 m Depositional. Dip - 50°.
Unit thickness - 0.90 m Type of unit - sediment

Grey to reddish-grey, fine- to coarse-grained, very poorly bedded sediment with subrounded rock fragments up to 30 mm in a fine-grained matrix containing some black mud coatings. Some slickensided surfaces. The rock becomes fine-grained and indistinct near base of unit.

UNIT 34.04 cont.

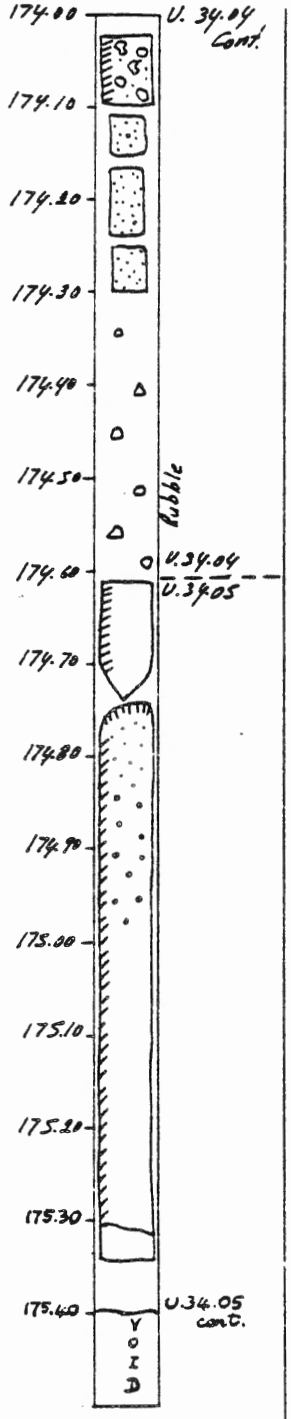
CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 34 Sheet 3

Graphic Representation | Sample

Visual Core Description Observer Hassan

Depth Interval 174.00 m to 175.40 m



UNIT 34.04 cont. Description - see Box 34, Sheet 2.

Grey to reddish-grey, fine- to coarse-grained, very poorly bedded sediment.

UNIT 34.05 OVERALL DESCRIPTION

Upper contact - 174.60 m Depositional. Dip - 50°
Lower contact - 176.20 m Ambiguous.
Unit thickness - 1.60 m Type of unit: pillow

Greenish-brown, fine-grained, homogeneous basalt.

Phenocrysts:- 2%, pyroxene
- size - 1 mm

Vesicles:- 10%
- size - 2 mm
- filling - 80% carbonates, 20% opaques

Veins:- size - 4 mm
- filling - 70% carbonates, 25% clay minerals, 5% calcite and some manganese oxide

GMA:- 10% - to 70% smectite, 30% opaques

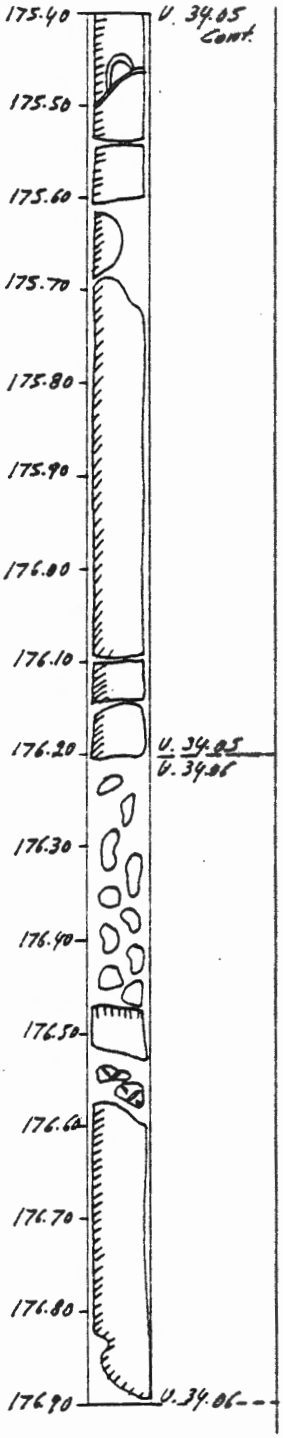
UNIT 34.05 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 34 Sheet 4

Visual Core Description Observer Hassan

Depth Interval 175.40 m to 176.90 m



UNIT 34.05 cont. Description - see Box 34, Sheet 3.

Greenish-brown, fine-grained, homogeneous basalt.

UNIT 34.06 OVERALL DESCRIPTION

Upper contact - 176.20 m Ambiguous.
Lower contact - 176.90 m Depositional. Dip - 30°
Unit thickness - 0.70 m Type of unit: pillow

Green-brown, fine-grained, homogeneous basalt.

Phenocrysts:- 1%, pyroxene
- size - 2 mm

Vesicles:- 10%
- size - 1 mm
- filling - 70% open, 20% carbonates, 10% opaques

Veins:- milky veins
- size - 5 mm
- filling - 60% carbonate, 38% open, 2% opaques

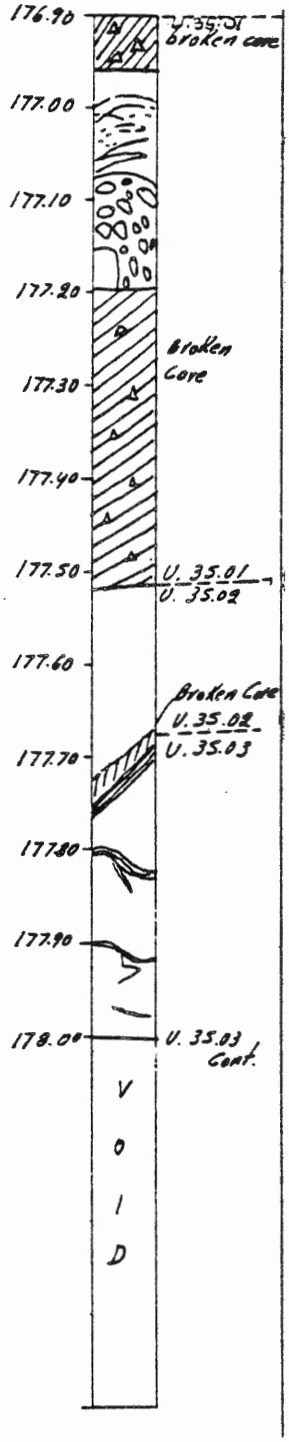
GMA:- 15% - to 65% smectite, 35% opaques

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 35 Sheet 1a

Visual Core Description Observer R. Barragar

Depth Interval 176.90 m to 178.00 m



UNIT 35.01 OVERALL DESCRIPTION

Upper contact - 176.90 m Thick (30-40 mm) altered, glassy margin - now 75% green smectite, 20% carbonate, and ±5% clay. Dip 45°. The relationship of the chilled margin to the following unit is uncertain. It may belong to unit above (34.06).
Lower contact - 177.51 m Missing.
Unit thickness - 0.61 m

Highly friable and brecciated mafic volcanic which extends down into the length of the broken core. Medium-grained, light brown, aphyric, mafic breccia. Fragment size - 10-20 mm.

Vesicles:- 2-3%
- maximum average size - 1 mm or less

No veins.

GMA:- extensive - 80%?
- to clays, quartz, carbonates
- finely open structured and friable

UNIT 35.02 OVERALL DESCRIPTION

Upper contact - 177.51 m Missing.
Lower contact - 177.67 m Missing.
Unit thickness - 0.16 m

Fine-grained, greenish-grey, aphyric basalt.

Vesicles:- 5%
- equidimensional but irregular in shape
- average maximum size - 5 mm
- filling - 90% carbonates, 10% smectite

Spotting:- 5%
- average maximum size - ca 5 mm
- Fe oxide brown spotting closely related to vesicles but the rims not always well defined and they appear to extend beyond the vesicles into the groundmass
- in places, what appear to be vesicles are filled by both brownish oxide and carbonate filled segregation vesicles

Veins:- 2%
- filling - carbonates

UNIT 35.03 Description - see Box 35, Sheet 1b.

CYPRUS RESEARCH DRILLING PROJECT Drill Hole # Cy-1

Core Box 35 Sheet 16

Graphic Representation | Sample

Visual Core Description Observer R. Bragar

Depth Interval 176.90 m to 178.00 m

UNIT 35.03 OVERALL DESCRIPTION

Upper contact - 177.67 m Altered glass minimum of 5 mm thick composed of 50% braided green smectite and 50% pale green granular-like clay mineral? Dip - 65°.
Lower contact - 178.17 m Altered glass, about 10 mm thick - mainly green smectite after glass. Dip - 55°.
Unit thickness - 0.50 m

Greenish-grey, sparsely porphyritic, slightly clinopyroxene phyric basalt with a fine-grained matrix.

Phenocrysts:- very sparse - <1%
- evident uniform distribution
- size - 1 mm or less
- clinopyroxene

Vesicles:- 5-10%
- average size - 3 mm
- maximum size - 7 mm
- filling - 60% open, 40% carbonates

Spotting:- 5%
- Fe oxide, brown
- average size - 6 mm
- maximum size - 10 mm

Veins:- 3%
- network white veins
- maximum size - 7mm
- filling - 80% calcite, 20% clay minerals - the latter in vein centers
- (including margins about 7% of which are - 60-70% smectite and 30-40% carbonates.)

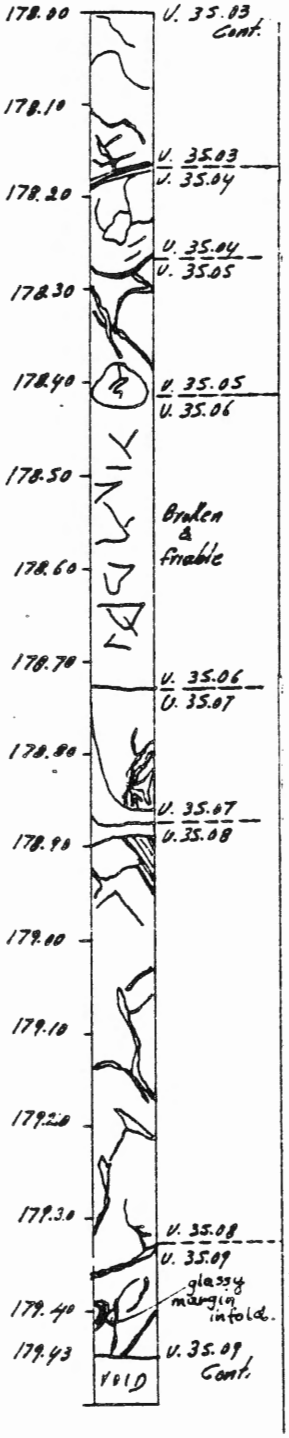
UNIT 35.03 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 35 Sheet 2a

Visual Core Description Observer R Barragar

Depth Interval 178.00 m to 179.43 m



UNIT 35.03 cont. Description see - Box 35, Sheet 1b.

Slightly clinopyroxene phyric basalt.

UNIT 35.04 OVERALL DESCRIPTION

Upper contact - 178.17 m Depositional.
Lower contact - 178.27 m Depositional.
Unit thickness - 0.10 m

Small unit of brownish-grey, fine-grained, aphyric basalt. Separated by altered glassy margins but broken up and nothing in place. Evidently small pillow lobes.

UNIT 35.05 OVERALL DESCRIPTION

Upper contact - 178.27 m Incomplete - appears to dip 45°.
Altered, glassy margin - green smectite and lenses of pale clay?
Lower contact - 178.41 m Missing - cut off by shears. Dip 50°.
Unit thickness - 0.14 m

Brownish-grey, aphanitic, aphyric basalt pillow.

Vesicles:- 5-10%
- average maximum size - 2 mm
- filling - 75% carbonates, 25% open

Spotting:- 2%
brown, Fe oxide
- size - 1-2 mm

Veins:- 5%
- rectilinear
- including the upper margin, veins - 10%
- filling - 50% carbonates, 50% green smectite

UNIT 35.06 OVERALL DESCRIPTION

Upper contact - 178.41 m Ambiguous.
Lower contact - 178.73 m Ambiguous.
Unit thickness - 0.32 m

Zone of broken and friable core. At least some altered glass present but the majority is altered, hydrated clayey material - evidently shear zone gouge.

UNITS 35.07 and 35.08 Descriptions - see Box 35, Sheet 2b.
UNIT 35.09 Description - see Box 35, Sheet 3a.

Graphic Representation | Sample

Visual Core Description Observer R. Bacagar
Depth Interval 178.00 m to 179.43 m

UNIT 35.07 OVERALL DESCRIPTION

Upper contact - 178.73 m Missing.
Lower contact - 178.87 m 10 mm thick, altered, glassy margin. 90% broken, greenish smectite and 10% intercalated carbonate. Dip 45°.
Unit thickness - 0.14 m Type of unit - pillow

Brownish, aphyric, aphanitic basalt.

Vesicles:- 1-2%
- filling - uncertain

Spotting:- ±5%
- brown Fe oxide
- average maximum size - 5-6 mm

Veins:- 15%
- vuggy
- filling - predominantly carbonate
- 35% including margins - 60% is green smectite and 40% is carbonate

UNIT 35.08 OVERALL DESCRIPTION

Upper contact - 178.87 m 150 mm thick, altered glass margin composed of 50% braided green smectite lenses, 10% pale yellow-green smectite and 40% carbonate. Dip - 75°.
Lower contact - 179.33 m Shear contact. Slickensided gouge across 10-20 mm?. Dip - 40°.
Unit thickness - 0.46 m Type of unit - pillow

Fine-grained to aphanitic, brownish-grey, aphryic, basalt.

Vesicles:- 10%
- tending to concentrated in zones dipping 45°.
- average maximum size - 3 mm
- maximum size - 15 mm
- filling - carbonate

Spotting:- 2-3%, most concentrated within 10 cm of the upper boundary
- average maximum size - 4 mm
- Fe oxide spotting - some of which is related to the vesicles
- one 15 mm elongate spot perpendicular to the upper boundary

Veins:- about 7%
- filling - white and brownish carbonate predominate
- including upper glassy margin - 10% veins, with 65% carbonates and 35% layer silicates

UNIT 35.09 Description - see Box 35, Sheet 3a.

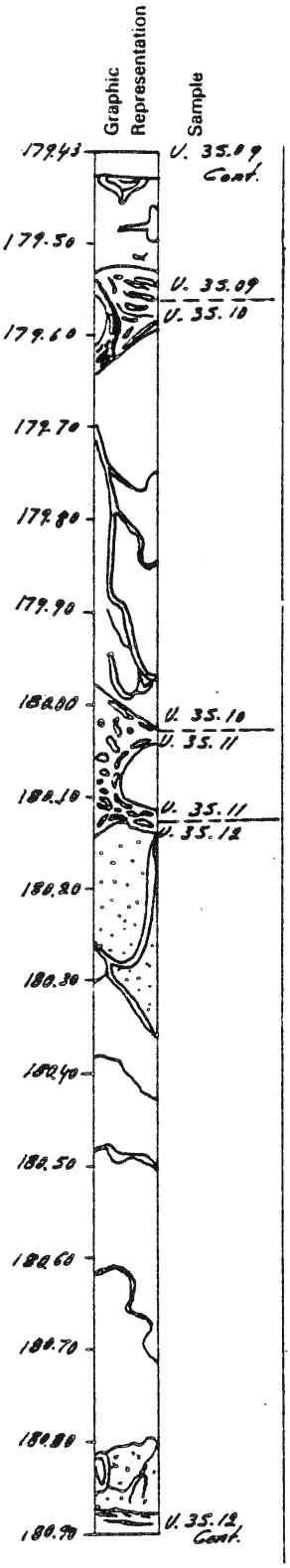
Brownish-grey, aphyric, aphanitic pillow basalt.
UNIT 35.09 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 35 Sheet 3a

Visual Core Description Observer R. Barragar

Depth Interval 179.43 m to 180.90 m



UNIT 35.09 OVERALL DESCRIPTION

Upper contact - 179.33 m Shear zone as above.
Lower contact - 179.57 m Incomplete. Evidently thick (15 mm) altered, glassy margin - braided green smectite and intercalated carbonate.
Unit thickness - 0.24 m Type of unit - pillow

Brownish-grey, aphyric, aphanitic basalt.

Vesicles:- 2-3%
- average maximum size - 2 mm
- filling - 75% carbonates and 25% open

Spotting:- 2-3% - at least some related to vesicles
- average maximum size - ca 2 mm

Veins:- 4%
- filling - predominantly carbonate

UNIT 35.10 OVERALL DESCRIPTION

Upper contact - 179.57 m Minimum of 10 mm thick but includes material of triple pillow junction. 50% broken, braided, green smectite embedded in 50% white to buff carbonate. Dip - 55°.
Lower contact - 180.02 m Altered glassy margin comprising 60% green braided smectite, in part broken and disoriented, 1 or 2 lithic fragments, embedded in 40% carbonate. Dip - 40°.
Unit thickness - 0.45 m

Brownish-grey, aphyric, fine-grained, basaltic pillow.

Vesicles:- 2-3%
- average maximum size - 1 mm
- filling - 80% open, 20% carbonate

Veins:- 6-7%
- predominantly carbonate - vuggy
- size - 1-10 mm
- margins comprise 6%
- filling - 75% smectite and 25% carbonate

UNIT 35.11 OVERALL DESCRIPTION

Upper contact - 180.02 m Depositional.
Lower contact - 180.12 m Depositional.
Unit thickness - 0.10 m

Lobe of adjoining pillow. Too small to sample. Aphanitic basalt, grey-green in colour.

UNIT 35.12 Description - see Box 35, Sheet 3b.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 35 Sheet 36

Graphic Representation | Sample

Visual Core Description Observer R. Baragar

Depth Interval 179.43 m to 180.90 m

UNIT 35.12 OVERALL DESCRIPTION

Upper contact - 180.12 m 10 mm thick margin, altered 70% glass green smectite, and 30% carbonate. Dip - 30°.
Lower contact - 180.93 m Altered glass - minimum of 50 mm but margin not complete. Dip 0°.
Unit thickness - 0.81 m

Brown-grey to green-grey, fine-grained, weakly phyric pillow basalt.

Phenocrysts:- <1% olivine pseudomorphs
- average maximum size - 2 mm
- <1% clinopyroxene phenocryst
- size - ± 1 mm
- both too few and scattered to note distribution

Vesicles:- 3-5%, most concentrated in the upper 20 cm where they reach 15%
- average maximum size - 3 mm
- filling - predominantly carbonate

Spotting:- Fe oxide brown spotting in part related to vesicles
- ranges from rounded with fairly distinct boundaries even locally with minor smectite core to highly irregular with a tendency to elongation parallel to flow contact particularly in lower 20 cm
- size range - 2 mm (rounded) to 20 mm (elongate)

Veins:- about 6%
- interval rectilinear veins
- size - 1-10 mm
- filling - predominantly carbonate
- including margins and veins - 2.5% - with - 75% smectite and 25% carbonates

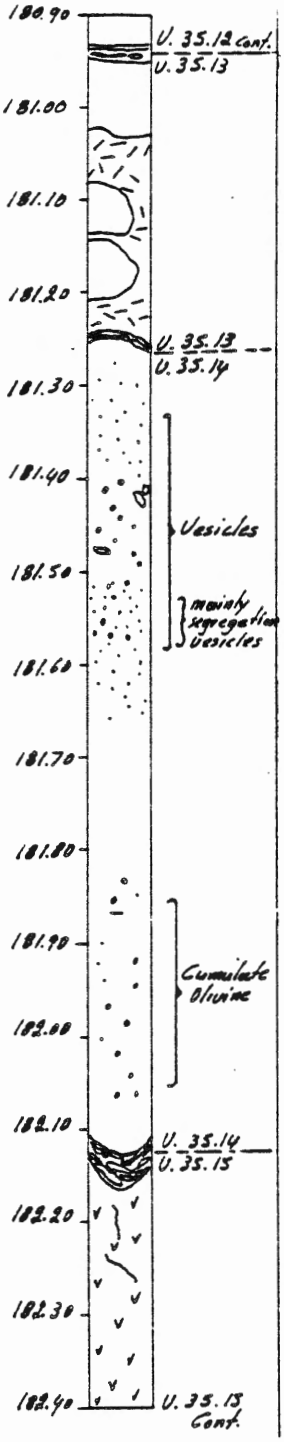
UNIT 35.12 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 35 Sheet 4a

Visual Core Description Observer R. Barragar

Depth Interval 180.90 m to 182.40 m



UNIT 35.12 cont. Description - see Box 35, Sheet 3b.

Brown-grey to green-grey, weakly phyric, pillow basalt.

UNIT 35.13 OVERALL DESCRIPTION

Upper contact - 180.93 m Altered glassy rim but incomplete.
Lower contact - 181.26 m Not present.
Unit thickness - 0.33 m

Greenish-grey, aphanitic, aphyric pillow basalt.

Vesicles:- 3-4%
- maximum average size - 1.5 mm
- filling - 55-60% open, 25% carbonates, 15-20% brown Fe oxides

Veins:- 5% or less
- filling - mainly carbonate

GMA:- extensive ±60%?
- crumbly, friable, much of it broken

UNIT 35.14 OVERALL DESCRIPTION

Upper contact - 181.26 m Altered glassy margin, minimum of 10 mm thick. Mainly green smectite (75%) with mineralized carbonate (25%). Dip - 30°.
Lower contact - 182.12 m Dip - 50°.
Unit thickness - 0.86 m

Greenish-grey, medium-grained, olivine phyric basalt.

Phenocrysts:- overall 1-2%, concentrated between 181.80 m and 182.05 m where they are about 5-7%
- average maximum size - 4 mm
- olivine pseudomorphs

Vesicles:- overall 2.5-3%, concentrated in the upper 30 cm where 15%
- average maximum size - 3-4 mm, maximum - 15 mm
- filling - 60% carbonate, 35% segregation vesicles mainly in the lower part of amygdaloidal zone, 5% open

Veins:- 2% - carbonate
- counting margins - 4% total, with - 50% green smectite, 50% carbonate

UNIT 35.15 Description - see Box 35, Sheet 4b.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 35 Sheet 4b

Graphic Representation | Sample

Visual Core Description Observer R. Baragar

Depth Interval 180.90 m to 182.40 m

UNIT 35.15 OVERALL DESCRIPTION

Upper contact - 182.12 m About 5 mm green altered glass.
Lower contact - 182.53 m 10 mm altered glass. Dip - 45°.
Unit thickness - 0.41 m Type of unit - pillow

Grey-green, fine-grained, slightly olivine phyric basalt.

Phenocrysts:- <1% olivine pseudomorphs near the base of the pillow
- average maximum size - 2 mm

Vesicles:- 15%
- maximum average size - 2 mm
- maximum size - 10 mm
- filling - 60% carbonate, 30% open, 10% segregation vesicles

Veins:- 3% carbonate
- filling including margins - 65% smectite, 35% carbonate

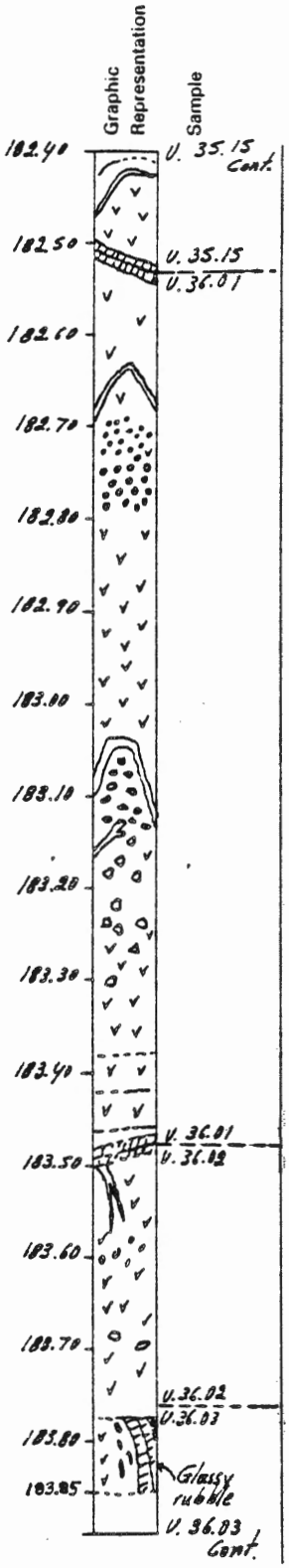
UNIT 35.15 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 36 Sheet 1a

Visual Core Description Observer Hall / Elsbree

Depth Interval 182.40 m to 183.85 m



UNIT 35.15 cont. Description - see Box 35, Sheet 4b.

Grey-green, very sparsely phyric pillow basalt.

UNIT 36.01 OVERALL DESCRIPTION

Upper contact - 182.53 m Depositional, altered glass. 20-30 mm of brecciation of green glass with carbonate present. Colour grades from green to green-grey towards the center. Dip - 30°.
Lower contact - 183.48 m Depositional, altered glass and carbonate present. Colour grades upwards from green to pinkish-grey, towards the unit center. Dip - 40°.
Unit thickness - 0.95 m Type of unit - pillow

Grey, fine-grained, olivine phyric basalt.

Phenocrysts:- 3% concentrated between 183.05-183.30 m
- size - 4 mm
- olivine pseudomorphs now Fe oxides
- settling texture
- subhedral

Vesicles:- 6% concentrated at 182.65-182.75 m and 182.30 m
- size - <1- 5 mm, but average of the 10 largest is 3 mm
- filling - 80% calcite, 10% clays, 10% open

Veins:- 3% at 182.65 m and 183.05 m
- maximum size - 8-9 mm
- filling - 80% calcite, 20% clays

GMA:- 25% - to 90% clay and 10% carbonate

UNIT 36.02 OVERALL DESCRIPTION

Upper contact - 183.48 m Depositional, altered glass. Green colour at contact grading down to pinkish towards the center. Variolitic. Dip - 30°.
Lower contact - 183.76 m Depositional, glassy rubble (altered).
Unit thickness - 0.28 m

Grey, fine-grained, slightly phyric, pillow basalt.

Phenocrysts:- <1%
- average size - 4 mm at 183.65 m
- olivine pseudomorphs altered to Fe oxides
- subhedral, settling

Vesicles:- 4%, concentrated at 183.57 m
- average size - 2 mm
- filling - 80% carbonates, 20% open

Veins:- 1%, concentrated at 183.57 m
- average size - <1 mm
- maximum size - 2 mm
- filling - 100% carbonate

GMA:- 25% - to 90% clays, 10% carbonate

UNIT 36.03 Description - see Box 36, Sheet 1b.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 36 Sheet 1b

Graphic Representation | Sample

Visual Core Description Observer Hall / Elsbree

Depth Interval 182.40 m to 183.85 m

UNIT 36.03 OVERALL DESCRIPTION

Upper contact - 183.76 m Depositional. Altered glassy rubble, vertical. Brecciated, with glassy spalls.
Lower contact - 183.91 m Altered glassy rubble. Brecciated with glassy spalls, vertical.
Unit thickness - 0.15 m

Ambiguous unit - some type of margin zone, but not clear as to what margin (i.e. belonging to the unit above or below, or distinct from either). Grey-green, fine-grained, aphyric basalt with glass.

Vesicles:- 3%
- average size - 1 mm
- filling - 50% open, 25% carbonates, 25% clay

Veins:- 4% (margin material mostly)
- filling - 70% altered glass and 30% carbonate

GMA:- 20% - to 90% clay and 10% carbonate
- fine network of cracks (carbonate lined) with associated alteration "fronts" along them (approximately 2-3 mm wide)

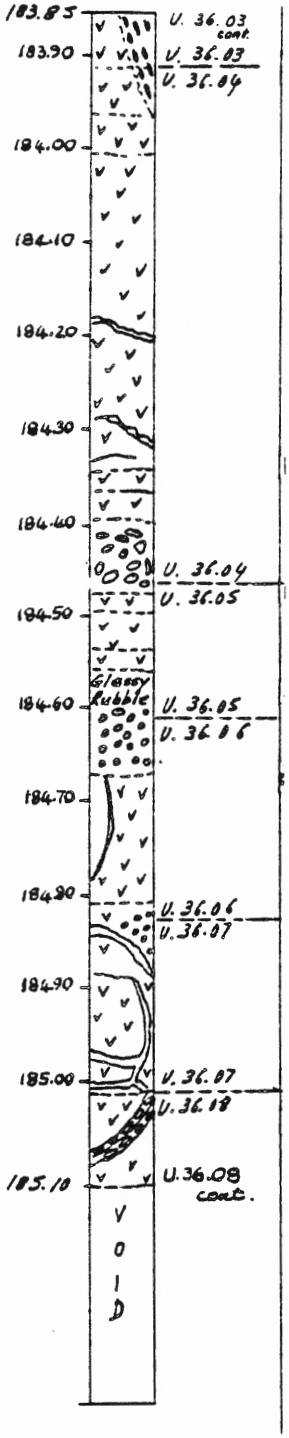
UNIT 36.03 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 36 Sheet 2a

Visual Core Description Observer Hall / Elsbree

Depth Interval 183.85 m to 185.10 m



UNIT 36.03 cont. Description - see Box 36, Sheet 1b.

Grey-green, fine-grained, aphyric basalt with glass.

UNIT 36.04 OVERALL DESCRIPTION

Upper contact - 183.91 m Depositional, variolitic. Vertical, altered glass with carbonate. Colour grades from greenish- to pinkish-grey at center.
Lower contact - 184.45 m Depositional. In altered, glassy brecciated zone with carbonate. Brecciated zone is 40 mm wide.
Unit thickness - 0.54 m Type of unit - pillow

Grey, fine-grained, aphyric basalt.

Vesicles:- 1% concentrated at 184.25 m
- average size - 2 mm
- filling - 40% open, 30% carbonates, 30% clays

Veins:- 3% (with margin material) concentrated at 184.28 m
- average size - <1 mm
- maximum size - 4 mm
- filling - 90% carbonates, 10% clays

GMA:- 20% - to 90% clay, 10% carbonate

UNIT 36.05 OVERALL DESCRIPTION

Upper contact - 184.45 m Depositional, altered glass. Variolitic. Brecciated zone (40 mm) with altered glass and carbonate. Dip and azimuth ambiguous.
Lower contact - 184.60 m Depositional. Terminates in altered, glassy rubble zone, so dip etc. are ambiguous.
Unit thickness - 0.15 m Type of unit - pillow

Grey-green, fine-grained, very fragmental, aphyric basalt.

Vesicles:- 5%
- average size - 1 mm
- filling - 50% clays, 30% open (lined with bluish clay), 20% carbonates

Veins:- (including margin material) 12%
- size - <<1 mm
- few fractures lined with carbonate

GMA:- 25% - to 90% clays and 10% layer silicates
- unit is pervasively fractured and has alteration 1-2 mm wide along these fractures

UNITS 36.06, 36.07 and 36.08 Descriptions - see Box 36, Sheet 2b.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 36 Sheet 26

Graphic Representation | Sample

Visual Core Description Observer Hall/Elsdon

Depth Interval 183.85 m to 185.10 m

UNIT 36.06 OVERALL DESCRIPTION

Upper contact - 184.60 m Depositional, in altered glassy rubble.
Lower contact - 184.83 m? Depositional. Altered glass. Zone of glass, carbonate, and pinkish clay, all fragmented, approximately 30 mm wide. Colour is orange above the lower contact.
Unit thickness - 0.23 m Type of unit - pillow
Grey, fine-grained, aphyric basalt.

Vesicles:- 5% concentrated at 184.70-184.75 m
- size - 2 mm
- filling - 60% open, 35% clays, 5% carbonates
- frequent Fe-staining at rims or lined with clay

Veins:- 5% at 184.65-184.75 m
- size - 1-5 mm
- maximum size - 4-5 mm
- filling - 50% clay, 50% carbonate

GMA:- 25% - to 90% clays and 10% carbonate
- common Fe staining

UNIT 36.07 OVERALL DESCRIPTION

Upper contact - 184.83 m Depositional. Altered glass. See above for description.
Lower contact - 185.01 m Depositional, narrow (10 mm) zone of glass fragments. Altered glass. Dip - 65°.
Unit thickness - 0.18 m Type of unit - pillow
Grey, fine-grained, aphyric basalt.

Vesicles:- 7%
- evenly distibuted
- size - 2 mm
- filling - 60% open, 30% clays, 10% carbonates

Veins:- 12% at 184.85 m and 184.95 m
- average size - 2-3 mm
- maximum size - 12 mm
- filling - 50% clays and 50% carbonate

GMA:- 25% - to 90% clay and 10% carbonate
- frequent Fe-oxide staining

UNIT 36.08 OVERALL DESCRIPTION

Upper contact - 185.01 m Altered glass. Narrow zone (10 mm) glassy fragments. Orange colour at contact grades to grey red towards center. Dip - 65°.
Lower contact - 185.35 m Depositional. Altered glass. Zone about 15 mm wide. Horizonal, glass with carbonate. Colour is orange at contact, to grey-red at center.
Unit thickness - 0.34 m Type of unit - pillow
Grey-red, fine-grained, aphyric basalt.

Vesicles:- 2% concentrated at the upper and lower contacts
- size - 2 mm
- filling - 70% open, 20% clays, 10% carbonates

Veins:- 7% concentrated at 185.20-185.30 m
- average size - <1 mm
- maximum size - 8-9 mm
- filling - 90% carbonates, 10% clays

GMA:- 25% - to 90% clay and 10% carbonate
- some Fe oxide staining

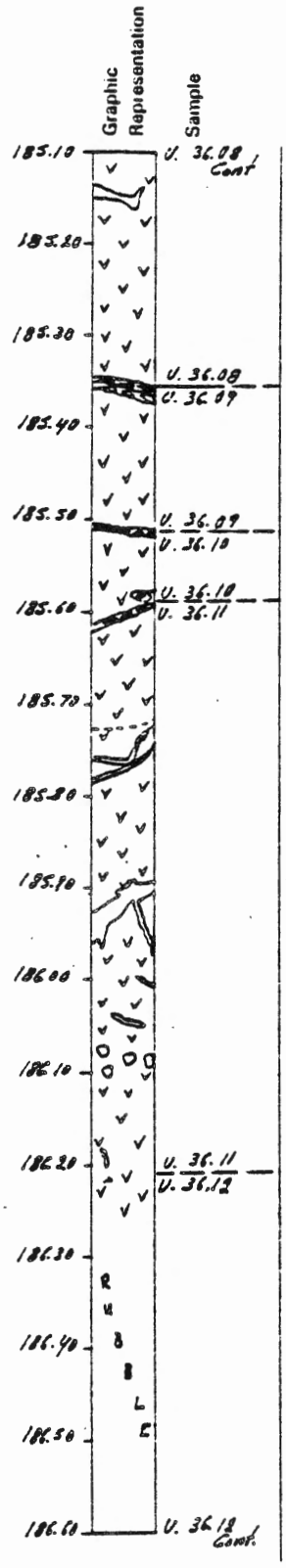
UNIT 36.08 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 36 Sheet 3a

Visual Core Description Observer Hall / Elsbree

Depth Interval 185.10 m to 186.60 m



UNIT 38.08 cont. Description - see Box 36, Sheet 2b.

Grey-red, fine-grained, aphyric pillow basalt.

UNIT 36.09 OVERALL DESCRIPTION

Upper contact - 185.35 m Depositional. Altered glass, narrow zone (15 mm) of glassy fragments and carbonate. Horizontal.
Lower contact - 185.50 m Depositional, altered glass, horizontal, narrow zone (10 mm) of glass and carbonate.
Colour grades from green-red at the center to orange-pink.
Unit thickness - 0.15 m Type of unit - pillow

Grey-red, fine-grained, aphyric basalt.

Vesicles:- 1% scattered through the unit
- size - 1 mm
- filling - 95% open, <5% carbonates
- some are clay lined

Veins:- 4% (mostly margin material)
- scattered through the unit
- filling - 95% carbonates, 5% clays
- average size - <1 mm
- maximum size - 3 mm

GMA:- 25% - to 90% clay and 10% carbonate
- some Fe oxide staining

UNIT 36.10 OVERALL DESCRIPTION

Upper contact - 185.50 m Depositional, altered glass, in a narrow zone, 10 mm wide of glassy fragments and carbonate. Horizontal.
Lower contact - 185.58 m Depositional. Altered glass. In a zone, 10 mm wide, of carbonate and glass. Dip - 30°.
Unit thickness - 0.08 m Type of unit - pillow?

Red-grey, fine-grained, aphyric basalt.

Vesicles:- 2%, evenly distributed through the unit
- size - 1 mm
- filling - 65% greenish clay, 30% open, 5% carbonates

Veins:- 12% (marginal material)
- average size - approximately 1 mm
- maximum size - 3-4 mm
- filling - 70% carbonates, 30% clays

GMA:- 30% - to 100% clay

UNIT 36.11 Description - see Box 36, Sheet 3b.
UNIT 36.12 Description - see Box 36, Sheet 4.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 36 Sheet 36

Graphic Representation | Sample

Visual Core Description Observer Hall/Elsbree

Depth Interval 185.10 m to 186.60 m

UNIT 36.11 OVERALL DESCRIPTION

Upper contact - 185.58 m Depositional, altered glass. In a zone approximately 10 mm wide of altered glass and carbonate. Dip - 30°.
Lower contact - 186.20 m Depositional, altered glass zone about 50 mm. Horizontal.
Unit thickness - 0.62 m Type of unit - pillow

Grey (grey-red at margins), fine-grained, slightly phyric basalt.

Phenocrysts:- 1% concentrated at 186.05-186.10 m
- olivine pseudomorphs altered to Fe oxide and carbonates
- size - 3 mm
- subhedral, settling texture

Vesicles:- 3% concentrated at the upper contact
- size - 1 mm
- filling - 80% open, 10% carbonates, 10% green clays

Veins:- 8%, scattered evenly through the unit
- maximum size - 8 mm
- filling - 90% carbonates, 10% clays

GMA:- 25% - to 90% clay and 10% carbonate
- occasional Fe oxide staining

UNIT 36.12 Description - see Box 36, Sheet 4.

Grey-red, slightly phyric, fine-grained pillow basalt.

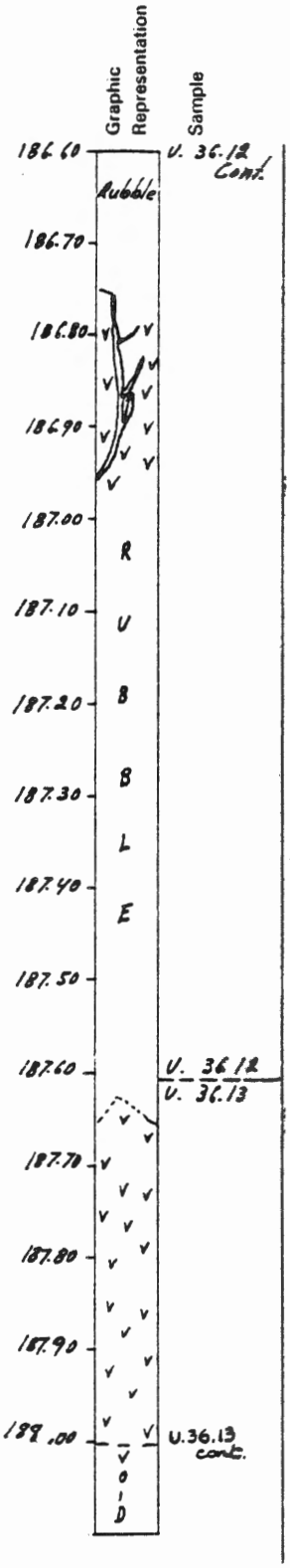
UNIT 36.12 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 36 Sheet 4

Visual Core Description Observer Hall/Elsbree

Depth Interval 186.60 m to 188.00 m



UNIT 36.12 OVERALL DESCRIPTION

Upper contact: 186.20 m Altered glass, depositional, zone about 5 mm, horizontal, carbonate and altered glass.
Lower contact: 187.60 m No glass. Depositional. Unit appears to bottom out in a zone of yellow-orange Fe oxide + carbonate material, of possible sediment. Some brecciated fragments of basalt included.
Unit thickness: 1.40 m Type of unit - pillow

Grey-red, fine-grained, slightly phyric basalt.

Phenocrysts:- 1% concentrated at 187.50 m
- olivine pseudomorphs altered to Fe oxides and carbonates
- size - 2 mm
- subhedral, settling

Vesicles:- 2% concentrated at 186.85 m but it is hard to determine as the core is so broken
- average size - 1 mm
- filling - 50% open, 40% carbonates, 10% clays

Veins:- 4% uniformly distributed through the rock
- maximum size - 2 mm
- filling - 85% carbonates and 15% clays

GMA:- 20% - to 90% clay and 10% carbonate

UNIT 36.13 OVERALL DESCRIPTION

Upper contact - 187.60 m Depositional. No glass. Indicated by presence of yellow orange Fe oxide material-possible sediment. Also, by a fractured zone with carbonate veins.
Lower contact - 188.25 m Truncated.
Unit thickness - 0.65 m Type of unit - pillow

Grey, fine-grained, aphyric basalt.

Vesicles:- 2%, concentrated at 187.75 m
- size - 2 mm
- filling - 60% open, 30% carbonates, 10% clays

Veins:- 5% pervasively fractured for most of the unit
- average size - 1 mm
- maximum size - 3 mm
- filling - 95% carbonates, 5% clays

GMA:- 25% - to 90% clays and 10% carbonate

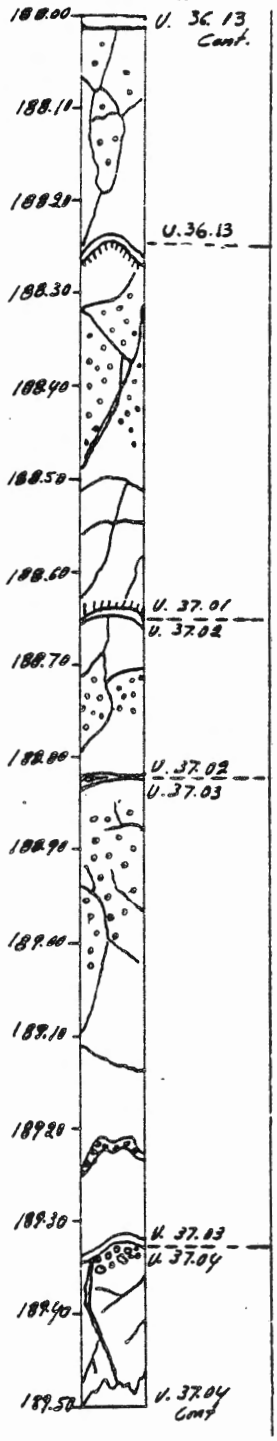
UNIT 36.13 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 37 Sheet 1a

Visual Core Description Observer D. BAILEY

Depth Interval 188.00 m to 189.50 m



UNIT 36.13 cont. Description - see Box 36, Sheet 4.

Grey, fine-grained, aphyric, pillow basalt

UNIT 37.01 OVERALL DESCRIPTION

Upper contact - 188.25 m Intrusive (high probability). Cooling evident in Unit 37.01 not Unit 36.15. Approximately 10 mm zone of carbonate, smectite, and altered glass above aphanitic "chill zone". Altered glass present. Dip - 40°.
Lower contact - 188.64 m Intrusive. Cooling evident only in Unit 37.01, possibly in Unit 37.02. Approximately 10 mm zone of fine-grained smectite above aphanitic chill zone. Sharp contact. No glass evident. Dip - 15°.
Unit thickness - 0.39 m Type of unit: Thin sill?

Grey-green (clearly distinct from Units 36.15 and 37.02), aphanitic (individual grains not visibly distinct) slightly olivine phyric basalt (?). No distinct olivine present but there are numerous dark grey, 0.5-2 mm, spots that could possibly be olivine pseudomorphs, however most appear to be irregular segregations and filled vesicles.

Segregation vesicles:- common, concentrated from 188.30-188.40 m
- size - 0.5-2 mm
- irregularly shaped, dark grey-green spots

Vesicles:- approximately 3%
- maximum size - 1.5 mm
- irregular shape
- filling - 35% open, 30% carbonates, 20% smectite, 15% oxides

Veins:- approximately 3%
- size - 0.25-3 mm
- filling - carbonate and minor smectite

GMA:- approximately 35-40%

UNITS 37.02 and 37.03 Descriptions - see Box 37, Sheet 1b.
UNIT 37.04 Description - see Box 37, Sheet 2a.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # C4-1

Core Box 37 Sheet 16

Graphic Representation | Sample

Visual Core Description Observer D. Bailey

Depth Interval 188.00 m to 189.50 m

UNIT 37.02 OVERALL DESCRIPTION

Upper contact - 188.64 m Intrusive cut by Unit 37.01. Thin "baked" margin. No glass. Dip-15°.
Lower contact - 188.82 m Depositional. 10-30 mm zone of carbonate, smectite altered glass. Altered glass present. Good 3-5 mm chill margin present. Dip 10°.
Unit thickness - 0.18 m Type of unit - pillow, possibly flow-impossible to determine because upper contact is not present

Brown-grey (distinct from Unit 37.01), fine-grained, aphanitic olivine basalt.

Phenocrysts:- approximately 2% olivine
- homogeneously distributed
- average maximum size - 1 mm
- shape - subhedral
- alteration total

Vesicles:- approximately 5%
- maximum size - 1.5 mm
- filling - 45% open, 30% carbonates, 15% opaques, 10% layer silicates
- shape - round, irregular
- note: segregation vesicles are blotchy, small, brown, and concentrated near the contacts

Veins:- 4%
- thin carbonate veins common (note 3 mm vein at approximately 188.75 m)
- filling - 70% carbonates, 30% smectite

GMA:- 60%

UNIT 37.03 OVERALL DESCRIPTION

Upper contact - 188.82 m Depositional. Altered glass, thin (5 mm) chilled margin. Dip - 15°.
Lower contact - 189.33 m Truncated (irregular). No chill - predominantly smectite filled contact (5 mm), minor carbonate/glass. Dip - 10°.
Unit thickness - 0.51 m Type of unit: likely pillow (maybe small flow)

Brown-grey, fine-grained, highly vesicular, aphyric basalt (no obvious olivine).

Vesicles:- 4%
- 10% highly vesicular at the top of unit below chill (188.85-188.95 m)
- size - 2 mm
- filling - 40% carbonates, 40% open, 10% layer silicates, 10% opaques
- segregation vesicles present and altered
- round and irregular

GMA:- 55%

UNIT 37.04 OVERALL DESCRIPTION - see Box 37, Sheet 2a.

Grey-brown, aphanitic to fine-grained, aphyric basalt sill.

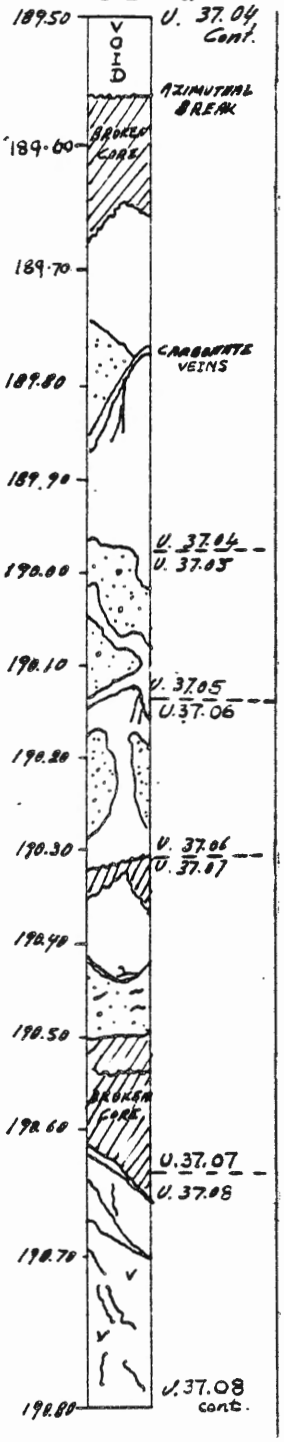
UNIT 37.04 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 37 Sheet 2a

Visual Core Description Observer D. BAILEY

Depth Interval 189.50 m to 190.80 m



UNIT 37.04 OVERALL DESCRIPTION

Upper contact - 189.33 m Intrusive. Approximately 6 mm thick smectite band with minor altered glass. Irregular contact. Dip - approximately 20°. Variolitic texture 20 mm immediately below contact.
Lower contact - 189.97 m Intrusive. Very irregular (apophyses continue into lower units). Minor carbonate, minor glass, and abundant highly altered smectite.
Unit thickness - 0.64 m Type of unit: sill

Grey-brown, aphanitic (fine-grained), aphyric basalt (note variolitic zone at upper contact is approximately 20 mm thick).

Vesicles:- approximately 1%
- average maximum size - approximately 0.5 mm (much smaller than previously)
- filling - 40% open, 30% opaques, 20% layer silicates, 10% carbonates
- shape - irregular

Veins - 2%
- carbonate veins common, but less abundant than in overlying units
- filling - 60% carbonates, 25% layer silicates, 15% opaques

GMA:- 60%

Note: This is an intrusive unit (distinct from Unit 37.01) with a variolitic upper margin and irregular lower margin.

UNIT 37.05 OVERALL DESCRIPTION

Upper contact - 189.97 m Truncated. Extremely irregular. (No chilled margin remains). Unit 37.04 cuts through in an irregular fashion. Extensively altered to predominantly smectites.
Lower contact - 190.13 m Ambiguous. Apophyses of Unit 37.04 continue - appear to follow pillow margins. Minor altered glass and chilled margins remain.
Unit thickness - 0.16 m Type of unit: pillow

Dark grey-brown (distinctly darker than previous units), fine-grained, aphyric basalt.

Vesicles:- approximately 4%
- size - approximately 1 mm
- shape - irregular
- segregation vesicles present, particularly near margins
- filling - 45% open, 30% carbonates, 15% opaques, 10% layer silicates

Veins:- apophyses abundant
- composition predominantly smectites
- minor altered glass present along earlier margins

UNITS 37.06, 37.07 and 37.08 Descriptions - see Box 37, Sheet 2b.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 37 Sheet 26

Graphic Representation | Sample

Visual Core Description Observer D. Bailey

Depth Interval 189.50 m to 190.80 m

UNIT 37.06 OVERALL DESCRIPTION

Upper contact - 190.13 m Ambiguous, originally depositional but apophyses of Unit 37.04 have intruded along pillow margins.

Lower contact - 190.30 m Ambiguous; same as above.

Note: Altered glass present in both. Carbonates-smectites abundant.

Unit thickness - 0.17 m Type of unit: pillow (chilled margins present throughout)

Dark green-grey (same as Unit 37.05), fine-grained, aphyric basalt.

Vesicles:- approximately 2%
- segregation vesicles present near rims
- filling - 30% carbonates, 25% open, 25% layer silicates, 20% opaques

Veins:- approximately 2%
- thin carbonate veins present

GMA:- approximately 50%

UNIT 37.07 OVERALL DESCRIPTION

Upper contact - 190.30 m Depositional, not totally preserved, but a thin margin of altered glass/carbonate remains. Chilled margin present (fine-grained, light yellow).

Lower contact - 190.64 m Ambiguous (not present - rubble).

Unit thickness - 0.34 m Type of unit: pillow (apparently)

Light brown-grey, aphanitic, aphyric basalt.

Vesicles:- approximately 6% (including segregation vesicles)
- homogeneous distribution
- filling - 40% carbonates, 30% open, 20% layer silicates, 10% opaques
- irregular shape

Veins:- 2-3%
- carbonate veins present (minor smectite)

GMA:- approximately 65-70%

UNIT 37.08 OVERALL DESCRIPTION

Upper contact - 190.64 m Depositional. Approximately 5 mm thick carbonate and altered glass band. Chilled margin.

Dip - 70°

Lower contact - 190.90 m Ambiguous. Rubble core, glass fragments present. Contact appears to cut core at a shallow angle.

Unit thickness - 0.26 m Type of unit: pillow

Grey-brown, aphanitic, aphyric basalt.

Vesicles:- 3% (including segregation vesicles)
- size - 0.5 mm
- filling - 45% open, 20% carbonates, 20% layer silicates, 15% opaques
- segregation vesicles - brown irregular splotches common

Veins:- 3%
- filling - carbonate and minor smectite

GMA:- ? approximately 50%

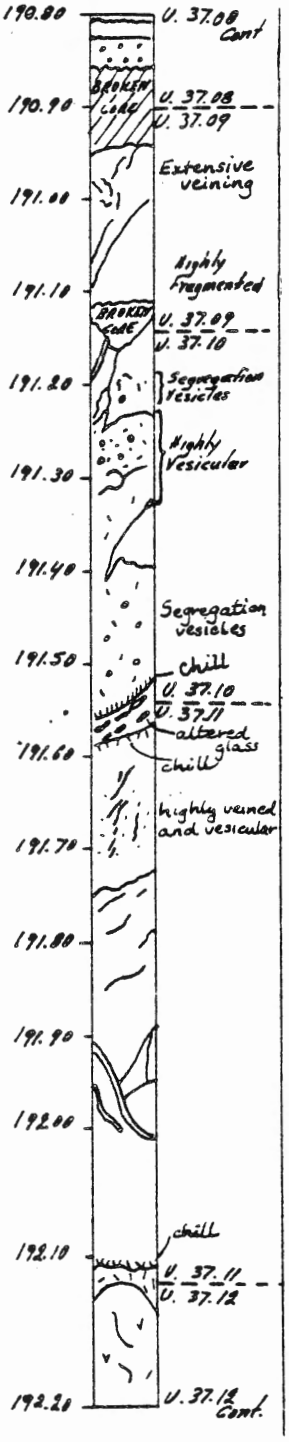
UNIT 37.08 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 37 Sheet 3a

Visual Core Description Observer D. BAILEY

Depth Interval 190.80 m to 192.20 m



UNIT 37.08 cont Description - see Box 37, Sheet 2b.

Grey-brown, aphanitic, aphyric pillow basalt.

UNIT 37.09 OVERALL DESCRIPTION

Upper contact - 190.90 m Ambiguous. Fragmented, altered glass. Carbonate and chilled margins present.
Lower contact - 191.15 m Ambiguous. Same as above.
Note: Contact between Units 37.09 and 37.10 appears to run subparallel to the core.
Unit thickness - 0.25 m Type of unit: (?) pillow

Light brown-grey, fine-grained, aphyric basalt.

Vesicles:- 3-4%
- average maximum size - 0.5 mm
- filling - 60% open, 20% carbonate, 10% layer silicates, 10% opaques
- segregation vesicles abundant, especially in the uppermost portion of the unit
- yellow brown splotches - irregular in shape composed of oxides and smectites

Veins:- approximately 4%
- network of veins at approximately 190.95 m
- filling - predominantly carbonates

GMA:- approximately 65%
- to 60% layer silicates, 30% opaques, 10% carbonates

UNIT 37.10 OVERALL DESCRIPTION

Upper contact - 191.15 m Ambiguous. Fragmented. Glass and carbonate fragments present. Chilled margin distinct.
Lower contact - 191.55 m Depositional. Thin (approximately 3 mm) chilled basalt rim overlies glass and carbonate rich band (20 mm). Dip - 66?
Unit thickness - 0.40 m Type of unit: pillow

Brown-grey, fine-grained, aphyric basalt.

Vesicles:- approximately 10%
- average maximum size - 1.5 mm
- shape - irregular, round
- segregation vesicles abundant - especially around the margins
- distribution: highest density at top (center) of pillow
- filling - 60% open, 20% carbonates, 10% layer silicates, 10% opaques

Veins:- approximately 3%
- filling - carbonate (smectite)

GMA:- 50% - to 75% layer silicates, 25% opaques

UNITS 37.11 and 37.12 Description - see Box 37, Sheet 3b.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 37 Sheet 36

Graphic Representation | Sample

Visual Core Description Observer D. Bailey

Depth Interval 190.80 m to 192.20 m

UNIT 37.11 OVERALL DESCRIPTION

Upper contact - 191.55 m Depositional. Chilled pillow margin with fragmented braided glass and carbonate above the margin. Dip about 20°.
Lower contact - 192.11 m Depositional. (Description same as above). Horizontal.
Unit thickness - 0.56 m Type of unit: pillow

Grey-green (but browner towards margins), very fine-grained, aphyric basalt.

Vesicles:- overall approximately 4%
- abundant in the uppermost portion of the pillow
- maximum size - approximately - 1 mm
- brown, splotchy segregation vesicles common
- filling - 50% open, 20% carbonates, 20% layer silicates, 10% opaques
- shape - irregular

Veins:- common, abundant from 191.60-191.75 m
- large veins at 191.77 m and 192.00 m
- predominantly carbonate stringers <2mm wide and minor smectite

GMA:- approximately 50%

UNIT 37.12 OVERALL DESCRIPTION

Upper contact - 192.11 m Depositional. Chilled pillow margin with braided, altered glass and carbonate.
Dip-30°.
Lower contact - 192.27 m Depositional, partially obscured by broken core but chilled margins still observable. Abundant altered glass in carbonate smectite matrix.
Dip-85° ?
Unit thickness - 0.16 m Type of unit: pillow (small lobe)

Brown-grey, fine-grained, clinopyroxene phyric basalt.

Phenocrysts:- microphyric
- homogeneous distribution
- average maximum size - approximately 0.5 mm
- approximately 1% clinopyroxene
- shape - approximately an-subhedral

Vesicles:- approximately 2%
- average maximum size - approximately 0.5 mm
- filling - 40% open, 30% layer silicates, 20% carbonates, 10% opaques

Veins:- 1%
- filling - predominantly carbonates

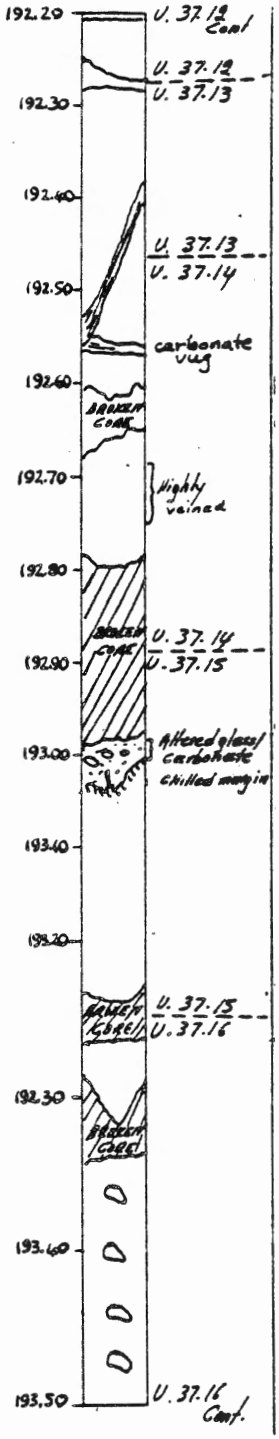
UNIT 37.12 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 37 Sheet 4a

Visual Core Description Observer D. BAILEY

Depth Interval 192.20 m to 193.50 m



UNIT 37.12 cont. Description - see Box 37, Sheet 3b.

Brown grey, fine-grained, clinopyroxene phyric pillow basalt.

UNIT 37.13 OVERALL DESCRIPTION

Upper contact = 192.27 m Ambiguous. Altered glass and carbonate present but the pillow margin is not distinct.
Lower contact - 192.47 m Depositional. Abundant altered glass, smectites, and carbonate. Chilled margin distinct.
High angle to core-approximately 45°
Unit thickness - 0.20 m Type of unit: pillow

Brown-grey, fine-grained, aphyric (possibly clinopyroxene microphyric) basalt.

Vesicles:- approximately 2-3%
- average maximum size - approximately 1 mm
- segregation vesicles common
- filling - 50% open, 25% layer silicates, 15% opaques, 10% carbonates

Veins:- thin carbonate veins common with minor layer silicates

GMA:- approximately 60%

UNIT 37.14 OVERALL DESCRIPTION

Upper contact - 192.47 m Depositional. Chilled margin with braided (altered glass). Dip-45°.
Lower contact - 192.89 m Ambiguous. Rubble zone between Units 37.14 and 37.15. Contact inferred because of abundance of altered glass fragments, carbonates, and chilled margins. Contact appears to run subparallel to core.
Unit thickness - 0.42 m Type of unit: pillow

Brown-grey, very fine-grained, aphyric basalt.

Vesicles:- approximately 2-3% concentrated near the top margin
- average size - approximately 1 mm
- filling - 45% open, 20% carbonates, 20% opaques, 15% layer silicates
- segregation vesicles present

Veins:- 5% - abundant in the mid-section of the unit
- filling - 80% carbonates, 15% layer silicates, 5% opaques
- note small vug at approximately 192.55 m

GMA:- approximately 60%

UNIT 37.15 Description - see Box 37, Sheet 4b.
UNIT 37.16 Description - see Box 37, Sheet 1.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 37 Sheet 4b

Graphic Representation | Sample

Visual Core Description Observer D. Bailey

Depth Interval 192.20 m to 193.50 m

UNIT 37.15 OVERALL DESCRIPTION

Upper contact - 192.89 m Ambiguous, however appears to be depositional. Abundant altered glass and chilled margin.
Lower contact - 193.27 m Ambiguous. Placed due to abundant glass and chilled margins.
Unit thickness - 0.38 m Type of unit: pillow (?)

Brown-grey, very fine-grained, aphyric basalt.

Vesicles:- approximately 5%
- average maximum size - approximately 1.5 mm
- segregation vesicles are common
- filling - 50% open, 20% carbonates, 15% layer silicates, 15% opaques

Veins:- 10%
- predominantly carbonate but zeolites common (analcime?), minor smectite
- filling - 70% carbonates, 20% zeolite, 10% layer silicates

GMA:- approximately 66%

UNIT 37.16 OVERALL DESCRIPTION - see Box 38, Sheet 1.

Brownish-grey, fine-grained, phyric massive basalt flow.

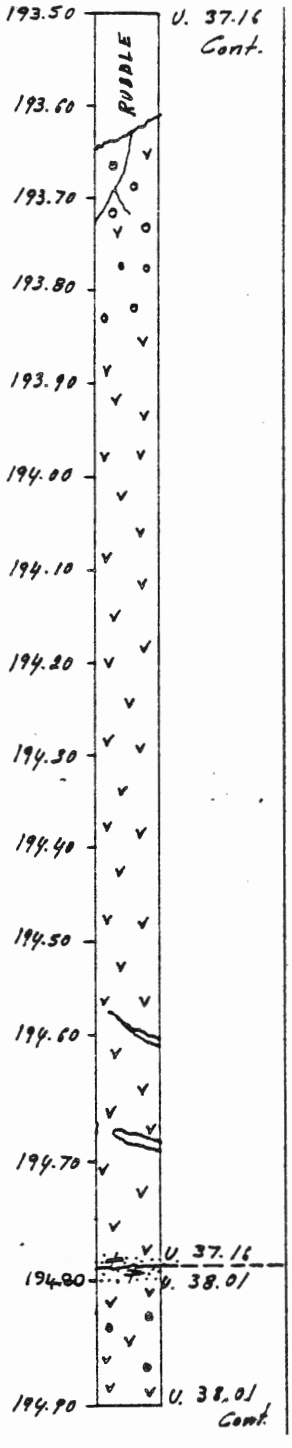
UNIT 37.16 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 38 Sheet 1

Visual Core Description Observer M. Haller

Depth Interval 193.50 m to 194.90 m



UNIT 37.16 OVERALL DESCRIPTION

Upper contact - 193.27 m Ambiguous. Highly veined, vesicular and fractured.
Lower contact - 194.79 m Depositional. Altered glass. Dip 0°.
Unit thickness - 1.52 m Type of unit: massive flow

Brownish-grey, phyric basalt with a fine-grained groundmass with porphyritic textures.

Phenocrysts:- 8%
- randomly distributed
- average size - 9 mm
- olivine replaced by brown ochreous material
- irregular shaped aggregates

Vesicles:- 5%, concentrated in the upper part of the unit
- filling - white milky material (zeolites?)

Veins:- 8%
- filling - 80% zeolite, 10% carbonates and 10% sheet silicates

GMA:- 50%

UNIT 38.01 OVERALL DESCRIPTION

Upper contact - 194.79 m Depositional. Altered glass.
Lower contact - 195.46 m Dip - 45° Depositional. Altered glass.
Unit thickness - 0.67 m Type of unit: massive flow

Grey, microphyric, fine-grained basalt - some brownish zones in the upper part.

Phenocrysts:- 1%, sporadic
- size - <1 mm
- bright green olivine
- shape - subhedral

Vesicles:- 8%, concentrated in the upper part of the unit
- filling - 50% zeolites, 50% carbonates

Veins:- 3%
- filling - 70% analcime(?), 25% carbonates and 5% sheet silicates

GMA:- approximately 20%

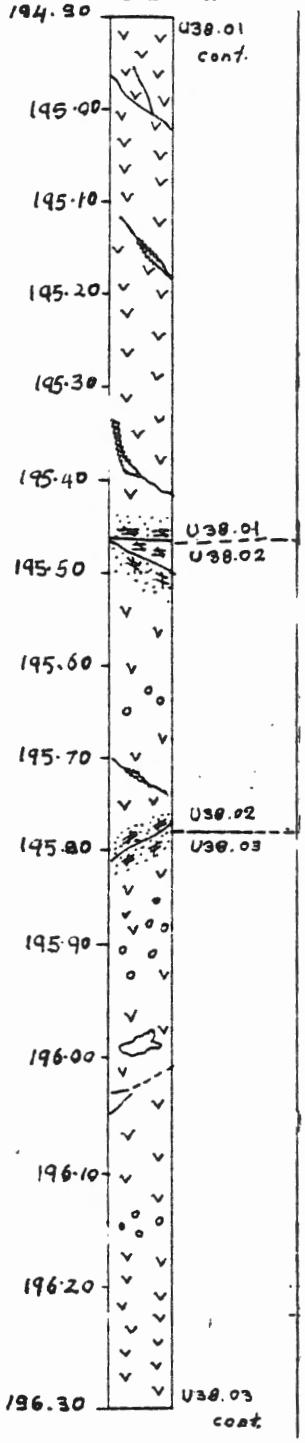
UNIT 38.01 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 38 Sheet 2

Visual Core Description Observer M. Haller

Depth Interval 194.90 m to 196.30 m



UNIT 38.01 cont. Description - see Box 38, Sheet 1.

Grey, microphyric, fine-grained basalt - some brownish zones in the upper part.

UNIT 38.02 OVERALL DESCRIPTION

Upper contact - 195.46 m Depositional. Altered glass.
Dip - 45°.
Lower contact - 195.79 m Depositional. Altered glass.
Dip - 50°.
Unit thickness - 0.33 m Type of unit - pillow

Grey, very fine-grained, aphyric basalt.

Vesicles:- 1%
- size - 1-1.5 mm
- filling - carbonate
- shape - round

Veins:- 18%
- filling - 70% sheet silicates, 25% carbonates and 5% zeolites

GMA:- approximately 30%

UNIT 38.03 OVERALL DESCRIPTION

Upper contact - 195.79 m Depositional. Altered glass.
Dip - 50°.
Lower contact - 196.40 m Depositional(?). Other features lost in rubble.
Unit thickness - 0.61 m Type of unit: massive flow

Grey, very fine-grained, microphyric basalt.

Phenocrysts:- 1% sporadic
- size - <0.5 mm
- green anhedral pyroxene

Vesicles:- 10%
- size - 1 mm
- filling - 50% open, 50% carbonates
- shape - round

Veins:- 5%
- size - approximately 1.5 mm
- filling - carbonate

GMA:- approximately 50%

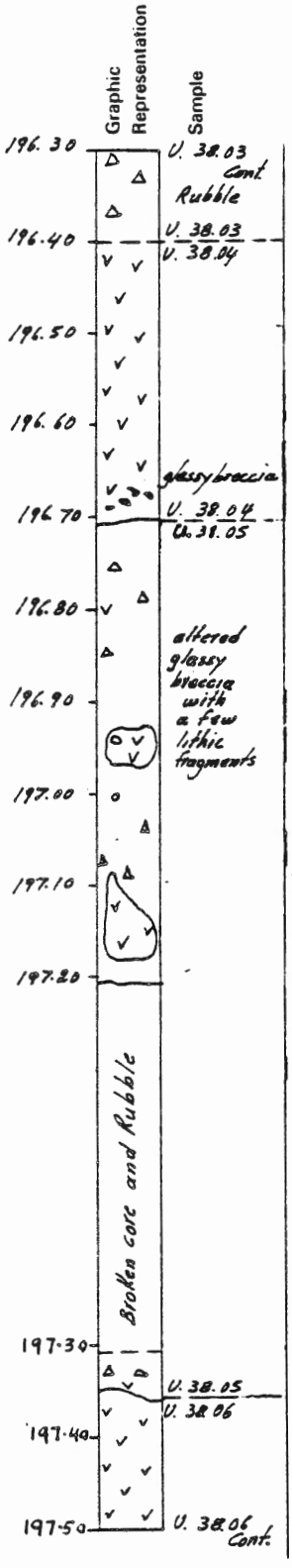
UNIT 38.03 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 38 Sheet 3

Visual Core Description Observer M. Haller.

Depth Interval 196.30 m to 197.50 m



UNIT 38.03 cont. Description - see Box 38, Sheet 2.

Grey, very fine-grained, microphyric massive basalt flow.

UNIT 38.04 OVERALL DESCRIPTION

Upper contact - 196.40 m Core lost.
Lower contact - 196.70 m Depositional. Altered glass. Dip - 45°
Unit thickness - 0.30 m

Grey, very fine-grained, microphyric basalt.

Vesicles:- 5%
- filling - glass altered to sheet silicates

Veins:- 1%, veins with carbonate and zeolite
- size - <1 mm
- filling - 80% sheet silicates, 20% carbonates

GMA:- approximately 30%

UNIT 38.05 OVERALL DESCRIPTION

Upper contact - 196.70 m Depositional.
Lower contact - 197.36 m Ambiguous.
Unit thickness - 0.66 m

Probable pillow margins section. Several pieces of grey, aphyric basalt with a high altered glass content.

Vesicles:- some small (<1 mm) ones

Veins:- filling - carbonate

UNIT 38.06 OVERALL DESCRIPTION - see Box 38, Sheet 4.

Grey, slightly phyric, massive basalt flow.

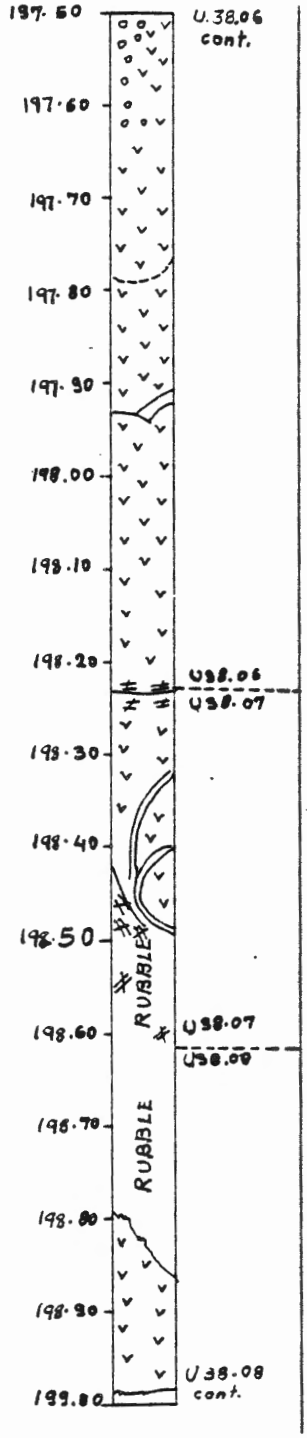
UNIT 38.06 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 38 Sheet 4

Visual Core Description Observer M. Haller

Depth Interval 197.50 m to 199.0 m



UNIT 38.06 OVERALL DESCRIPTION

Upper contact - 197.36 m Core lost.
Lower contact - 198.23 m Depositional. Altered glass.
Probably horizontal contact.
Unit thickness - 0.87 m Type of unit: massive flow

Grey, very fine-grained, slightly phyric basalt.

Phenocrysts:- 1%, sporadic
- size - <0.5 mm
- olivine
- shape - anhedral

Vesicles:- size - 1-1.5 mm
- filling - in upper part - approximately 50% carbonate, 50% zeolite
- in lower part - sheet silicate altered material
- shape - round

Veins:- 4%
- size - 1-1.5 m
- filling - 80% sheet silicates, 15% carbonates and 5% zeolite

GMA:- approximately 25%

UNIT 38.07 OVERALL DESCRIPTION

Upper contact: 198.23 m Depositional. Altered glass. Horizontal contact. Lower part of the unit consist of rubble. A lateral pillow lobe is distinguishable at 188.45 m with chill with altered glass and fine-grained rock.
Lower contact: 198.62 m Core lost. Probably depositional horizontal contact.
Unit thickness - 0.39 m

Grey, fine-grained, slightly phyric basalt.

Phenocrysts:- 1%, sporadic
- size - <1 mm
- olivine
- shape - subhedral

Vesicles:- filling - sheet silicates

Veins:- approximately 5%
- size - 5-6 mm
- filling - 70% sheet silicates, 20% carbonates and 10% zeolites

GMA:- 30%

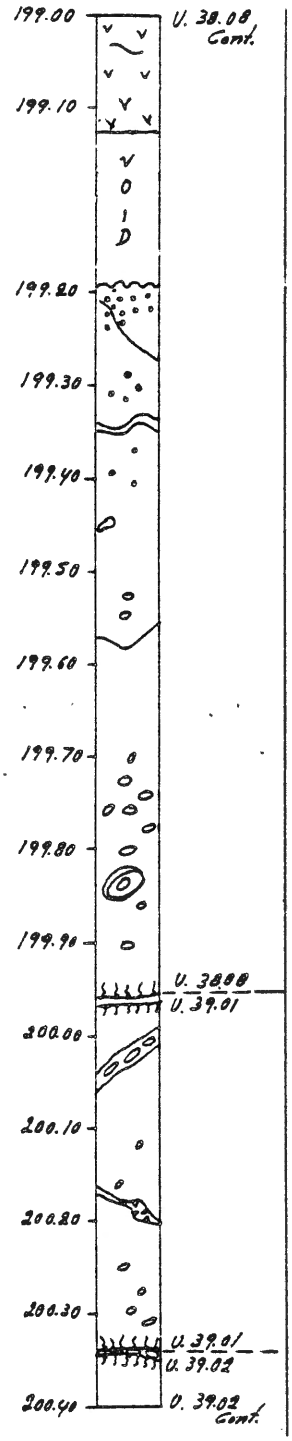
UNIT 38.08 Description - see Box 39, Sheet 1a.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 39 Sheet 1a

Visual Core Description Observer N. Baglow / T. Purcell

Depth Interval 199.00 m to 200.40 m



UNIT 38.08 OVERALL DESCRIPTION

Upper contact - 198.62 m Ambiguous - in rubble. Probably depositional, horizontal contact.
Lower contact - 199.95 m Depositional. 15-20 mm altered glass and 5 mm chilled margin.
Unit thickness - 1.33 m Type of unit: massive flow

Grey-green, slightly olivine phyric, very fine-grained basalt. Some chilling is observed at 199.17 m. A patch of green-grey, very fine-grained basalt and altered glass is present at 199.87 m - infolded pillow margin?.

Phenocrysts:- 5%
- size range - 1-5 mm, average 4 mm
- settled out from 199.60 m to base of unit
- all altered to brown smectite?
- some carbonate replacement evident

Vesicles:- 10% concentrated at top, 5% below 199.40 m
- filling - 50% open, 50% with material (carbonate and zeolite)

Veins:- approximately 3%
- thin veins with carbonate and analcime in euhedral crystals

GMA:- approximately 30%

UNIT 39.01 OVERALL DESCRIPTION

Upper contact - 199.95 m Same as above lower contact.
Lower contact - 200.36 m Depositional with altered glass and narrow chilled margin which is paler green-grey.
Unit thickness - 0.41 m Type of unit: pillow

Very fine-grained, green, slightly olivine phyric basalt.

Phenocrysts:- 3%, distributed throughout the unit, with slight increase towards the base but always <5%
- size - 2-3 mm
- olivine
- all completely altered to sub- to euhedral crystals
- irregular brown patches (eg. at 200.20 m) represent altered interstices

Vesicles:- <5%, predominantly in the top half of the unit, though commence away from chilled zone
- size - 1-2 mm
- filling - 90% open, 10% carbonates

Veins:- 6%
- fracture at 200.05 m with altered glass and pale green clayey material
- open fracture (vug?) at 200.16 m is calcite filled
- filling - 70% sheet silicates, 30% carbonates

GMA:- approximately 20% overall, appears dark green and fresh

UNIT 39.02 Description - see Box 39, Sheet 1b.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 39 Sheet 16

Graphic Representation | Sample

Visual Core Description Observer N. Baglow / T. Purcell

Depth Interval 199.00 m to 200.40 m

UNIT 39.02 OVERALL DESCRIPTION

Upper contact - 200.36 m Same as above lower contact.
Lower contact - 200.58 m Depositional with altered glass (10-20 mm zone) and narrow chill margin.
Unit thickness - 0.22 m Type of unit: pillow

Very fine-grained, green to green-grey, slightly olivine phyric basalt.

Phenocrysts:- 2% distributed throughout the unit
- average size - 2-3 mm
- olivine
- shape - sub- to euhedral

Vesicles:- slightly vesicular (1%) with some vesicles coalescing
- size - 1-2 mm
- filling - 60% carbonates, 40% open

Vein:- including margins 5%
- wispy
- filling - 50% sheet silicates, 50% carbonates

GMA:- varies from fresh to 40% (the latter in patches)
- N.B. some brownish patches up to 7 mm across could be segregation vesicles.

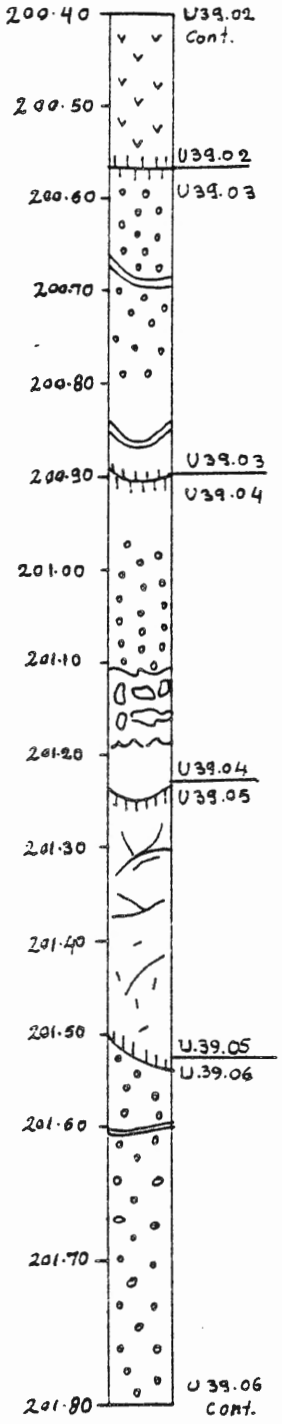
UNIT 39.02 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY 1

Core Box 39 Sheet 2a

Visual Core Description Observer N. Baglow / T. Purcell

Depth Interval 200.40 m to 201.80 m



UNIT 39.02 cont. Description see - Box 39, Sheet 1b.

Very fine-grained, green to green-grey, slightly olivine phyric basalt.

UNIT 39.03 OVERALL DESCRIPTION

Upper contact - 200.58 m Depositional, chilled margin with some altered glass.
Lower contact - 200.90 m Depositional, 5 mm chilled margin adjacent to altered glass.
Unit thickness - 0.32 m Type of unit: pillow (or thin flow?)

Very fine-grained, green, slightly olivine phyric basalt.

Phenocrysts:- have settled towards the bottom 10 cm
- size - 1-3 mm
- altered olivine
- shape is sub- to euhedral

Vesicles:- 5% from 200.61-200.73 m, few outside this zone
- size - 1-3 mm
- filling - 60% carbonates, 40% open

Veins:- 5% (including margins)
- size - 1-2 mm
- filling - 80% sheet silicates (dark and pale green), 20% carbonates

GMA:- 10% (fresh)

UNIT 39.04 OVERALL DESCRIPTION

Upper contact - 200.90 m Same as above lower one.
Lower contact - 201.23 m Depositional with minor altered glass.
Unit thickness - 0.33 m Type of unit: pillow

Very fine-grained, green, very slightly olivine phyric basalt.

Phenocrysts:- 2% sporadically distributed towards the base
- size - 1-3 mm
- brown altered olivine
- subhedral to euhedral

Vesicles:- 10% from 200.95-201.20 m
- size 1-8 mm
- average size of the ten largest - 5 mm
- vesicles 1-2 mm occur sparsely in lower portion of the unit
- filling - predominantly carbonate

Veins:- 3%
- minor carbonate veining particularly near the top 15 cm
- filling - 70% carbonates, 30% sheet silicates

GMA:- approximately 10%

UNITS 39.05 and 39.06 Descriptions - see Box 39, Sheet 2b.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 39 Sheet 26

Graphic Representation | Sample

Visual Core Description Observer N. Baglow/T. Purcell

Depth Interval 200.40 m to 201.80 m

UNIT 39.05 OVERALL DESCRIPTION

Upper contact - 201.23 m Intrusive with chilled margins. No glass.
Lower contact - 201.53 m Intrusive, 10 mm chilled margin with some altered glass. Dip - 45°
Unit thickness:- 0.30 m Type of unit: sill

Aphanitic, aphyric, green-grey basalt. Sparse 1 mm patches of pale green altered material, otherwise homogeneous.

Veins:- 3% overall, including margins
- internal veining negligible
- filling - 80% sheet silicates, 20% carbonates

GMA:- approximately 20%

UNIT 39.06 OVERALL DESCRIPTION

Upper contact - 201.53 m Ambiguous, some glass.
Lower contact - 202.22 m Ambiguous.
Unit thickness - 0.69 m

Very fine-grained, green-grey, very slightly olivine phyric basalt.

Phenocrysts:- sparse
- average size - 1 mm
- maximum size - 4 mm
- subhedral altered olivine

Vesicles:- 10%
- average size - 1-2 mm
- filling - either with carbonate or pale blue celadonite remains plus some voids
- some fragments of small rounded nondescript brown patches

Veins:- remnants of carbonate veins

GMA:- low to medium

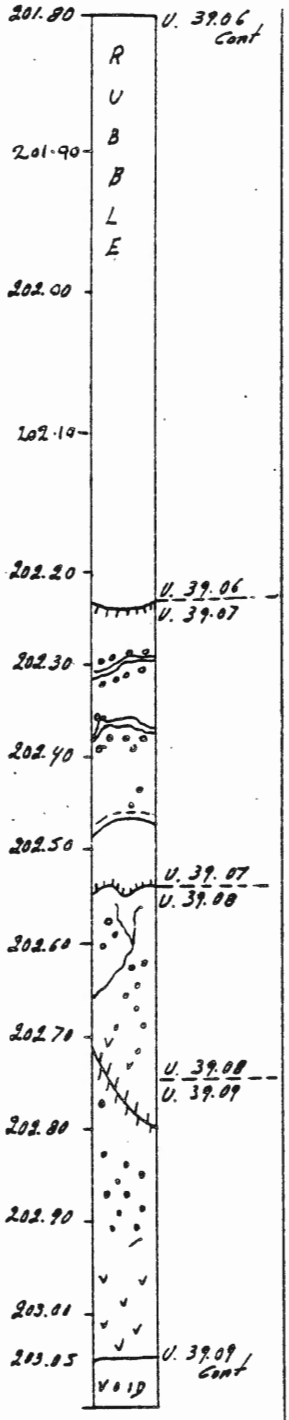
UNIT 39.06 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 39 Sheet 3a

Visual Core Description Observer N. Baglow / T. Purcell

Depth Interval 201.80 m to 203.05 m



UNIT 39.06 cont. Description - see Box 39, Sheet 2b.

Very fine-grained, green-grey, very slightly olivine phyric basalt.

UNIT 39.07 OVERALL DESCRIPTION

Upper contact - 202.22 m Depositional with narrow chilled margin and a small amount of glass.
Lower contact - 202.54 m Depositional with chilled margin.
Unit thickness - 0.32 m Type of unit: probably a pillow

Very fine-grained, green-grey, sparsely olivine phyric basalt.

Phenocrysts:- 3%, predominantly in basal 15 cm
- size - 2-4 mm
- all altered, olivine
- sub- to euhedral

Vesicles:- approximately 8%, most concentrated in the upper 10 cm where they constitute 25%
- size - 1-2 mm
- filling - 95% carbonates, 5% open
- rounded

Veins:- 3%
- minor irregular carbonate veining
- filling - 90% carbonates, 10% sheet silicates

GMA:- low

UNIT 39.08 OVERALL DESCRIPTION

Upper contact - 202.54 m Depositional.
Lower contact - 202.73 m Some altered glass and carbonate.
Unit thickness - 0.19 m Type of unit: massive flow

Aphanitic, green-grey, very slightly olivine phyric basalt.

Phenocrysts:- 1%, settled towards the base
- size - 1-2 mm
- altered olivine
- subhedral

Vesicles - 5% overall
- comprise 10-20% of the top 7 cm of unit
- average size - approximately 2 mm
- filling - 50% carbonate, 50% blue celadonite(?)

Veins:- 4% overall with margins
- filling - 50% sheet silicates, 50% carbonate

GMA:- low

UNIT 39.09 Description - see Box 39, Sheet 3b.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # C4-1

Core Box 39 Sheet 36

Graphic Representation | Sample

Visual Core Description Observer N. Baglow/ T. Purcell

Depth Interval 201.80 m to 203.05 m

UNIT 39.09 OVERALL DESCRIPTION

Upper contact - 202.73 m Chilled margin and altered glass.
Lower contact - 203.14 m Ambiguous with a little altered glass.
Unit thickness - 0.41 m Type of unit: pillow

Very fine-grained, greenish-grey, very slightly olivine phyric basalt.

Phenocrysts:- 1%, sparse
- most of the smaller size have settled out towards the base
- size - 1-4 mm
- altered euhedral olivine

Vesicles:- highly vesicular from 202.77-202.92 m where vesicles account for 35%
- most of the rounded vesicles are 1-2 mm and 60% carbonate filled
- towards the bottom of this zone voids and blue celadonite (20%) rims prevail

Veins:- 2%, but overall veining with margins 4%
- filling - 60% carbonates, 40% sheet silicates

GMA:- low

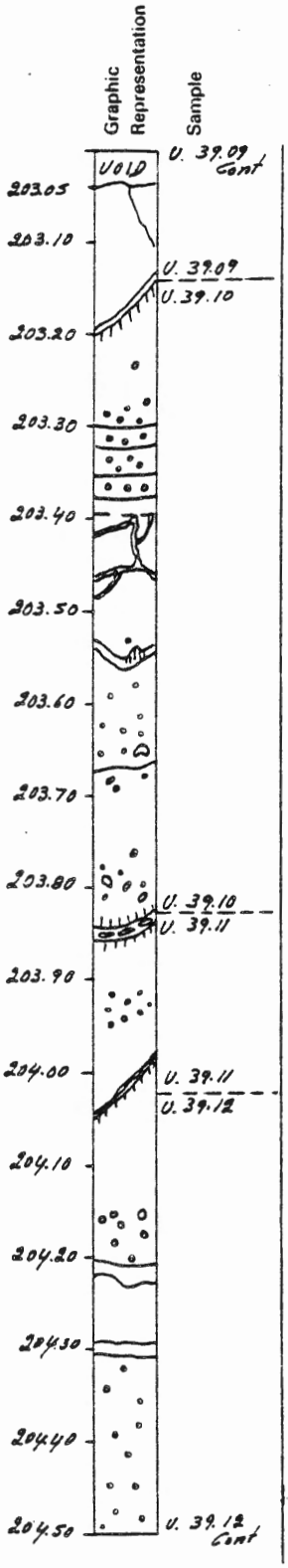
UNIT 39.09 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 39 Sheet 4a

Visual Core Description Observer N. Baglow / T. Purcell

Depth Interval 203.05 m to 204.50 m



UNIT 39.09 cont. Description - see Box 39, Sheet 3b.

Very fine-grained, greenish-grey, very slightly olivine phyric basalt.

UNIT 39.10 OVERALL DESCRIPTION

Upper contact - 203.14 m Depositional. Chilled margin plus a small amount of glass.
Lower contact - 203.82 m Chilled contact with some altered glass and carbonate.
Unit thickness - 0.68 m Type of unit: massive flow?
Very fine-grained, greenish-grey, very slightly olivine phyric basalt. The base of the unit is slightly coarser-grained than the top.

Phenocrysts:- size - 2-6 mm
- olivine, all are altered - most to brown sheet silicates, but some are altered to green smectite? or carbonate
- sub- to anhedral

Vesicles:- 5%, predominately from 203.20-203.33 m
- size - 1-2 mm
- filling - 50% carbonates, 40% open
10% blue celadonite film
- rounded vesicles occur sporadically throughout
- in the lower portions patches of darker green could represent mineral segregations

Veins:- <5%
- filling - 80% carbonates, 20% sheet silicates
- altered vug-like fracture at 203.53 m (5 mm wide) filled with carbonate and analcime

GMA:- low except for reddening between fractures at base

UNIT 39.11 OVERALL DESCRIPTION

Upper contact - 203.82 m Depositional, with a narrow chilled margin. 15 mm zone of altered glass, pale green sheet silicates and carbonate. Pervasive, red alteration for 10 cm away from the contact.
Lower contact - 204.01 m Truncated. (N.B. Unit cannot satisfactorily be picked up in box 40).
Unit thickness - 0.19 m Type of unit: pillow?
Fine-grained, greenish-red, aphyric basalt. Amorphous reddened segregations (3-5 mm) just before intrusion - probably reflect altered interstitial material.

Vesicles:- locally vesicular
- rounded
- size - 1-2 mm
- filling - 60% carbonates, 40% open
- small vesicles in the chilled contact zone tend to be filled with green sheet silicate

Veins:- 2%
- minor and irregular white and pink carbonate filling at the top of the unit
- filling - 60% sheet silicates, 40% carbonates

GMA:- high

UNIT 39.12 Description - see Box 39, Sheet 4b.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # C4-1

Core Box 39 Sheet 46

Graphic Representation | Sample

Visual Core Description Observer N. Baglow/T. Purcell

Depth Interval 203.05 m to 204.50 m

UNIT 39.12 OVERALL DESCRIPTION

Upper contact - 204.01 m Intrusive, a narrow chilled zone lacking glass. A 4 mm vein with carbonate and pale green sheet silicate occurs at the contact. Minor red colouration. Veining contact dip indicates previous fracture control?
Lower contact - 204.87 m Altered material.
Unit thickness - 0.86 m

Fine- to medium-grained, greenish-brown, very slightly phyric olivine basalt.

Phenocrysts:- <1%, with some settling
- size - 1-3 mm
- subhedral altered olivine

Vesicles:- 2%
- not strongly vesicular, but comparatively large (±5 mm) rounded to elongated carbonate vesicles are found from 204.13 m to 204.40 m - within this zone various segregation vesicles can be distinguished - these irregular darker patches (2 mm to ±10 mm) are preferentially associated with the amygdules - this relationship is not as apparent outside the main vesicular zone
- filling - 80% carbonates, 20% open

Veins:- 5% minor
- carbonate and red/white sheet silicates filled fractures at 204.32 m dip 0° and 204.46 m dip 0°0°
- have some indication of oxidation.
- filling - 50% sheet silicates (red and green), 50% carbonates

GMA:- patchy, medium to high

OVERALL - FOR BOX - The non-intrusive units exhibit a consistent way-up direction (up the hole) and are generally characterised by the presence of a concentration of vesicles (1-2 mm, rounded, voids or carbonate filled with minor development of pale blue celadonite rims in the lower units) just below the top chilled zone. Most units are in addition slightly olivine phyric, with crystals (1 mm to approximately 6 mm, all completely altered, sub- to euhedral) settling out towards the unit base.

The unit margins are noticeably thinner than those found at the top of the drill hole; in particular the proportion of glass is greatly reduced. The nature of many contacts in box 39 is suggestive of hot magma being in contact with other magma that is still hot possibly as buds from a feeder pillow or tube protruding gently into other pillows only just formed. A number of the units cannot in their own right be distinguished as pillows (as opposed to thin flows). Unit 39.05 is clearly intrusive but could conceivably be a bud of magma that intruded wholly within an earlier but not completely cooled pillow.
Groundmass alteration (other than Unit 39.12) is low.

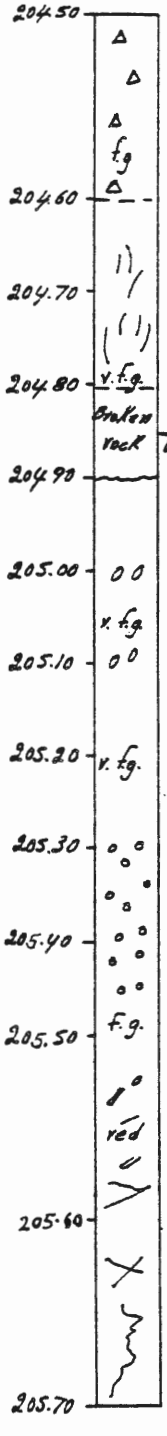
UNIT 39.12 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 40 Sheet 1

Visual Core Description Observer S. Agrell

Depth Interval 204.50 m to 205.70 m



UNIT 39.12 cont. Description - see Box 39, Sheet 4b.

Fine- to medium-grained, greenish-brown, very slightly phyric olivine basalt.

UNIT 40.01 OVERALL DESCRIPTION

Upper contact - 204.87 m Ambiguous. Fractured.
Lower contact - 206.00 m Ambiguous. Chill in spall zone.
Unit thickness - 1.13 m Type of unit: pillow

Grey, dominantly aphanitic, vesicular basalt.

Phenocrysts:- 2% at 250.10 m and 205.80 m
- size - 3 mm
- brown olivine

Vesicles:- maximum locally 10%, average 6%
- size - 4 mm at 205.30-205.50 m
- filling - 45% carbonates, 30% open, 15% layer silicates, 10% opaques
- patchily distributed
- overall filling - 40% layer silicates, 30% open, 20% carbonates, 10% opaques

Fractures:- locally 5%
- filling - 90% carbonate, 10% layer silicates

GMA:- 30%

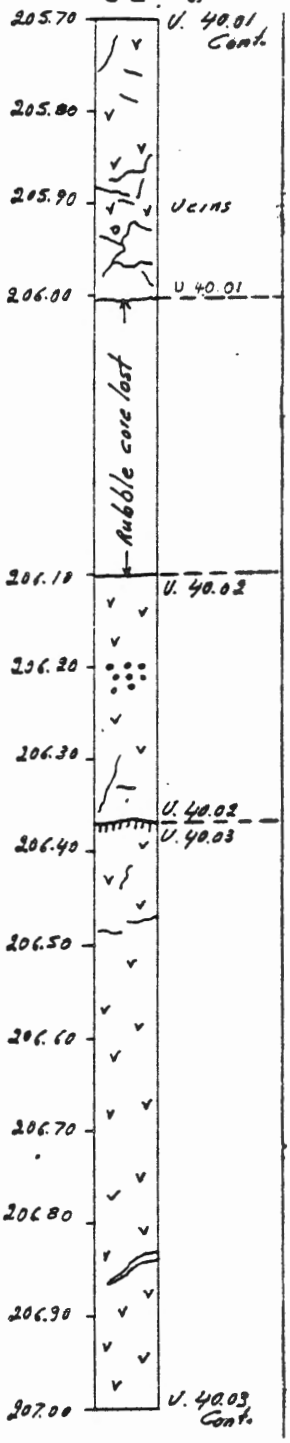
UNIT 40.01 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 40 Sheet 2

Visual Core Description Observer S. Agrell

Depth Interval 205.70 m to 207.00 m



UNIT 40.01 cont. Description - see Box 40, Sheet 1.

Pillow of grey vesicular basalt, dominantly aphanitic.

206.00-206.10 m - zone of rubble and lost core not included in any unit.

UNIT 40.02 OVERALL DESCRIPTION

Upper contact - 206.10 m Ambiguous.
Lower contact - 206.37 m Truncated.
Unit thickness - 0.27 m Type of unit: possibly a pillow bud from Unit 40.01

Grey-brown, aphanitic basalt.

Vesicles:- 6%
- filling - 40% open, 20% layer silicates, 20% carbonates, 20% opaques

Veins:- 7%
- filling - carbonate

UNIT 40.03 OVERALL DESCRIPTION

Upper contact - 206.37 m Chilled, vitrophyric, 50 mm.
Dip - 70°.
Lower contact - 207.15 m Intrusive. Chilled, crystallized, milky green.
Unit thickness - 0.78 m

Green-grey, aphyric, fine-grained basalt.

Vesicles:- between 206.50-206.95 m - open, 1-2 mm
- between 206.70-206.85 m - vesicles 4mm, carbonate filled
- 206.70-206.80 m - segregation vesicles round and elliptical, darker green than matrix basalt
- segregation vesicles, may be empty or calcite-filled bubble
- 207.00-207.10 m - thin schlieren - segregation zones of hydration reaction, either incipient cracks and vapour alteration or segregation followed by alteration

Veins:- 1%
- filling - 80% carbonates, 10% layer silicates 10% opaques

GMA:- 15% - to 70% layer silicates, 30% carbonate

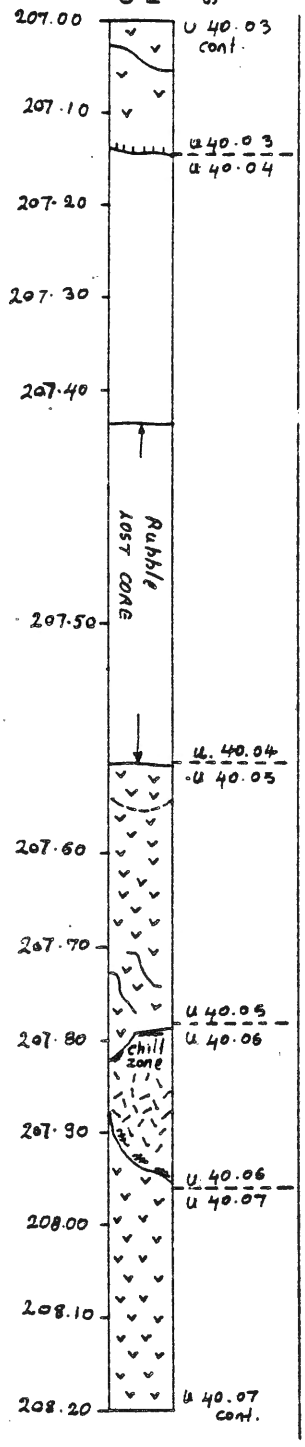
UNIT 40.03 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY1

Core Box 40 Sheet 3

Visual Core Description Observer S Agrell

Depth Interval 207.00 m to 208.20 m



UNIT 40.03 cont. Description - see Box 40, Sheet 2.

Green-grey, aphyric, fine-grained basalt.

UNIT 40.04 OVERALL DESCRIPTION

Upper contact - 207.15 m Irregular. No chill.
Lower contact - 207.55 m Irregular. Chilled, devitrified.
Unit thickness - 0.40 m Type of unit - pillow

Grey, microporphyritic olivine basalt.

Microphenocrysts:- 1%
- size - 2 mm
Vesicles:- 1% darker grey altered lava
Veins:- 2% carbonate filled veins
GMA:- 70%
- argillic alteration zones of fine glass material around vesicles and veins

UNIT 40.05 OVERALL DESCRIPTION

Upper contact - 207.55 m Chilled, irregular, intrusive, no glass.
Lower contact - 207.78 m Irregular, argillic alteration. Spherulites or variolites and altered glass seen. Chilled.
Unit thickness - 0.23 m

Grey-brown, very fine-grained, microvesicular, aphyric basalt.
Vesicles:- <2%
- filling - 90% open, 10% layer silicates

UNIT 40.06 OVERALL DESCRIPTION

Upper contact - 207.78 m Indistinct. Block fractures. Irregular. Lined smectite block or fresh glass?
Lower contact - 207.95 m Chill slight.
Unit thickness - 0.17 m

Fine-grained, dark grey-green, vesicular basalt.
GMA:- 30% - to 70% layer silicates, 30% carbonate

UNIT 40.07 OVERALL DESCRIPTION

Upper contact - 207.95 m Depositional. Irregular, vitrophyric quenched edge passes into variolitic vitrophyre.
Lower contact - 208.59 m Irregular, chilled, vitrophyric passes into variolitic vitrophyre.
Unit thickness - 0.64 m

Devitrified vitrophyre zone 20 mm wide passes through sparsely variolitic devitrified vitrophyre (20 mm), into microvariolitic fine-grained basalt- nature of argillic devitrification?

Vesicles:- <5%
- filling - 65% open, 20% layer silicates, 10% carbonates, 5% opaques
Veins:- <1%
- filling - 90% carbonates, 10% layer silicates
GMA:- 40% - to 70% layer silicates, 20% carbonate, 10% opaques

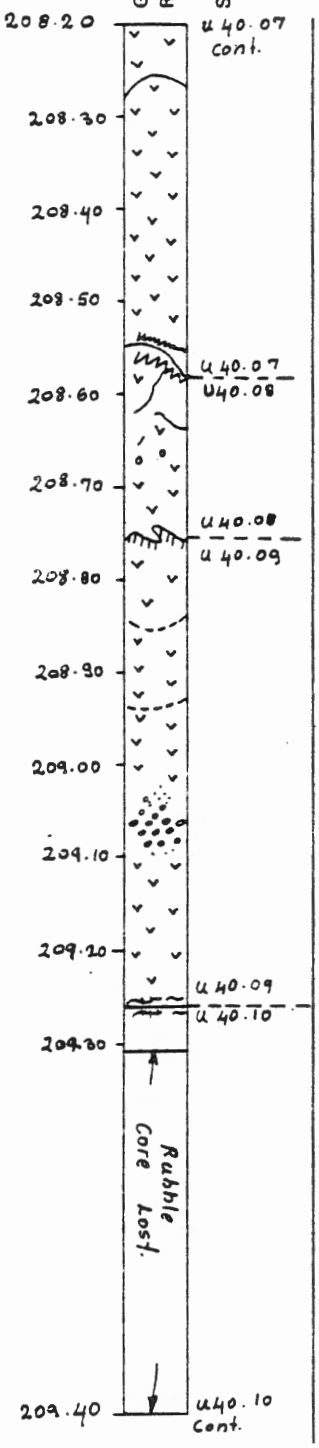
UNIT 40.07 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY1

Core Box 40 Sheet 4

Visual Core Description Observer S. Agrell.

Depth Interval 208.20 m to 209.40 m



UNIT 40.07 cont. Description - see Box 40, Sheet 3.

Fine-grained, dark grey-green vesicular basalt.

UNIT 40.08 OVERALL DESCRIPTION

Upper contact - 208.59 m Ambiguous.
Lower contact - 208.75 m Ambiguous.
Unit thickness - 0.16 m

Dark grey, coarser-grained basalt.

Vesicles:- <2%
- size - <3 mm
- filling - layer silicates and carbonate

Small central zone of argillic alteration.

UNIT 40.09 OVERALL DESCRIPTION

Upper contact - 208.75 m Irregular. Chilled. Possible altered vitric-hyalopilitic to variolitic zones.
Lower contact - 209.26 m Depositional. Probably intrusive unit. Chilled. Dip - 0°
Unit thickness - 0.51 m

Grey-green, sparsely porphyritic olivine basalt?

Phenocrysts:- maximum size - 4 mm
- ±1% clinopyroxene, 2% olivine

Vesicles:- 4%
- size - 1-4 mm
- filling - 50% carbonates, 40% layer silicates 10% opaques
- rounded

Veins:- <1%
- filling - 50% carbonates, 30% open, 10% layer silicates, 10% opaques

GMA:- 25%

UNIT 40.10 OVERALL DESCRIPTION - see Box 41, Sheet 1.

Dark grey to slate grey, fine-grained, weakly phyric pillow basalt.

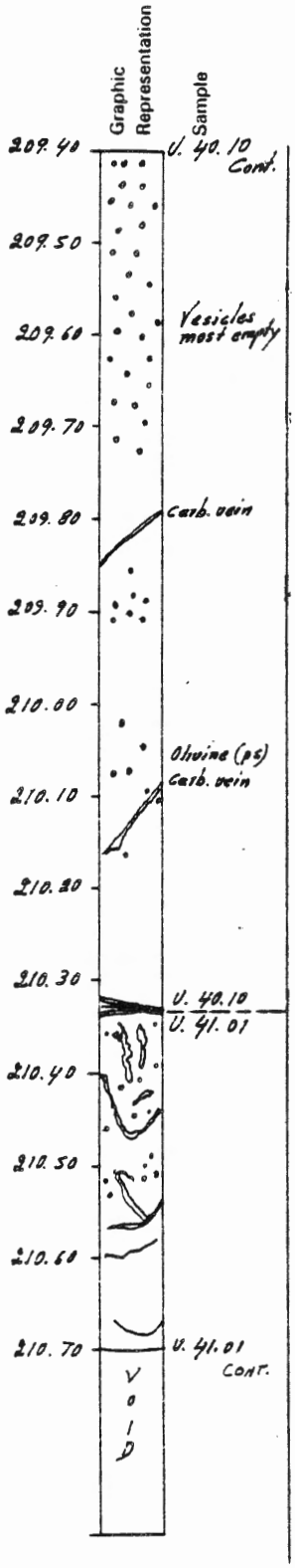
UNIT 40.10 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 41 Sheet 1

Visual Core Description Observer R. Barragan

Depth Interval 209.40 m to 210.70 m



UNIT 40.10 cont. OVERALL DESCRIPTION

Upper contact - 209.26 m Incomplete - altered glassy rim only about 2-3 mm thickness remains. Dip - 15°.
Lower contact - 210.33 m About 50 mm altered glass dipping 15 - 20°.
Unit thickness - 1.07 m Type of unit - pillow

Dark grey to slate grey, fine-grained, weakly phyric basalt.

Phenocrysts:- <<1% olivine pseudomorphs, concentrated in the lower part of the pillow - 210.00-210.10 m
- average maximum size - 5 mm
- <<1% bottle green clinopyroxene
- size - ± 1 mm

Vesicles:- 7-8% overall
- most concentrated in the upper part of the unit down to 209.70 m - 15-20%
- average maximum size - 5 mm
- maximum size - 10 mm
- filling - 85-90% open, 10-15% carbonates

Veins:- 1-2% vuggy carbonate only

GMA:- olivine altered to 50% carbonates, 50% yellow smectite

UNIT 41.01 OVERALL DESCRIPTION

Upper contact - 210.33 m As for lower contact above dip 10°.
Lower contact - 210.79 m Dip - 35°.
Unit thickness - 0.46 m Type of unit - pillow

Dark or slate-grey, fine-grained to aphanitic, very sparsely phyric basalt.

Phenocrysts:- <<1%
- settled in lower part of pillow
- olivine pseudomorphs ±1 mm; bottle green clinopyroxene ±1 mm

Vesicles:- 10%, concentrated in the upper half of the pillow - with a tendency to be in layers
- average maximum size - 3 mm
- filling - 90% open, 10% carbonates

Veins:- about 3%
- filling - predominantly carbonate

GMA: fresh

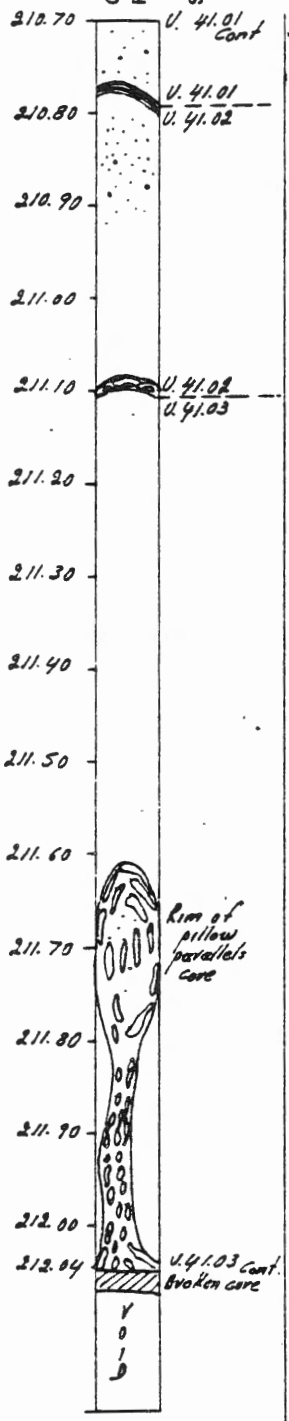
UNIT 41.01 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 41 Sheet 2

Visual Core Description Observer R. Barragan

Depth Interval 210.70 m to 212.04 m



UNIT 41.01 cont. Description - see Box 41, Sheet 1.

Fine-grained to aphanitic, very sparsely phyric pillow basalt.

UNIT 41.02 OVERALL DESCRIPTION

Upper contact - 210.79 m 5 mm thick, comprising braided altered glass now green smectite. Dip - 35°.
Lower contact - 211.11 m Incomplete altered glass.
Unit thickness - 0.32 m
Dark grey, fine-grained, slightly clinopyroxene phyric basalt.

Phenocrysts:- sparse ±1% or less
- distribution uncertain
- average maximum size - 1 mm
- bottle green clinopyroxene

Vesicles:- overall 4-5%
- filling - 85% open, 15% carbonate

Veins:- 1%
- filling - carbonate

GMA:- 2-3% brown altered tubes - 10 mm long near the base - associated with vesicles

UNIT 41.03 OVERALL DESCRIPTION

Upper contact - 211.11 m 5 mm minimum, green altered glassy rim. Dip - 40°
Lower contact - 212.21 m Total glassy margin (Unit 41.03-41.04) 7 mm thick-upper margin (part that is Unit 41.03) 3-4 mm thick of dark green braided smectite and about 30% pale green, intercalated lenses with another variety of smectite. Dip - 30°
Unit thickness - 1.10 m Type of unit - pillow

Dark grey, very sparsely clinopyroxene phyric, aphanitic basalt.

Phenocrysts:- <<1%
- size - ±1 mm
- bottle green clinopyroxene

Vesicles:- 10-12%
- average maximum size - 2-3 mm
- filling - 90% open, 10% carbonates

Spotting:- about 10%
- closely related to vesicles
- brown spotting represents alteration of the groundmass but the altered zone which has sharp although inconspicuous boundaries with unaltered groundmass is rich in tiny vesicles
- size of spots: up to 10 mm long - where elongate and commonly 3 mm wide
- the elongate spots, like pipe vesicles, are oriented perpendicular to the pillow margins

Veins:- 3% total (with pillow margins), 1-2% otherwise
- filling - 50% carbonate, 50% green smectite

Note: Altered glassy rim parallels core and skims the upper part of the core diameter from 211.60-212.30 m.

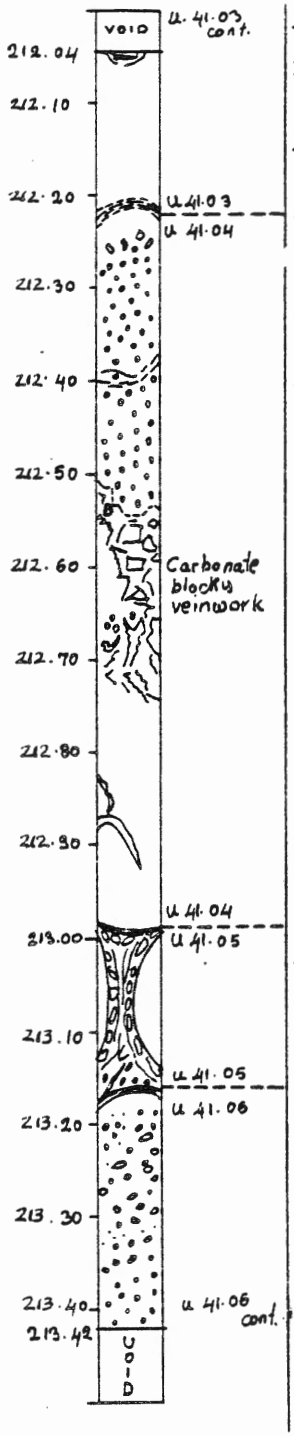
UNIT 41.03 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 41 Sheet 3a

Visual Core Description Observer A. Bacagor

Depth Interval 212.04 m to 213.42 m



UNIT 41.03 cont. Description - see Box 41, Sheet 2.

Dark grey, very sparsely clinopyroxene phyric, pillow basalt.

UNIT 41.04 OVERALL DESCRIPTION

Upper contact - 212.21 m About 3-4 mm of dark green smectite after glass and lenses of very pale green smectite.
Lower contact - 212.99 m Dip - about 30° but swings more or less parallel to the core.
Braided dark green smectite after glass with lenses of very pale smectite.
Unit thickness - 0.78 m Type of unit - pillow

Dark grey, fine-grained, very sparsely clinopyroxene phyric basalt.

Phenocrysts:- 10%
- size - <1 mm, generally equidimensional
- bottle green clinopyroxene

Vesicles:- 7% overall
- concentrated up to 20% between 212.25 212.52 m
- average maximum size - 4 mm
- filling - 80% open, 20% carbonate

Spotting:- 2-3%
- brown spotting related to vesicles but evidently representing alteration of the groundmass in round, elliptical, elongate masses up to about 6 mm long, 1-2 mm wide
- most concentrated in the lower part of the unit

Veins:- 6% overall, 8% including margins
- network of coarse veins enclosing breccia fragments of pillow, in pillow interior from 212.55 -212.70 m
- filling - 75% vuggy carbonate, 25% green smectite

UNIT 41.05 OVERALL DESCRIPTION

Upper contact - 212.99 m Depositional.
Lower contact - 213.16 m Depositional.
Unit thickness - 0.17 m

Lobe from adjoining pillow - aphyric, purplish-grey basalt.

Vesicles:- 5-10%
- average maximum size - about 2 mm
- filling - mostly open

Spotting:- about 5% brownish spotting related to vesicles

UNIT 41.06 Description - see Box 41, Sheet 3b.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 41 Sheet 36

Graphic Representation | Sample

Visual Core Description Observer R. Baragar

Depth Interval 212.04 m to 213.42 m

UNIT 41.06 OVERALL DESCRIPTION

Upper contact - 213.16 m Dip - 30° Altered glassy pillow margin about 7 mm thick comprising 40% pale and dark green smectite and 60% intercalated carbonate.
Lower contact - 213.74 m Incomplete.
Unit thickness - 0.58 m Type of unit - pillow

Dark grey, fine-grained, sparsely clinopyroxene phyric basalt.

Phenocrysts:- <<1%
- size - ±1 mm
- bottle green clinopyroxene

Vesicles:- 10% but concentrated to 20% in the upper 25 cm
- average maximum size - about 6 mm
- maximum size - 10 mm
- filling - 50% carbonates, 45% open, 5% green smectite

Spotting:- 2-3%
- brown spotting related to vesicles and including vesicles in part
- maximum size - 10 mm
- most concentrated in the upper and lower few centimeters

Veins:- 3-4%, 5-6% including marginal altered glass
- filling - 60% carbonates, 40% smectite

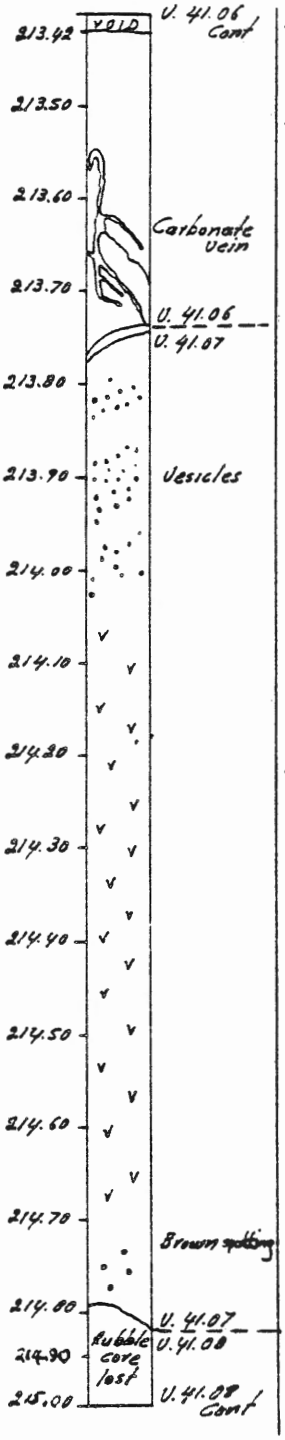
UNIT 41.06 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 41 Sheet 4

Visual Core Description Observer R. Barragan/M. Haller

Depth Interval 213.42 m to 215.00 m



UNIT 41.06 cont. Description - see Box 41, Sheet 3b.

Dark grey, clinopyroxene phyric pillow basalt.

UNIT 41.07 OVERALL DESCRIPTION

Upper contact - 213.74 m 5-6 mm of altered glass.
Dip - 25°
Lower contact - 214.82 m Incomplete, attitude uncertain.
Unit thickness - 1.08 m

Dark grey, fine-grained, sparsely clinopyroxene phyric basalt.

Phenocrysts:- <<1%
- average maximum size - ±1 mm
- bottle green clinopyroxene

Vesicles:- 5%, but concentrated up to 25% in upper 20 cm
- average maximum size - about 3-4 mm
- filling - 50% open, 50% carbonate

Spotting:- brown spotting related to vesicles
- most concentrated near the upper and lower margins - particularly the lower where they tend to be oriented perpendicular to the contact
- average size - 7 mm long - 3 mm wide

Veins:- about 3%, 5% including margins
- filling - 60% smectite and 40% carbonate

UNIT 41.08 OVERALL DESCRIPTION

Upper contact - 214.82 m Depositional with altered glass.
Core loss?
Lower contact - 215.21 m Depositional with altered glass.
Dip - 30°.
Unit thickness - 0.39 m Type of unit: pillow

Grey, fine-grained, microphyric basalt.

Phenocrysts:- scarce - 2%
- homogeneously distributed
- size - approximately 0.5 mm
- euhedral green clinopyroxene

Vesicles:- 3%
- size - <1 mm
- filling - 100% open
- round

Veins:- 4%
- size - approximately 1 mm
- filling - 80% layer silicates, 10% carbonates, 10% zeolites
- glassy margins replaced by green sheet silicates

GMA:- approximately 35%

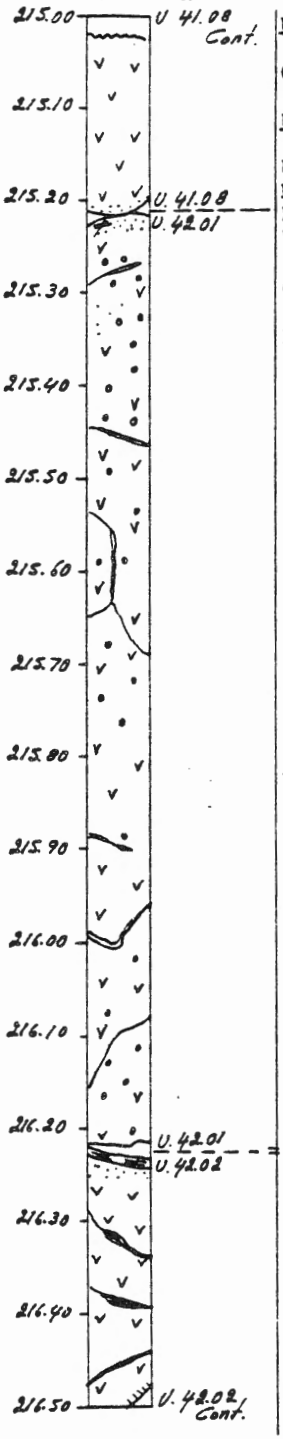
UNIT 41.08 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 42 Sheet 1

Visual Core Description Observer M. Haller.

Depth Interval 215.00 m to 216.50 m



UNIT 41.08 cont. Description - see Box 41, Sheet 4.

Grey, microphyric pillow basalt.

UNIT 42.01 OVERALL DESCRIPTION

Upper contact - 215.21 m Depositional with altered glass.
Dip - 30°.
Lower contact - 216.22 m Core loss, probably depositional.
Unit thickness - 1.01 m Type of unit: pillow?

Grey, fine-grained, microphyric basalt.

Phenocrysts:- 3%, sporadic
- homogeneous distribution
- size - <0.5 mm
- light green clinopyroxene
- subhedral

Vesicles:- 10%
- filling - open or filled with euhedral analcime
- mostly round

Veins:- 3%
- size - 1-3 mm
- filling - 40% carbonates, 30% sheet silicates
30% zeolites
- glassy margin replaced by dark green sheet silicates

GMA:- approximately 25%

UNIT 42.02 OVERALL DESCRIPTION

Upper contact - 216.22 m Depositional with altered glass.
Dip - 25°.
Lower contact - 216.58 m Depositional with altered glass.
Dip - 45°.
Unit thickness - 0.36 m Type of unit: pillow

Grey, very fine-grained, microphyric basalt.

Phenocrysts:- 2%
- homogenously distributed
- size - <0.5 mm
- anhedral light green clinopyroxene

Vesicles:- size - 1 mm
- filling - mostly open
- round

Veins:- 7%
- size - 1-9 mm
- filling - 70% carbonate, 25% sheet silicates,
5% zeolites
- upper and lower glassy margins replaced by green
sheet silicates

GMA:- 30%

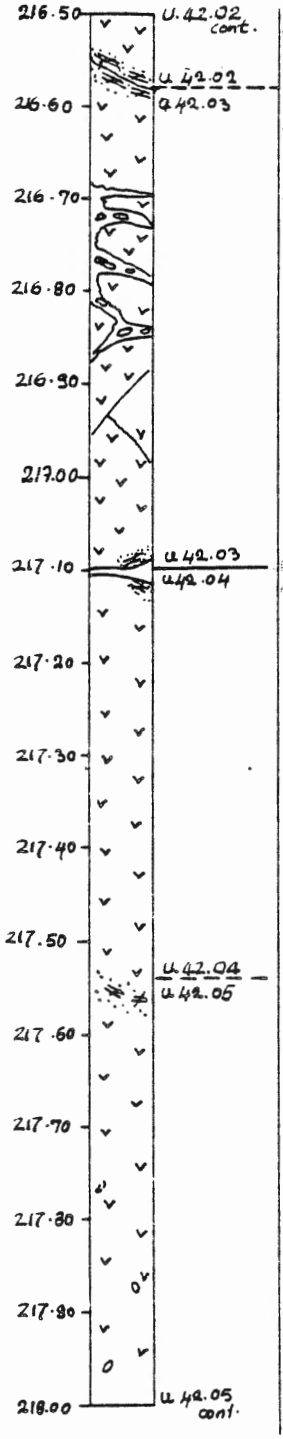
UNIT 42.02 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY 1

Core Box 42 Sheet 2a

Visual Core Description Observer M.Haller

Depth Interval 216.50 m to 218.00 m



UNIT 42.02 cont. Description - see Box 42, Sheet 1.

Grey, very fine-grained, microphyric pillow basalt.

UNIT 42.03 OVERALL DESCRIPTION

Upper contact - 216.58 m Depositional, with altered glass.
Dip - 45°.
Lower contact - 217.10 m Depositional, with altered glass.
Nearly horizontal contact.
Unit thickness - 0.52 m Type of unit: pillow

Grey, very fine-grained, microphyric basalt.

Phenocrysts:- 1%
- randomly distributed
- size - <0.5 mm
- subhedral grey clinopyroxene

Vesicles:- 5%
- size - 1-1.5 mm
- filling - 100% open
- shape - irregular

Veins:- 12%
- size - 1-7 mm
- filling - 65% carbonate, 30% sheet silicates, 5% zeolites
- glassy margins replaced by dark green sheet silicates

GMA:- approximately 30%

UNIT 42.04 OVERALL DESCRIPTION

Upper contact - 217.10 m Depositional, with altered glass, nearly horizontal contact.
Lower contact - 217.55 m Intrusive with little to no glass.
Dip - 0°.
Unit thickness - 0.45 m Type of unit: pillow

Grey, coarse-grained, slightly phyric basalt.

Phenocrysts:- scarce - 4%
- homogeneously distributed
- size - clinopyroxene(?) - <0.5 mm; olivine - 2-3 mm
- 2% green anhedral clinopyroxene? and 2% euhedral olivine in the lower half of the unit
- the olivine phenocrysts are altered to a brownish material

Vesicles:- 5%
- size - <1 mm
- filling - open or filled with carbonate

Veins:- 20%
- size - 1-2 mm
- filling - 55% sheet silicates, 45% carbonates

GMA:- 30%

UNIT 42.05 Description - see Box 42, Sheet 2b.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 42 Sheet 26

Graphic Representation | Sample

Visual Core Description Observer M. Haller

Depth Interval 216.50 m to 218.00 m

UNIT 42.05 OVERALL DESCRIPTION

Upper contact - 217.55 m Intrusive with little to no altered glass contact of a greyish chill zone approximately 10 mm in width. Dip approximately horizontal.
Lower contact - 218.70 m Depositional with altered glass.
Dip - 45°
Unit thickness - 1.15 m Type: pillow

Grey, fine-grained, slightly phyric basalt.

Phenocrysts:- 2%
- size - 3 mm
- olivine completely altered to orange Fe oxides
- subhedral

Vesicles:- 1%
- size - 2 mm
- filling - 85% open, 15% carbonate

Veins:- 1%
- filling - mainly calcite

GMA:- 30% - to 70% layer silicates, 30% carbonate

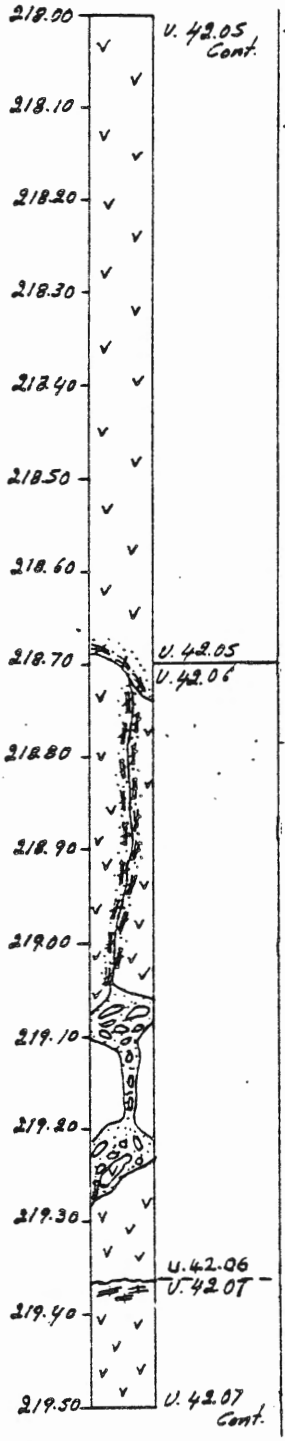
UNIT 42.05 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 42 Sheet 3

Visual Core Description Observer M. Haller

Depth Interval 218.00 m to 219.50 m



UNIT 42.05 cont. Description - see Box 42, Sheet 2b.

Grey, fine-grained, slightly phyric basalt.

UNIT 42.06 OVERALL DESCRIPTION

Upper contact - 218.70 m Depositional with altered glass.
Dip - 65°
Lower contact - 219.37 m Depositional with altered glass.
Probably horizontal contact - fractured core.
Unit thickness - 0.67 m Type of unit: pillow margin zone and/or pillow breccia

Grey, fine-grained, slightly phyric basalt.

Phenocrysts:- 5%
- size - olivine - 2 mm, clinopyroxene? - <1 mm
- 80% euhedral olivine phenocrysts altered in brownish material and 20% green euhedral clinopyroxene(?)

Vesicles:- 2%, scarce
- size - 1 mm
- filling - 100% open
- rounded

Veins:- 25% (including glassy margins)
- carbonate veins including angular rock pieces
- size - 14 mm
- filling - 50% sheet silicates, 50% carbonate
- glassy margins replaced by dark green sheet silicates

GMA:- approximately 35%

UNIT 42.07 OVERALL DESCRIPTION

Upper contact - 219.37 m Depositional with altered glass.
Probably horizontal contact.
Lower contact - 219.63 m Depositional with altered glass.
Dip - 70°
Unit thickness - 0.26 m Type of unit: pillow

Grey, fine-grained, slightly phyric basalt.

Phenocrysts:- approximately 3%
- size - 1 mm
- euhedral olivine

Vesicles:- 1%, scarce
- size - <1 mm
- filling - 100% open

Veins and fractures:- 15%
- filling - 95% clay minerals, 5% open
- at 219.48 m - a fracture with hydrothermal alteration to greenish-grey clay minerals

GMA:- approximately 20%

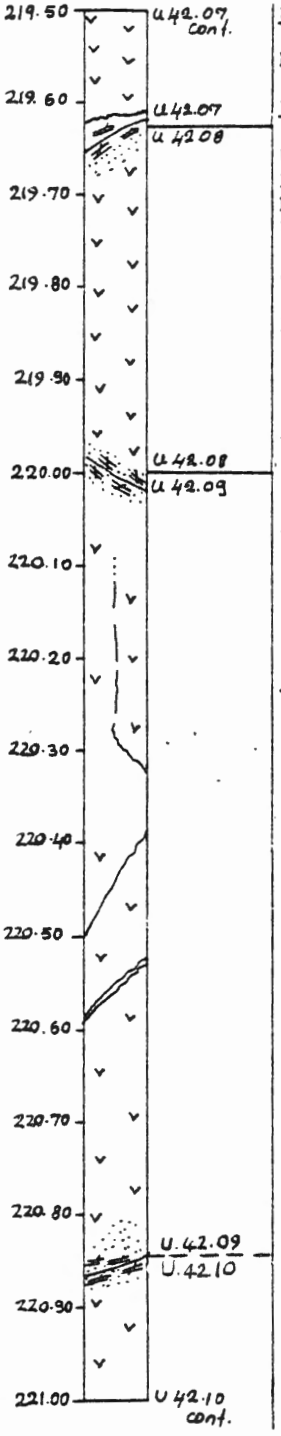
UNIT 42.07 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY 1

Core Box 42 Sheet 4

Visual Core Description Observer M.Haller

Depth Interval 219.50 m to 221.00 m



UNIT 42.07 cont. Description - see Box 42, Sheet 3.

Fine-grained, grey, slightly phyric pillow basalt.

UNIT 42.08 OVERALL DESCRIPTION

Upper contact - 219.63 m Depositional with altered glass.
Lower contact - 220.00 m Depositional with altered glass.
Dip - 45°.
Unit thickness - 0.37 m Type of unit: pillow

Grey, quite fine-grained, slightly phyric basalt.

Phenocrysts:- 2%
- randomly distributed
- size - 1-2 mm
- euhedral, altered olivine?

Vesicles:- 1%, scarce
- filling - 100% open
- shape - irregular

Veins:- 8%
- filling - 99% layer silicates, 1% open
- glassy margins altered to green sheet silicates

GMA:- 35%

UNIT 42.09 OVERALL DESCRIPTION

Upper contact - 220.00 m Depositional, altered glass. Dip - 45°.
Lower contact - 220.84 m Depositional, altered glass. Dip - 25°.
Unit thickness - 0.84 m Type of unit: pillow

Grey, very fine-grained, slightly phyric basalt.

Phenocrysts:- scarce (1%)
- size - 1-2 mm
- subhedral olivine altered to ochreous material

Veins:- 5%
- glassy margins altered to dark green sheet silicates
- size - 1-5 mm
- filling - 65% layer silicates, 35% carbonate

GMA:- 25%

UNIT 42.10 Description - see Box 43, Sheet 1.

Fine-grained, grey, olivine phyric pillow basalt.

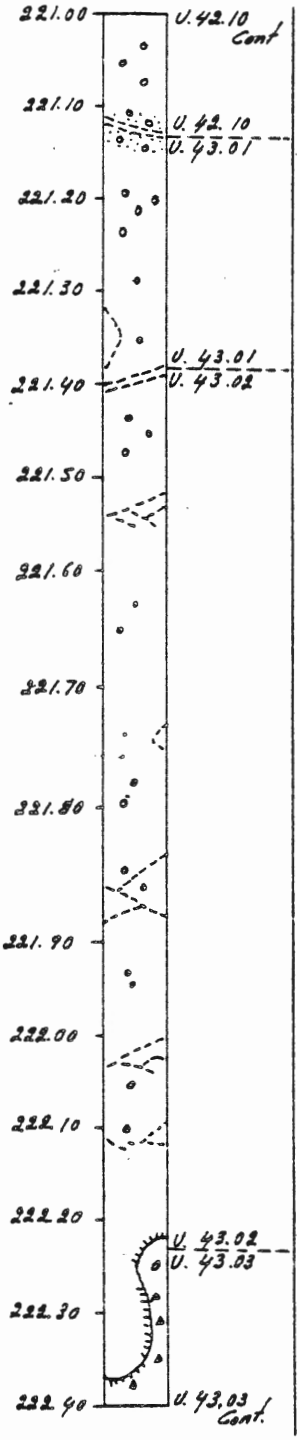
UNIT 42.10 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 43 Sheet 1a

Visual Core Description Observer J.A.Pearce

Depth Interval 221.00 m to 222.40 m



UNIT 42.10 cont. OVERALL DESCRIPTION

Upper contact - 220.84 m Depositional. Chilled, 25 mm brecciated altered glass contact zone. Dip - 80°.
Lower contact - 221.13 m Depositional, irregular, brecciated (altered glass and calcite) contact zone. Dip - variable. Small amounts fresh? glass.
Unit thickness - 0.29 m Type of unit: pillow

Grey, fine-grained, olivine phyric basalt. Some tiny feldspar laths visible.

Phenocrysts:- 2-5%
- irregular distribution
- maximum size - 5 mm
- olivine (and ??clinopyroxene) phenocrysts completely pseudomorphed by calcite and goethite
- subhedral

Vesicles:- approximately 2%
- irregular distribution
- filling - mostly open, locally (especially near fractures) filled by dark green crystalline smectite or calcite

Veins:- <1% veins throughout
- size - <2 mm
- filling - carbonate
- irregular

UNIT 43.01 OVERALL DESCRIPTION

Upper contact - 221.13 m Chilled, thin, altered glass. Dip - 80°.
Lower contact - 221.38 m Chilled, thin, altered glass. Dip - 80°.
Unit thickness - 0.25 m Type of unit: pillow

Grey, fine-grained, olivine basalt.

Phenocrysts:- 2%
- irregular distribution
- maximum size - 4 mm
- olivine altered to clay and iron oxides
- subhedral

Vesicles:- approximately 2%
- size - 2-5 mm
- filling - carbonate
- irregular

Veins:- <1%
- size - hairline to mm
- filling - 90% carbonate, 10% layer silicates

UNITS 43.02 and 43.03 Descriptions - see Box 43, Sheet 1b.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1
Core Box 43 Sheet 16

Graphic Representation | Sample

Visual Core Description Observer J.A. Pearce
Depth Interval 221.00 m to 222.40 m

UNIT 43.02 OVERALL DESCRIPTION

Upper contact - 221.38 m Chilled, altered glass. Dip - 80°.
Lower contact - 222.23 m Chilled, thick glassy rind, altered to clay and carbonate brecciated. Dip - 90°.
Unit thickness - 0.85 m Type of unit: pillow

Grey, fine-grained, fresh, olivine basalt.

Phenocrysts:- 2%
- size - 1-3 mm
- olivine altered to iron oxides and clays
- subhedral

Vesicles:- 1%, mostly in upper 10 cm
- size - 1-2 mm
- filling - open or filled with carbonate
- irregular

Veins:- 2%
- size - hairline to 2 mm
- filling - carbonate
- irregular

UNIT 43.03 OVERALL DESCRIPTION

Upper contact - 222.23 m Depositional. Chilled, details obscured.
Lower contact - 222.80 m Depositional. Chilled, details obscured.
Unit thickness - 0.57 m Type of unit: pillow

Grey, fine-grained, olivine phyric basalt with brown alteration patches.

Phenocrysts:- 0-1%, slightly more abundant at the base
- maximum size - 3 mm
- olivine phenocrysts completely pseudomorphed by goethite
- subhedral

Vesicles:- approximately 2% on average but greater at the top of the unit
- filling - mostly open, green smectite dominates in filled vesicles, rare calcite is present
- average size - 1 mm
- maximum size - approximately 2 mm

Veins:- clay rich zones common, hence unit is only preserved as rubble in this section

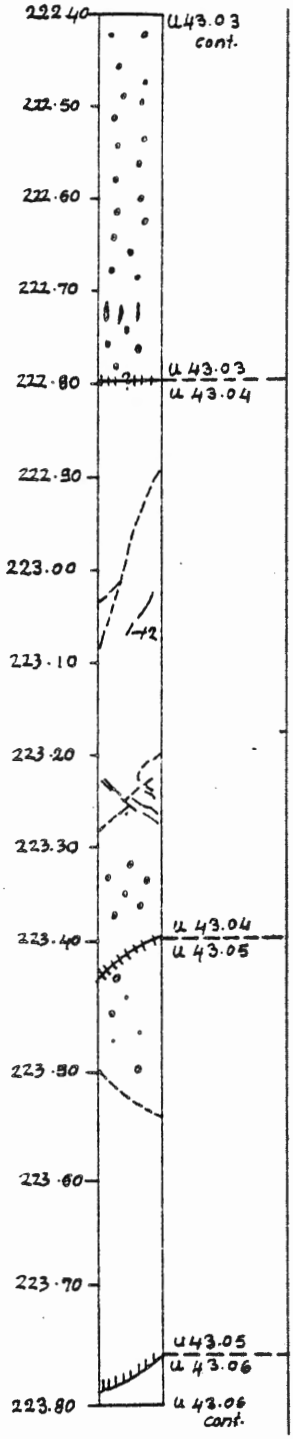
UNIT 43.03 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY 1

Core Box 43 Sheet 2

Visual Core Description Observer J.A. Pearce

Depth Interval 222.40 m to 223.80 m



UNIT 43.03 cont. Description - see Box 43, Sheet 1b.

Fine-grained, grey, olivine phyric, pillow basalt.

UNIT 43.04 OVERALL DESCRIPTION

Upper contact - 222.80 m Depositional, chilled, details obscured.
Lower contact - 223.40 m Depositional, chilled. Dip - 30°.
Unit thickness - 0.60 m Type of unit: probable pillow

Fine-grained, grey olivine basalt with rare brown patches.

Phenocrysts:- approximately 1%
- random distribution
- olivine totally pseudomorphed by goethite ± carbonate
- subhedral
- maximum size - 2 mm

Vesicles:- <1%, concentrated at the top of the unit
- maximum size - 2 mm
- filling - green smectite ± calcite

Veins:- approximately 2%
- maximum size - approximately 5 mm
- filling - calcite and green smectite
- glass spall altered fragments occur in the widest veins
- all gradations exist from spherical vesicles, through segregation "vesicles" to veins

UNIT 43.05 OVERALL DESCRIPTION

Upper contact - 223.40 m Depositional. Chilled, altered glass spall. Dip - 30°.
Lower contact - 223.76 m Depositional. Chilled, altered glass spall. Dip - 80°.
Unit thickness - 0.36 m Type of unit: pillow?

Grey, fine-grained, olivine basalt with occasional brown patches.

Phenocrysts:- <<1%
- maximum size - 2 mm
- olivine totally pseudomorphed by goethite ± carbonate
- subhedral

Vesicles:- 2-5%, concentrated at the top of the unit
- maximum size - 2 mm
- filling - green smectite, calcite, and brown Fe oxide
- mostly spherical

Veins:- <1%
- size - thin
- filling - calcite and green smectite
- irregular

UNIT 43.06 Overall Description - see Box 43, Sheet 3.

Fine-grained, grey-green, olivine pillow basalt.

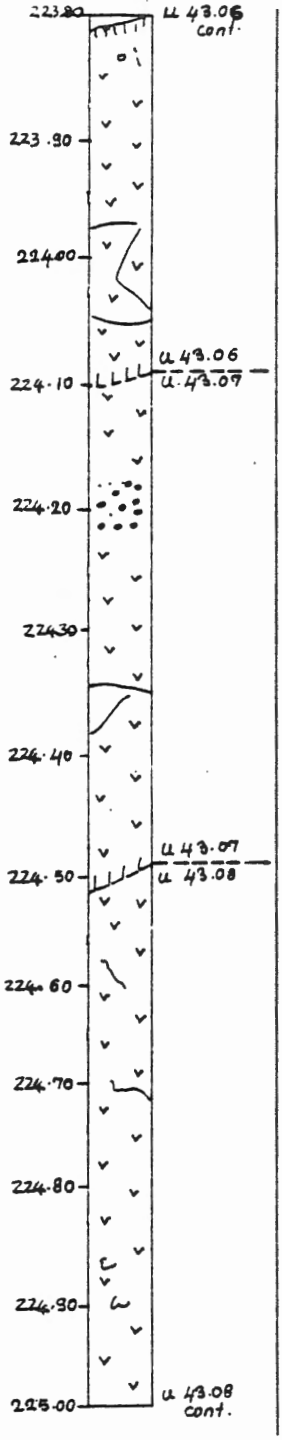
UNIT 43.06 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY 1

Core Box 43 Sheet 3

Visual Core Description Observer J. Pearce / P.T. Robinson

Depth Interval 223.80 m to 225.00 m



UNIT 43.06 cont. OVERALL DESCRIPTION

Upper contact - 223.76 m Depositional. Chilled, approximately 20 mm altered glass spall assumed. Dip 80°.
Lower contact - 224.09 m Contact obscured - only rubble preserved (could conceivably be only fracture zone). Dip 60°.
Unit thickness - 0.33 m Type of unit: pillow (?)

Fine-grained, grey-green, olivine basalt with brown patches especially at the base.

Phenocrysts:- <1%
- randomly distributed
- maximum size - 2 mm
- pseudomorphed (goethite) and subhedral olivine

Vesicles:- approximately 2% concentrated at top and center
- maximum size - 4 mm
- filling - many open, where filled green smectite and calcite dominates

Veins:- 1-2%
- average size - 20 mm
- average spacing - 50 mm
- filling - mainly calcite, and smectite
- irregular

UNIT 43.07 OVERALL DESCRIPTION

Upper contact - 224.09 m Chilled, greenish, narrow, minor altered glass. Dip - 60°.
Lower contact - 224.49 m Chilled, reddish-grey, narrow minor altered glass. Dip - 45°.
Unit thickness - 0.40 m Type of unit: pillow

Fine-grained, grey, uniform, fresh, olivine basalt.

Phenocrysts:- 1%, scattered
- size - 1 mm
- olivine altered to iron oxides and clays
- subhedral

Vesicles:- 2-3%, mostly near 224.20 m
- maximum size - 3 mm
- filling - 80% carbonates, 20% layer silicates
- subrounded

Veins:- 2%
- size - 1-2 mm
- filling - carbonate
- irregular

UNIT 43.08 Description - see Box 43, Sheet 4.

Grey, fine-grained, olivine basalt with extensive brown patches.

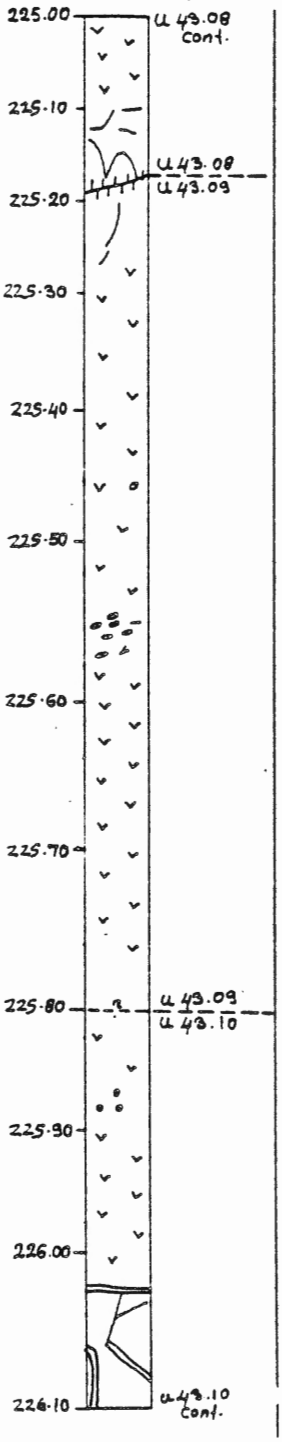
UNIT 43.08 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY 1

Core Box 43 Sheet 4

Visual Core Description · Observer J. Pearce / D. Bailey

Depth Interval 225.00 m to 226.10 m



UNIT 43.08 OVERALL DESCRIPTION

Upper contact - 224.49 m Contact obscured (could just be fracture). Dip - 45°.
Lower contact - 225.17 m Depositional. Chilled, 20 mm zone of altered glass spall. Dip - 20°.
Unit thickness - 0.68 m Type of unit: pillow(?)

Fine-grained, grey, olivine basalt with extensive brown patches.

Phenocrysts:- <1%
- randomly distributed
- maximum size - 3 mm
- pseudomorphed (goethite) and subhedral olivine

Vesicles:- approximately 2%, slightly more abundant at top
- maximum size - 2 mm
- filling - many void, a few filled by smectite or carbonate
- most are small and spherical

Veins:- <1%
- average size - 20 mm
- average spacing - 50 mm
- filling - carbonate and rare green smectite
- irregular

UNIT 43.09 OVERALL DESCRIPTION

Upper contact - 225.17 m Depositional. Chilled, 20 mm altered glass spall. Dip - 20°.
Lower contact - 225.80 m Depositional. Chilled, altered glass, contact obscured.
Unit thickness - 0.63 m Type of unit: pillow(?) (could be flow)

Grey-brown, variolitic(?), fine-grained, aphyric basalt with extensive brown patches.

Vesicles:- approximately 2%, more abundant at the top
- maximum size - 2 mm
- filling - some open or with smectite or calcite
- mostly spherical

Veins:- <1%
- maximum size - 3 mm
- average spacing - 10 cm
- filling - dominantly calcite
- irregular

UNIT 43.10 Description - see Box 44, Sheet 1.

Grey-brown, very fine-grained, aphyric basalt.

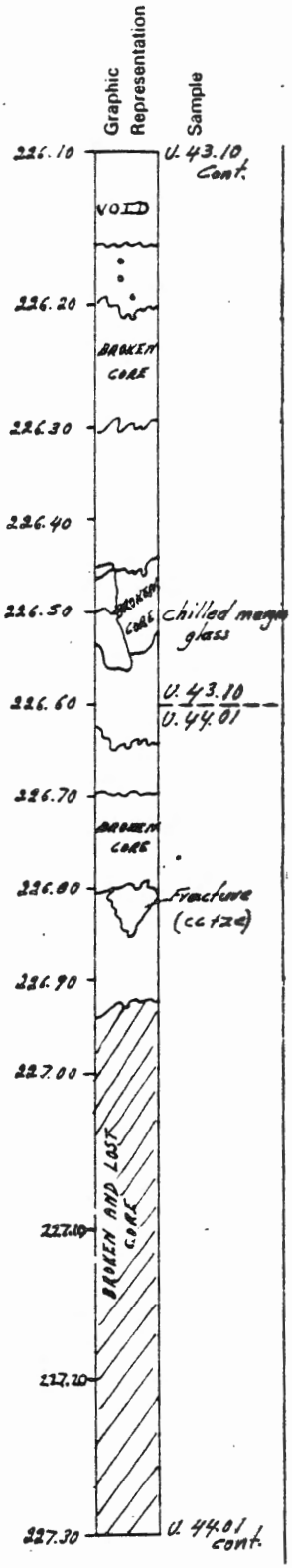
UNIT 43.10 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 44 Sheet 1

Visual Core Description Observer D BAILEY

Depth Interval 226.10 m to 227.30 m



UNIT 43.10 OVERALL DESCRIPTION

Upper contact - 225.80 m Obscured.
Lower contact - 226.60 m Depositional(?), fragmented - but chilled margin and altered glass present.
Unit thickness - 0.80 m Type of unit: massive flow(?)

Grey-brown, very fine-grained, aphyric basalt.

Vesicles:- overall 3%, though highly vesicular and with segregation vesicles at approximately 226.15 m, 226.50 m and 226.60 m
- average maximum size - 2 mm
- filling - 45% open, 30% carbonate, 15% opaques, 10% layer silicates

Veins:- 4%
- size - 0.25-3 mm
- filling - 60% carbonate, 30% zeolites (analcime), 10% layer silicates

UNIT 44.01 OVERALL DESCRIPTION

Upper contact - 226.60 m Ambiguous. Chilled margin present but orientation and nature of contact are obscure.
Lower contact - 228.18 m Ambiguous. Fragmented but altered glass and chilled margins present. Highly veined (slightly brecciated).
Unit thickness - 1.58 m Type of unit: pillow?

Grey-green, fine-grained, aphyric basalt. The unit is highly fragmented and a general description is difficult.

Vesicles:- overall approximately 3%
- homogeneous distribution?
- maximum size - 1.5 mm
- filling - 40% open, 30% carbonate, 20% layer silicates, 10% opaques
- Note:- segregation vesicles common and surrounded by brown "splotchy" alteration

Veins:- approximately 3%
- size - <3 mm
- filling - 70% carbonates, 20% zeolites, 10% layer silicates

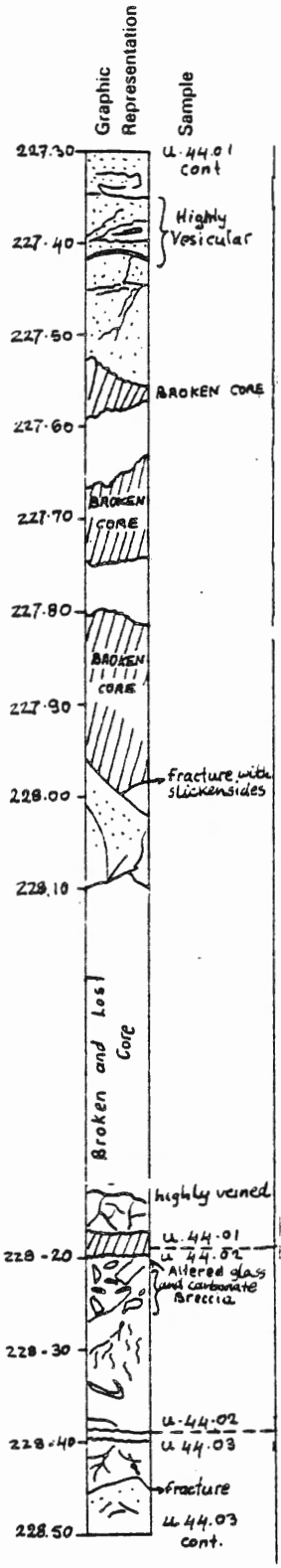
UNIT 44.01 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY 1

Core Box 44 Sheet 2a

Visual Core Description Observer D Bailey

Depth Interval 227.30 m to 228.50 m



UNIT 44.01 cont. Description - see Box 44, Sheet 1.

Fine-grained, grey green, aphyric pillow(?) basalt.

Vesicles:- highly vesicular from 227.30-227.40 m

Veins:- carbonate veining extensive at about 227.45 m and from 228.05-228.15 m (virtually brecciated)
- celadonite common from about 227.3-227.55 m
- fracture with minor movement and sheet silicates at approximately 227.97 m, orientation 60°/210°

UNIT 44.02 OVERALL DESCRIPTION

Upper contact - 228.18 m Depositional(?). The top 10 cm are brecciated with angular basalt fragments in a carbonate matrix. Altered glass common at the very top.
Lower contact - 228.38 m Depositional(?) apparently. Chilled margin present locally. No glass, orientation not clear.
Unit thickness - 0.20 m Type of unit: Thin flow? with brecciated upper surface

Grey-green, fine-grained, slightly olivine phyric basalt.

Phenocrysts:- 1%, homogeneous distribution
- average size - approximately 1 mm
- 100% altered olivine
- subhedral

Vesicles:- minor - 2%
- maximum size - approximately 1 mm
- filling - 50% open, 25% carbonates, 15% layer silicates, 10% opaques
- irregular
- splotchy segregation vesicles present, especially at the base of the unit

Veins:- approximately 4%
- carbonate veins common especially in upper brecciated zone
- maximum size - approximately 1 mm

UNIT 44.03 Description - see Box 44, Sheet 2b.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 44 Sheet 26

Graphic Representation | Sample

Visual Core Description Observer D. Bailey

Depth Interval 227.30 m to 228.50 m

UNIT 44.03 OVERALL DESCRIPTION

Upper contact - 228.38 m Depositional. Altered braided glass, carbonate and smectite present above the chilled margin. Dip - 75°. [Note: slight movement along the contact].
Lower contact - 229.00 m Ambiguous - broken core. Minor altered glass. Analcime also present. Contact drawn because of the presence of altered glass, chilled margins and change in rock colour.
Unit thickness - 0.62 m Type of unit: pillow(?)

Grey-green, very fine-grained, slightly olivine phyric basalt.

Phenocrysts:- 1%, homogeneous distribution
- average size - 1 mm
- 100% altered olivine
- subhedral

Vesicles:- approximately 4%
- maximum size - approximately 2 mm
- filling - 40% carbonates, <35% open, 15% layer silicates, 10% opaques, zeolite?
- segregation vesicles with surrounding splotches common at the top of the unit

Veins:- 4%
- average maximum size - approximately 3 mm
- filling - predominantly carbonate, less zeolite

GMA:- approximately 50%

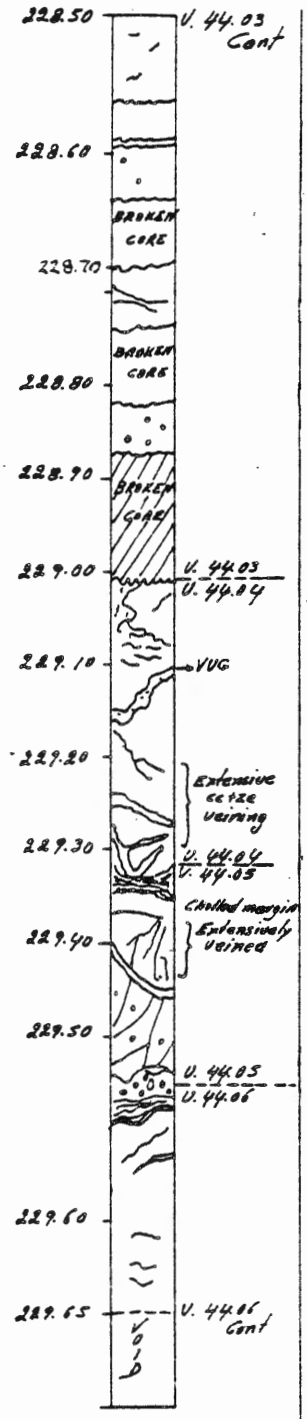
UNIT 44.03 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 44 Sheet 3a

Visual Core Description Observer D. BAILEY

Depth Interval 228.50 m to 229.65 m



UNIT 44.03 cont. Description - see Box 44, Sheet 2b.

Grey-green, very fine-grained, highly fragmented and veined olivine pillow basalt.

Veins:- predominantly carbonate but analcime also present in some fragments

UNIT 44.04 OVERALL DESCRIPTION

Upper contact - 229.00 m Ambiguous. Small angular glass and basalt fragments in a carbonate matrix. Some chilled margins preserved but the nature of the contact is not clear. Orientation is not measurable.
Lower contact - 229.31 m Depositional. Altered glass and carbonate form contact along chilled margin of pillow. Highly veined. Orientation not measurable as contact is subparallel to the back of the core but then cuts across the core at 229.31 m.
Unit thickness - 0.31 m Type of unit: pillow

Brown-grey, fine-grained, slightly olivine phryic basalt.

Phenocrysts:- 1%, homogeneous distribution
- average size - approximately 1 mm
- 100% altered olivine
- subhedral

Vesicles:- minor approximately 2%
- average size - approximately 0.5 mm
- filling - 50% open, 30% carbonates, 10% layer silicates, 10% opaques
- irregular
- segregation vesicles (splotches) common at the top of the unit
- vugs also present (one at 229.14 m)

Veins:- 10%
- carbonate and zeolite veins common
- average maximum size - 4 mm

GMA:- approximately 50% (Note: colour changes from red-brown to brown-grey at 229.12 m)

UNITS 44.05 and 44.06 Descriptions - see Box 44, Sheet 3b.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 44 Sheet 36

Graphic Representation | Sample

Visual Core Description Observer D. Bailey

Depth Interval 228.50 m to 229.65 m

UNIT 44.05 OVERALL DESCRIPTION

Upper contact - 229.31 m Depositional. Altered glass, carbonate and smectite surround the chilled pillow margin.
Dip - approximately 85°.
Lower contact - 229.54 m Depositional. Smectite and altered glass below the chilled margin. Dip - approximately 30°.
Unit thickness - 0.23 m Type of unit: pillow

Grey-brown, fine-grained, slightly olivine phyric basalt.

Phenocrysts:- <1%, homogeneous distribution
- average size - 1 mm
- 100% altered olivine
- subhedral

Vesicles:- minor, approximately 2%
- average size - approximately 0.5 mm
- filling - <40% open, 30% carbonate, 20% layer silicates, 10% opaques, zeolite?
- segregation vesicles common (3%) and altered to dark brown

Veins:- approximately 5%
- average maximum size - approximately 2 mm
- filling - predominantly carbonate; some zeolite

GMA:- 50%

UNIT 44.06 OVERALL DESCRIPTION

Upper contact - 229.54 m Chilled with altered glass.
Lower contact - 229.86 m Depositional with 15 cm breccia zone separating Units 44.06 and 44.07. Very little altered glass present.
Unit thickness - 0.32 m Type of unit: pillow

Grey-brown, very slightly olivine phyric, brecciated pillow basalt with olivine (1 mm) altered to reddish-brown clay. Alteration halos occur along veins.

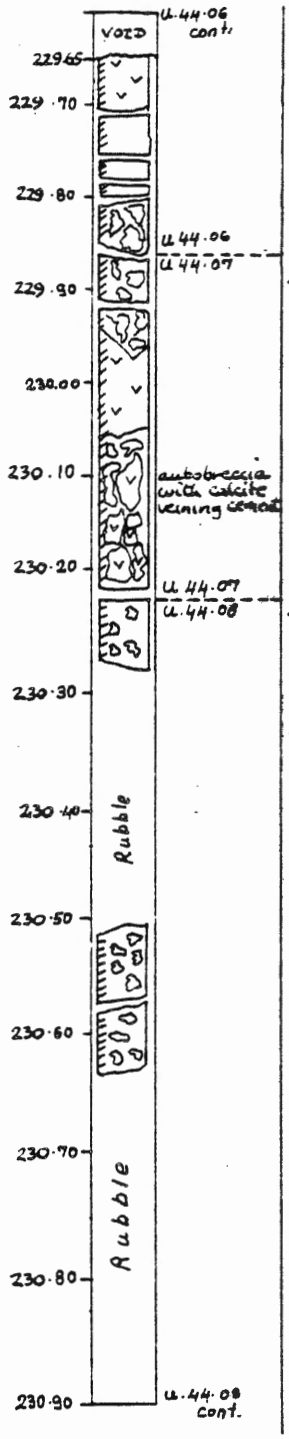
UNIT 44.06 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 44 Sheet 4

Visual Core Description Observer J. Mehegan / D. Bailey

Depth Interval 229.65 m to 230.90 m



UNIT 44.06 cont. Description - see Box 44, Sheet 3b.

Grey-brown, very slightly olivine phyric, brecciated pillow basalt with olivine (1 mm) altered to reddish-brown clay.

UNIT 44.07 OVERALL DESCRIPTION

Upper contact - 229.86 m Depositional. Ambiguous.
Lower contact - 230.23 m Depositional.
Unit thickness - 0.37 m

Greenish-brown, fine-grained, very slightly olivine phyric, brecciated pillow basalt with calcite veining.

UNIT 44.08 OVERALL DESCRIPTION

Upper contact - 230.23 m Highly brecciated zone comprising angular brown basalt fragments, each 10-20 mm across imbedded in a matrix of smaller brown basalt fragments, green fragments of altered glass spall and iron-stained calcite and clay minerals. The contact between this breccia and Unit 44.07 is quite sharp but irregular.
Lower contact - 232.40 m Ambiguous - in rubble. Probably similar in character to the upper contact.
Unit thickness - 2.17 m Type of unit: fragmented pillow breccia

This unit is made up of pillow clasts in a breccia matrix. The degree of brecciation is greatest at the top and bottom where the rock is very friable and no intact clasts greater than 10 cm across can be identified. Some larger pillow fragments are preserved between 231.15 and 231.65 m and are separated by a strongly brecciated matrix. The pillow clasts are purple-brown with brown patches and are aphyric and vesicular. The breccia matrix consists of intimate mixtures of (1) rounded-angular pillow fragments of sizes ranging from 1 - >100 mm (2) green, altered glass spall fragments (3) calcite and white/green clay minerals.

Vesicles:- approximately 5% in the pillow clasts
- filling - void or with calcite or green smectite with a brown alteration rim
- brown spherical patches are also present and may be considered as vesicle related or as altered varioles

GMA:- pillow fragments range from brown to white (completely replaced by calcite and clay) and are intensely altered

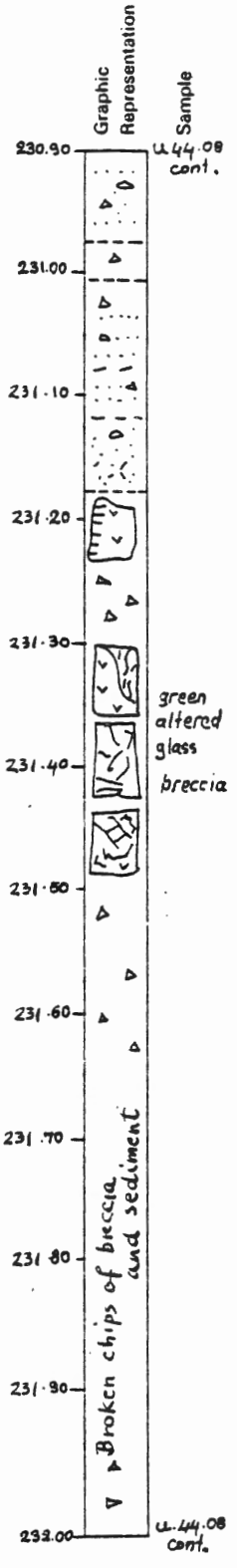
UNIT 44.08 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 45 Sheet 1

Visual Core Description Observer J. Pearce / P.T. Robinson

Depth Interval 230.90 m to 232.00 m



UNIT 44.08 cont. Description - see Box 44, Sheet 4.

This unit is made up of pillow clasts in a breccia matrix. The degree of brecciation is greatest at the top and bottom where the rock is very friable and no intact clasts greater than 10 cm across can be identified. Some larger pillow fragments are preserved between 231.15 and 231.65 m and are separated by a strongly brecciated matrix. The pillow clasts are purple-brown with brown patches and are aphyric and vesicular. The breccia matrix consists of intimate mixtures of (1) rounded-angular pillow fragments of sizes ranging from 1 - >100 mm (2) green, altered glass spall fragments (3) calcite and white/green clay minerals.

Vesicles:- approximately 5% in the pillow clasts
- filling - void or with calcite or green smectite with a brown alteration rim
- brown spherical patches are also present and may be considered as vesicle related or as altered varioles

GMA:- pillow fragments range from brown to white (completely replaced by calcite and clay) and are intensely altered

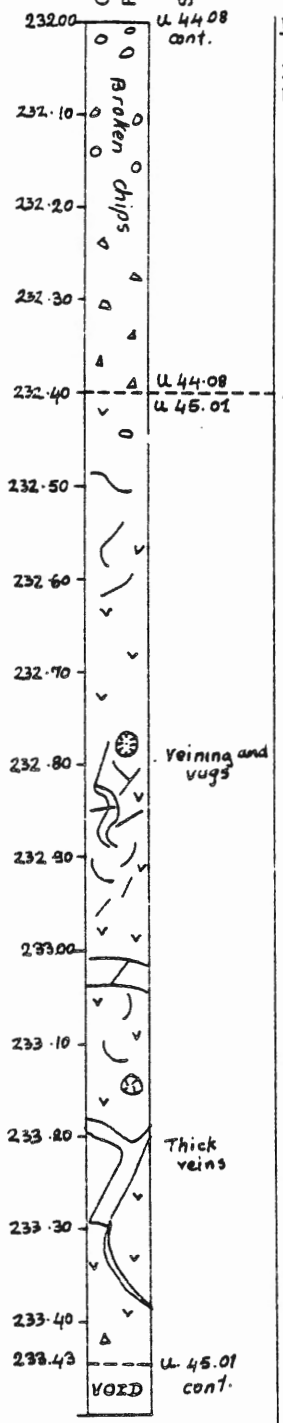
UNIT 44.08 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 45 Sheet 2

Visual Core Description Observer J.A. Pearce / P.T. Robinson

Depth Interval 232.00 m to 233.43 m



UNIT 44.08 cont. Description - see Box 44, Sheet 4.

Purple-brown, aphyric, vesicular pillow clasts in a volcanic breccia.

UNIT 45.01 OVERALL DESCRIPTION

Upper contact - 232.40 m Brownish-grey zone of relatively intense alteration approximately 50 mm wide, otherwise the contact is obscured.
Lower contact - 240.75 m Finer-grained and brecciated toward the base.
Unit thickness - 8.35 m Type of unit: probably a massive flow

Aphanitic/fine to fine/medium-grained, grey basalt with grey-green and grey-brown patches. Schlieren of aphanitic/fine-grained rock occur within the coarser-grained sections. The primary texture appears to be aphyric, intersertal with plagioclase laths and clinopyroxene.

Vesicles:- approximately 2%
- large vesicles ≥5 mm occur randomly throughout
- mostly spherical
- filling - mainly calcite

Veins:- 2-3%
- maximum size - 5 mm
- filling - calcite (occasionally Fe-Mn stained) ± clay minerals
- irregular
- locally (especially at 233.35-233.55 m) there are zones of brecciation in which angular flow fragments are enclosed within a carbonate matrix

GMA:- strong

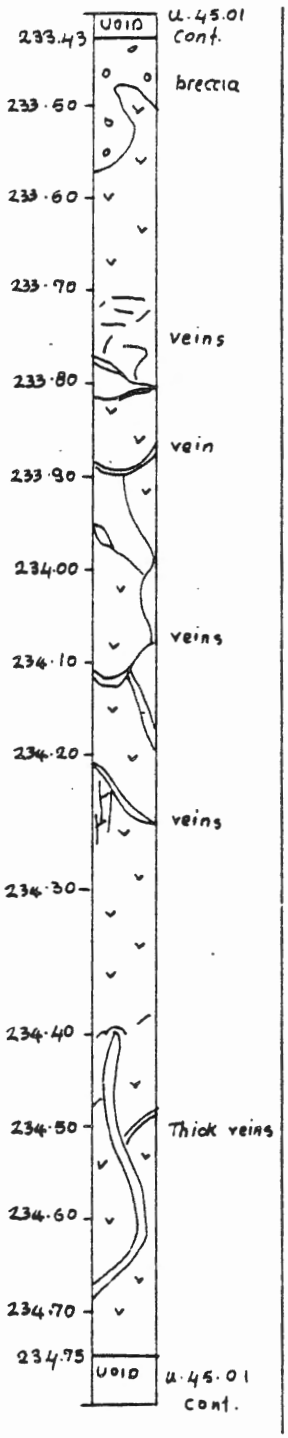
UNIT 45.01 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 45 Sheet 3

Visual Core Description Observer J.A. Pearce / P.T. Robinson

Depth Interval 233.43 m to 234.75 m



UNIT 45.01 cont. Description - see Box 45, Sheet 2.

Aphanitic/fine to fine/medium-grained, grey basalt with grey-green and grey-brown patches. Schlieren of aphanitic/fine-grained rock occur within the coarser-grained sections. The primary texture appears to be aphyric, intersertal with plagioclase laths and clinopyroxene.

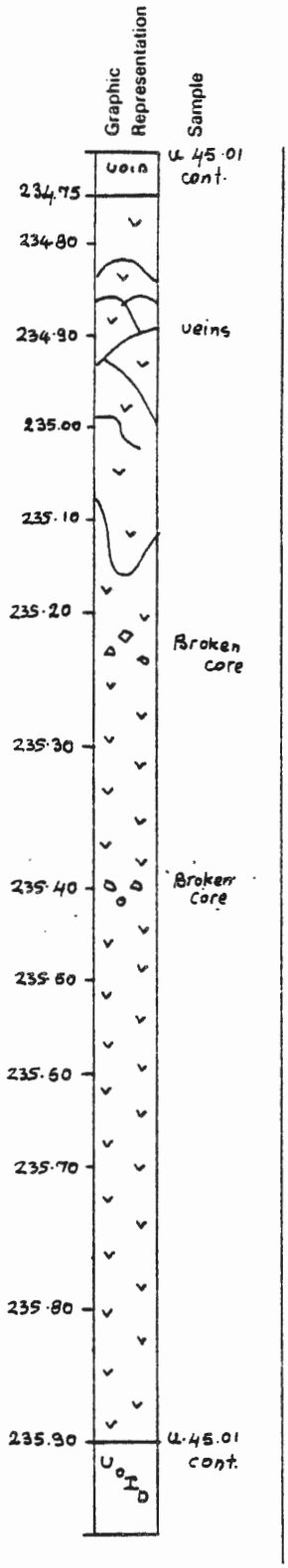
UNIT 45.01 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 45 Sheet 4

Visual Core Description Observer J.A. Pearce/P.T. Robinson

Depth Interval 234.75 m to 235.90 m



UNIT 45.01 cont. Description - see Box 45, Sheet 2.

Aphanitic/fine to fine/medium-grained, grey basalt with grey-green and grey-brown patches. Schlieren of aphanitic/fine-grained rock occur within the coarser-grained sections. The primary texture appears to be aphyric, intersertal with plagioclase laths and clinopyroxene.

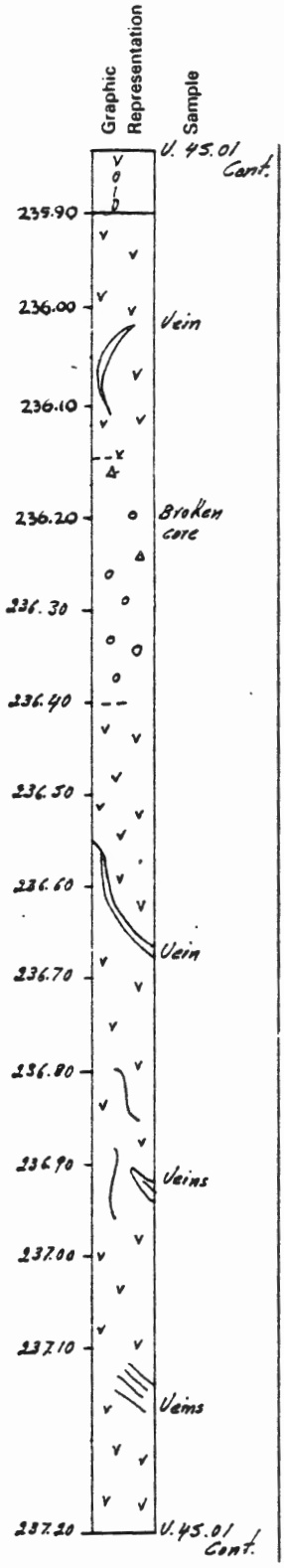
UNIT 45.01 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 46 Sheet 1

Visual Core Description Observer J.A. Pearce / P.T. Robinson

Depth Interval 235.90 m to 237.20 m



UNIT 45.01 cont. Description - see Box 45, Sheet 2.

Aphanitic/fine to fine/medium-grained, grey basalt with grey-green and grey-brown patches. Schlieren of aphanitic/fine-grained rock occur within the coarser-grained sections. The primary texture appears to be aphyric, intersertal with plagioclase laths and clinopyroxene.

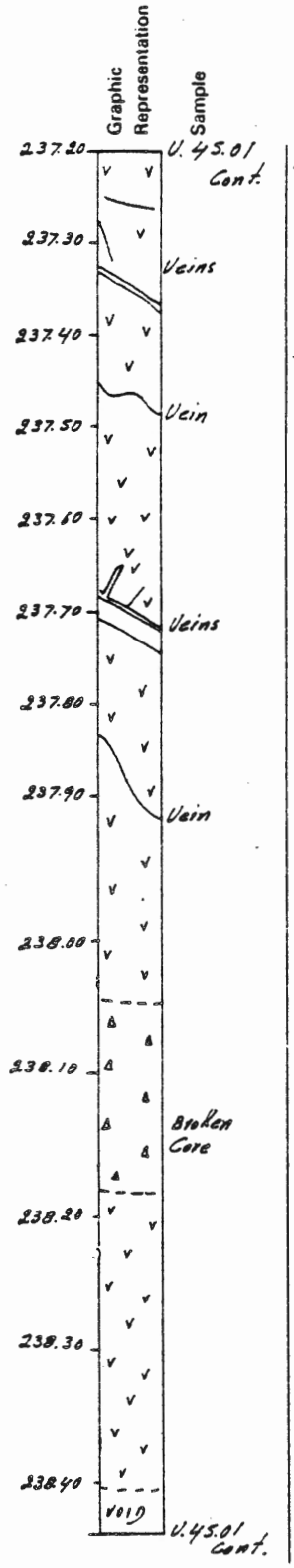
UNIT 45.01 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 46 Sheet 2

Visual Core Description Observer J.A. Pearce / P.T. Robinson

Depth Interval 237.20 m to 238.40 m



UNIT 45.01 cont. Description - see Box 45, Sheet 2.

Aphanitic/fine to fine/medium-grained, grey basalt with grey-green and grey-brown patches. Schlieren of aphanitic/fine-grained rock occur within the coarser-grained sections. The primary texture appears to be aphyric, intersertal with plagioclase laths and clinopyroxene.

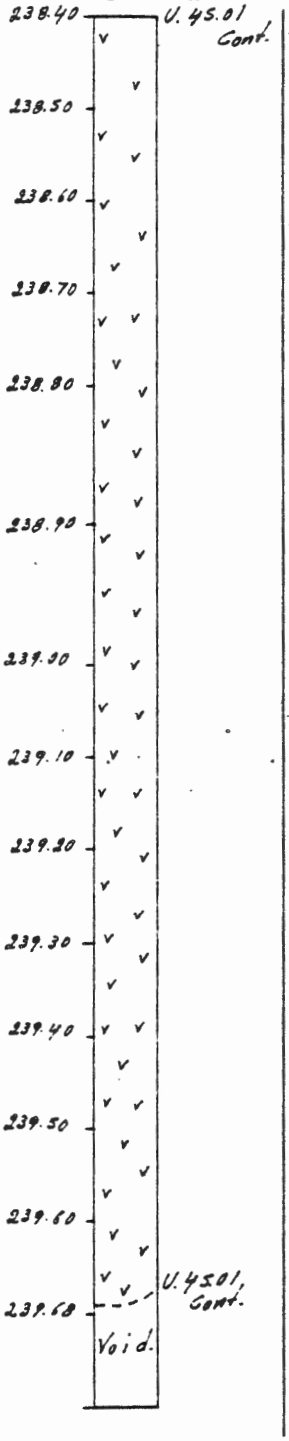
UNIT 45.01 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 46 Sheet 3

Visual Core Description Observer J.A. Pearce / P.T. Robinson

Depth Interval 238.40 m to 239.68 m



UNIT 45.01 cont. Description - see Box 45, Sheet 2.

Aphanitic/fine to fine/medium-grained, grey basalt with grey-green and grey-brown patches. Schlieren of aphanitic/fine-grained rock occur within the coarser-grained sections. The primary texture appears to be aphyric, intersertal with plagioclase laths and clinopyroxene.

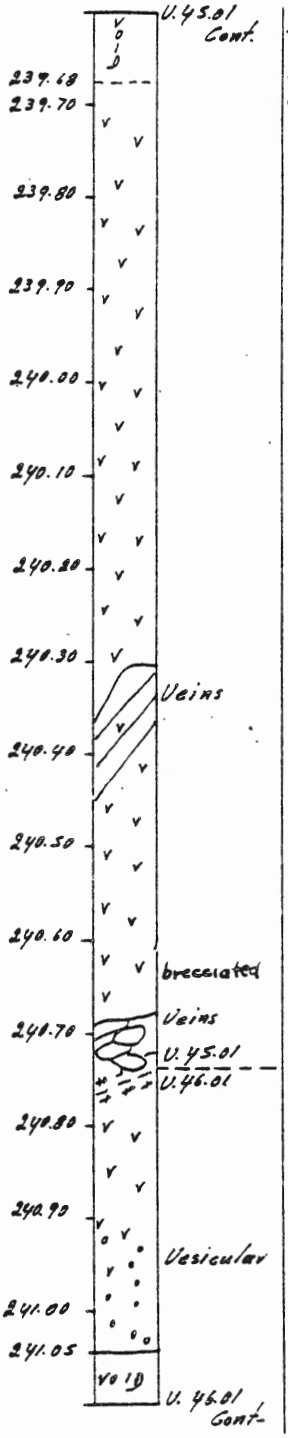
UNIT 45.01 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 46 Sheet 4

Visual Core Description Observer J. Mehegan

Depth Interval 239.68 m to 241.05 m



UNIT 45.01 cont. Description - see Box 45, Sheet 2.

Aphanitic/fine to fine/medium-grained, grey basalt with grey-green and grey-brown patches. Schlieren of aphanitic/fine-grained rock occur within the coarser-grained sections. The primary texture appears to be aphyric, intersertal with plagioclase laths and clinopyroxene.

UNIT 46.01 OVERALL DESCRIPTION

Upper contact - 240.75 m Brownish-grey and vesicular.
Lower contact - 241.60 m Vesicular pillow(?) basalt with fine-grained, aphyric, reddish-brown groundmass.
Unit thickness - 0.85 m

Green-grey, fine-grained basalt.

Vesicles:- 5%
- filling - 80% open, 10% layer silicates, 10% carbonate

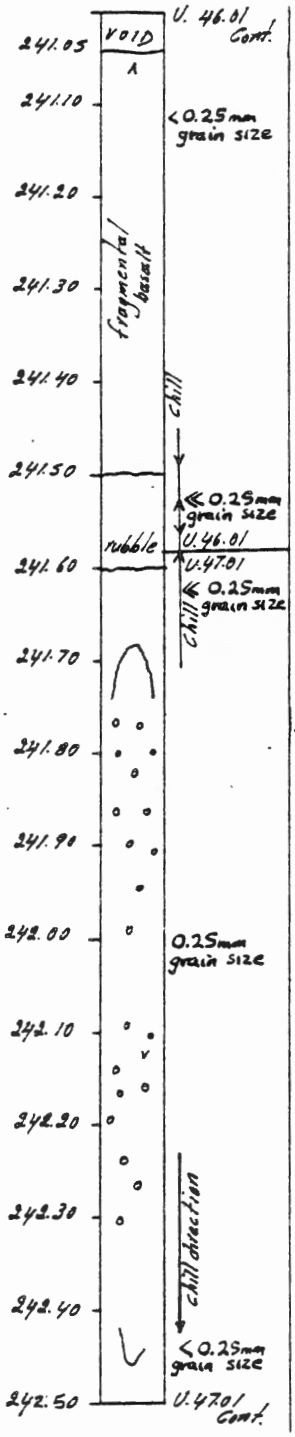
UNIT 46.01 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 47 Sheet 1

Visual Core Description Observer S. Ayrell

Depth Interval 241.05 m to 242.50 m



UNIT 46.01 cont. Description - see Box 46, Sheet 4.

Chips and fragments of fine-grained, green-grey, vesicular basalt.

UNIT 47.01 OVERALL DESCRIPTION

Upper contact - 241.60 m Chill, no glass separately but altered hemihyaline chill. Chilled gradually over 50 mm to very fine-grained edge.
Lower contact - 242.55 m Chill, no glass separately but altered hemihyaline chill. Chilled gradually over 100 mm to very fine-grained edge.

Vesicular, grey-green massive basalt flow, <0.25 mm grainsize with pyroxene and plagioclase.

Vesicles:- 12%
- size - <4 mm
- filling - 60% open, 20% carbonate, 10% layer silicates, 10% zeolites

Veins:- 3% veins and longitudinal fractures
- filling - 50% gypsum, 30% layer silicates, 20% carbonate

GMA:- 30% - to 85% layer silicates, 15% carbonate

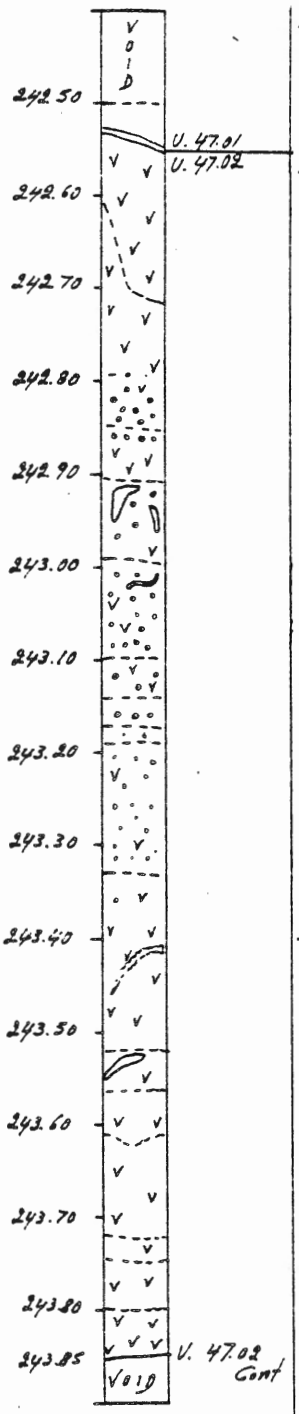
UNIT 47.01 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 47 Sheet 2

Visual Core Description Observer H. Elsbree

Depth Interval 242.50 m to 243.85 m



UNIT 47.01 cont. Description - see Box 47, Sheet 1.

Vesicular, grey-green massive basalt flow.

UNIT 47.02 OVERALL DESCRIPTION

Upper contact - 242.55 m Probably depositional. No glass, but there is a chilled margin and grain size decreases towards the contact. Dip - 15°.
Lower contact - 245.80 m Depositional. Small amount of altered glass and small altered zone (5 mm). Chilled margin. Dip - 30°.
Unit thickness - 3.25 m Type of unit - flow basalt

Grey, aphyric basalt which is fine-grained to approximately 243.00 m, then medium-grained to approximatey 245.30 m and fine-grained to the lower contact.

Vesicles:- 5% but higher in some zones, concentrated between 242.60-243.80 m
- size - 5 mm - small in size near the upper contact and increases to 243.30 m and decreases at 243.70 m
- filling - 50% open, 35% carbonate, 15% clay
- open vesicles often have a clay lining

Veins:- 2%
- a large vein runs perpendicular down the core from 243.55-243.90 m
- filling - 80% carbonate and 20% clays
- at 243.52 m is an area of clay, carbonate and what appears to be green altered glass

GMA:- 30% - to 70% layer silicates, 30% carbonate
- some gmelinite in vesicles

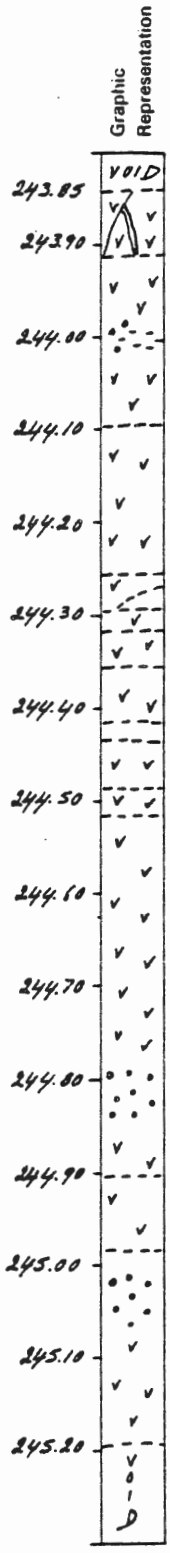
UNIT 47.02 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 47 Sheet 3

Visual Core Description Observer HElsbree

Depth Interval 243.85 m to 245.20 m



UNIT 47.02 cont. Description - see Box 47, Sheet 2.

Grey, aphyric basalt which is fine-grained to approximately 243.00 m, then medium-grained to approximately 245.30 m and fine-grained to the lower contact.

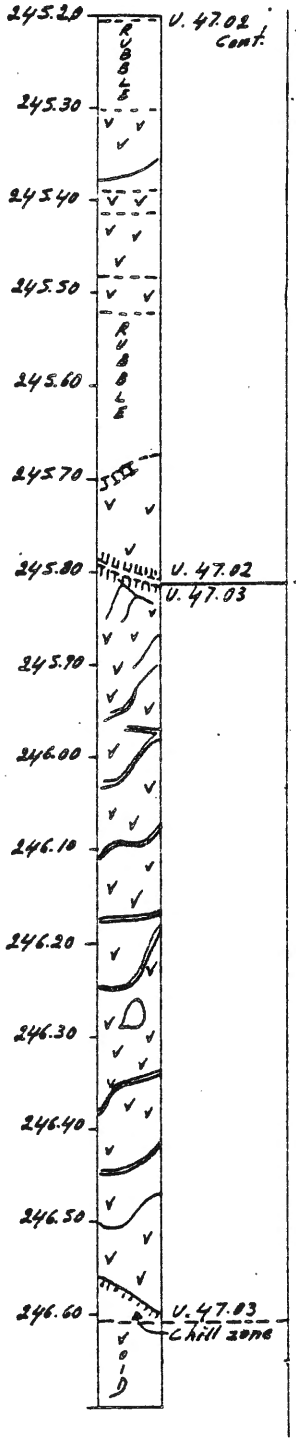
UNIT 47.02 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 47 Sheet 4

Visual Core Description Observer HElsbree

Depth Interval 245.20 m to 246.60 m



UNIT 47.02 cont. Description - see Box 47, Sheet 2.

Fine- to medium-grained, grey, aphyric flow basalt.

UNIT 47.03 OVERALL DESCRIPTION

Upper contact - 245.80 m Depositional.
Lower contact - 246.60 m Depositional, with altered glass and chill margin. Some slight grain size decrease near contact. Reddish alteration near contact. Dip - 85°
Unit thickness - 0.80 m Type of unit: small flow or pillow

Grey, fine-grained, slightly phyric basalt.

Phenocrysts:- 1%
- size - 2 mm
- olivine altered to orange Fe oxides
- subhedral

Vesicles:- 1%
- size - 2 mm
- filling - 50% open, 30% carbonate, 20% clays

Veins:- 4%, scattered evenly through the unit
- size - 1-8 mm
- filling - 95% carbonate, 5% clays

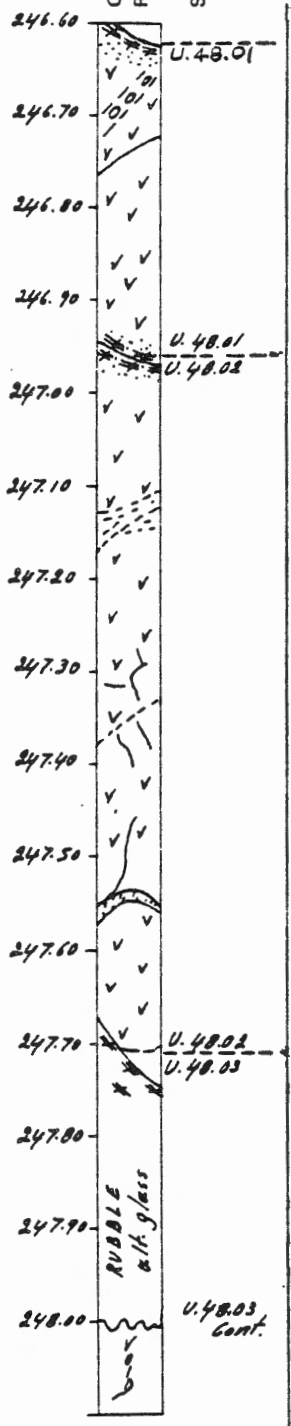
GMA:- 30% - to 70% layer silicates, 30% carbonate

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 48 Sheet 1

Visual Core Description Observer M. Haller

Depth Interval 246.60 m to 248.00 m



UNIT 48.01 OVERALL DESCRIPTION

Upper contact - 246.60 m Depositional, with altered glass. 5 mm thick, chilled, fine-grained pink zone. Dip - 50°.
Lower contact - 246.96 m Depositional, with scarce altered glass. 4 mm thick chilled margin with brownish, fine-grained zones. Dip - 20°.
Unit thickness - 0.36 m Type of unit: pillow
Grey, fine-grained, slightly phyric basalt.

Phenocrysts:- scarce - 1%, sporadic
- size - <0.5 mm subhedral, light green clinopyroxene and one isolated euhedral 5 mm olivine with small (<0.2 mm) black euhedral spinels and brownish replacing material

Vesicles:- 2%
- size - small
- filling - open or carbonate filled
- mostly round

Veins:- 6%
- size - 1-4 mm
- filling - 55% carbonate and 45% sheet silicates

GMA:- approximately 20%

UNIT 48.02 OVERALL DESCRIPTION

Upper contact - 246.96 m Depositional with scarce altered glass. Dip - 20°.
Lower contact - 247.70 m Depositional with altered glass. Core loss in the bottom of the unit.
Unit thickness - 0.74 m Type of unit: probably pillow

Grey, fine-grained, aphyric basalt.

Vesicles:- 1%
- size - <1 mm
- filling - carbonate

Veins:- 9%
- several 1-3 mm thick carbonate veins
- 247.56 m - 10 mm thick carbonate vein
- filling - 65% carbonate and 35% sheet silicates

GMA:- approximately 35%

UNIT 48.03 OVERALL DESCRIPTION

Upper contact - 247.70 m Depositional with a 25 mm thick altered glass zone. No orientation possible because of core fragmentation.
Lower contact - 248.20 m Depositional with altered glass. Dip - 30°.
Unit thickness - 0.50 m Type of unit: pillow breccia

The upper part of the unit is formed by angular, aphyric basalt fragments. The interstitial material is sheet silicates (altered glass). The rock fragments are quite fine-grained, grey-brownish basalt and have an average size of 40-50 mm. The lower part of the unit consists of a 70 mm thick layer, formed by spalled fragment breccia of green altered glass in a clay rich matrix. The curved flakes (2-4 mm thick) are supported by the matrix.

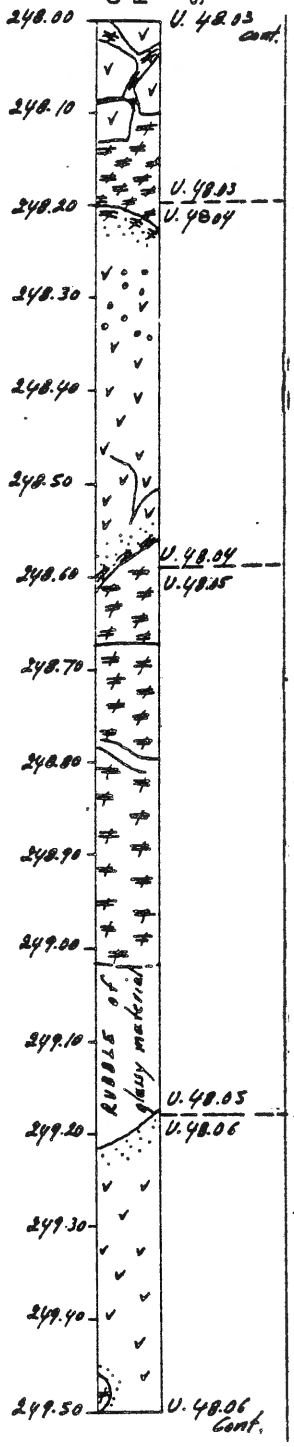
UNIT 48.03 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 48 Sheet 2

Visual Core Description Observer M. Haller

Depth Interval 248.00 m to 249.50 m



UNIT 48.03 cont. Description - see Box 48, Sheet 1.

Pillow breccia. The fragments are quite fine-grained, grey-brownish, aphyric basalt and are 40-50 mm in size. The lower 70 mm is spalled fragment breccia of green, altered glass in a clay rich matrix.

UNIT 48.04 OVERALL DESCRIPTION

Upper contact - 248.20 m Depositional with altered glass.
Dip - 30°.
Lower contact - 248.60 m Depositional with altered glass.
Dip - 30°.
Unit thickness - 0.40 m Type of unit: pillow

Both boundaries of the unit are formed by a very fine-grained chilled margin, 5 mm thick of grey, fine-grained, aphyric basalt.

Vesicles:- 10% - located in the upper part of the unit
- size - 1 mm
- filling - open or filled with euhedral zeolites
- round

Veins:- 6%
- size - 1-4 mm
- filling - 50% carbonate, 35% sheet silicates, and 15% gypsum

GMA:- approximately 30%

UNIT 48.05 OVERALL DESCRIPTION

Upper contact - 248.60 m Depositional, altered glass. Dip - 30°.
Lower contact - 249.18 m Probably depositional (core loss).
Unit thickness - 0.58 m Type of unit: pillow breccia

Fine-grained, spalled fragment breccia with a dominant greenish-grey colour and also with pink, brownish and yellow parts. There are little blocky fragments from chilled vitric basalt. Bedding of spalled flakes only in upper 80 mm. A clay matrix supports the fragments. The whole unit is highly altered.

UNIT 48.06 Overall Description - see Box 48, Sheet 3.

Grey, fine- to coarse-grained, aphyric massive basalt flow.

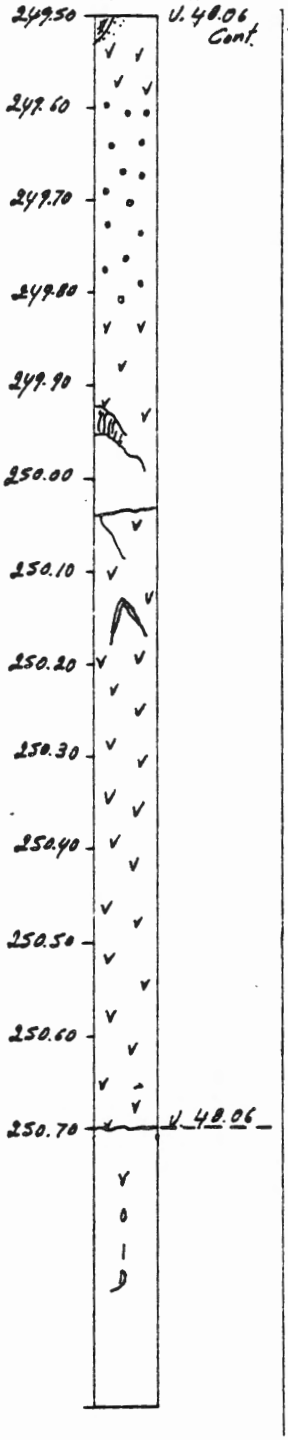
UNIT 48.06 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 48 Sheet 3

Visual Core Description · Observer M. Haller

Depth Interval 249.50 m to 250.70 m



UNIT 48.06 cont. OVERALL DESCRIPTION

Upper contact - 249.18 m Probably depositional (core loss?).
Lower contact - 250.70 m Intrusive with "baked" margin.
Dip - 45°.
Unit thickness - 1.52 m Type of unit: massive flow

Grey, aphyric basalt which is quite fine-grained with some medium-grained zones in the central part of the unit.

Vesicles:- 5%, almost all located in the upper half
- size - 1-2 mm
- filling - open or filled with carbonate

Veins:- 5%
- 249.50 m - a lateral chilled margin with altered glass and fine-grained zone (4 mm thick)
- filling - 70% carbonate, 25% sheet silicates, 5% zeolites

GMA:- approximately 30%

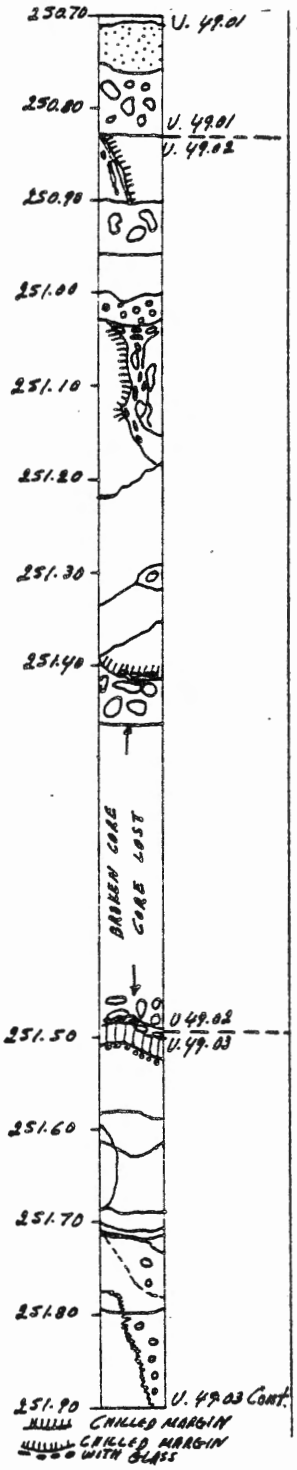
Note: Section 4 of Box 48 is empty.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 49 Sheet 1a

Visual Core Description Observer N. Baglow

Depth Interval 250.70 m to 251.90 m



UNIT 49.01 OVERALL DESCRIPTION

Upper contact - 250.70 m Ambiguous, no glass.
Lower contact - 250.83 m Ambiguous with altered glass (rubble).
Unit thickness - 0.13 m

Overall doleritic aspect of the main fragment suggests a small intrusive body. Fine- to medium-grained, aphyric, green and white speckled dolerite with very sparse altered feldspar segregation (2-3 m).

No vesicles or veins.

GMA:- low to medium

UNIT 49.02 OVERALL DESCRIPTION

Upper contact - 250.83 m Depositional with altered glass.
Lower contact - 251.49 m Depositional with altered glass.
Unit thickness - 0.66 m Type of unit: pillow basalt

Fine-grained, green-red, aphyric basalt with alteration of interstitial material into irregular red patches (1-3 mm). Slight variolitic (mottled) texture immediately outside of some chilled margin zones. Small (approximately 0.5 mm) green smectite replacements occur sporadically.

Vesicles:- 1%, evenly distributed throughout the unit
- size - 0.5-1 mm
- filling - mostly open with some 5% (within the chilled margin) green sheet silicates, filled and 1% rimmed with blue celadonite
- round
- odd, irregular 3 mm voids

Veins:- 30% accentuated by infolded pillow margins
- filling - 80% sheet silicates (most altered glass, but some red and green clayey material included), 15% clear gypsum, 5% carbonate

GMA:- medium to high

UNIT 49.03 Description - see Box 49, Sheet 1b.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 49 Sheet 16

Graphic Representation | Sample

Visual Core Description Observer N. Baglow

Depth Interval 250.70 m to 251.90 m

UNIT 49.03 OVERALL DESCRIPTION

Upper contact - 251.49 m Depositional with altered glass.
Lower contact - 251.94 m Depositional with altered glass.
Unit thickness - 0.45 m Type of unit: pillow basalt

Fine- to medium-grained, aphyric basalt, green-red to green-white (coarser areas) in colour. Most pervasive red alteration toward the marginal areas, upper margin characterized by mottling immediately below narrow chill. Similar lower contact.

Vesicles:- 5%, sparsely distributed throughout
- size - 0.5-3 mm
- filling - 70% carbonate, 30% open
- generally irregular in shape
- dark segregations (2-8 mm) are found predominantly in the lower 20 cm of the unit largely restricted to approximately 30 mm wide apparently vertically trending zone - segregations typically approach sphericity

Veins:- 10%
- fractures at 251.71 m and 251.76 m are essentially gypsum filled with the gypsum appearing to be in optical continuity (cleavage planes parallel through fracture)
- filling - 60% sheet silicates (mostly altered glass), 30% gypsum, 10% carbonate

GMA:- medium to high, patchy
- irregular, red alteration blotches (3-10 mm) associated with vesicles towards the base

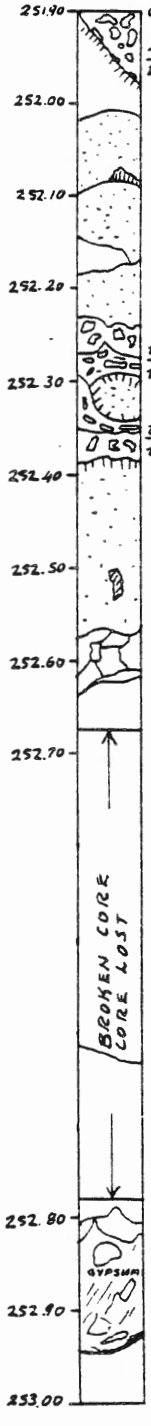
UNIT 49.03 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY 1

Core Box 49 Sheet 2a

Visual Core Description Observer N. Baglow

Depth Interval 251.90 m to 253.00 m



UNIT 49.03 cont. Description - see Box 49, Sheet 1b.

Fine- to medium grained, aphyric basalt which is green-red to green-white in coarser areas.

UNIT 49.04 OVERALL DESCRIPTION

Upper contact - 251.94 m Depositional with altered glass, narrow chilled margin.
Lower contact - 252.26 m Depositional with altered glass. Core fragmented towards the contact.
Unit thickness - 0.32 m Type of unit: pillow basalt

Fine-grained, speckled, green-red to green, aphyric basalt. Red alteration more pervasive towards the top, locally associated with green smectite (eg. 252.11 m) ± vesicles.

Vesicles:- 1%, patchy distribution
- size - 1-3 mm
- filling - 75% carbonate, 25% open
- irregular shape

Veins:- 3%, internally negligible
- filling - 80% sheet silicates (mostly altered glass, some pale-green to red clays), 20% carbonate

GMA:- medium, greater towards the top

UNIT 49.05 OVERALL DESCRIPTION

Upper contact - 252.26 m Depositional with much altered glass.
Lower contact - 252.38 m Depositional with much altered glass.
Unit thickness - 0.12 m Type of unit - pillow

This is the tip of a pillow of fine-grained, green-red, aphyric basalt. Small patches of a green sheet silicate after glass are found away from the chilled margin.

Vesicles:- negligible

Veins:- (including margins) 30%
- filling - 75% sheet silicates, 15% carbonate, 5% iron oxides, 5% gypsum

GMA:- high

UNIT 49.06 Description - see Box 49, Sheet 2b.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY 1

Core Box 49 Sheet 26

Graphic Representation | Sample

Visual Core Description Observer N. Baglow

Depth Interval 251.90 m to 253.00 m

UNIT 49.06 OVERALL DESCRIPTION

Upper contact - 252.38 m Depositional with altered glass-pillow contact.
Lower contact - 253.09 m Depositional with some altered glass.
Unit thickness - 0.71 m Type of unit: pillow

Fine-grained, green-red, very slightly olivine phyric basalt.

Phenocrysts:- <1%
- size - 1-2 mm
- highly altered or plucked out olivines have settled, odd examples include replacement by green smectite(?) and interstitial oxide patches occur throughout
- subhedral to anhedral in shape

Vesicles:- 1%, irregular through the unit
- size - 0.5-3 mm
- filling - 70% open, 30% carbonate
- variable shapes

Veins:- appproximately 10%
- filling - 50% gypsum, 30% sheet silicates, 20% carbonate
- transparent gypsum fills most of the fracture at 252.90 m

GMA:- low to medium; pale blue celadonite is evident on some freshly broken pieces

UNIT 49.06 cont.

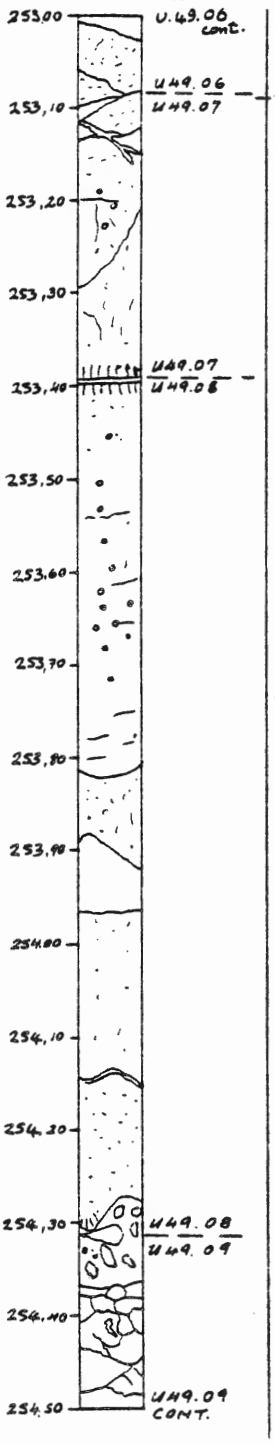
K

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY 1

Core Box 49 Sheet 3a

Visual Core Description Observer N. Saglow

Depth Interval 253.00 m to 254.50 m



UNIT 49.06 cont. Description - see Box 49, Sheet 2b.

Green-red, fine-grained, very slightly olivine phyric basalt.

UNIT 49.07 OVERALL DESCRIPTION

Upper contact - 253.09 m Depositional with altered chilled zone and minor glass. Dip - 80°.
Lower contact - 253.39 m Depositional with some altered glass. Horizontal.
Unit thickness - 0.30 m Type of unit: pillow

Fine-grained, green-red, aphyric basalt.

Vesicles:- 1%, occur throughout unit, but proportion greater in upper half
- size - most 1-3 mm
- filling - 70% open, 30% carbonate

Veins:- 5%
- filling - 70% sheet silicates, 30% carbonate - the latter often rimming the thin internal veins and fractures

GMA:- low to medium; red brown patches throughout
- occasional green smectite within the groundmass

UNIT 49.08 OVERALL DESCRIPTION

Upper contact - 253.39 m Depositional with altered glass. Dip - 5°.
Lower contact - 254.30 m Depositional with very minor altered glass. Contact obscured to some extent by brecciation at the top of the underlying unit.
Unit thickness - 0.91 m Type of unit: pillow

Fine- to medium-grained, green, aphyric basalt. The grain size increases from 10 cm away from contacts. A number of aphanitic "schlieren"-like patches occur through the pillow mass. The unit has an intersertal (plagioclase and cpx) texture.

Vesicles:- 2% concentrated in the upper 30 cm
- size - 1-3 mm
- filling - 80% carbonate/gypsum, 20% open
- most spherical

Veins:- 2%
- filling - 50% carbonate, 20% sheet silicates, 20% gypsum, 10% zeolite
- carbonate fills the majority of the thin to hairline veins
- analcime(?) at 254.15 m
- calcite and gypsum occur together in many veins

GMA:- low, though aphanitic patches tend to be more altered, as is the top of the unit
- small dark green sheet silicates are dispersed throughout as at 253.83 m where there appears to be altered glass (interstitial)

UNIT 49.09 Description - see Box 49, Sheet 3b.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 49 Sheet 36

Graphic Representation | Sample

Visual Core Description Observer: N. Baglow

Depth Interval 253.00 m to 254.50 m

UNIT 49.09 OVERALL DESCRIPTION

Upper contact - 254.30 m Depositional(?) with altered glass. Actual contact brecciated and obscured. Only portions of the bottom chilled margin of Unit 49.08 are preserved - in part the breccia extends up into the overlying pillow. Overall impression of later fault movement directed through what was perhaps already a crackled flow top.
Lower contact - 254.89 m Depositional with altered glass.
Unit thickness - 0.59 m Type of unit: massive flow

Fine-grained, green, slightly olivine phyric basalt. The flow is brecciated to 254.55 m, with angular fragments from 1 mm to approximately 60 mm in a predominantly carbonate matrix, but also with altered glass and other pale green sheet silicates (eg. at 254.41 m). The unit is still fractured below this zone but grades into massive material. In a large fragment at 254.43 m, there are odd altered subhedral olivines (1-2 mm), usually weathered out, with some carbonate replacement. Under 30X magnification one can observe what appear to be black spinels within the altered grains ($\leq$ 1%).

Vesicles:- $\leq$1%
- size - 1-3 mm
- filling - 50% carbonate, 50% open

Veins:- 12% including fractures
- filling - 50% carbonate, 30% open, 20% sheet silicates

GMA:- medium

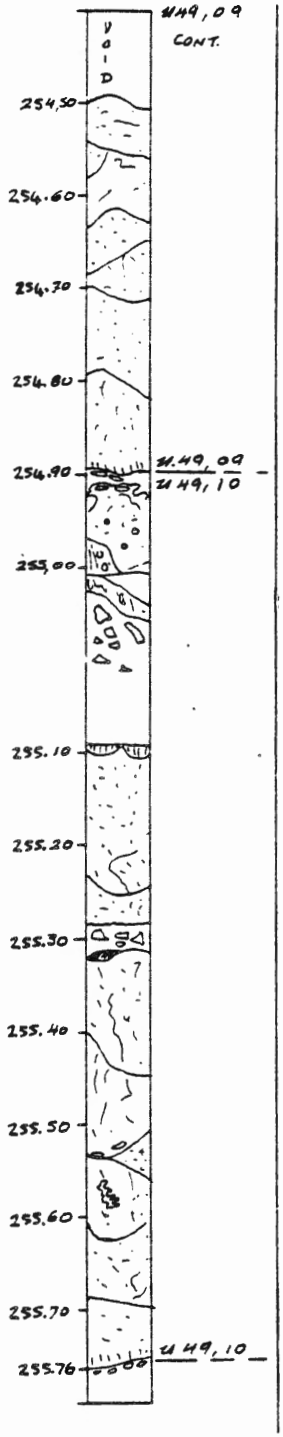
UNIT 49.09 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY 1

Core Box 49 Sheet 4

Visual Core Description Observer N. Baglow

Depth Interval 254.50 m to 255.76 m



UNIT 49.09 cont. Description - see Box 49, Sheet 3b.

Green, fine-grained, slightly olivine phyric basalt.

UNIT 49.10 OVERALL DESCRIPTION

Upper contact - 254.89 m Depositional with altered glass. Altered glass and pale green sheet silicate material extend to 255.09 m as the margin of an adjoining pillow.
Lower contact - 255.76 m Depositional with altered glass.
Unit thickness - 0.87 m Type of unit: pillow

Fine-grained, green-red, very slightly olivine phyric basalt.

Phenocrysts:- ≤1%
- altered, settled olivine
- size - 1-2 mm
- subhedral

Vesicles:- 2%, concentrated from the top to 255.03 m - vesicles sparse elsewhere, but some vertically elongate ones at the base
- size - 0.5-4 mm
- filling - 65% open, 30% carbonate (often associated with gypsum), 5% green smectite

Veins:- 10% (including marginal material)
- veins not strongly developed
- filling - 75% sheet silicates (40% dark green altered glass, 35% pale green clayey material), 17% carbonate, 5% gypsum, 3% zeolites
- altered glass is present in the cooling crack at 255.52 m
- small (approximately 1 mm) red-brown stained crystals of analcime are found on the fracture face at 255.10 m

GMA:- medium though patchy
- red brown 'holly' shaped interstitial alteration is almost pervasive and can be associated with green smectite after glass (eg. at 255.56 m)
- this interstitial alteration is in patches of a few mm up to 50 mm
- fractures dip 50-80°

OVERALL FOR THIS BOX

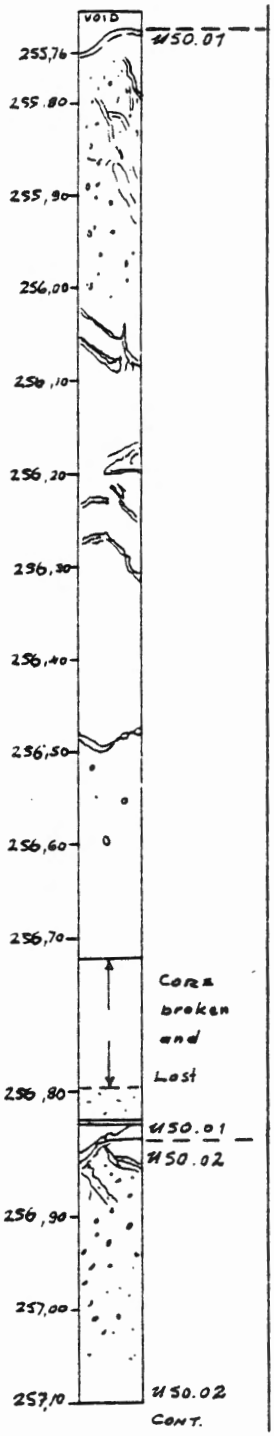
The core has passed through a lithological unit of pillows, ranging from 12 to 91 cm across, with a possible intrusive unit at the top (Unit 49.01) and a thin massive flow (Unit 49.09) included. Green sheet silicates (largely altered glass) and carbonate are the predominant secondary phases though gypsum is significant in some larger fractures (as well as being associated with carbonate in a number of thin veins and vesicles - often forming the center). Zeolites (analcime) are present but minor; celadonite rimming insignificant. Overall degree of groundmass alteration is medium, with the exception of Unit 49.08 which is relatively fresh.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY 1

Core Box 50 Sheet 1

Visual Core Description Observer R. Beragar

Depth Interval 255.76 m to 257.10 m



UNIT 50.01 OVERALL DESCRIPTION

Upper contact - 255.76 m Dip - 35°. 10 mm total thickness of double pillow margin. Altered glass comprising layers of dark green smectite and pale green to grey lenses of smectite(?) is present.
Lower contact - 256.84 m Altered glassy margin but incomplete.
Unit thickness - 1.08 m Type of unit - pillow

Greenish-grey, medium-grained, very slightly phyric basalt.

Phenocrysts:- <<1%
- average maximum size - 1 mm
- maximum size - 3 mm
- tend to be elliptical in shape
- settled brown olivine

Vesicles:- 2%, concentrated up to 10% in upper 20 cm
- average maximum size - 4 mm
- maximum size - 7 mm
- filling - 65% open, 15-20% brown Fe oxide, 10-15% carbonate, 5% green smectite
- brown Fe oxide rich filling appears to fill vesicles in part but also permeates the surrounding groundmass, hence is in part groundmass alteration

Veins:- about 2.5% carbonate veins (3-4% including altered glassy margin)
- filling - 75% carbonate, 25% layer silicates

UNIT 50.02 OVERALL DESCRIPTION

Upper contact - 256.84 m Dip - 40°. The total thickness of the glassy rim (double margin) is probably about 8 mm.
Lower contact - 257.34 m Incomplete - altered glassy rim.
Unit thickness - 0.50 m

Greenish-grey, medium-grained, very sparsely olivine phyric basalt.

Phenocrysts:- <<1%
- size - 1-2 mm
- rare pseudomorphic olivine

Vesicles:- 2%, but concentrated up to 10% in upper 10 cm
- average maximum size - 2 mm
- maximum size - about 3 mm
- filling - 50% open, 30% carbonate, 20% segregation vesicles

Spotting:- red to brown spotting - related to vesicles and most common near the contacts - commonly have poorly defined margins and grade into groundmass
- commonly range from 1-3 mm in diameter and are 1-2% altered

Veins:- 3%, but up to 6% including glassy margins
- filling - 50% smectite, 50% carbonate (margins)
- some veins have carbonate and gypsum

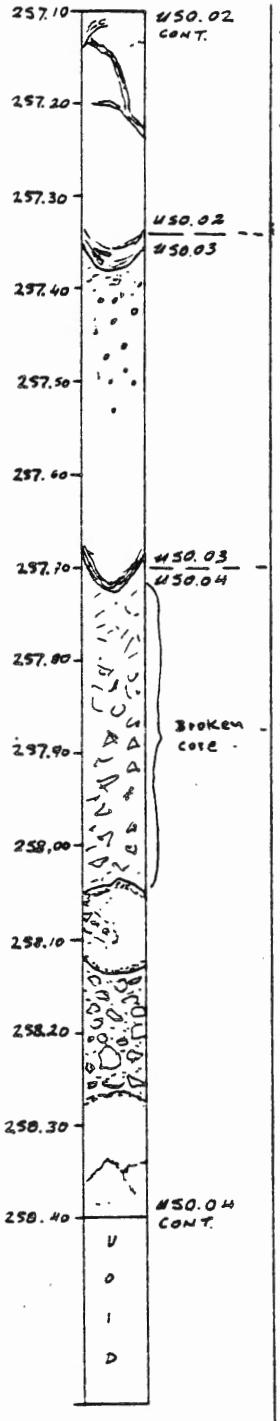
UNIT 50.02 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY 1

Core Box 50 Sheet 2

Visual Core Description Observer R. Baragar

Depth Interval 257.10 m to 258.40 m



UNIT 50.02 cont. Description - see Box 50, Sheet 1.

Greenish-grey, medium-grained, very sparsely olivine phyric basalt.

UNIT 50.03 OVERALL DESCRIPTION

Upper contact - 257.34 m Dip - 35°/180° to core axis. About 10 mm total thickness of double margin, composed of altered glass, now dark green, braided smectite and lenses of pale cream smectite(?).
Lower contact - 257.70 m Dip - 30°/45° to core. Margin, altered glass. Incomplete - minimum of 5 mm.
Unit thickness - 0.36 m Type of unit - pillow

Slate grey, aphyric, aphanitic basalt.

Vesicles:- 15%, most abundant in upper half of pillow
- average maximum size - 2 mm
- filling - 88-89% open, 10% carbonate, and within 10 mm of upper contact 1-2% green smectite

Spotting:- 3-5% brown, mostly poorly outlined spots ranging 1-4 mm in diameter in the upper 50 mm of the pillow - related to vesicles but actual significance uncertain

Veins:- about 1% (4% including margins)
- filling - 75% carbonate, 25% smectite

UNIT 50.04 OVERALL DESCRIPTION

Upper contact - 257.70 m Depositional but not well defined. Irregular.
Lower contact - 258.97 m Depositional but not well defined. Irregular.
Unit thickness - 1.27 m

Hyaloclastite, mostly altered glass fragments commonly ranging from 10-20 mm forming the clast supported matrix to masses of chilled lava ranging from 3-15 cm. Some lithic fragments and broken pillow fragments are also present but subordinate.

Veins and interstices:- 5-6% within the breccia
- filling - 50% carbonate, 30% gypsum, 20% zeolites that are pink, fibrous, and radiating

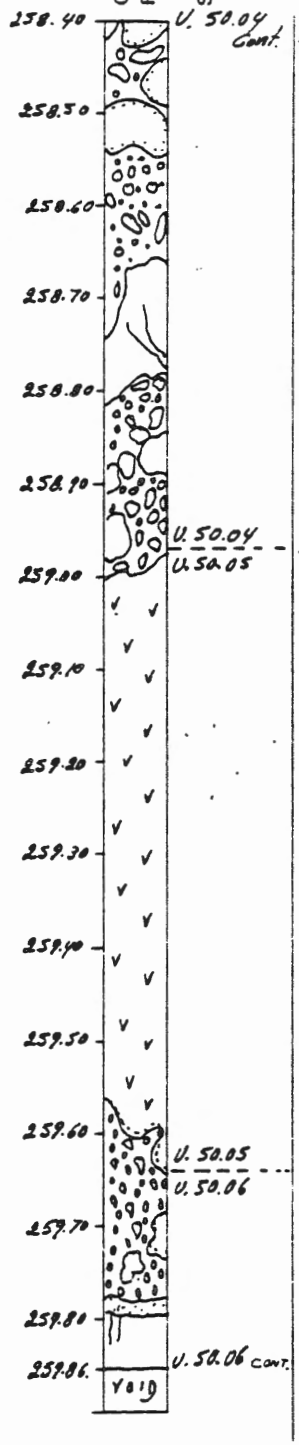
UNIT 50.04 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 50 Sheet 3

Visual Core Description Observer R. Baragar

Depth Interval 258.40 m to 259.86 m



UNIT 50.04 cont. Description - see Box 50, Sheet 2.

Hyaloclastite, mostly altered glass fragments, forming the clast supported matrix to masses of chilled lava.

UNIT 50.05 OVERALL DESCRIPTION

Upper contact - 258.97 m Depositional but irregular - chilled altered glass.
Lower contact - 259.63 m Depositional but irregular - chilled altered glass.
Unit thickness - 0.66 m

Dark grey, aphanitic, aphyric basalt.

Vesicles:- 1% or less
- size - ±1 mm
- filling - mainly smectite

Veins:- filling - mainly carbonate

UNIT 50.06 OVERALL DESCRIPTION

Upper contact - 259.63 m Irregular and evidently depositional.
Lower contact - 260.85 m Irregular and evidently depositional.
Unit thickness - 1.22 m

Hyaloclastite with about 30% of larger (5-20 cm) masses of lava with chilled margins. The matrix is predominantly altered glass but contains rounded clots of lava throughout. At least minor amounts of fresh glass are present.

Vesicles:- <5% - within lava clots in hyaloclastite
- maximum size - ≤0.5 mm
- filling - smectite(?)

Secondary minerals in interstices of hyaloclastite and cavities from 259.90 - 260.00 m total 3-5% of gypsum and pink, radiating zeolite and minor carbonate

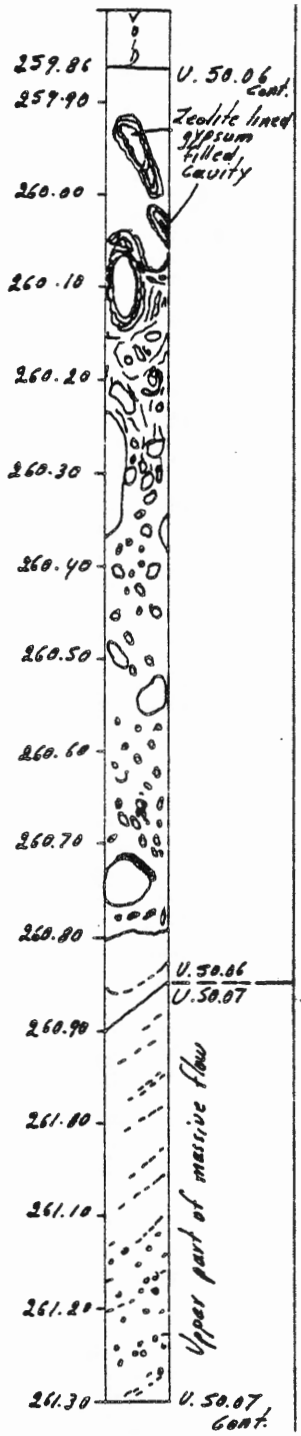
UNIT 50.06 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 50 Sheet 4

Visual Core Description Observer R Barrager

Depth Interval 259.86 m to 261.30 m



UNIT 50.06 cont. Description - see Box 50, Sheet 3.

Hyaloclastite with about 30% larger (5-20 cms) masses of lava with chilled margins. The matrix is predominantly altered glass but contains rounded clots of lava throughout. Minor fresh glass is present.

UNIT 50.07 OVERALL DESCRIPTION

Upper contact - 260.85 m Missing - presumably depositional.
Lower contact - 262.90 m A 20 cm brecciated zone occurs comprising basalt blocks in a calcite matrix ending in a zone 3-4 cm zone of altered glass spall breccia.
Depositional. Dip - 30°.
Unit thickness - 2.05 m Type of unit - massive flow

Medium-grained (in this box), massive, aphyric basalt.

Vesicles:- 15% in the uppermost 40 cm
- average maximum size - 3 mm
- filling - 80% open, 20% carbonate

Veins:- 2% in this section
- filling - 50% carbonate, 50% gypsum

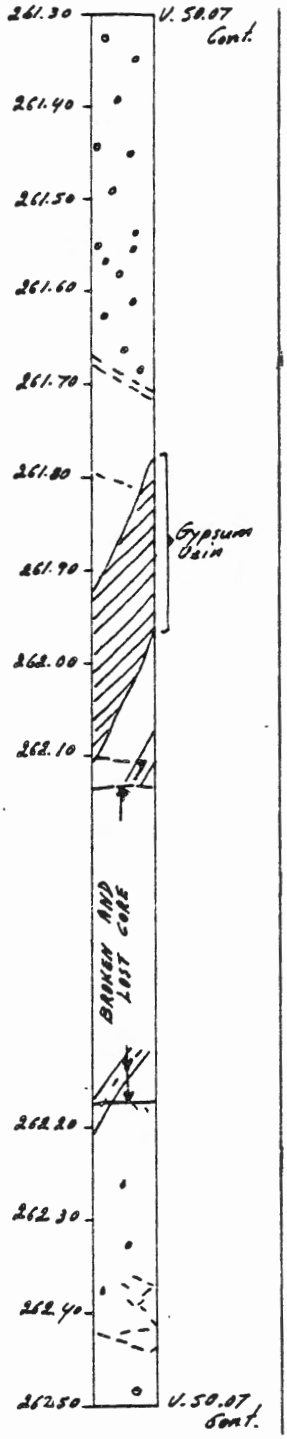
UNIT 50.07 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 51 Sheet 1

Visual Core Description Observer J. A. Pearce

Depth Interval 261.30 m to 262.50 m



UNIT 50.07 cont. Description - see Box 50, Sheet 4.

Fine- to fine/medium-grained, mostly grey but grey brown in the more intensely veined sections, aphyric basalt. Intersertal texture, mainly plagioclase and clinopyroxene moderately altered. Fine-grained sections occur at the lower boundary and as schlieren.

Vesicles:- approximately 2-5%, irregular distribution
- maximum size - approximately 2 mm
- filling - 50% open, 50% calcite (and gypsum?) and rare smectite

Veins:- main feature is a thick (approximately 1 mm wide) vein of pure gypsum - this part of core is not intact but the vein appears to lie at approximately 20° from the vertical
- elsewhere thin (1 mm) calcite veins with approximately 10 cm spacing occur
- calcite forms the main matrix for the brecciated zone at the base (gypsum may also be present-not obvious)

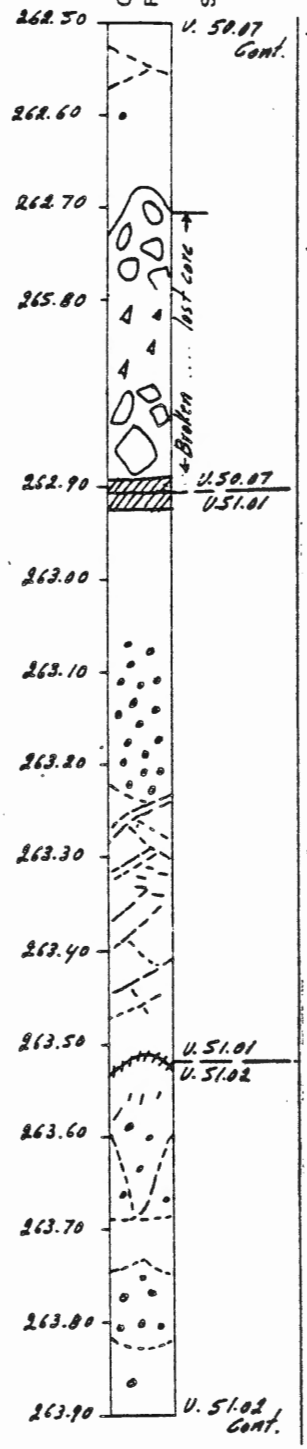
UNIT 50.07 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole #Cy-1

Core Box 51 Sheet 2

Visual Core Description Observer J. A. Pearce

Depth Interval 262.50 m to 263.90 m



UNIT 50.07 cont. Description - see Box 50, Sheet 4 and Box 51, Sheet 1.

Fine- to fine/medium-grained, grey to grey-brown, aphyric massive basalt flow. A fine-grained section occurs at the lower boundary. A 20 cm thick brecciated zone of basalt blocks in a calcite matrix ending with a 3-4 mm zone of altered glass spall breccia marks the lower contact.

UNIT 51.01 OVERALL DESCRIPTION

Upper contact - 262.90 m Depositional, chilled. Dip - 10°.
Lower contact - 263.52 m Depositional, chilled altered glass. Dip - 0°.
Unit thickness - 0.62 m Type of unit: probably a massive flow

Fine-grained, grey with finer-grained brownish margins, moderately altered, aphyric basalt with possible variolitic texture at margins.

Vesicles:- 5%, ranging from 1% at margins to 10% at center
- maximum size - approximately 3 mm
- filling - approximately 70% open, 30% white calcite, translucent gypsum and bluish celadonite

Veins:- the lower 0.25 m of the unit is strongly veined and brecciated comprising largely unrotated basalt fragments in a white matrix of gypsum, calcite and green clay material
- maximum size - 8 mm (in the brecciated zone)

UNIT 51.02 OVERALL DESCRIPTION

Upper contact - 263.52 m Depositional, chilled with altered glass. Dip - 0°.
Lower contact - 264.40 m Depositional, chilled with altered glass, slightly brecciated. Dip - 30°
Unit thickness - 0.88 m Type of unit: probably a massive flow

Grey, fine-grained, moderately vesicular, altered, aphyric basalt with paler, finer-grained margins.

Vesicles:- averaging approximately 5% but >10% in places
- maximum size - 3 mm
- filling - 80% open, 20% calcite, rare gypsum
- filled vesicles mostly adjacent to veins
- spherical

Veins:- approximately 1% - includes brecciated region at the top of the unit
- maximum size - 4 mm
- average spacing - 5 cm
- filling - mainly calcite with some gypsum
- mostly random though a significant number dip 45°

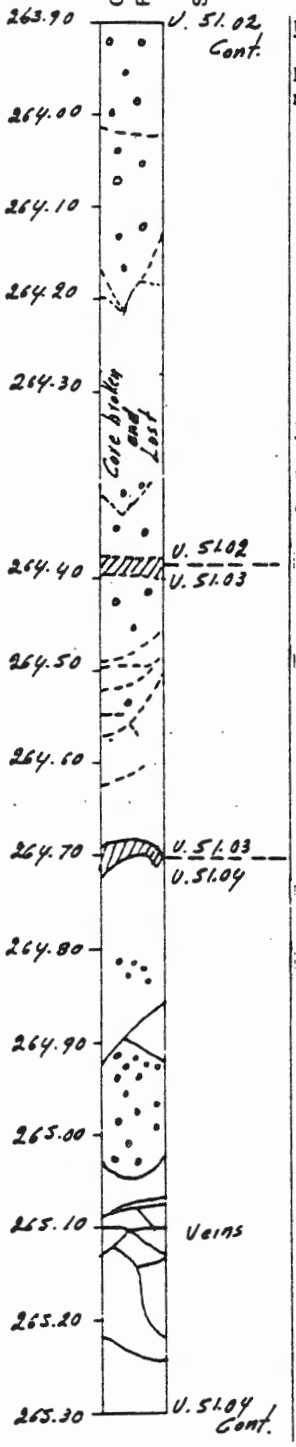
UNIT 51.02 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 51 Sheet 3

Visual Core Description Observer J. A Pearce/J. Mehegan

Depth Interval 263.90 m to 265.30 m



UNIT 51.02 cont. Description - see Box 51, Sheet 2.

Fine-grained, grey, moderately vesicular, aphyric, altered massive basalt flow with paler, finer-grained margins.

UNIT 51.03 OVERALL DESCRIPTION

Upper contact - 264.40 m Depositional, containing altered glass spall. Orientation not measureable.
Lower contact - 264.70 m Depositional, with chilled margin containing altered glass. Dip - 55°.
Unit thickness - 0.30 m Type of unit: probably massive flow

Fine-grained, medium grey, moderately altered, aphyric basalt with a pale grey and green glass margin.

Vesicles:- approximately 2%, greater concentration at top of the unit
- maximum size - 2 mm
- filling - 80% open, 20% calcite and ?% gypsum

Veins:- 1-2%
- average size - 2 mm
- average spacing - 4 cm
- filling - calcite, gypsum, and green smectite
- irregular

UNIT 51.04 OVERALL DESCRIPTION

Upper contact - 264.70 m Depositional with chilled margin containing altered glass. Dip - 55°.
Lower contact - 265.40 m
Unit thickness - 0.70 m Type of unit: pillow basalt(?)

Greyish-blue, aphyric basalt with a fine-grained, vesicular center and very fine-grained, sparsely vesicular margins.

Vesicles:- approximately 5%
- filling - 96% open, 2% very fine lining of blue-grey clay lining and 2% calcite
- size - 1-2 mm
- round

Veins:- 1-2%
- size - 1-4 mm
- filling - calcite and late stage gypsum

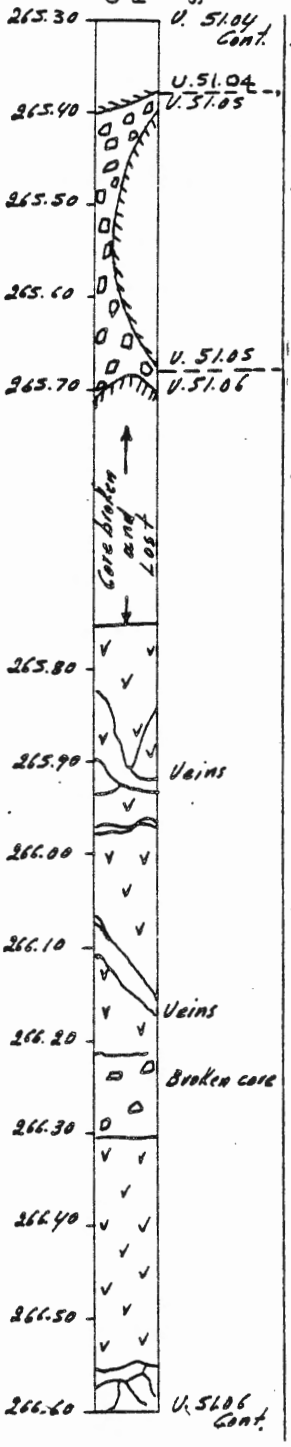
UNIT 51.04 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 51 Sheet 4

Visual Core Description · Observer J. A. Pearce/J. Mehegan

Depth Interval 265.30 m to 266.60 m



UNIT 51.04 cont. Description - see Box 51, Sheet 3.

Greyish-blue, vesicular, aphyric, pillow basalt with a fine-grained, vesicular center and very fine-grained, sparsely vesicular margins.

UNIT 51.05 OVERALL DESCRIPTION

Upper contact - 265.40 m Depositional with chilled margin containing altered glass(?), fresh glass and calcite cement.
Lower contact - 265.70 m Depositional with chilled margin containing altered glass(?), fresh glass and calcite cement.
Unit thickness - 0.30 m Type of unit: pillow basalt margin

Grey-blue, fine-grained, aphyric basalt with olivine (?) microphenocrysts.

UNIT 51.06 OVERALL DESCRIPTION

Upper contact - 265.70 m Depositional with altered glass.
Lower contact - 266.91 m Depositional with altered glass.
Unit thickness - 1.21 m Type of unit: massive (sheet) flow or pillow basalt

Greyish-blue, fine- to medium-grained, aphyric basalt with white plagioclase microphenocrysts(?).

Vesicles:- <<1%
- size - 1-2 mm
- filling - calcite and black clay

Veins:- <1%
- filling - calcite
- irregular

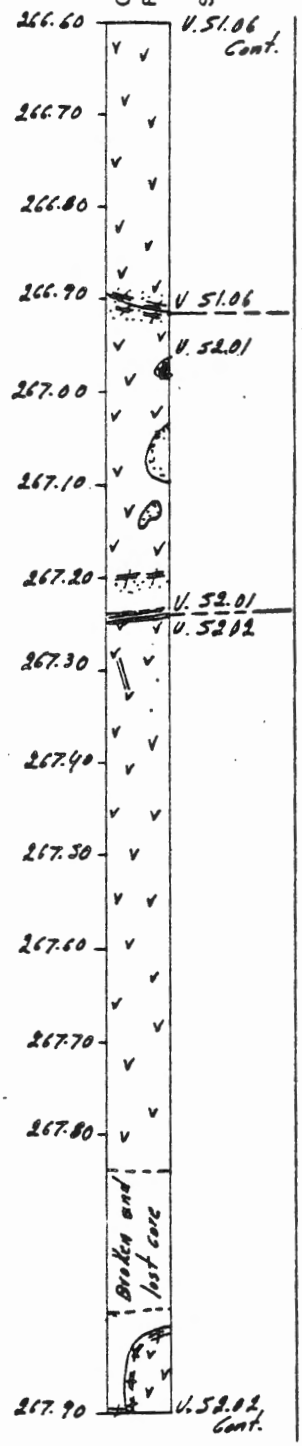
UNIT 51.06 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 52 Sheet 1

Visual Core Description Observer M. Haller

Depth Interval 266.60 m to 267.90 m



UNIT 51.06 cont. Description - see Box 51, Sheet 4.

Greyish-blue, fine- to medium-grained, altered, aphyric massive basalt flow or pillow basalt with white plagioclase microphenocrysts(?).

UNITS 52.01 and 52.02 OVERALL DESCRIPTION

UNIT 52.01
Upper contact - 266.91 m Depositional with altered glass.
Lower contact - 267.25 m
Unit thickness - 0.34 m

UNIT 52.02
Upper contact - 267.25 m
Lower contact - 268.00 m Depositional with altered glass.
Unoriented contact.
Unit thickness - 0.75 m

The description that follows is for both Units 52.01 and 52.02 because the contact at 267.25 m was added at a later time.

Type of unit - massive flow

Grey, medium-grained, slightly phyric basalt with several darker, fine-grained zones (schlieren).

Phenocrysts:- <3%
- size - <1 mm clinopyroxene, 3-5 mm olivine
- 2% euhedral, green clinopyroxene and <1% subhedral, olivine altered to ochreous material

Vesicles:- 3%
- size - 1-3 mm
- filling - open or with carbonate -
- larger vugs at 266.98 m and 267.05 m lined with carbonate
- round

Veins:- 14% (including glassy margins)
- size - 1-5 mm
- at 267.25 m is a mutual boundary with thin chilled margins and altered glass which separates 2 subunits with similar lithology
- at the bottom of Unit 52.02 is a lateral pillow lobe of aphyric, grey basalt with altered glass and a 40 mm thick altered glass layer with curved flakes supported by a clay matrix
- filling - 60% sheet silicates, 40% carbonate

GMA:- approximately 20%

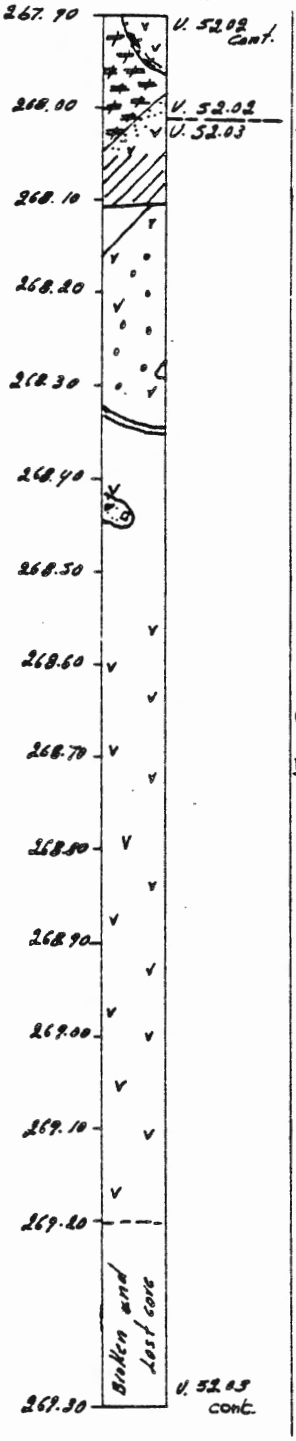
UNIT 52.02 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 52 Sheet 2

Visual Core Description Observer N. Haller

Depth Interval 267.90 m to 269.30 m



UNIT 52.02 cont. Description - see Box 52, Sheet 1.

Grey, medium-grained, slightly phyric basalt.

UNIT 52.03 OVERALL DESCRIPTION

Upper contact - 268.00 m Depositional with altered glass.
Unoriented.
Lower contact - 270.68 m Depositional with altered glass.
Unit thickness - 2.68 m Type of unit: massive flow

Grey, medium-grained, slightly phyric basalt with dark, fine-grained zones (schlieren).

Phenocrysts:- <1% euhedral olivines, <<1% sporadic, subhedral, light green clinopyroxene
- size - olivines - 1-15 mm
- cpx - <0.5 mm

Vesicles:- 1%, mostly located in the upper part of the unit
- size - 1-3 mm
- round

Veins:- 5%
several veins with calcite and gypsum
- size - 1-7 mm
- filling - 72% carbonate, 18% sheet silicates, 10% gypsum

GMA:- 25%

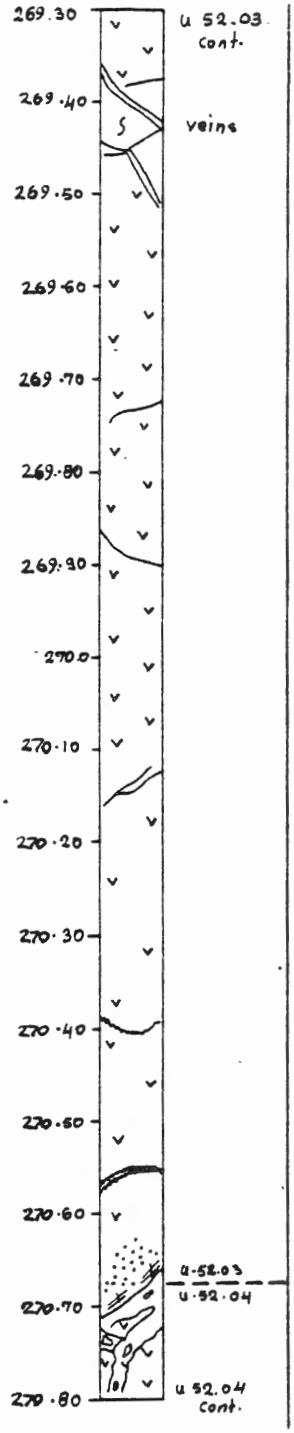
UNIT 52.03 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 52 Sheet 3

Visual Core Description Observer M. Haller

Depth Interval 269.30 m to 270.80 m



UNIT 52.03 cont. Description - see Box 52, Sheet 2.

Grey, medium-grained, slightly phyric basalt with dark, fine-grained zones (schlieren).

UNIT 52.04 OVERALL DESCRIPTION

Upper contact - 270.68 m Depositional with altered glass. No orientation possible.
Lower contact - 271.26 m Depositional with altered glass.
Dip - 25°.
Unit thickness - 0.58 m Type of unit: brecciated pillow

Several angular fragments of grey, fine-grained, aphyric basalt. The interstitial material consists of carbonate and gypsum with smaller, angular rock fragments. The upper and lower boundaries have chilled margins with rock colour changes.

Veins:- 13%
- filling - 70% carbonate, 20% sheet silicates, 10% gypsum

GMA:- approximately 30%

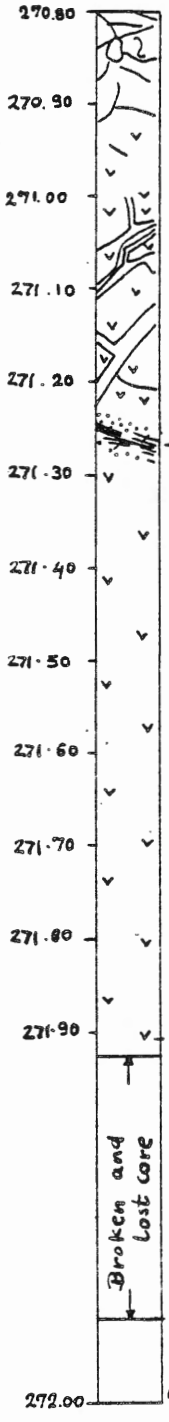
UNIT 52.04 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 52 Sheet 4

Visual Core Description Observer M. Haller

Depth Interval 270.80 m to 272.00 m



UNIT 52.04 cont. Description - see Box 52, Sheet 3.

Grey, fine-grained, aphyric, brecciated pillow basalt.

UNIT 52.05 OVERALL DESCRIPTION

Upper contact - 271.26 m Depositional with altered glass.
Dip - 25°
Lower contact - 272.80 m Truncated. Chilled?
Dip - 30°.
Unit thickness - 1.54 m Type of unit: massive flow

Grey, generally fine-grained, slightly phyric basalt with medium-grained patches.

Phenocrysts:- <<1%
- size - 2-5 mm
- euhedral olivine

Vesicles:- some 10-20 mm vesicular zones in the upper part of the unit
- size - 0.5-2 mm
- 100% open

Veins:- 5%
- size - 0.5-3 mm
- filling - 86% carbonate, 14% sheet silicates

GMA:- 30%

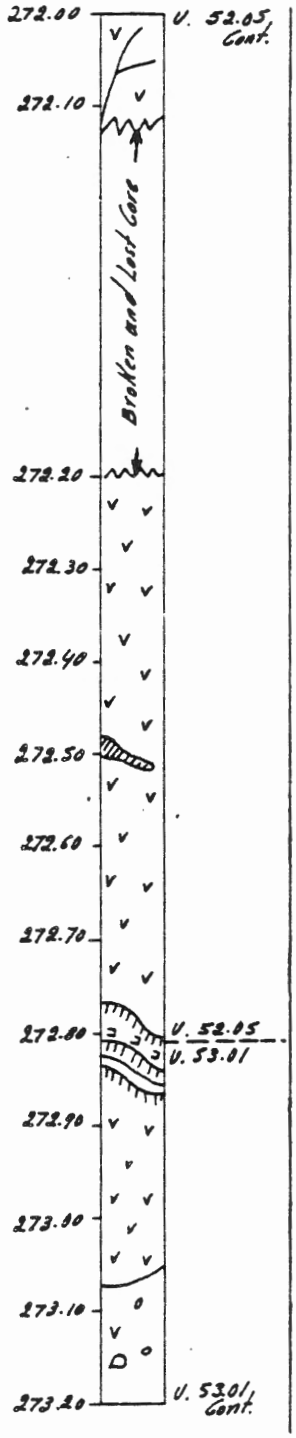
UNIT 52.05 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 53 Sheet 1

Visual Core Description Observer T. Rowell

Depth Interval 272.00 m to 273.20 m



UNIT 52.05 cont. Description - see Box 52, Sheet 4.

Green-grey, very fine-grained, aphyric massive basalt flow.

Vesicles:- 2%, scattered throughout
- large (5 cm) segregation vesicle at 272.50 m
- filling - 85% open, 15% carbonate

Veins:- 4%
- filling - 100% carbonate

GMA:- approximately 30%
- to 80% sheet silicates, 20% carbonate

UNIT 53.01 OVERALL DESCRIPTION

Upper contact - 272.80 m Intrusive with a 5 cm glassless chilled margin. Dip - 50°
Lower contact - 273.83 m Intrusive and irregular, altered glass, one way chill with fingers and apophyses of material around margin.
Unit thickness - 1.03 m Type of unit: sill-like body

Very fine-grained, porphyritic, green-grey basalt with medium- to coarse-grained interior (273.10-273.30 m).

Phenocrysts:- concentrated near the margins of the sill(?)
- size - 5-9 mm
- olivine pseudomorphed by carbonate (calcite)
- euhedral to subhedral

Vesicles:- between 273.10-273.30 m there is a coarser part of the unit (flow structure) with glass segregations and vesicles ranging from 5-6 mm
- very small minor carbonate filled vesicles concentrated towards the lower part of the unit

Veins:- very minor carbonate veining towards the lower part of the unit
- lining - dark green micaceous minerals

GMA:- approximately 30%

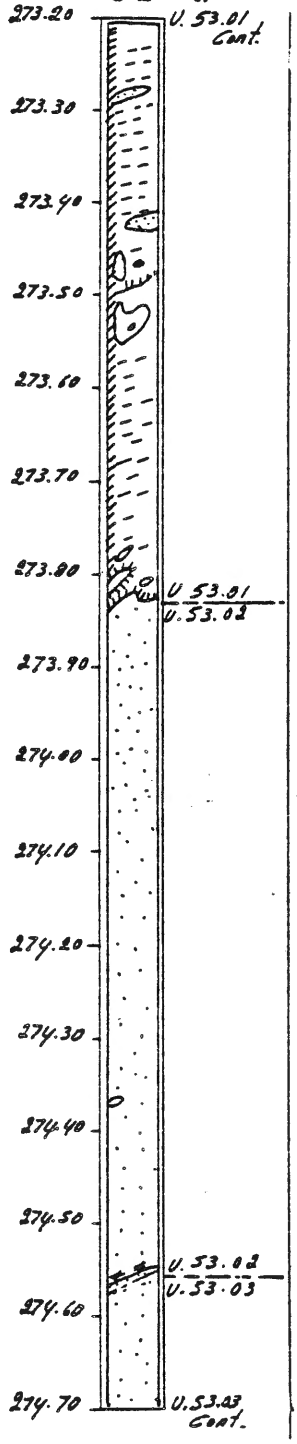
UNIT 53.01 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 53 Sheet 2

Visual Core Description Observer Jim Mehegan

Depth Interval 273.20 m to 274.70 m



UNIT 53.01 cont. Description - see Box 53, Sheet 1.

Very fine-grained, porphyritic, green-grey basalt with medium- to coarse-grained interior (273.10-273.30 m).

UNIT 53.02 OVERALL DESCRIPTION

Upper contact - 273.83 m Truncated, Unit 53.01 cuts Unit 53.02.
Lower contact - 274.55 m Depositional(?), contains altered glass and narrow bleach zone.
Unit thickness - 0.72 m Type of unit: unknown, pillow(?)

Grey to bleached grey, very sparsely olivine phyric (1 olivine crystal altered to reddish-brown product, 4 mm in size, anhedral), medium-grained, aphyric basalt. The lower 15 cm is much more friable than the upper part of the unit which may be due to a variation in groundmass texture.

Vesicles:- 1-2%
- size - 1 mm
- filling - calcite

Veins:- 1%
- size - 1-3 mm
- filling - calcite

Note: This unit appears to be similar to Unit 52.04. The lower contact of Unit 53.02 in somewhat ambiguous and may be at 275.40 m with Units 53.02 and 53.03 being the same unit.

UNIT 53.03 OVERALL DESCRIPTION

Upper contact - 274.55 m Depositional, altered glass. Dip - 50°/180°.
Lower contact - 275.15 m Depositional, altered glass. Dip - 10°/300°.
Unit thickness - 0.60 m

Grey-green, fine-grained, aphyric pillow basalt.

Vesicles:- concentrated between 274.80-275.00 m
- very few vesicles in lower and upper parts
- size - 5 mm (irregular) and 3 mm (round)
- filling - 50% open, 30% layer silicates, 20% carbonate

Veins:- 9%
- size - 3 mm
- smectite zone near lower contact (pillow margin)
- filling - 80% layer silicates, 20% carbonate

GMA:- 30% - to 80% layer silicates, 20% carbonate

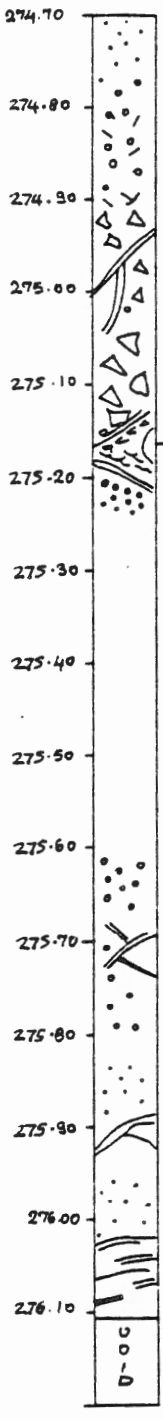
UNIT 53.03 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 53 Sheet 3

Visual Core Description Observer M. Rautenschlein / H. Elsbree

Depth Interval 274.70 m to 276.10 m



UNIT 53.03 cont. Description - see Box 53, Sheet 2.

Grey-green, fine-grained, aphyric, pillow basalt.

UNIT 53.04 OVERALL DESCRIPTION

Upper contact - 275.15 m Depositional. Altered glass pillow margins. Dip - 50°/180°.
Lower contact - 276.65 m Depositional. Altered glass. Dip - 80°.
Unit thickness - 1.49 m Type of unit - pillow

Grey-green basalt which is fine-grained at margins and medium-grained from 276.20-276.45 m.

Vesicles:- 3 mm vesicle at the top and other vesicular zones from 275.60-275.80 m and 276.30-276.45 m
- pipe vesicles at the base 3 mm wide, 12 mm long
- filling - 60% open, 30% carbonate, 10% layer silicates

Veins:- 9%
- maximum size - 3-7 mm
- filling - 90% carbonate, 10% layer silicates

GMA:- 30% - to 80% layer silicates, 20% carbonate

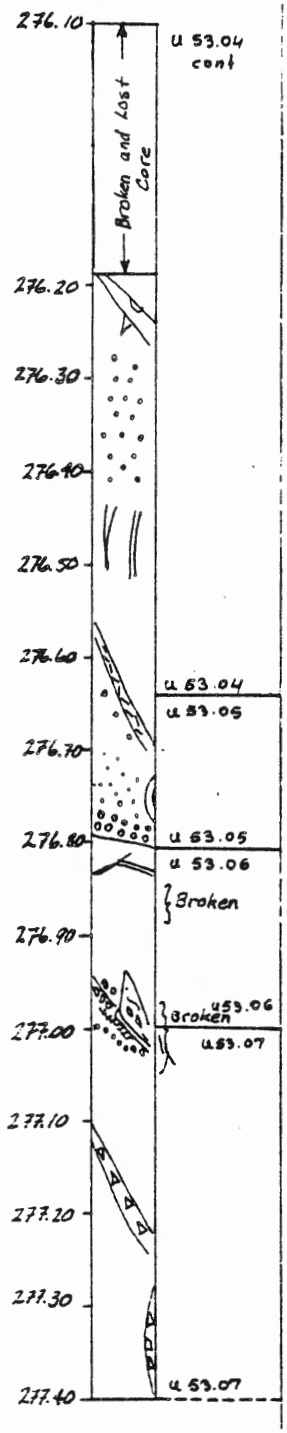
UNIT 53.04 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 53 Sheet 4

Visual Core Description Observer M. Rautenschlein / H. Ellsbree

Depth Interval 276.10 m to 277.40 m



UNIT 53.04 cont. Description - see Box 53, Sheet 3.
Grey-green pillow basalt which is fine-grained at the top and bottom and medium-grained from 276.20-276.45 m.

UNIT 53.05 OVERALL DESCRIPTION
Upper contact - 276.65 m Depositional, altered glass, pillow margin. Dip - 50°
Lower contact - 276.80 m Depositional, altered glass, pillow margin. Dip - 30°
Unit thickness - 0.15 m Type of unit: pillow
Grey-green (at the top) to grey (at the bottom), fine-grained, aphyric basalt.
Vesicles:- 10% concentrated at the bottom
- size - 2 mm
- filling - 35% carbonate, 35% layer silicates, 30% open (upper vesicles empty)
Veins:- 15% (excludes glassy margin on rim of core)
- maximum size - 4 mm
- filling - 80% layer silicates, 15% calcite, 5% gypsum
GMA:- 40% - to 70% layer silicates, 30% carbonate

UNIT 53.06 OVERALL DESCRIPTION
Upper contact - 276.80 m Depositional, altered glass, pillow margin. Dip - 30°
Lower contact - 277.00 m Depositional, altered glass. Dip - 80°. Pillow margin (brecciated glassy veins). Carbonate displacing breccia fragments.
Unit thickness - 0.20 m Type of unit - pillow
Grey-greenish, fine-grained, aphyric basalt.
Vesicles:- <5%
- size - 2 mm
- filling - green coating inside, 80% open, 15% layer silicates, 5% calcite
Veins:- 30%
- maximum size - 10 mm
- filling - 40% layer silicates, 40% carbonate, 20% gypsum
GMA:- 40% - to 70% layer silicates, 30% carbonate

UNIT 53.07 OVERALL DESCRIPTION

Upper contact - 277.00 m Depositional, altered glass, pillow margin. Dip - 30°
Lower contact - 277.40 m Depositional, altered glass, pillow margin. Dip - 0°
Unit thickness - 0.40 m Type of unit: pillow
Grey-greenish, fine-grained, aphyric basalt.

Vesicles:- <5%
- size - 1 mm
- filling - green coating inside, 80% open, 10% layer silicates, 10% carbonate
Veins:- 9%
- maximum size - 10 mm
- filling - 90% layer silicates, 10% carbonate

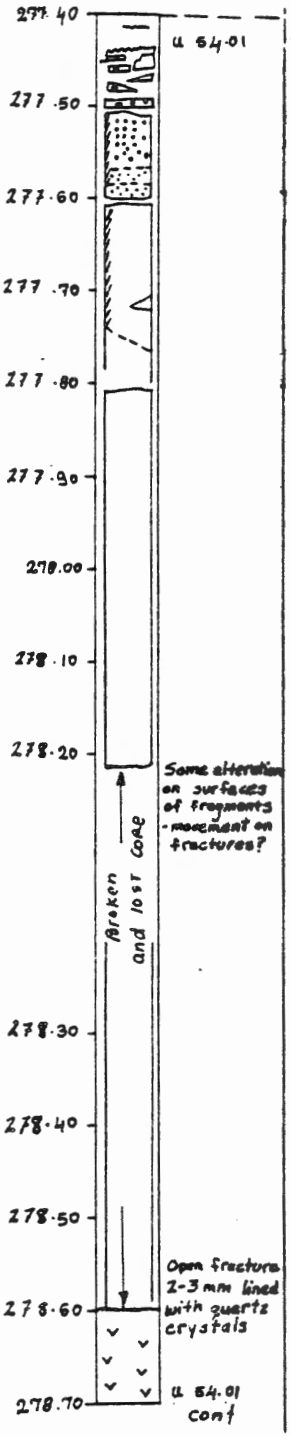
GMA:- 30% - to 80% layer silicates, 20% carbonate

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 54 Sheet 1

Visual Core Description Observer C. Milligan

Depth Interval 277.40 m to 278.70 m



UNIT 54.01 OVERALL DESCRIPTION

Upper contact - 277.40 m Depositional.
Lower contact - 278.89 m 15 cm zone of glass fragments.
Dip - 140°/90°.
Unit thickness - 1.49 m Type of unit - flow

Greenish-grey, olivine basalt. Zones with a spherulitic(?) pattern occur at 277.50 m, 277.70 m (40 mm), 277.90 m, 278.20 m, about 20 mm in each case.

Phenocrysts:- 2% brown pseudomorphs after olivine uniformly distributed

Vesicles:- up to 15% in top zone from 277.40-277.60 m
- maximum size - 1 mm
- filling - lined with celadonite, 50% open, 30% brown carbonate, 20% white zeolite

Veins:- <1%
- size - 5 mm thick at 277.72 m
- dip - 60°
- filling - selenite

GMA:- pervasive, green, micaceous alteration

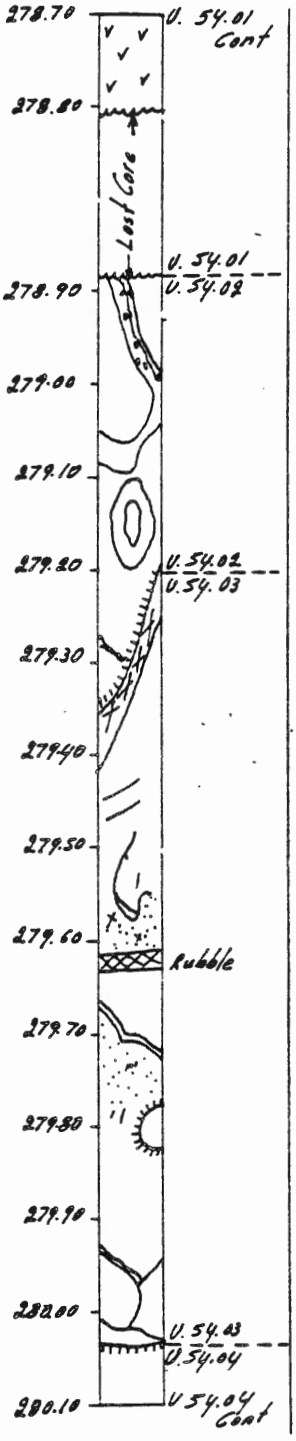
UNIT 54.01 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 54 Sheet 2

Visual Core Description Observer G. Milligan

Depth Interval 278.70 m to 280.10 m



UNIT 54.01 cont. Description - see Box 54, Sheet 1.

Greenish-grey, olivine basalt flow.

UNIT 54.02 OVERALL DESCRIPTION

Upper contact - 278.89 m Depositional.
Lower contact - 279.20 m Chilled (5 mm) followed by breccia zone (40 mm) with a matrix of 80% selenite in interstices, 20% carbonate lining fractures and coating fragments.
Unit thickness - 0.31 m

Dark grey, vesicular, aphyric basalt with only a suggestion of the spherulitic pattern of Unit 54.01.

Vesicles:- 12%
- average size - about 0.1 mm
- maximum size - 1 mm
- filling - 80% carbonate, 20% open

Veins:- 2%
- maximum size - 1 mm
- filling - carbonate

GMA:- pervasive greenish micaceous alteration

UNIT 54.03 OVERALL DESCRIPTION

Upper contact - 279.20 m Depositional.
Lower contact - 280.03 m Dark greenish basalt, glass fragments, altered (gmelinite?).
Unit thickness - 0.83 m Type of unit - pillow?

Dark grey, fine-grained, aphyric, vesicular basalt (marginal effect of an adjacent pillow at 279.88-280.00 m?). There are 10% calcite streaks up to 1 cm wide which probably were glass segregations, from 279.70-279.90 m.

Vesicles:- 15%
- average size - 0.2 mm
- maximum size - 1 mm
- filling - 60% carbonate, 40% open

Veins:- 8%
- maximum size - 5 mm
- filling - 100% carbonate

UNIT 54.04 Overall Description - see Box 54, Sheet 3.

Upper contact - 280.03 m Depositional.

Dark grey, fine-grained, vesicular, slightly porphyritic basalt.

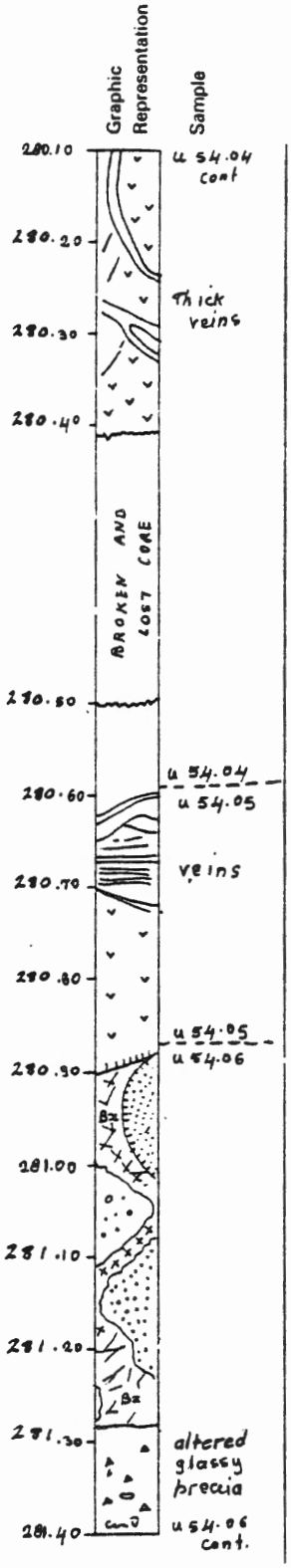
UNIT 54.04 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 54 Sheet 3

Visual Core Description Observer C. Milligan

Depth Interval 280.10 m to 281.40 m



UNIT 54.04 cont. OVERALL DESCRIPTION

Upper contact - 280.03 m Depositional.
Lower contact - 280.60 m In rubble zone.
Unit thickness - 0.57 m
Dark grey, fine-grained, vesicular, slightly porphyritic basalt.

Phenocrysts:- <5% olivine pseudomorphs
- maximum size - 1 mm in the upper 10 cm
Vesicles:- 10%
- average size - 1 mm
- maximum size - 3 mm
- filling - 80% carbonate, 20% open
Veins:- 10%
- maximum size - 5 mm
- filling - 80% carbonate, 20% white micaceous material in the center of vein, in rubble zone 2% gmelinite(?) in fractures in glass fragments
- not fresh

UNIT 54.05 OVERALL DESCRIPTION

Upper contact - 280.60 m Chilled, 5 mm.
Lower contact - 280.90 m Chilled, some glass, basalt pillow.
Unit thickness - 0.30 m
Fine-grained, grey, aphyric basalt with dark patches (possibly glass segregations?).

Vesicles:- 10%
- average size - <1 mm
- maximum size - 2 mm
- filling - 80% carbonate, 20% open
Veins:- 1%
- maximum size - 3 mm in zone at 280.60-280.70 m and 280.82-280.85 m
- filling - 90% carbonate, 10% zeolites
GMA:- chlorite?

UNIT 54.06 OVERALL DESCRIPTION

Upper contact - 280.90 m Depositional.
Lower contact - 281.50 m Pillow margins and inter-pillow breccia, possibly margins of three pillows, dark grey basalt.
Unit thickness - 0.60 m

Breccia has large dark greenish basalt fragments [=altered glass?] and 10% carbonate matrix, 10% zeolite, trace gypsum and the balance is clays.

Phenocrysts:- 15% brown spots (olivine pseudomorphs)
- maximum size - 4 mm
- anhedral

Vesicles:- 10% - in pillow fragment at 281.10 m
- maximum size - 3 mm at 281.10 m, otherwise <1 mm
- filling - 80% carbonate, 20% open

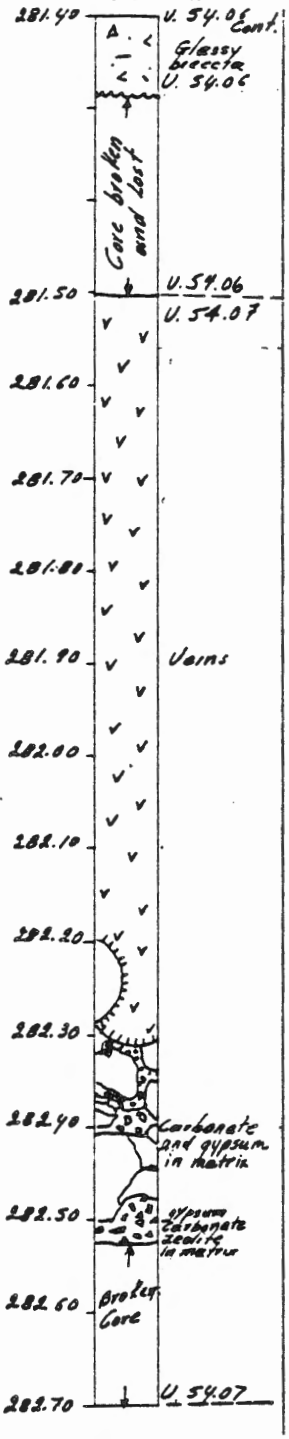
UNIT 54.06 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 54 Sheet 4

Visual Core Description Observer Milligan

Depth Interval 281.40 m to 282.70 m



UNIT 54.06 cont. Description - see Box 54, Sheet 3.

Breccia with large, dark greenish basalt fragments (=altered glass?), and 10% carbonate matrix, 10% zeolite, trace gypsum and the remainder is clay

UNIT 54.07 OVERALL DESCRIPTION

Upper contact - 281.50 m Depositional.
Lower contact - 282.70 m Ambiguous.
Unit thickness - 1.20 m Type of unit - flow?

Dark greenish-grey, aphyric, vesicular basalt. Internal contact at 282.20-282.30 m cuts across carbonate veins, which have breccia filling. Fine-grained zones with an irregular shape, maximum thickness 10 mm (probably fluid - (glass?) segregations) occur between 281.50 and 282.20 m.

Vesicles:- 20%
- maximum size - 2 mm - size increases near top
- filling - 90% white carbonate, 10% open, thin celadonite lining

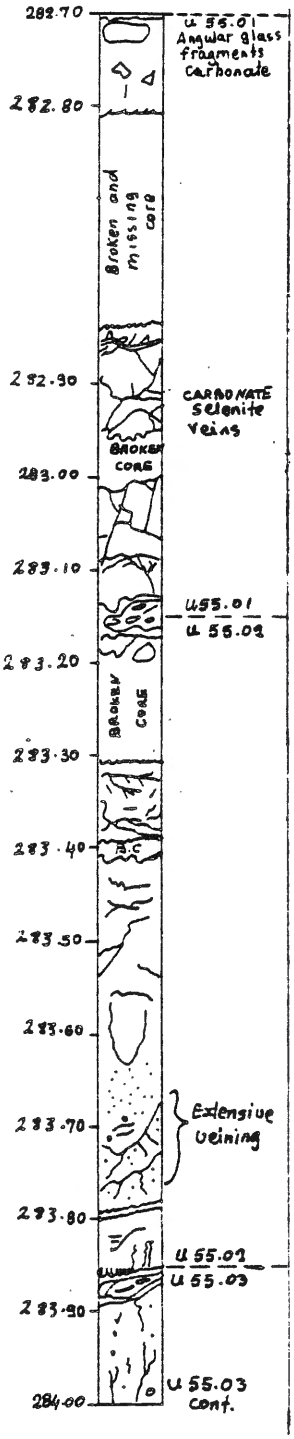
Veins:- <1%
- hairline fractures at 281,50-282.20 m
- filling - 75% selenite, 20% carbonate, 5% zeolites

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 55 Sheet 1a

Visual Core Description Observer D. Bailey

Depth Interval 282.70 m to 284.00 m



UNIT 55.01 OVERALL DESCRIPTION

Upper contact - 282.70 m Depositional? (difficult to define due to broken core). Sharp contact of carbonate/selenite/gmelinite and altered glass fragments with fine-grained basalt. Orientation?
Lower contact - 283.18 m Depositional, fragmented and similar to above. Abundant altered glass, selenite and gmelinite common; thin chilled margin also present. Dip - 70º
Unit thickness - 0.48 m Type of unit: pillow

Grey-green, fine-grained, slightly olivine phyric (spinel microphyric) basalt.

Phenocrysts:- slightly olivine phyric, 1%
- size - 1 mm
- shape - sub-euhedral
- alteration - total
- spinel microphyric, <1%
- size - 5 mm
- shape - sub-euhedral
- alteration - minor
- distribution of phenocrysts - homogeneous

Vesicles:- 1%
- maximum size - approximately 0.5 mm
- filling - 50% calcite, 30% open, 10% opaques, 10% layer silicates

Veins:- 3%, dense veining from 282.88-283.00 m
- size - 2 mm
- filling - predominantly carbonate and gypsum

GMA:- approximately 50%

UNIT 55.02 OVERALL DESCRIPTION

Upper contact - 283.18 m Depositional. Fragments with chilled margin present. Orientation?
Lower contact - 283.88 m Depositional. Chilled margin, altered glass. Orientation not measurable.
Unit thickness - 0.70 m Type of unit: pillow

Grey-green, fine-grained, slightly olivine phyric basalt.

Phenocrysts:- slightly olivine phyric, <<1%
- size - 0.75 m
- shape - subhedral
- alteration - total
- distribution - concentric; concentrated in the center of the pillow

Vesicles:- 1%
- average and maximum size - approximately 0.5 mm
- filling - 50% calcite, 35% open, 10% layer silicates concentrated at the upper contact and in highly veined zone, 5% opaques in segregation vesicles present at the upper contact

Veins:- 2%, abundant from 283.60-283.75 m
- average maximum size - approximately 1 mm
- filling - predominantly calcite and later selenite

GMA:- approximately 50%

UNIT 55.03 Description - see Box 55, Sheet 1b.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 55 Sheet 16

Graphic Representation | Sample

Visual Core Description Observer D. Bailey

Depth Interval 282.70 m to 284.00 m

UNIT 55.03 OVERALL DESCRIPTION

Upper contact - 283.88 m Depositional. Altered glass abundant with smectite and minor gmelinite and carbonate.
Dip - 60°
Lower contact - 284.57 m Ambiguous(?) - core broken, apparently depositional (minor chilled margin and glass present).
Unit thickness - 0.69 m Type of unit: pillow

Grey-green, fine-grained, aphyric basalt.

Vesicles:- 2%, concentrated from 283.90-284.00 m
- average maximum size - 2 mm
- filling - 50% carbonate, 30% open, 10% layer silicates, 5% opaques, 5% zeolites, minor celadonite lining

Veins:- 2%, concentrated in upper and lower portions of core
- average and maximum size - approximately 2 mm

GMA:- 50% - to smectite

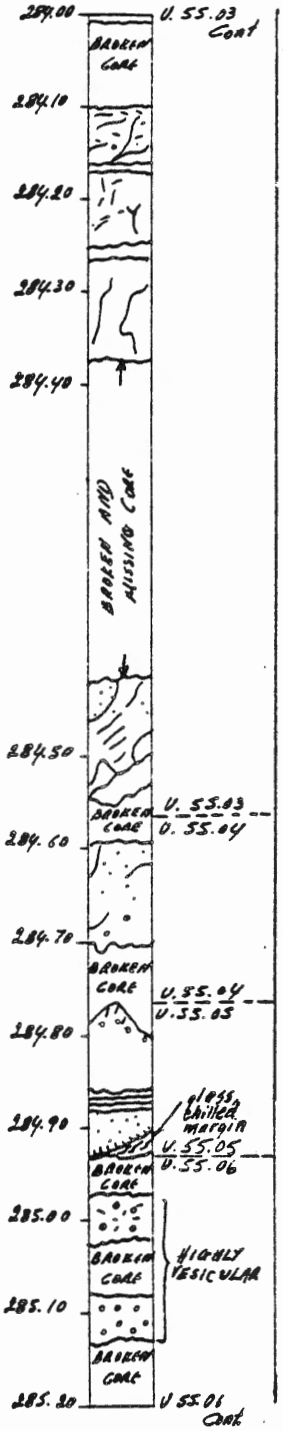
UNIT 55.03 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 55 Sheet 2a

Visual Core Description Observer D. BAILEY

Depth Interval 284.00 m to 285.20 m



UNIT 55.03 cont. Description - see Box 55, Sheet 1b.

Grey-green, fine-grained, aphyric basalt.

UNIT 55.04 OVERALL DESCRIPTION

Upper contact - 284.57 m Depositional. Altered glass, abundant smectite and gmelinite(?), chilled margin, irregular contact.
Lower contact - 284.76 m Ambiguous - core fractured. Minor zeolite and altered glass.
Unit thickness - 0.19 m Type of unit: pillow

Dark grey-green, very fine-grained, slightly phyric, olivine basalt.

Phenocrysts:- olivine phenocrysts
- maximum size - 1 mm
- homogeneous distribution
- totally altered

Vesicles:- 1%
- maximum size - approximately 1 mm
- filling - 60% open, 25% carbonate, 10% layer silicates, 5% opaques

Veins:- <1%
- maximum size - 0.5 mm
- filling - predominantly carbonate and minor selenite

GMA:- approximately 50% - to predominantly smectite

UNIT 55.05 OVERALL DESCRIPTION

Upper contact - 284.76 m Depositional. Chilled contact, minor glass. Dip - approximately 80°
Lower contact - 284.93 m Depositional. Irregular, chilled margin with minor glass, abundant smectite, minor gmelinite.
Orientation?
Unit thickness - 0.17 m Type of unit: pillow "lobe"?

Dark grey-green, very fine-grained, slightly olivine phyric basalt which appears to be the same as Unit 55.04.

Phenocrysts:- <1%, homogeneously distributed
- average and maximum size - approximately 1 mm
- alteration - total

Vesicles:- <1%
- average maximum size - approximately 1 mm
- filling - 60% open, 20% layer silicates, 10% carbonate, 5% zeolites, 5% opaques
- segregation vesicles present at the margins

Veins:- very minor carbonate veins

GMA:- 50% - to smectite

UNIT 55.06 Description - see Box 55, Sheet 2b.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 55 Sheet 26

Graphic Representation | Sample

Visual Core Description Observer D. Bailey

Depth Interval 284.00 m to 285.20 m

UNIT 55.06 OVERALL DESCRIPTION

Upper contact - 284.93 m Ambiguous - core broken.
Lower contact - 285.35 m Ambiguous. Some altered glass present however units above and below 20 mm zone of glass/smectite are brecciated. Chilled margins not evident.
Apparent movement along contact.
Unit thickness - 0.42 m Type of unit: faulted top of flow?

Very dark grey-green, fine-grained, aphyric basalt.

Vesicles:- 4% overall, but highly vesicular from 285.00-285.20 m
- average and maximum size - 2 mm
- filling - 45% open, 30% carbonate, 10% zeolites, 10% gypsum, 5% layer silicates

Veins:- approximately 2%, prevalent from 285.20-285.30 m
- filling - predominantly carbonate and selenite

GMA:- approximately 55%

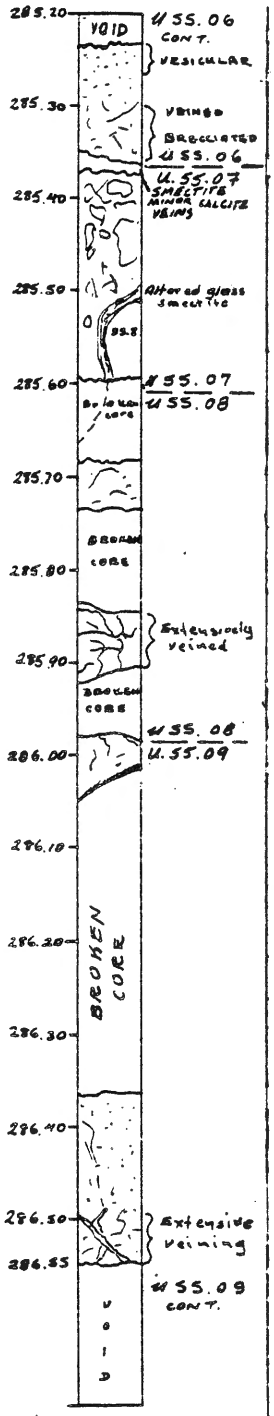
UNIT 55.06 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY 1

Core Box 55 Sheet 3a

Visual Core Description Observer D Bailey

Depth Interval 285.20 m to 286.55 m



UNIT 55.06 cont. Description - see Box 55, Sheet 2b.

Very dark grey-green, fine-grained, aphyric basalt.

UNIT 55.07 OVERALL DESCRIPTION

Upper contact - 285.35 m Ambiguous. Sharp contact between basalt and 10 mm thick smectite zone. No chilled margins or glass fragments are obvious. Dip - approximately 90°
Lower contact - 285.60 m Ambiguous. Highly irregular(?).
Unit thickness - 0.25 m Type of unit: flow(?)

Light grey-green, fine-grained, slightly olivine phryic, "brecciated" basalt in which a fine-grained, dark groundmass surrounds fine- to medium-grained, light grey, angular fragments which range in size from 2 mm - 50 mm. This is an interesting unit - it has a brecciated texture but is not a true breccia.

Phenocrysts:- <1%, homogeneously distributed
- average and maximum size - 1 mm
- shape - subhedral
- alteration - total

Vesicles:- 1%, generally present in fragments
- average maximum size - approximately 0.5 mm
- filling - 70% open, 20% calcite, 5% layer silicates, 5% zeolite
- irregular shape

Veins:- 1%
- average size - 1.5 mm
- filling - carbonate and zeolite

GMA:- 60%

UNIT 55.08 OVERALL DESCRIPTION

Upper contact - 285.60 m Depositional(?). Altered glass present, chilled margins(?), irregular contact, fragmented.
Lower contact - 286.03 m Depositional. Altered glass, smectite, zeolite present, sharp contact.
Unit thickness - 0.43 m Type of unit: pillow(?)

Grey-green, fine-grained, slightly olivine basalt.

Phenocrysts:- very slightly olivine phyric (trace)
- homogeneous distribution
- average maximum size - approximately 0.5 mm
- shape - subhedral
- alteration - total to oxides/smectites

Vesicles:- 1%
- distribution and size irregular - difficult to estimate due to fragmented core
- average maximum size - approximately 3 mm
- filling - 60% carbonate, 30% zeolites, 10% layer silicates
- dogtooth calcite and zeolites common in small vugs (analcime, gmelinite?)

GMA:- approximately 60%

UNIT 55.09 Description - see Box 55, Sheet 3b.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 55 Sheet 36

Graphic Representation | Sample

Visual Core Description Observer D. Bailey

Depth Interval 285.20 m to 286.55 m

UNIT 55.09 OVERALL DESCRIPTION

Upper contact - 286.03 m Ambiguous - broken core. Contact not preserved.
Lower contact - 286.63 m Ambiguous. Contact of minor breccia with glass fragments of Unit 55.10(?). No cooling margins on this unit. Does not appear to be depositional.
Unit thickness - 0.60 m Type of unit: not clear, pillow?

Light grey-green, very fine-grained, slightly olivine phyric basalt.

Phenocrysts:- slightly olivine phyric - 1%
- average maximum size - approximately 1 mm
- subhedral
- alteration - total to brown oxides

Vesicles:- much more abundant than in previous units - 4%, particularly common in upper fragments
- maximum size - 1 mm
- filling - 65% open, 20% carbonate, 10% zeolites, 5% layer silicates

Veins:- overall approximately 3%
- extremely abundant from 286.50-287.70 m, bottom of unit virtually brecciated
- filling - 75% carbonate, 15% zeolites, 10% layer silicates

GMA:- 50%

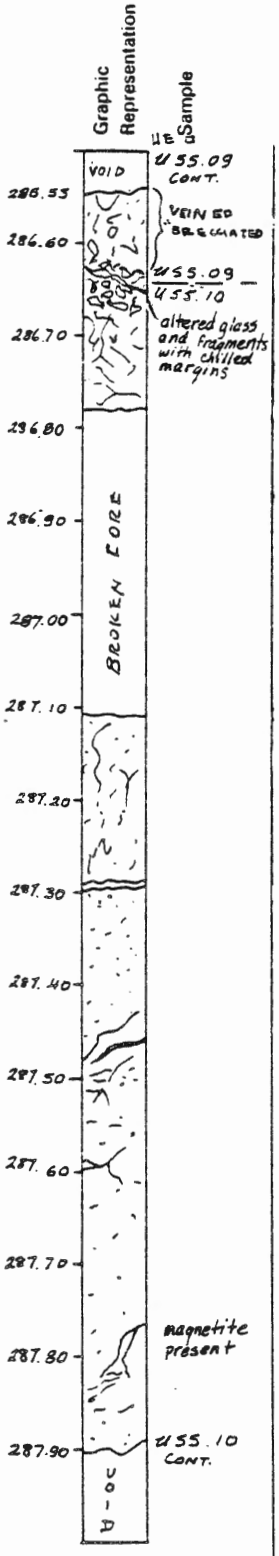
UNIT 55.09 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY 1

Core Box 55 Sheet 4

Visual Core Description Observer D BAILEY

Depth Interval 286.55 m to 287.90 m



UNIT 55.09 cont. Description - see Box 55, Sheet 3b.

Light grey-green, very fine-grained, slightly olivine phyric basalt which is highly "brecciated" at the base.

UNIT 55.10 OVERALL DESCRIPTION

Upper contact - 286.63 m Depositional (brecciated top of large flow). Altered glass fragments, brecciated fragments are fine-grained and show chilled margins. Dip - approximately 70º Slightly variolitic texture, fine-grained, light grey fragments of altered glass and minor fresh glass!(?). Note: small (1 mm) dark brown "spots" in carbonate/zeolite matrix at the top contact - now predominantly clays. Originally?
Lower contact - 289.62 m Altered glass. Dip - 50º
Unit thickness - 2.99 m Type of unit: massive flow

Light grey-green, fine-grained, massive, aphyric basalt. Magnetite is present as minute disseminated grains with yellow alteration halos (especially around 287.80 m).

Vesicles:- highly vesicular - approximately 8%
- average size - approximately 1 mm
- maximum size - approximately 2 mm
- filling - 80% open (many lined with celadonite?), 15% carbonate, 5% layer silicates, 5% zeolite
- segregation vesicles also present

Veins:- common - approximately 3%
- average maximum size - approximately 3 mm
- filling - predominantly carbonate

GMA:- approximately 50%

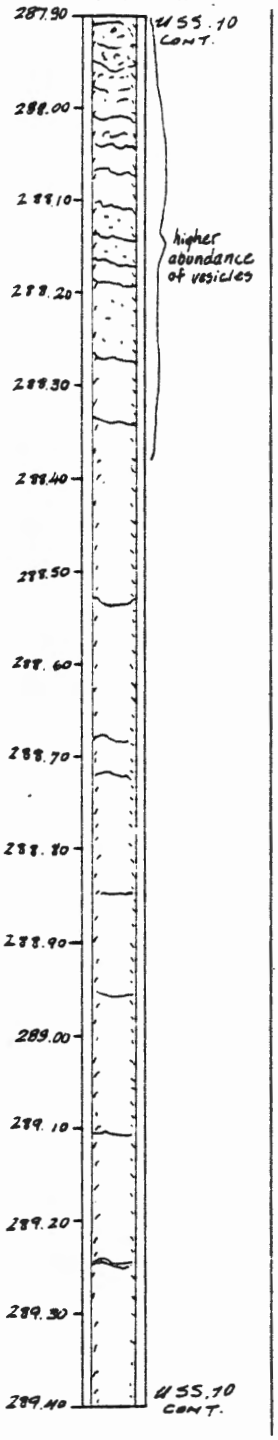
UNIT 55.10 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY 1

Core Box 56 Sheet I

Visual Core Description Observer Hassan

Depth Interval 287.90 m to 289.40 m



UNIT 55.10 cont. Description - see Box 55, Sheet 4.

Light grey-green, fine-grained, massive, aphyric, vesicular basalt flow.

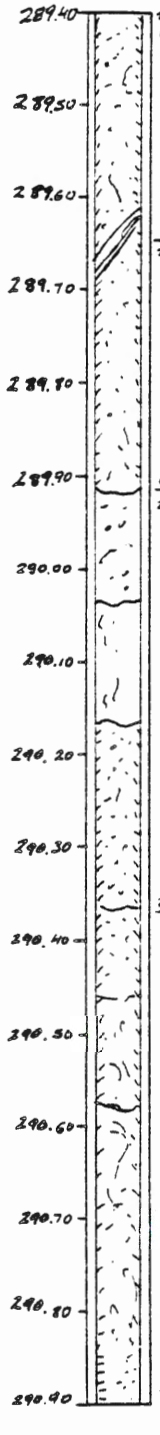
UNIT 55.10 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY 1

Core Box 56 Sheet 2

Visual Core Description Observer Hasson

Depth Interval 288.40 m to 290.90 m



UNIT 55.10 cont. Description - see Box 55, Sheet 4.

Grey-green, fine-grained, massive, aphyric, vesicular basalt flow.

UNIT 56.01 OVERALL DESCRIPTION

Upper contact - 289.62 m Depositional. Dip - 50°
Altered glass.
Lower contact - 289.90 m Depositional. Dip - 55°
Altered glass.
Unit thickness - 0.28 m Unit type: pillow

Grey-green, fine-grained, homogeneous basalt.

Vesicles:- 1%
- maximum size - 1 mm
- filling - 90% open, 10% carbonate
Veins:- 1%
- size - 1 mm
- filling - 90% open, 10% carbonate
GMA:- 10% - to 60% smectite, 40% carbonate

UNIT 56.02 OVERALL DESCRIPTION

Upper contact - 289.90 m Depositional. Dip - 60°
Some glass.
Lower contact - 290.35 m Dip ambiguous.
Unit thickness - 0.45 m Type of unit: pillow

Grey-green, fine-grained, homogeneous basalt.

Vesicles:- 2%
- size - 1 mm
- filling - 80% open, 20% calcite
Veins:- 1% milky veins
- size - 2 mm
- filling - 70% carbonate, 30% open
GMA:- 10% - to 60% smectite, 40% carbonate

UNIT 56.03 OVERALL DESCRIPTION

Upper contact - 290.35 m Dip ambiguous. Altered glass.
Lower contact - 291.00 m Depositional. Dip - 90°. Altered glass.
Unit thickness - 0.65 m Type of unit: pillow

Grey-green, fine-grained, homogeneous basalt.

Vesicles:- 1%
- size - 1 mm
- filling - 95% open, 5% carbonate
Veins:- 1% milky veins
- size - 1-4 mm
- filling - 60% carbonate, 40% open
GMA:- 10% - to 60% smectite, 40% carbonate

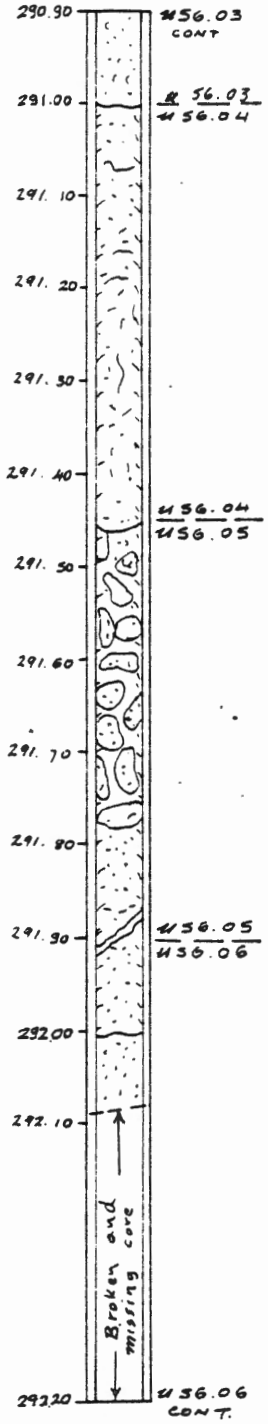
UNIT 56.03 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY 1

Core Box 56 Sheet 3

Visual Core Description Observer Hanson

Depth Interval 290.90 m to 292.20 m



UNIT 56.03 cont. Description - see Box 56, Sheet 2.

Grey-green, fine-grained, homogeneous basalt.

UNIT 56.04 OVERALL DESCRIPTION

Upper contact - 291.00 m Depositional. Dip - 50?
Some altered glass.
Lower contact - 291.45 m Ambiguous. Some altered glass.
Unit thickness - 0.45 m Type of unit: pillow

Green-grey, fine-grained, homogeneous basalt.
Vesicles:- 2%
- size - 1 mm
- filling - 95% open, 5% carbonate
Veins:- 1% milky veins
- size- 1-4 mm
- filling - 60% carbonate, 40% open
GMA:- 10% - to 60% smectite, 40% carbonate

UNIT 56.05 OVERALL DESCRIPTION

Upper contact - 291.45 m Some altered glass. Dip-ambiguous.
Lower contact - 291.90 m Depositional. Altered glass.
Dip - 45°.
Unit thickness - 0.45 m Type of unit: basalt rubble

Grey-green, fine-grained, homogeneous basalt rubble.

Vesicles:- 1%
- size - 1 mm
- filling - 60% carbonate, 40% open
Veins:- milky veins
- size - 1-5 mm
- filling - 60% carbonate, 40% open
GMA:- 60% - to 90% smectite, 10% carbonate

UNIT 56.06 OVERALL DESCRIPTION

Upper contact - 291.90 m Depositional. Some glass.
Dip - 45°.
Lower contact - 293.22 m Depositional. Some glass.
Dip - 90°.
Unit thickness - 1.32 m Type of unit: pillow

Grey-green, fine-grained, homogeneous basalt with rubble from 292.00-292.20 m.

Vesicles:- 5%
- size - 1 mm
- filling - 60% carbonate, 40% open
Veins:- 1%
- size - 1-4 mm
- filling - 60% carbonate, 40% open
GMA:- 80% from 290.00-292.20 m, 10% otherwise
- to 90% smectite, 10% carbonate

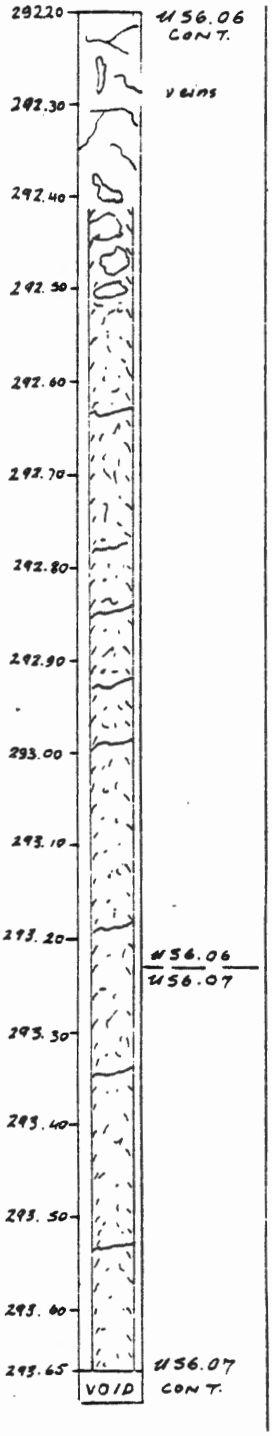
UNIT 56.06 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY 1

Core Box 56 Sheet 4

Visual Core Description Observer Hassan

Depth Interval 292.20 m to 293.65 m



UNIT 56.06 cont. Description - see Box 56, Sheet 3.

Grey-green, fine-grained, homogeneous basalt.

UNIT 56.07 OVERALL DESCRIPTION

Upper contact - 293.22 m Depositional. Altered glass. Dip = 90°..
Lower contact - 293.78 m Depositional. Altered glass. Dip - 50° There is 5 mm altered glass plus 5-7 mm interpillow deposit of crystalline analcite coated with orange-brown blocky zeolite with striated surfaces-gmelenite?
Unit thickness - 0.56 m Type of unit: pillow

Grey-green, fine-grained, aphyric, homogeneous basalt with some 2 mm quartz crystals settled in the vugs.

Vesicles:- 1%
- size - 1 mm
- filling - 60% open, 40% carbonate

Veins:- 1%
- size - 1-4 mm
- filling - 60% carbonate and quartz, 40% open

GMA:- 10% - to 90% smectite, 10% carbonate

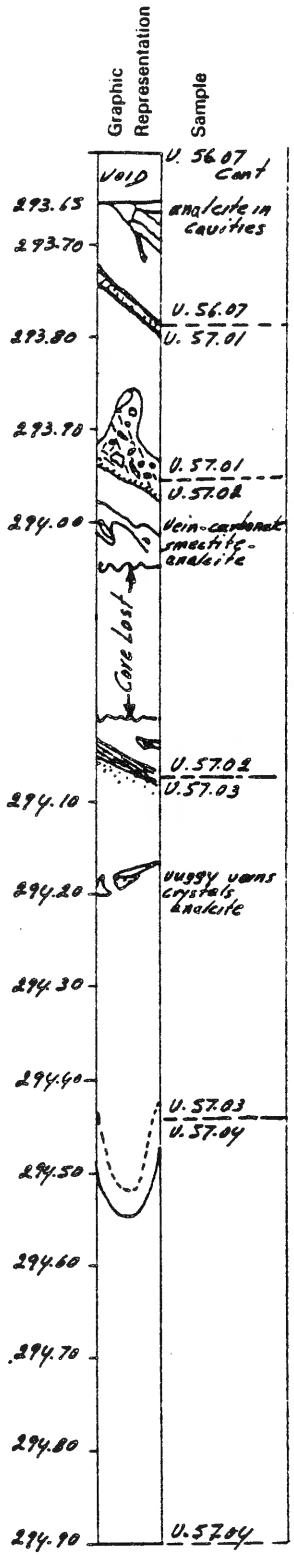
UNIT 56.07 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 57 Sheet 1a

Visual Core Description Observer R. Baragar

Depth Interval 293.65 m to 294.90 m



UNIT 56.07 cont. Description - see Box 56, Sheet 4.

UNIT 57.01 OVERALL DESCRIPTION

Upper contact - 293.78 m 5 mm thick altered glass-now green smectite. Dip - 40°. 0/80.
Lower contact - 293.96 m Incomplete, core broken. It appears to be a pillow boundary that swings parallel to core axis. Comprises green smectite imbedded partly in carbonate.
Unit thickness - 0.18 m Type of unit: pillow
Dark grey, fine-grained, aphyric basalt.

Vesicles:- 2-3%
- average maximum size - 1.5 mm
- filling - green smectite, open, carbonate in order of abundance

Veins:- 8-10% including pillow margins
- filling - 60% green smectite, 30% carbonate, 10% analcite

UNIT 57.02 OVERALL DESCRIPTION

Upper contact - 293.96 m Dip - 40°. Minimum 7 mm thick altered glass - now green smectite, lenses of pale green to white smectite.
Lower contact - 294.09 m Dip - 20°. Minimum 7 mm thickness green smectite after altered glass with lenses and layers of pale grey smectite.
Unit thickness - 0.13 m Type of unit: pillow
Grey, fine-grained, aphyric basalt.

Vesicles:- 1-2%
- filling - mainly smectite or open

Spotting:- 10% vaguely defined brown spotting
- average size - 2-4 mm

Veins:- 20%
- major vein at the center of the unit appears to be in part an infold of altered glassy margin with the remainder cross cutting veins in which fragments of pillow basalt are suspended
- filling - green smectite, pale grey materials, carbonate and analcite in order of abundance

UNIT 57.03 OVERALL DESCRIPTION

Upper contact - 294.09 m Dip - 20°. 10 mm minimum thickness altered glass (smectite and pale grey material) and vugs with analcite crystals.
Lower contact - 294.44 m Incomplete - altered glassy rim.
Unit thickness - 0.35 m Type of unit: pillow
Dark grey, medium-grained, aphyric basalt.

Vesicles:- ± 1%
- size - <<1 mm
- open

Veins:- 3% internal veins, 6% including pillow margins
- filling - internal veins - carbonate, pink zeolite and analcite (especially in vugs)
- filling - pillow margins - 50% smectite 50% carbonate and zeolites

UNIT 57.04 Description - see Box 57, Sheet 1b.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 57 Sheet 16

Graphic Representation | Sample

Visual Core Description Observer R. Baragar

Depth Interval 293.65 m to 294.90 m

UNIT 57.04 OVERALL DESCRIPTION

Upper contact - 294.44 m Dip - 75°. 5-7 mm minimum thickness altered glass, now dark green smectite and pale grey substance.
Lower contact - 294.90 m Not complete, attitude obscure, high angle to core. Double margin (upper and lower pillows) 30 mm thick. Comprised of green layered smectite slabs cemented by network of carbonate-zeolite veinlets.
Unit thickness - 0.46 m Type of unit - pillow

Dark grey, fine-grained, aphyric basalt. Rock is flecked with what appear to be feldspar crystals - could be plagioclase microphyric.

Vesicles:- <1%
- average maximum size - 1.5 mm
- filling - 70-80% open, 20-30% smectite

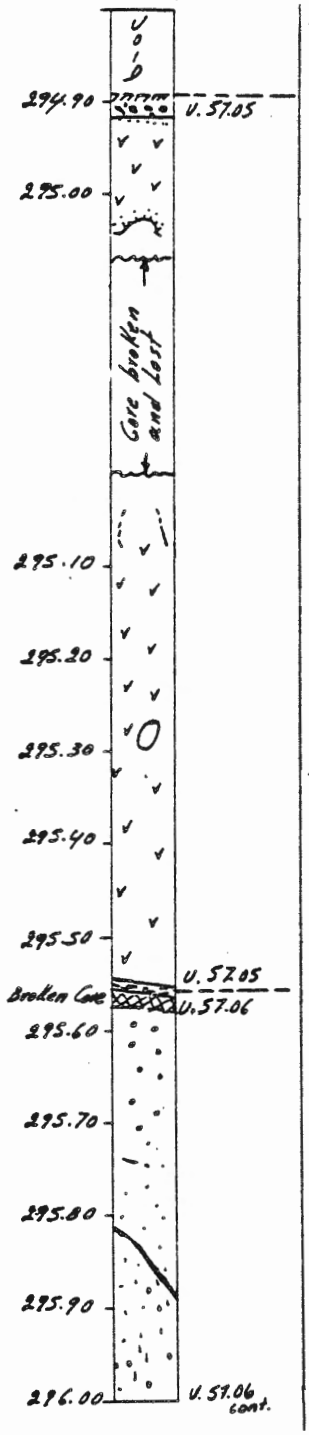
Veins:- <<1% internal veins, 5% including margins
- filling - internal veins - 100% carbonate
- margins - 96-97% carbonate, 3-4% green smectite and pale grey clay

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 57 Sheet 2

Visual Core Description Observer R. Baragar

Depth Interval 294.90 m to 296.00 m



UNIT 57.05 OVERALL DESCRIPTION

Upper contact - 294.90 m Incomplete. Double margin (upper and lower pillows) 30 mm thick. Comprised of green layered smectite slabs cemented by network of carbonate-zeolite veinlets.
Lower contact - 295.56 m Dip = 5°.
Incomplete, minimum of 10 mm of very pale grey and light buff clay minerals? (75%) and dark green smectite.
Unit thickness - 0.66 m Type of unit: pillow
Dark grey, aphanitic to medium-grained, aphyric or microphyric basalt. The rock may be plagioclase and clinopyroxene microphyric - visible adjoining margins but lost in coarser-grained interior.

Vesicles:- 1-2%
- average maximum size - 1.5 mm
- filling - 75% carbonate or open in interior, 25% green smectite near margins

Veins:- 3% interior veins, 8% including glassy margins
- filling - interior veins - mostly carbonate but one includes chips of altered glass presumably from margins (green smectite), and one occurrence of tetragonal? zeolite
- glassy margins include 75% green smectite
- note - margin parallels core direction in part and leaves altered glassy coating on exterior of core

UNIT 57.06 OVERALL DESCRIPTION

Upper contact - 295.60 m Not present.
Lower contact - 298.73 m Incomplete. 2-3 mm minimum thickness green smectite, pale grey clay minerals.
Dip = 70°.
Unit thickness - 3.04 m Type of unit: flow or large pillow
Speckled dark grey, aphyric, possibly microphyric basalt. The rock is medium-grained in the interior but grades to aphanitic at margins and is flecked with white plagioclase microphenocrysts(?). Internal dyking is common in the lower part of the unit where darker, irregular dykes with sharp but unchilled margins pass irregularly through the unit (as shown on sketch - 297.00-297.30 m).

Vesicles:- 2 generations
1. - 10% large vesicles in upper 0.45 m of unit
   - average maximum size - 6 mm
   - large vesicles rare below this except for basal 0.20 m of unit
   - filling - 50% carbonate, 50% open
2. - 1-3% distributed throughout
   - minute, mostly interstitial vesicles bounded by groundmass crystals
   - open

Veins:- 3% interior veins, 4% including margins
- filling - interior veins - predominantly carbonate
- margins - 75% carbonate, 25% smectite

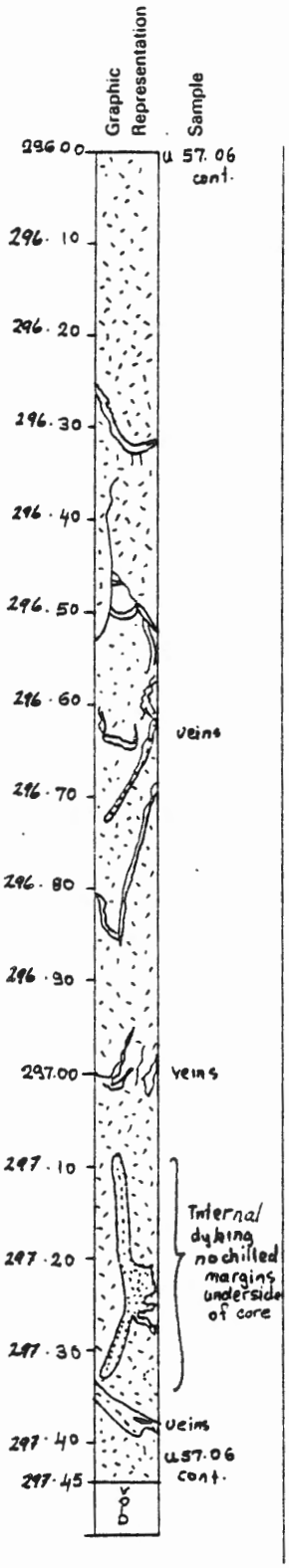
UNIT 57.06 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 57 Sheet 3

Visual Core Description Observer R Baragar

Depth Interval 296.00 m to 297.45 m



UNIT 57.06 cont. Description - see Box 57, Sheet 2.

Speckled dark grey, aphyric, possibly microphyric basaltic thin flow or large pillow. The rock is medium-grained in the interior but grades to aphanitic at margins and is flecked with white plagioclase microphenocrysts(?). Internal dyking is common in the lower part of the unit where irregular, darker dykes with sharp but unchilled margins pass irregularly through the unit (as shown on sketch - 297.00-297.30 m).

UNIT 57.06 cont.

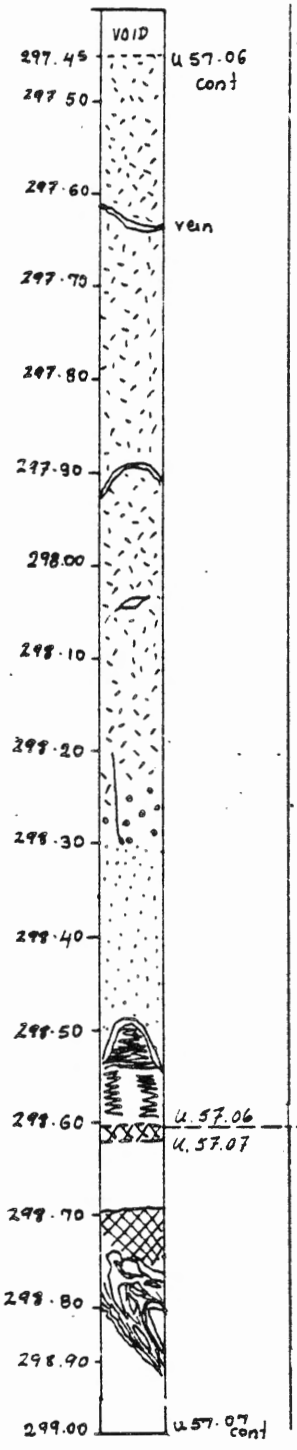
CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 57 Sheet 4

Graphic Representation | Sample

Visual Core Description Observer R. Baragar

Depth Interval 297.45 m to 299.00 m



UNIT 57.06 cont. Description - see Box 57, Sheet 2.

Speckled dark grey, aphyric possibly microphyric basaltic thin flow or large pillow.

UNIT 57.07 Description - see Box 58, Sheet 1.

Upper contact - 298.60 m Depositional. Altered glass and brecciated zone. Dip - 30°.

This section has 0.10 m of dark grey basalt, flecked with probable feldspar microphenocrysts(?).

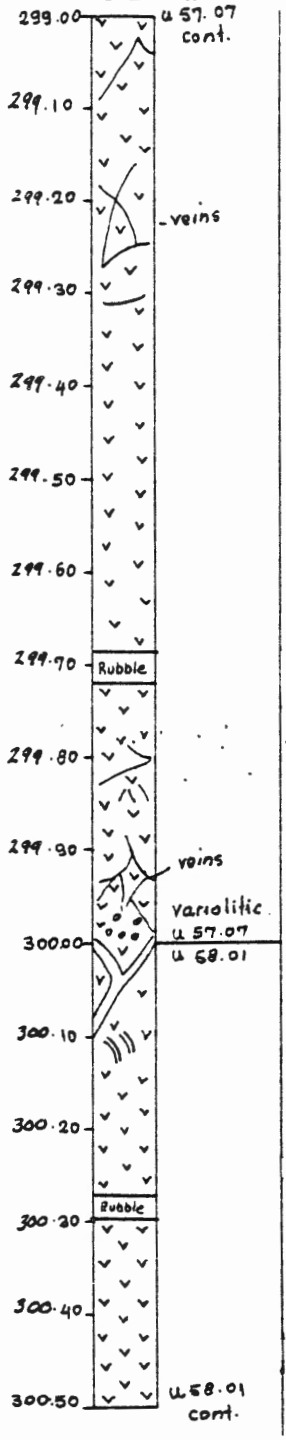
UNIT 57.07 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 58 Sheet 1

Visual Core Description Observer HELGESEN

Depth Interval 299.00 m to 300.50 m



UNIT 57.07 cont. OVERALL DESCRIPTION

Upper contact - 298.60 m Depositional. Altered glass and brecciated zone. Dip - 30°.
Lower contact - 300.05 m Depositional. Altered glass. Contact is between 3 pillows, 1 is penetrated only through a corner. Dip - 55°
Unit thickness - 1.45 m Type of unit - pillow

Grey-green, fine-grained, aphyric basalt.

Vesicles:- 3%, higher at 299.10 m
- size - 2 mm
- filling - 50% calcite, 35% open, 15% layer silicates

Veins:- 5%
- filling - 90% calcite, 10% layer silicates

GMA:- 30% - to 70% layer silicates, 30% carbonate

UNIT 58.01 OVERALL DESCRIPTION

Upper contact - 300.05 m Depositional. Altered glass. Dip - 55°
Lower contact - 300.67 m Depositional. Variolitic texture (2 mm in size), altered glass with zeolite. Dip - 50°
Unit thickness - 0.62 m Type of unit - pillow

Grey-green, aphyric, fine-grained basalt.

Vesicles:- <2%
- size - 1 mm
- round
- filling - 70% open, 25% carbonate, 5% layer silicates

Veins:- 8%
- filling - 80% carbonate, 20% layer silicates

GMA:- 30% - to 70% layer silicates, 30% carbonate

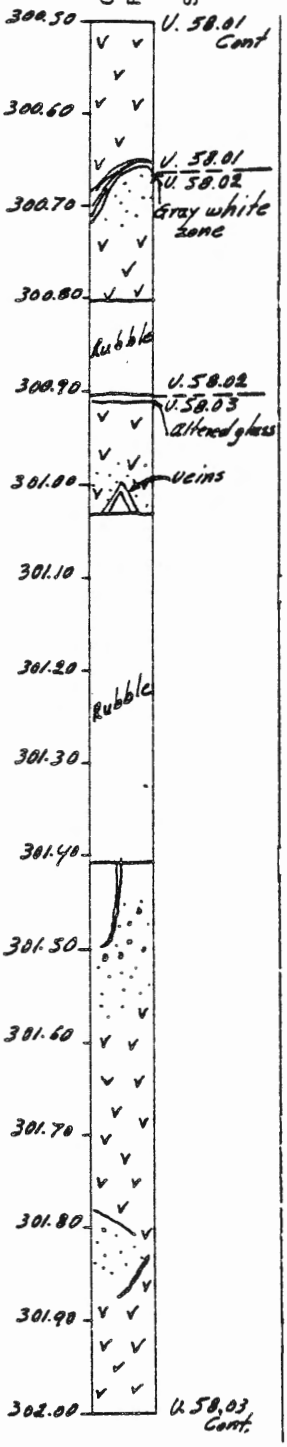
UNIT 58.01 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 58 Sheet 2

Visual Core Description Observer HELSBREE

Depth Interval 300.50 m to 302.00 m



UNIT 58.01 cont. Description - see Box 58, Sheet 1.

Grey-green, fine-grained, aphyric pillow basalt.

UNIT 58.02 OVERALL DESCRIPTION

Upper contact - 300.67 m Depositional. Altered glass. Dip - 50° At contact, pillow is grey-white and grades into grey-green.
Lower contact - 300.90 m Depositional. Altered glass. Dip - 70°
Unit thickness - 0.23 m Type of unit - pillow

Aphyric, grey-green, fine-grained basalt.

Vesicles:- 3%
- size - 1 mm
- round
- filling - 70% open, 20% carbonate, 10% layer silicates

Veins:- 10%
- filling - 80% carbonate, 20% layer silicates

GMA:- 30% - to 70% layer silicates, 30% carbonate
- trace of yellow zeolite at upper contact

UNIT 58.03 OVERALL DESCRIPTION

Upper contact - 300.90 m Depositional. Altered glass. Dip - 70°
Lower contact - 303.00 m Depositional. Altered glass. Variolitic. Dip - 20°.
Unit thickness - 2.10 m Type of unit - flow

Grey-green, fine-grained, aphyric basalt. The flow is slightly coarser-grained from 302.30-302.40 m.

Vesicles:- 8%, concentrated at upper contact and between 301.40-301.60 m
- size - 3 mm
- round
- filling - 60% open, 30% carbonate, 10% layer silicates

Veins:- 5%
- filling - 80% carbonate, 20% green and yellow clays

GMA:- 30% - to 65% smectite, 35% carbonate

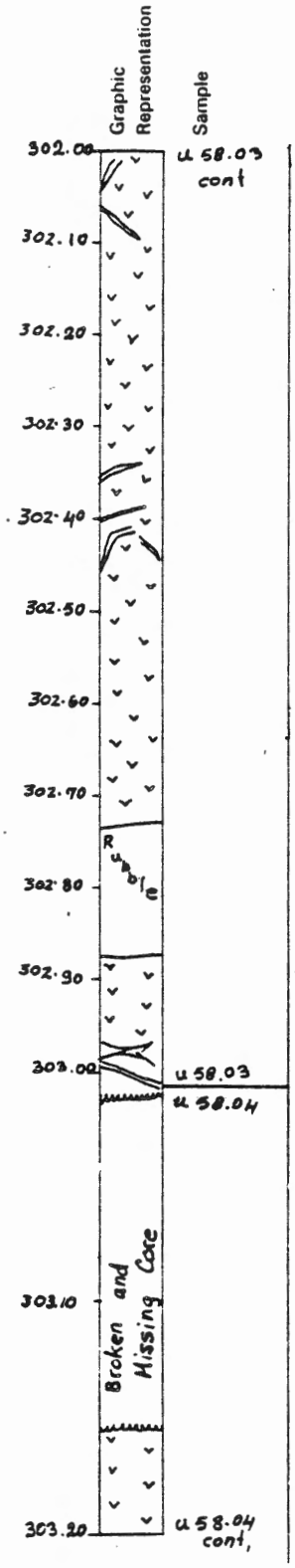
UNIT 58.03 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY 1

Core Box 58 Sheet 3

Visual Core Description Observer HELSBREE

Depth Interval 302.00 m to 303.20 m



UNIT 58.03 cont. Description - see Box 58, Sheet 2.

Grey-green, fine-grained, aphyric flow basalt. The flow is slightly coarser-grained at 302.30-302.40 m.

UNIT 58.04 OVERALL DESCRIPTION

Upper contact: 303.00 m Depositional. Altered glass. Greyish-white colour near contact, grading into greyish-green. Variolitic. Dip - 20°.
Lower contact: 304.05 m Depositional. Variolitic. Altered glass. This contact is brecciated, with fragments of basalt "cemented" by carbonate and clay (width = 70 mm). Dip - 50°/90°.
Unit thickness: 1.05 m Type of unit - pillow

Green-grey, fine-grained, aphyric basalt.

Vesicles:- 8%, concentrated in rubble at 303.00-303.20 m and at 303.50 m
- size - 2 mm
- filling - 60% open, 30% carbonate, 10% layer silicates

Veins:- 5%
- filling - 80% carbonate, 20% layer silicates

GMA:- 40% - to 70% layer silicates, 30% carbonate

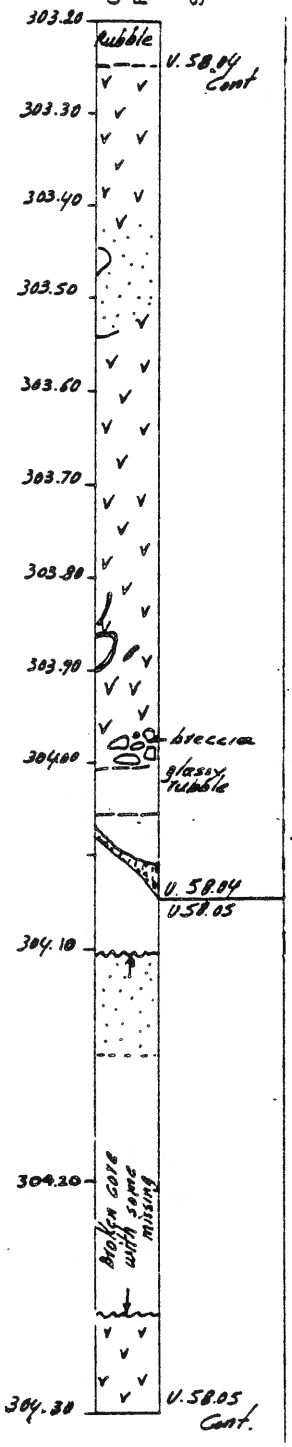
UNIT 58.04 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 58 Sheet 4

Visual Core Description Observer H. Elsbree

Depth Interval 303.20 m to 304.30 m



UNIT 58.04 cont. Description - see Box 58, Sheet 3.

Grey-green, fine-grained, aphyric pillow basalt.

UNIT 58.05 OVERALL DESCRIPTION

Upper contact: 304.05 m Depositional. Variolitic. Altered glass and smectite. Overlain by brecciated zone (see Unit 58.04). Dip - 50°
Lower contact: 306.12 m Depositional. Altered glass. Grey-green to grey-white to altered glass at contact. Dip - 35°
Unit thickness: 2.07 m Type of unit - flow

Grey-green, fine-grained, aphyric basalt.

Vesicles:- 6%, concentrated in rubble from 304.20-304.30 m
- size - 2 mm
- round
- filling - upper vesicles - 70% open, 20% carbonate, 10% layer silicates
- lower vesicles are open

Veins:- 5%
- filling - 70% carbonate, 30% layer silicates

GMA:- 40% - to 80% layer silicates, 20% carbonate

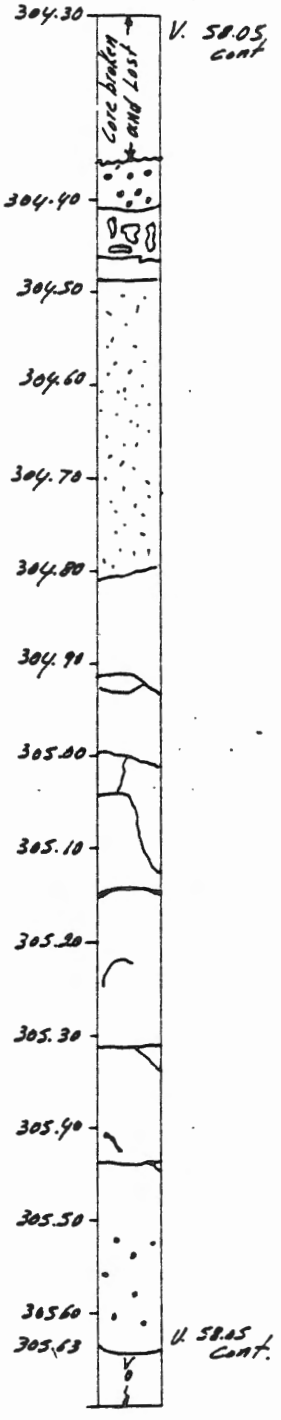
UNIT 58.05 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 59 Sheet 1

Visual Core Description Observer N. Baglow

Depth Interval 304.30 m to 305.63 m



UNIT 58.05 cont. Description - see Box 58, Sheet 4.

Green, fine-grained, aphyric basalt with the middle portion increasing in grain size toward medium-grained with clinopyroxene as the dominant and larger phase (agglomerations).

Vesicles:- 6% over whole section, but up to 50% for first 30 cm of this section
- size - gradation from 0.1-3 mm
- round
- filling - 80% open, 15% carbonate, 5% gypsum
- proportion of voids greater towards contacts
- sporadic, darker, roughly spherical patches probably represent segregation vesicles
- 8 mm vug at 305.46 m

Veins:- 2%, including irregular fractures
- size - 0.5-3 mm
- filling - 60% carbonate, 20% gypsum with 20% sheet silicates at the margins

GMA:- low devitrification of glassy material into pale green and dark green sheet silicate around clinopyroxene spherulites (1-4 mm across) just away from both chilled margins has given rise to distinctive 5-10 cm mottled zones of spherulites

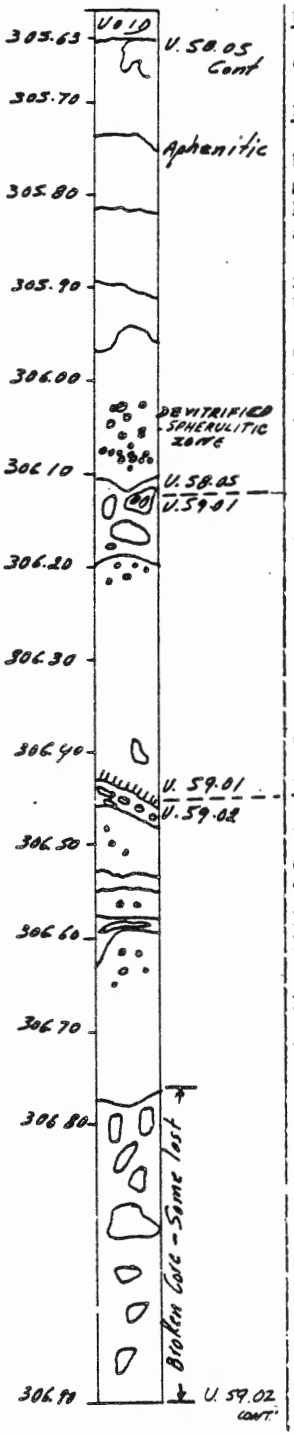
UNIT 58.05 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 59 Sheet 2

Visual Core Description Observer N. Baglow

Depth Interval 305.63 m to 306.90 m



UNIT 58.05 cont. Description - see Box 58, Sheet 4.

Grey-green, fine-grained, aphyric pillow or flow basalt.

UNIT 59.01 OVERALL DESCRIPTION

Upper contact - 306.12 m Depositional. Minor altered glass. Fractured.
Lower contact - 306.45 m Depositional. Altered glass over a 30 mm zone. Some indication of black fresh glass (conchoidal shiny surfaces). Glass filled fractures extend into pillow away from contact.
Unit thickness - 0.33 m Type of unit - pillow

Green, fine-grained, aphyric basalt. The core is broken and there is some loss below 306.78 m.

Vesicles:- 4%, mostly concentrated towards the top, but sparsely distributed throughout
- subrounded
- size-0.5-3 mm
- filling - 75% open, 15% carbonate, 10% gypsum

Veins and fractures:- 4%
- filling - 65% sheet silicates, 10% carbonate, 20% gypsum, 5% zeolite
- dominant away from lower contact, with gypsum filling larger dilations within the fractures - eg. at 306.33 m
- orange gmelinite within lower contact zone

GMA:- low

UNIT 59.02 OVERALL DESCRIPTION

Upper contact - 306.45 m Depositional. Altered and fresher glass. The chilled margin is for the most part not clearly defined and patches of green smectite extend for up to 10 cm into the pillow.
Lower contact - 307.25 m Depositional. Altered glass.
Unit thickness - 0.80 m Type of unit - pillow

Fine-grained, green to green-grey, aphyric basalt.

Vesicles:- 2%, concentrated in upper 10 cm
- size-1-4 mm
- filling - 75% open, 20% gypsum, 5% carbonate
- smaller vesicles are spherical - roundness decreases with diameter increase
- tend to be elongate at the base

Veins:- 2%, mostly in margins
- filling - 70% sheet silicates (dark and pale green altered glass), 15% gypsum, 10% carbonate, 5% zeolite
- pale orange gmelinite is found as small, poorly shaped crystals at the upper contact

GMA:- low

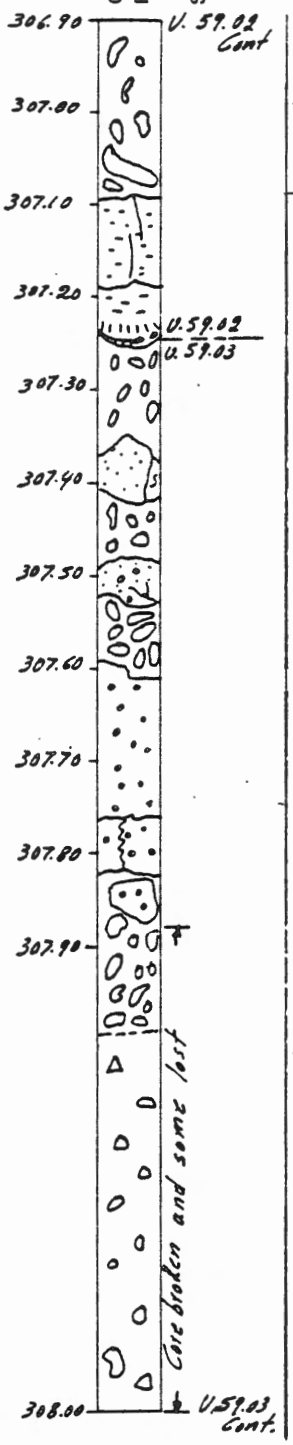
UNIT 59.02 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 59 Sheet 3

Visual Core Description Observer N. Baglow

Depth Interval 306.90 m to 308.00 m



UNIT 59.02 cont. Description - see Box 59, Sheet 2.

Green to green-grey, fine-grained, aphyric pillow basalt.

UNIT 59.03 OVERALL DESCRIPTION

Upper contact - 307.25 m Ambiguous - fragmented. Altered glass.
Lower contact - 309.50 m Ambiguous - fragmented. Very minor altered glass. Overall, both unit boundaries are probably depositional (pillow?) as the over- and underlying units (59.02 and 60.01) appear comformable (chilled margin and fine-grained rock followed by vesicular basalt, respectively).
Unit thickness - 2.25 m

Fine- to medium-grained, green aphyric basalt. Away from marginal areas, clinopyroxene forms the larger masses (0.5-2 mm) within the groundmass, with tiny plagioclases confined to the interstitial areas. The core is broken, there is some loss below 307.95 m.

Vesicles:- 3%, conspicuous to 307.95 m
- size - 0.2-4 mm
- filling - 90% open, 10% carbonate
- round
- below 307.95 m, pin-head voids are typical

Veins: - 3% - found throughout but are nowhere significant
- filling - 50% carbonate, 30% gypsum, 20% sheet silicates (at margin)

GMA:- low

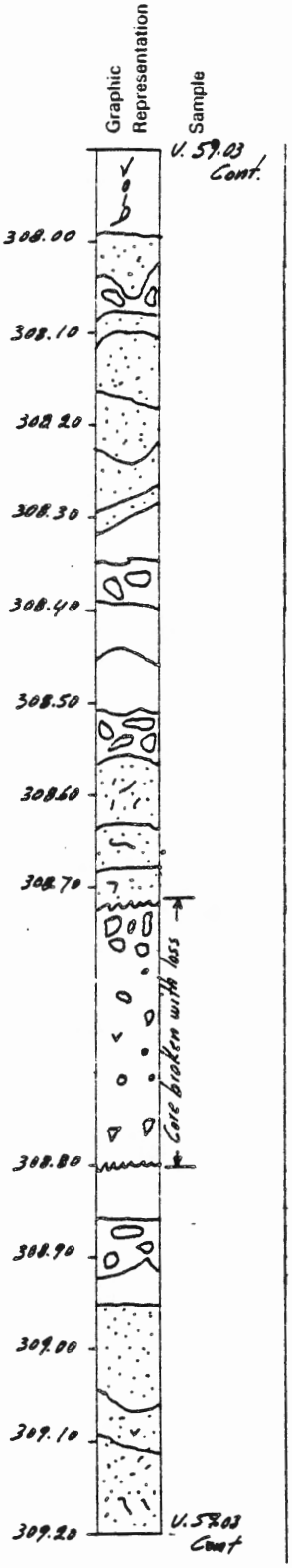
UNIT 59.03 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 59 Sheet 4

Visual Core Description Observer N. Baglow

Depth Interval 308.00 m to 309.20 m



UNIT 59.03 cont. Description - see Box 59, Sheet 3.

Green fine- to medium-grained aphyric basalt. The core is broken and there is some loss from 308.70-308.80 m.

UNIT 59.03 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 60 Sheet 1

Visual Core Description Observer T. Purcell

Depth Interval 309.20 m to 310.70 m

UNIT 59.03 cont. Description - see Box 59, Sheet 3.

Medium-grained, aphyric, grey basalt. There are plagioclase laths in the groundmass. Glassy segregation "blotches" or veins and minute voids (5%) are distributed throughtout. Carbonate veining is very minor and celadonite lines or fills fractures.

GMA:- low - 15%(?)

UNIT 60.01 OVERALL DESCRIPTION

Upper contact - 309.50 m Some altered glass in rubble. Grain size fines toward this rubbled or broken up contact zone.
Lower contact - 312.95 m Depositional. One centimeter of altered glass at the chilled margin. There is a 20 mm zone of spherulites at this margin.
Unit thickness - 3.45 m Type of unit - massive flow

Grey, medium-grained, aphyric, highly vesicular, massive basalt.

Vesicles:- 15% scattered throughout (note - first appear about 80 mm from upper contact)
- size - range from 2 mm-10 mm
- some are rimmed by darker, finer material which is also found in blotches or patches (segregation vesicles)
- filling - 80% gypsum and 20% sheet silicates
- voids make up 15% of the unit and are lined with pale blue-smectite
- on occasion the gypsum vesicles are wholly contained within the segregation vesicles

Veins:- fractures in the breccia zone from 310.40-310.90 m are filled with celadonite

GMA:- low, about 20%

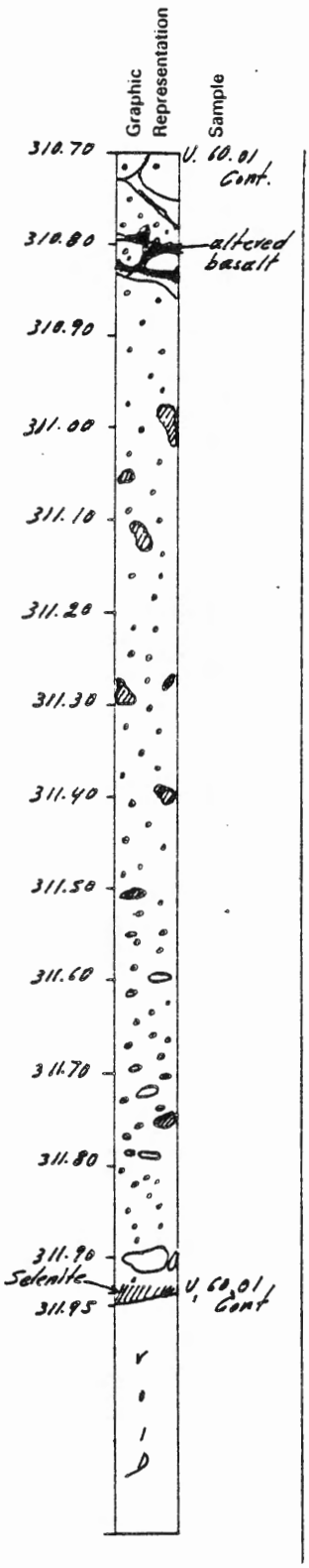
UNIT 60.01 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 60 Sheet 2

Visual Core Description Observer T. Purcell

Depth Interval 310.70 m to 311.95 m



UNIT 60.01 cont. Description - see Box 60, Sheet 1.

Grey, medium-grained, aphyric, highly vesicular, massive basalt flow.

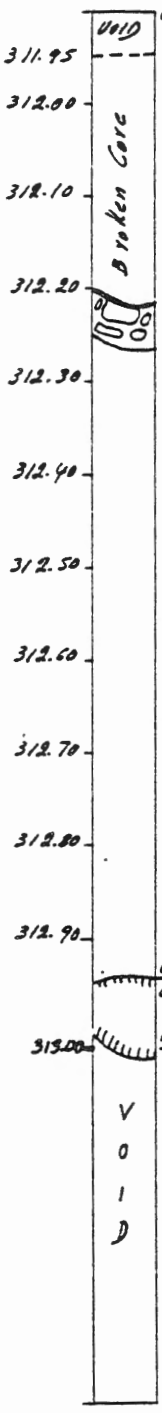
UNIT 60.01 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 60 Sheet 3

Visual Core Description Observer J Purcell / PTR

Depth Interval 311.95 m to 313.00 m



UNIT 60.01 cont. Description - see Box 60, Sheet 1.

Grey, medium-grained, aphyric, highly vesicular, massive basalt flow.

UNIT 60.02 OVERALL DESCRIPTION

Upper contact - 312.95 m Fine-grained, no glass preserved.
Lower contact - 313.00 m Chilled margin, altered glass about 10 mm thick.
Unit thickness - 0.05 m Type of unit - small dyke?

Fine- to very fine-grained, fresh aphyric basalt.

No vesicles.

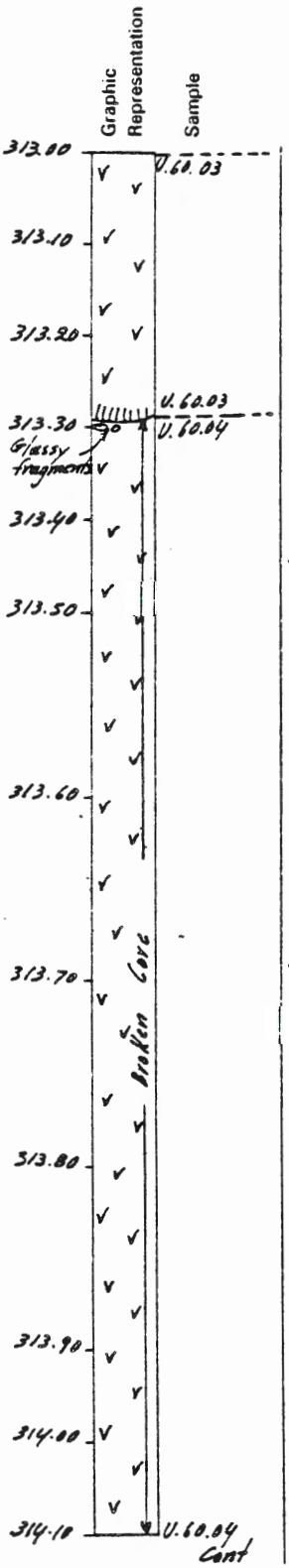
Veins:- 2%, steep
- size - 1 mm
- filling - 95% carbonate, 5% layer silicates

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 60 Sheet 4

Visual Core Description Observer T. Purcell

Depth Interval 313.00 m to 314.10 m



UNIT 60.03 OVERALL DESCRIPTION

Upper contact - 313.00 m Spherulite at the contact.
Lower contact - 313.30 m Ambiguous. Fine, glassy and approaching freshness.
Unit thickness - 0.30 m Type of unit - pillow

Grey, medium- to fine-grained, aphyric basalt.

Vesicles:- 5%
- segregation blotches throughout
- filling - carbonate

Veins:- very minor carbonate veining

GMA:- very low, about 20%

UNIT 64.04 OVERALL DESCRIPTION

Upper contact - 313.30 m Ambiguous.
Lower contact - 314.20 m Ambiguous. Fining towards contact.
Unit thickness - 0.90 m Type of unit - pillow

Grey fine-grained, aphyric basalt. There is a finer-grained patch at 313.85 m but the core is too rubbled to define another unit.

Vesicles:- 3%
- segregation vesicles and patches are present, but not as abundant as Unit 64.03

GMA:- low, about 20%

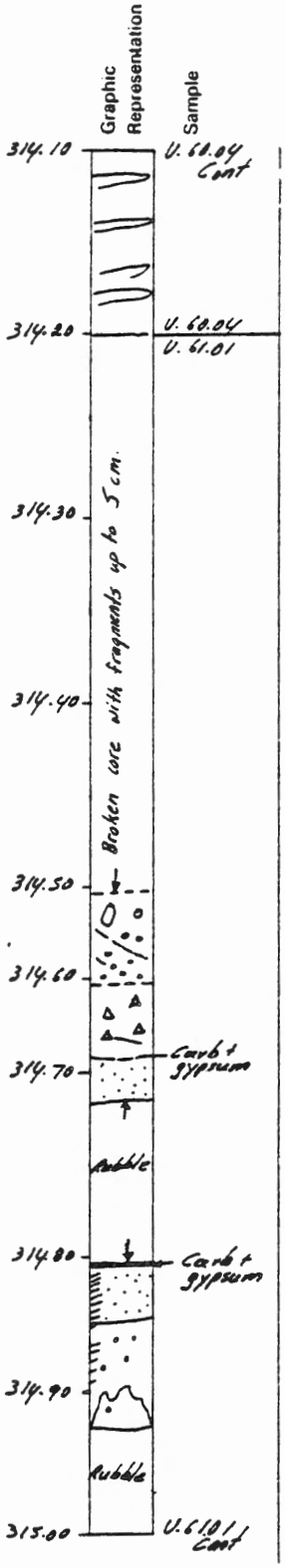
UNIT 64.04 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 61 Sheet 1

Visual Core Description Observer C Milligan

Depth Interval 314.10 m to 315.00 m



UNIT 60.04 cont. Description - see Box 60, Sheet 4.

Grey, fine-grained, aphyric pillow basalt.

UNIT 61.01 OVERALL DESCRIPTION

Upper contact - 314.20 m Depositional. Small fragments of altered glass in rubble.
Lower contact - 317.40 m Contact almost parallel to core. Altered glass fragment present from 317.20-317.40 m. Grain size decreases toward contact.
Unit thickness - 3.20 m Type of unit - flow

Fine-grained, dark grey, vesicular basalt with a mottled surface apparently due to thin zones of glass surrounding vesicles. There are some internal glass segregations in lower part. There is a decrease in grain size from 314.60-314.90 m.

Phenocrysts:- very sparse, subhedral
- clay pseudomorphs after olivine

Vesicles:- in upper part - 35%
- average size - 2 mm
- maximum size - 4 mm
- filling - 80% open, 20% carbonate, trace celadonite as lining
- decrease in number and size - 314.60-315.60 m
- in lower part - 15%
- maximum size - 1 mm
- filling - 50% carbonate, 50% open
- decrease in size and number towards base of section
- below 316.80 m vesicles are tiny and rock is fine-grained

Veins:- <1%, mostly hairline fractures
- size - 3 mm
- filling - carbonate and gypsum at 314.68, 314.90 and 315.40 m

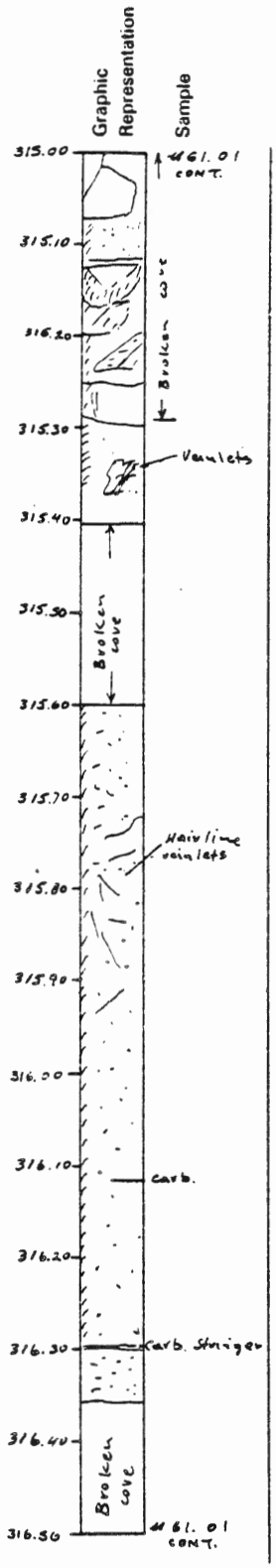
UNIT 61.01 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY. 1

Core Box 61 Sheet 2

Visual Core Description Observer C. Milligan

Depth Interval 315.00 m to 316.50 m



UNIT 61.01 cont. Description - see Box 61, Sheet 1.

Dark grey, fine-grained, vesicular basalt flow with a mottled surface apparently due to thin zones of glass surrounding vesicles. There are some internal glass segregations in the lower part. There is a decrease in grain size from 314.60-314.90 m and vesicles decrease in size and number in this zone.

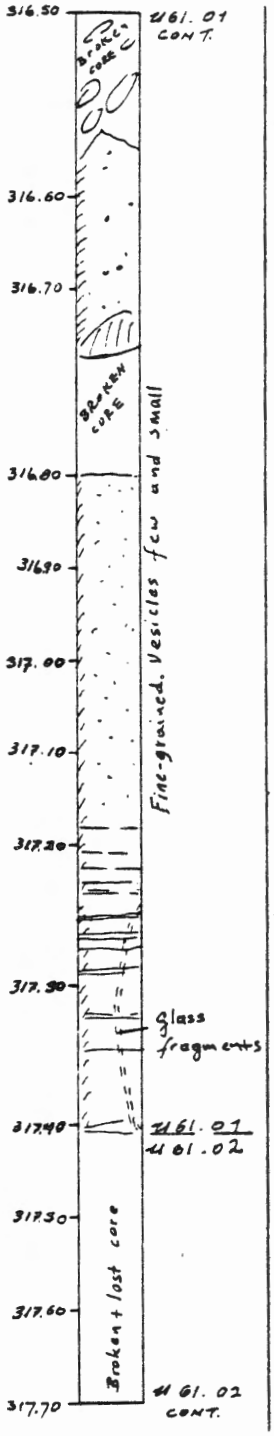
UNIT 61.01 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY 1

Core Box 61 Sheet 3

Visual Core Description Observer C. Milligan

Depth Interval 316.50 m to 317.70 m



UNIT 61.01 cont. Description - see Box 61, Sheet 1.

Dark grey, fine-grained, vesicular basalt flow with a mottled surface apparently due to thin zones of glass surrounding vesicles. There are some internal glass segregations in this lower part.

UNIT 61.02 OVERALL DESCRIPTION

Upper contact - 317.40 m Altered glass fragments.
Lower contact - 317.96 m Altered glass fragments and reduced grain size. Depositional.
Unit thickness - 0.56 m Type of unit - pillow?

Dark grey, very fine-grained, aphyric basalt.

Vesicles:- 3%, concentrated near top of unit (25%)
- maximum size - 1 mm
- spherical

No veins.

GMA:- green micaceous mineral on fracture surface at 317.90 m and several others in rubble fragments; chlorite ???
- probably the usual clay minerals occur - rather pervasive alteration in the frgments

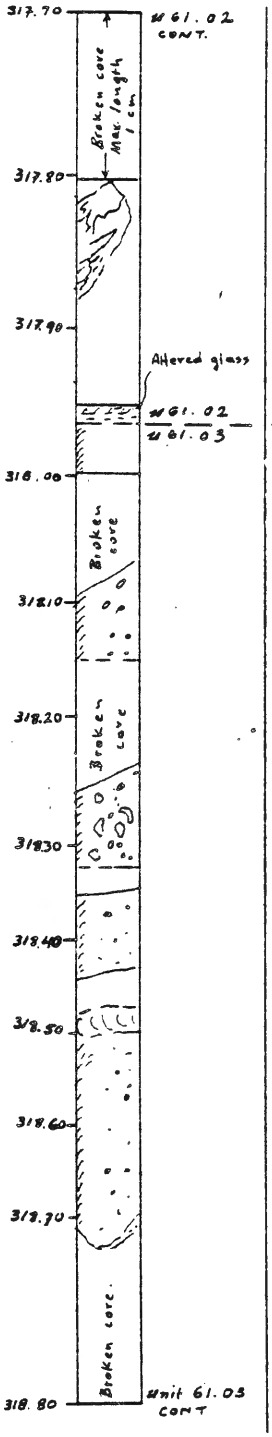
UNIT 61.02 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY 1

Core Box 61 Sheet 4

Visual Core Description Observer C. Milligan

Depth Interval 317.70 m to 318.80 m



UNIT 61.02 cont. Description - see Box 61, Sheet 3.

Dark grey, very fine-grained, aphyric basalt pillow(?).

UNIT 61.03 OVERALL DESCRIPTION

Upper contact - 317.96 m Small altered glass fragments.
Lower contact - 329.60 m Ambiguous. Glass fragments.
Unit thickness - 11.64 m Type of unit - massive flow

Dark grey, fine-grained, aphyric, massive basalt. The cooling zone from 318.00-318.10 m grades into a strongly vesicular zone which extends to 318.90 m.

Vesicles:- 20%, maximum from 318.20-318.60 m, decreasing upward and downward
- some tubular, majority spherical to irregular
- filling - 95% open, 5% gypsum

Veins:- << 1%
- hairline
- one at 318.15 m is clay filled

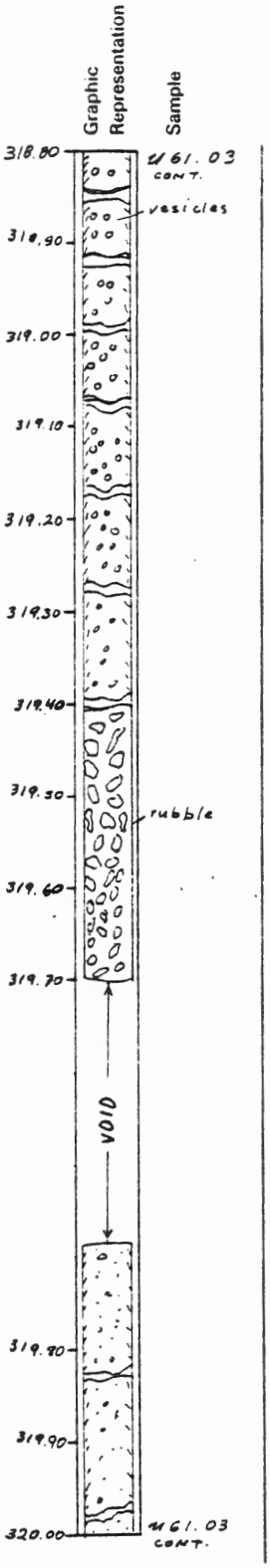
UNIT 61.03 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY 1

Core Box 62 Sheet 1

Visual Core Description Observer Hosson

Depth Interval 318.80 m to 320.00 m



UNIT 61.03 cont. Description - see Box 61, Sheet 4.

Greyish-green, fine-grained, homogeneous, massive basalt flow.

Vesicles:- 10%
- size - 1 mm with some vugs up to 12 mm
- filling - 50% carbonate, 50% open

Veins:- 1% milky veins
- size - 4 mm
- filling - carbonate and gypsum

GMA:- 25% - to smectite and ?

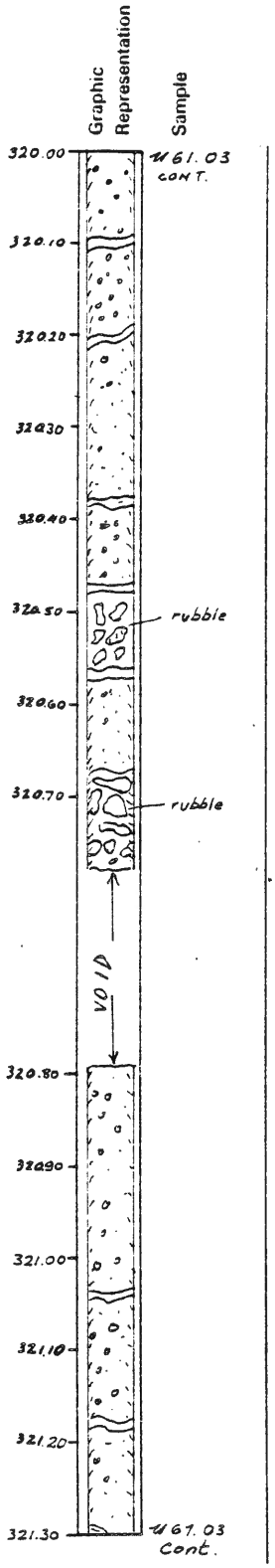
UNIT 61.03 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY 1

Core Box 62 Sheet 2

Visual Core Description Observer Hassan

Depth Interval 320.00 m to 321.30 m



UNIT 61.03 cont. Description - see Box 61, Sheet 4.

Greyish-green, fine-grained, homogeneous, massive basalt flow.

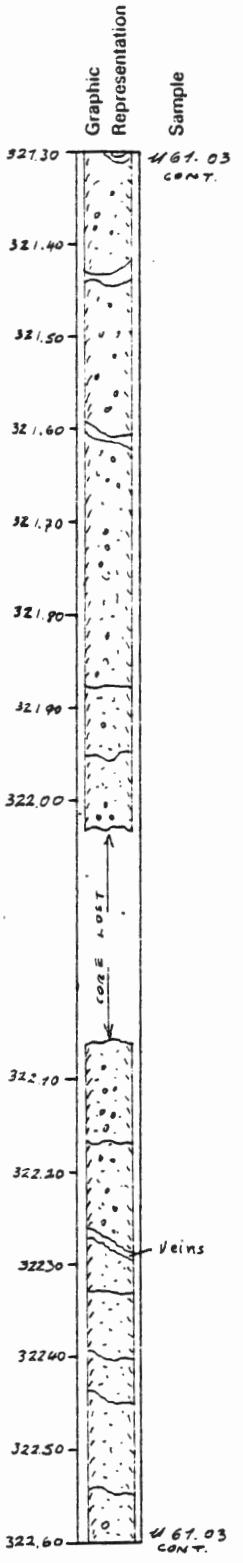
UNIT 61.03 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY1

Core Box 62 Sheet 3

Visual Core Description Observer Hasson

Depth Interval 321.30 m to 322.60 m



UNIT 61.03 cont. Description - see Box 61, Sheet 4.

Greyish-green, fine-grained, homogeneous, massive basalt flow.

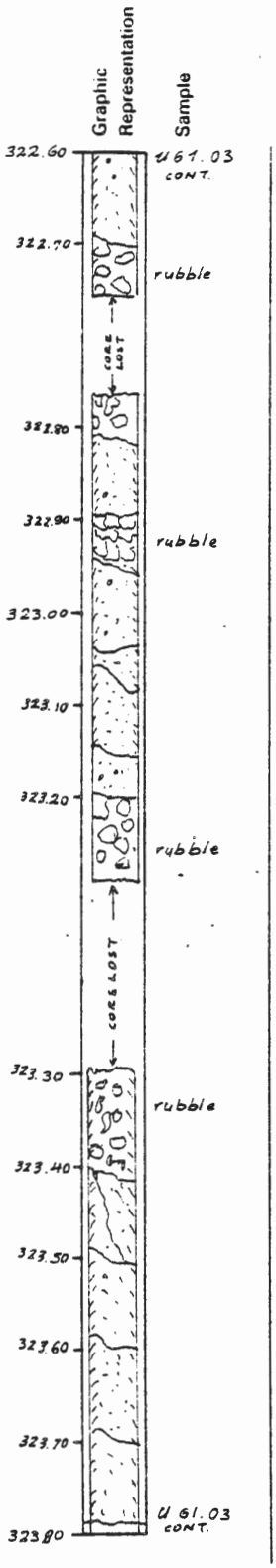
UNIT 61.03 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY 1

Core Box 62 Sheet 4

Visual Core Description Observer Hasson

Depth Interval 322.60 m to 323.80 m



UNIT 61.03 cont. Description - see Box 61, Sheet 4.

Greyish-green, fine-grained, homogeneous, massive basalt flow.

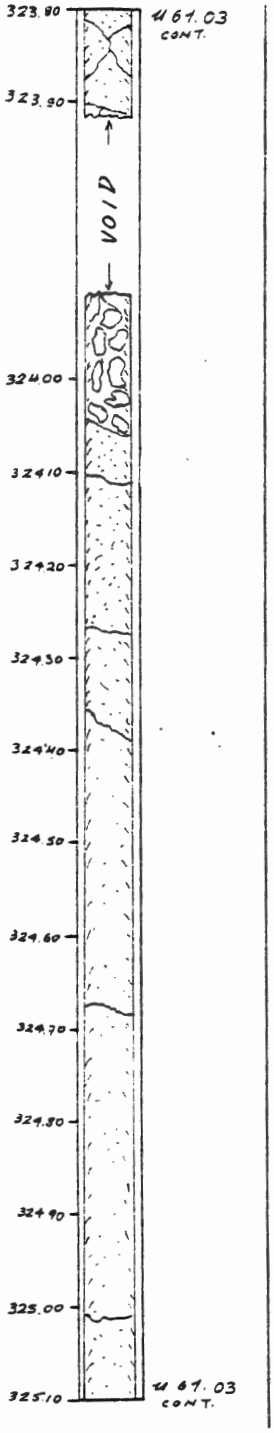
UNIT 61.03 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY 1

Core Box 63 Sheet 1

Visual Core Description Observer Hassan

Depth Interval 323.80 m to 325.10 m



UNIT 61.03 cont. Description - see Box 61, Sheet 4.

Greyish-green, fine-grained, homogeneous, massive basalt flow.

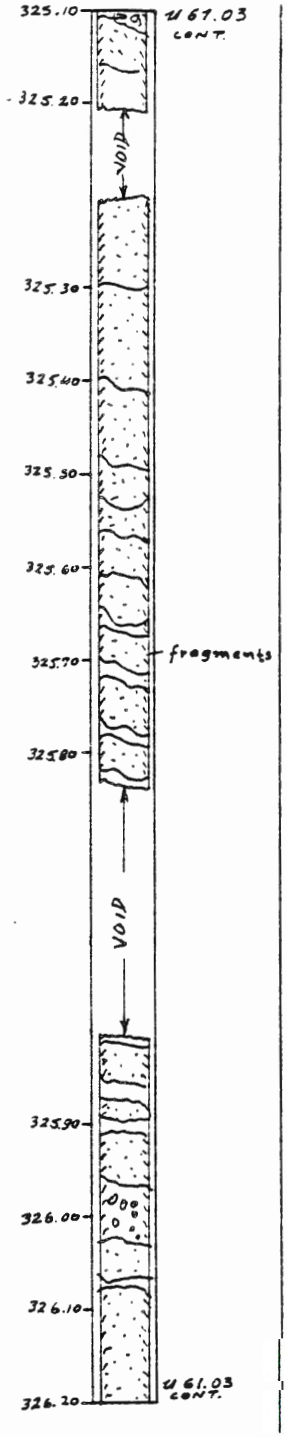
UNIT 61.03 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY 1

Core Box 63 Sheet 2

Visual Core Description Observer Hassan

Depth Interval 325.10 m to 326.20 m



UNIT 61.03 cont. Description - see Box 61, Sheet 4.

Greyish-green, fine-grained, homogeneous, massive basalt flow.

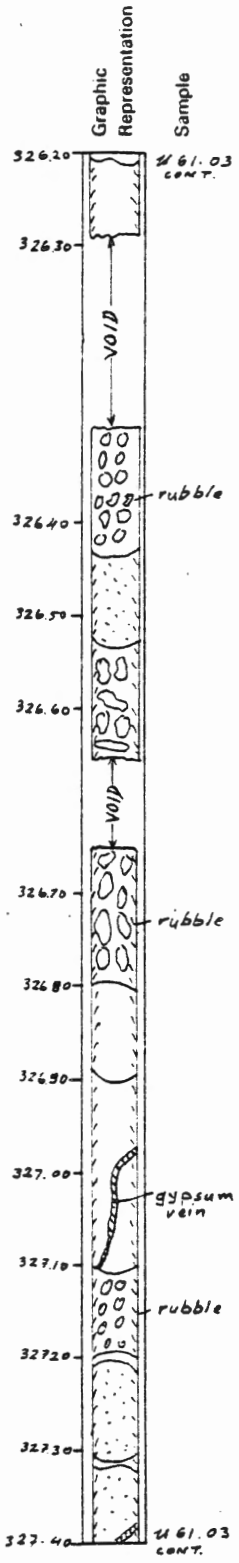
UNIT 61.03 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY 7

Core Box 63 Sheet 3

Visual Core Description Observer Hassan

Depth Interval 326.20 m to 327.40 m



UNIT 61.03 cont. Description - see Box 61, Sheet 4.

Greyish-green, fine-grained, homogeneous, massive basalt flow.

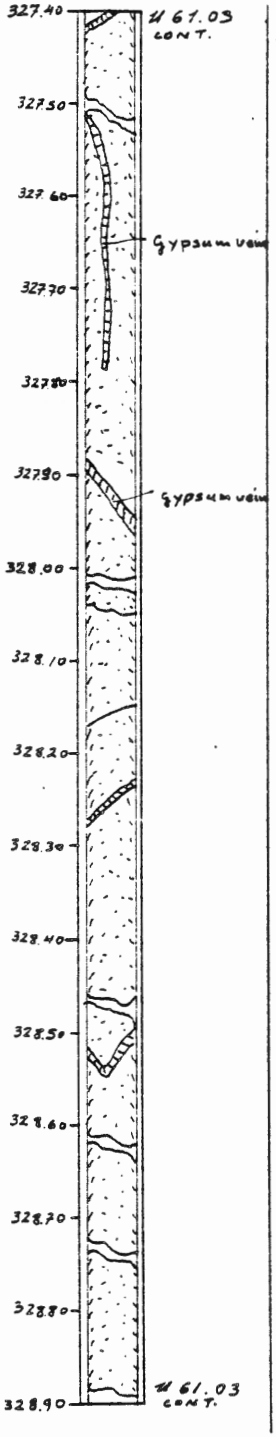
UNIT 61.03 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY1

Core Box 63 Sheet 4

Visual Core Description Observer Hossan

Depth Interval 327.40 m to 328.90 m



UNIT 61.03 cont. Description - see Box 61, Sheet 4.

Greyish-green, fine-grained, homogeneous, massive basalt flow.

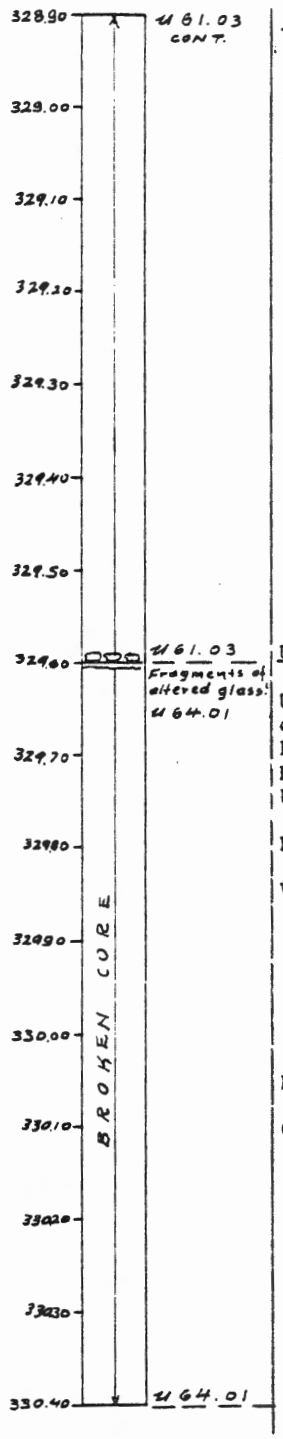
UNIT 61.03 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY1

Core Box 64 Sheet 1

Visual Core Description Observer DBailey

Depth Interval 328.90 m to 330.40 m



UNIT 61.03 cont. Description - see Box 61, Sheet 4.

Unit is severely fractured in this section. The largest pieces are approximately 40 mm. Light grey-green, fine-grained, aphyric, massive basalt flow.

Vesicles:- << 1%
- maximum size - approximately 1 mm
- filling - 80% open, 10% carbonate, 5% layer silicates, 5% zeolite
- shape - irregular

GMA:- approximately 45% - to predominantly smectites

UNIT 64.01 OVERALL DESCRIPTION

Upper contact - 329.60 m Fragments of altered glass and chilled margin present. Ambiguous.
Lower contact - 330.40 m Nature and orientation ambiguous.
Fragments of altered glass and chilled margin.
Unit thickness - 0.80 m Type of unit - pillow(?)

Dark grey, very fine-grained, aphyric, basalt pillow(?).

Vesicles:- 5%
- maximum size - 2 mm
- irregular shape
- filling - >90% open, <10% layer silicates, carbonate, zeolites
- dark grey splotchy segregation vesicles present throughout

No veins.

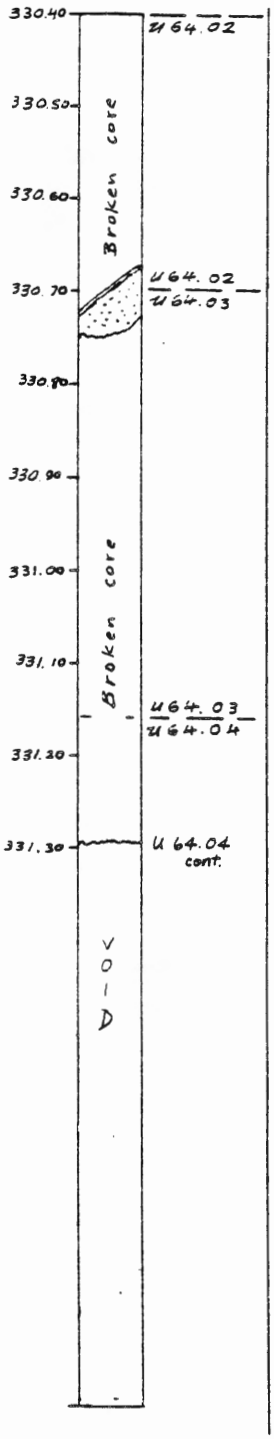
GMA:- approximately 40%(?)

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY1

Core Box 64 Sheet 2

Visual Core Description Observer D. Bailey

Depth Interval 330.40 m to 331.30 m



UNIT 64.02 OVERALL DESCRIPTION

Upper contact - 330.40 m Ambiguous.
Lower contact - 330.70 m Depositional, chilled margin sitting on fresh glass of Unit 64.03.
Unit thickness - 0.30 m Type of unit - pillow

Grey, very fine-grained, aphyric basalt.

Vesicles:- 3%
- maximum size - 1 mm
- filling - minor carbonate, zeolite or layer silicates, some celadonite linings

No veins but very minor fractures are present with smectite linings.

GMA:- approximately 40%

UNIT 64.03 OVERALL DESCRIPTION

Upper contact - 330.70 m Relatively fresh black glass (10 mm) present above chilled margin.
Lower contact - 331.15 m Depositional. Drawn because of presence of altered glass fragments and chilled margin.
Unit thickness - 0.45 m Type of unit - pillow

Grey, fine-grained, aphyric basalt.

Vesicles:- 2% (concentrated in upper 10 cm of unit)
- filling - predominantly empty; some lined by celadonite and very minor carbonate

No veins but there are minor smectite/gypsum lined fractures.

GMA:- 40%

UNIT 64.04 OVERALL DESCRIPTION

Upper contact - 331.15 m Depositional. Altered glass and chilled margin present. Orientation not measurable.
Lower contact - 331.33 m Ambiguous. Drawn because of abundant altered glass fragments.
Unit thickness - 0.18 m Type of unit - pillow

Dark grey, very fine-grained, aphyric basalt.

Vesicles:- 2%
- maximum size - 1 mm
- filling - predominantly open, minor smectite, celadonite
- segregation vesicles are common (dark splotches)

No veins but there are fractures with smectite and minor gypsum present.

GMA:- 40%

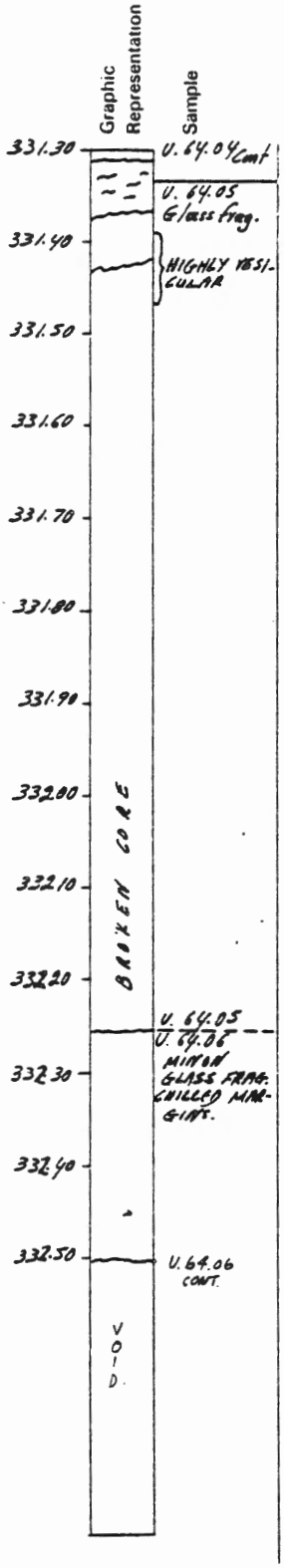
UNIT 64.04 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 64 Sheet 3

Visual Core Description Observer D.Bailey

Depth Interval 331.30 m to 332.50 m



UNIT 64.04 cont. Description - see Box 64, Sheet 2.

Dark grey, very fine-grained, aphyric, basalt pillow.

UNIT 64.05 OVERALL DESCRIPTION

Upper contact - 331.33 m Depositional. Minute fragments of slightly altered glass above thin, nearly horizontal(?) chilled margin. Orientation obscured.
Lower contact - 332.25 m Ambiguous. Fragments of altered glass present at approximately 332.25 m.
Unit thickness - 0.92 m Type of unit - flow

Dark grey-green, very fine-grained, aphyric basalt. This section has highly fragmented core - largest pieces approximately 50 mm.

Vesicles:- 2% overall, however more abundant in the upper 15 cm of unit
- maximum size - approximately 1.5 mm
- shape - irregular
- filling - 40% carbonate, 20% layer silicates, 10% zeolite, 20% gypsum, 10% open (note: celadonite(?) common)
- dark segregation vesicles also common near upper contact

Veins:- extremely minor, thin carbonate veins
- predominantly thin fractures lined with gypsum and smectite
- filling - 50% layer silicates, 20% carbonate, 20% gypsum, 10% zeolite(?)

GMA:- 40%?

UNIT 64.06 OVERALL DESCRIPTION

Upper contact - 332.25 m Ambiguous.
Lower contact - 334.00 m Depositional(?). Slightly altered glass abundant.
Unit thickness - 1.75 m Type of unit - flow

Light grey-green, fine-grained, aphyric basalt.

Vesicles:- approximately 3% overall, more abundant in upper 30 cm of unit
- maximum size - approximately 3 mm
- very irregular shape
- filling - 40% layer silicates, 20% carbonate, 10% gypsum, 30% open

Veins:- <1%
- size - very thin (< 0.5 mm)
- thin fractures lined with smectite (celadonite) and gypsum
- filling - 55% layer silicates, 25% gypsum, 20% carbonate

GMA:- approximately 45%

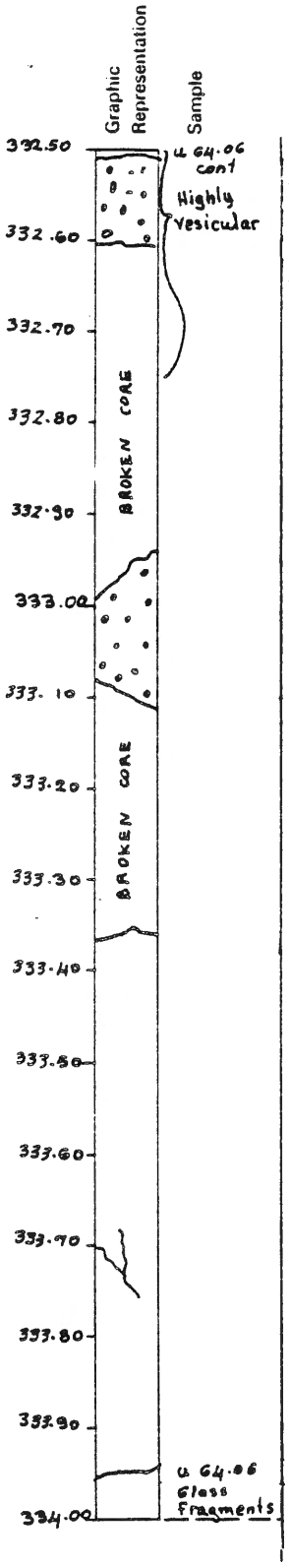
UNIT 64.06 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 64 Sheet 4

Visual Core Description Observer D. Bailey

Depth Interval 332.50 m to 334.00 m



UNIT 64.06 cont. Description - see Box 64, Sheet 3.

Light grey-green, fine-grained, aphyric, basalt flow.

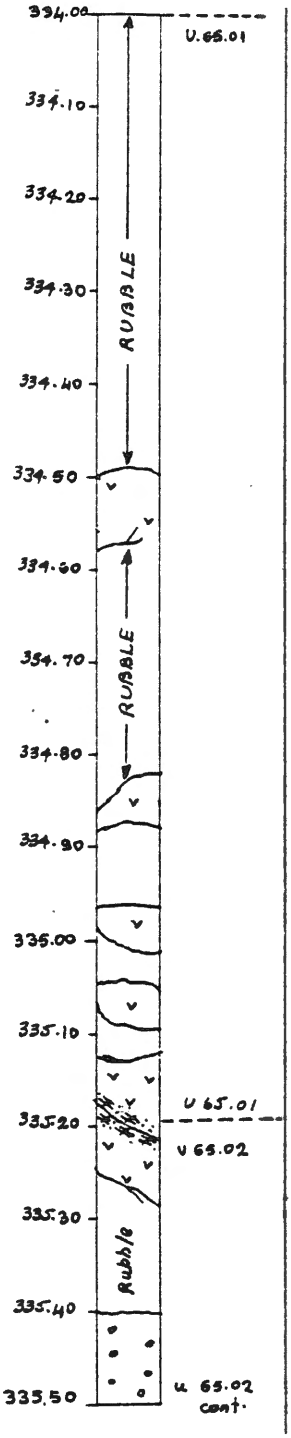
UNIT 64.06 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY1

Core Box 65 Sheet 1

Visual Core Description Observer M. Haller

Depth Interval 334.00 m to 335.50 m



UNIT 65.01 OVERALL DESCRIPTION

Upper contact - 334.00 m Ambiguous. Material loss - probably depositional with altered glass.
Lower contact - 335.20 m Depositional with altered glass.
Unit thickness - 1.20 m Type of unit - massive flow?

Rubble of grey, quite fine-grained, aphyric basalt.

Vesicles:- 5%
- size - small (< 1 mm)
- irregular shape
- open

GMA:- approximately 60%

UNIT 65.02 Description - see Box 65. Sheet 2.

Upper contact - 335.20 m Depositional. Altered glass.

Grey, fine- to medium-grained, aphyric, massive basalt flow.

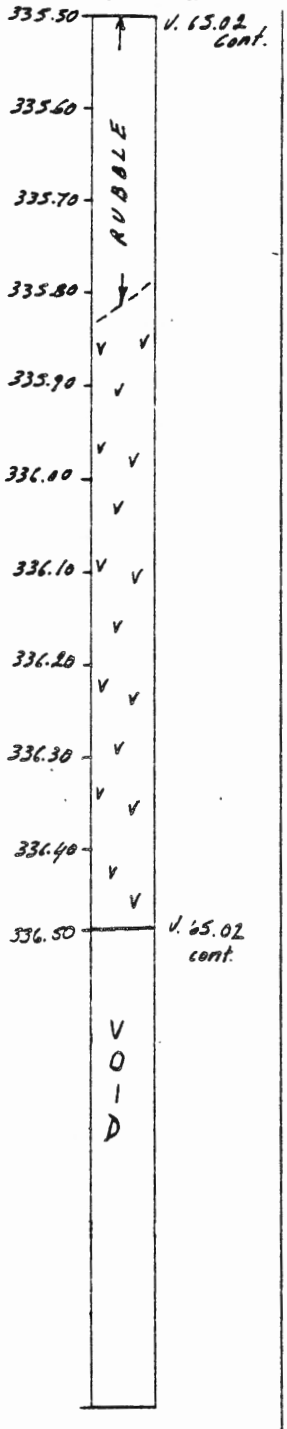
UNIT 65.02 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 65 Sheet 2

Visual Core Description Observer M. Haller

Depth Interval 335.50 m to 336.50 m



UNIT 65.02 cont. OVERALL DESCRIPTION

Upper contact - 335.20 m Depositional. Altered glass.
Lower contact - 336.78 m Truncated by dyke.
Unit thickness - 1.58 m Type of unit - massive flow

Grey, fine- to medium-grained, aphyric, massive basalt with a plagioclase rich variolitic texture. Several pale fine-grained zones occur.

Vesicles:- 10%
- size - 1-6 mm
- open

Veins:- 1%
- filling - thin veins with smectite and other sheet silicates - 100%.

GMA:- 60%

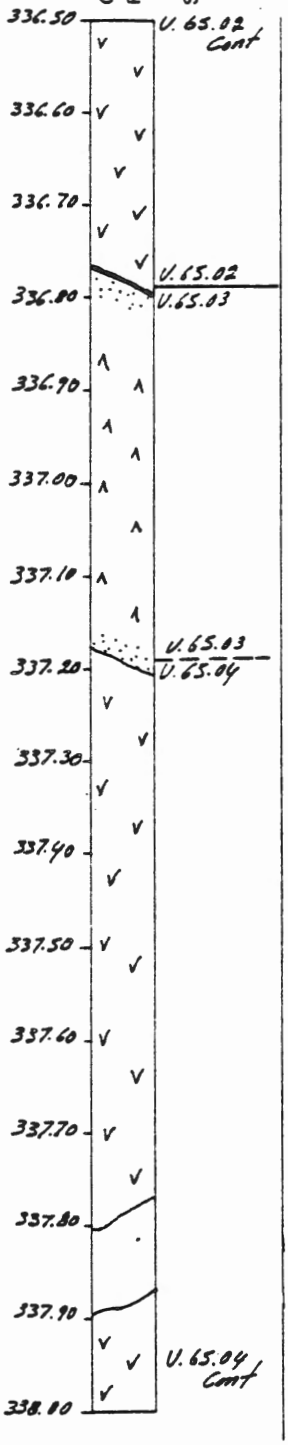
UNIT 65.02 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 65 Sheet 3

Visual Core Description Observer M. Haller

Depth Interval 336.50 m to 338.00 m



UNIT 65.02 cont. Description - see Box 65, Sheet 2.

Grey, fine- to medium-grained, aphyric, massive basalt flow.

UNIT 65.03 OVERALL DESCRIPTION

Upper contact - 336.78 m Intrusive with minor altered glass.
Lower contact - 337.18 m Intrusive with minor altered glass.
Unit thickness - 0.40 m Type of unit - dyke

Grey aphyric basalt. The dyke core is medium-grained, but the grain size decreases to fine-grained near the contacts.

No vesicles.

Veins:- 3% including chilled margins
- chilled margins (5 mm) with sheet silicates and gypsum
- filling - 95% layer silicates, 5% gypsum

UNIT 65.04 OVERALL DESCRIPTION

Upper contact - 337.18 m Truncated.
Lower contact - 338.74 m Ambiguous.
Unit thickness - 1.56 m Type of unit - massive flow

This is a continuation of Unit 65.02 which was cut by the dyke of Unit 65.03. Grey, fine- to medium-grained, aphyric, massive basalt.

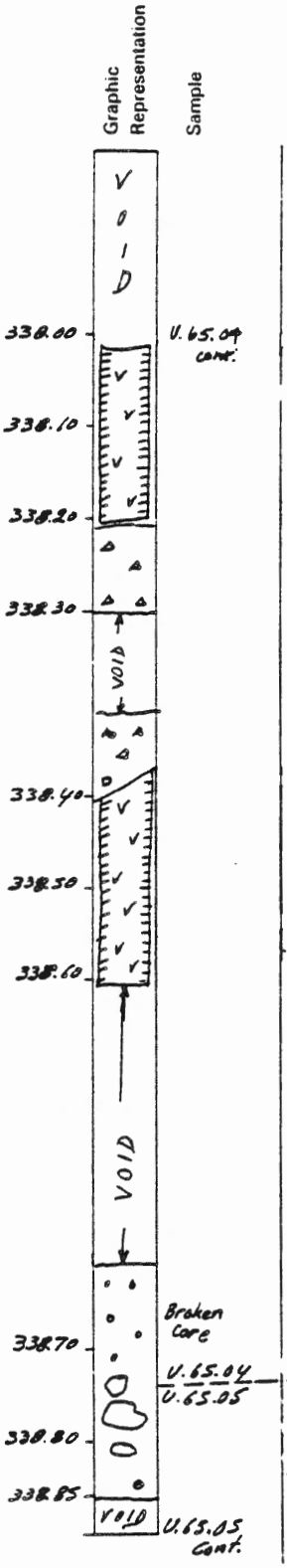
UNIT 65.04 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 65 Sheet 4

Visual Core Description Observer M. Haller

Depth Interval 338.00 m to 338.85 m



UNIT 65.04 cont. Description - see Box 65, Sheet 3.

Grey, fine- to medium-grained, aphyric, massive basalt flow.

UNIT 65.05 Description - see Box 66, Sheet 1.

Grey-green, fine-grained, slightly olivine phyric basalt.

UNIT 65.05 cont.

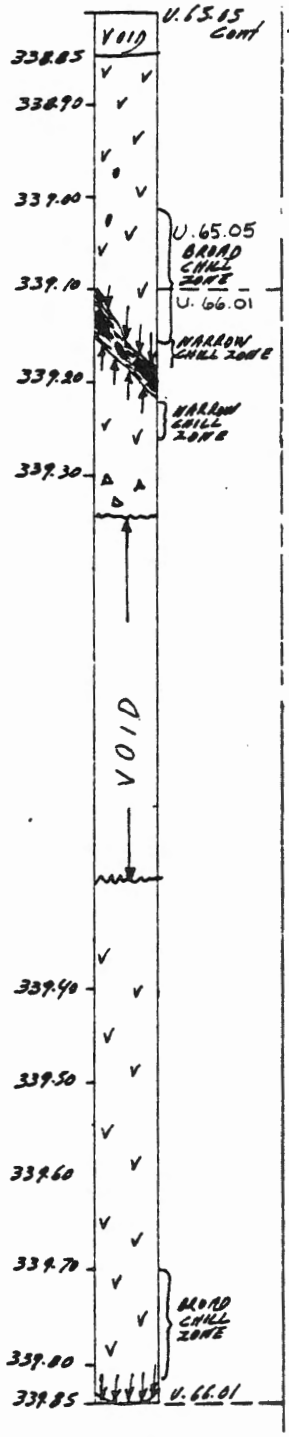
CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 66 Sheet 1

Graphic Representation | Sample

Visual Core Description — Observer T. Purcell

Depth Interval 338.85 m to 339.85 m



UNIT 65.05 cont. OVERALL DESCRIPTION

Upper contact - 338.74 m Core is broken, but chilled margin and altered glass present in rubble. Ambiguous.
Lower contact - 339.10 m Depositional. Broad chilling zone over 15 cm with 3 cm of altered glass. Contact is irregular with pieces of basalt caught up in glassy margin.
Unit thickness - 0.36 m Type of unit - pillow(?), possibly massive flow

Fine-grained, grey-green, slightly olivine phyric basalt.

Phenocrysts:- 2% olivine
- size - 1-2 mm
- euhedral to subhedral, approaching freshness

No vesicles.

No veins.

GMA:- low, about 25%

UNIT 66.01 OVERALL DESCRIPTION

Upper contact - 339.10 m Depositional with a narrow chill zone (30 mm) and a glassy margin.
Lower contact - 339.85 m Depositional. Chilled zone (10 cm) and altered glassy margin (2 cm).
Unit thickness - 0.75 m Type of unit - massive flow

Grey-green, fine- to medium-grained, slightly olivine phyric basalt.

Phenocrysts:- <10%
- size - olivine phenocrysts are less than 1 mm

Vesicles:- 10%
- size - <<1 mm
- open

No veins but gypsum and smectite line fractures (10%).

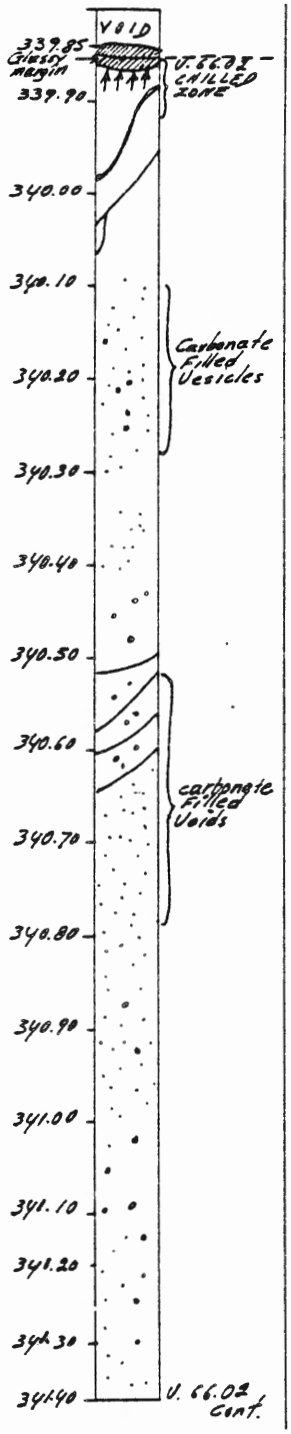
GMA:- low, about 20%

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 66 Sheet 2

Visual Core Description Observer T. Purcell

Depth Interval 339.85 m to 341.40 m



UNIT 66.02 OVERALL DESCRIPTION

Upper contact - 339.85 m Depositional. Chilled zone and glassy margin.
Lower contact - 344.45 m Depositional. Very broad chill zone over 25 cm with a 6 cm zone of altered glass, highly irregular.
Unit thickness - 4.60 m

Grey, medium-grained, aphyric, slightly vesicular basalt. From 343.50-343.70 m, the rock unit fines but a contact is not drawn.

Vesicles:- 20% distributed throughout the unit but most abundant between 342.40-343.00 m
- carbonate filled vesicles are most abundant between 340.10-340.30 m and 340.50-340.80 m
- average size - 5 mm

Veins:- carbonate veining is very minor - 2%
- concentrated near the top of the unit and between 340.45-340.60 m
- smectite and sheet silicates line fractures

GMA:- low, about 20%

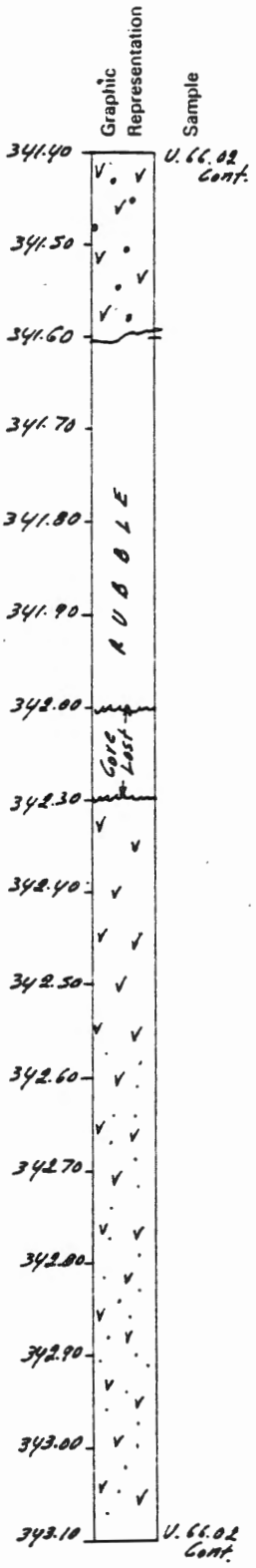
UNIT 66.02 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 66 Sheet 3

Visual Core Description • Observer T Purcell

Depth Interval 341.40 m to 343.10 m



UNIT 66.02 cont. Description - see Box 66, Sheet 2.

Grey, medium-grained, aphyric, slightly vesicular basalt. Vesicles are most abundant from 342.40-343.00 m.

UNIT 66.02 cont.

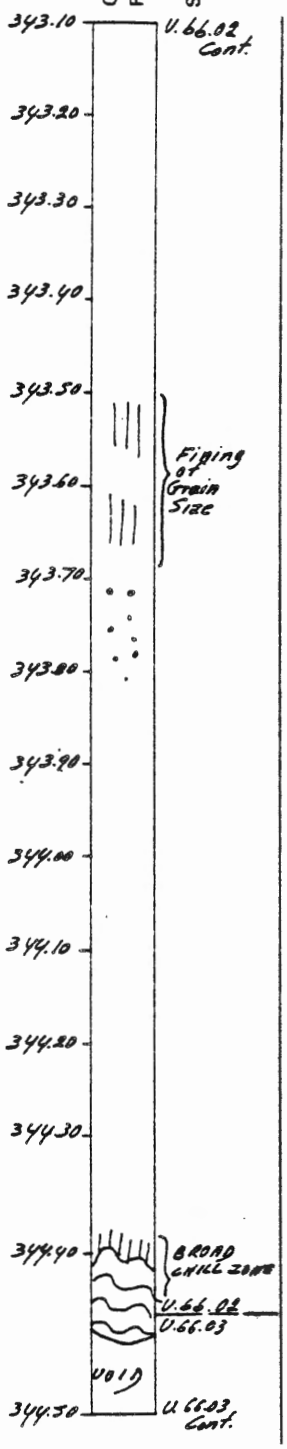
CORE LOST : 30 cm. - 342.00 - 342.30 m.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 66 Sheet 4

Visual Core Description Observer T. Purcell

Depth Interval 343.10 m to 344.50 m



UNIT 66.02 cont. Description - see Box 66, Sheet 2.

Grey, medium-grained, aphyric, slightly vesicular basalt. From 343.50-343.70, the rock unit fines but a contact is not drawn.

UNIT 66.03 Description - see Box 67, Sheet 1.

Light grey, medium-grained, aphyric basalt.

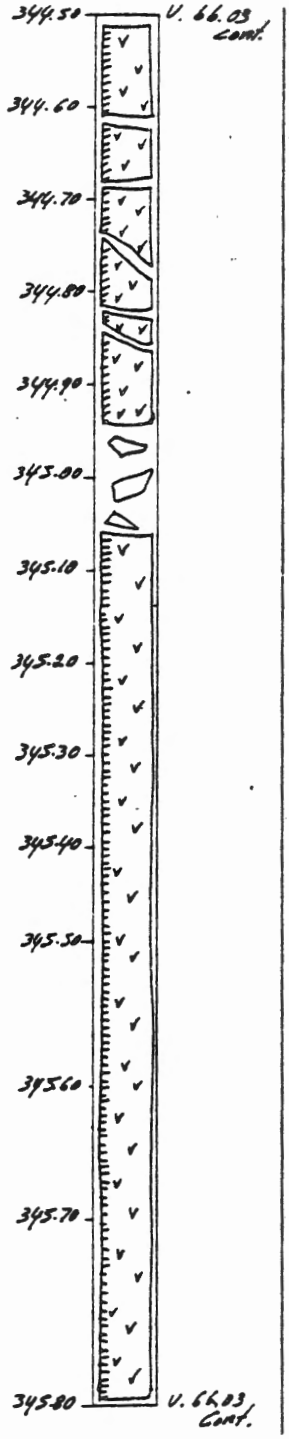
UNIT 66.03 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 67 Sheet 1

Visual Core Description Observer PTR

Depth Interval 344.50 m to 345.80 m



UNIT 66.03 cont. OVERALL DESCRIPTION

Upper contact - 344.45 m Depositional. Altered glass.
Lower contact - 345.90 m Depositional. Fresh glass.
Unit thickness - 1.45 m Type of unit - massive flow

Light grey, medium-grained, aphyric basalt.

Vesicles:- 2%
- size - 1-2 mm
- filling - 90% open, 10% calcite

Veins:- <<1%
- maximum size - 1 mm
- filling - calcite

GMA:- 5% - to clay

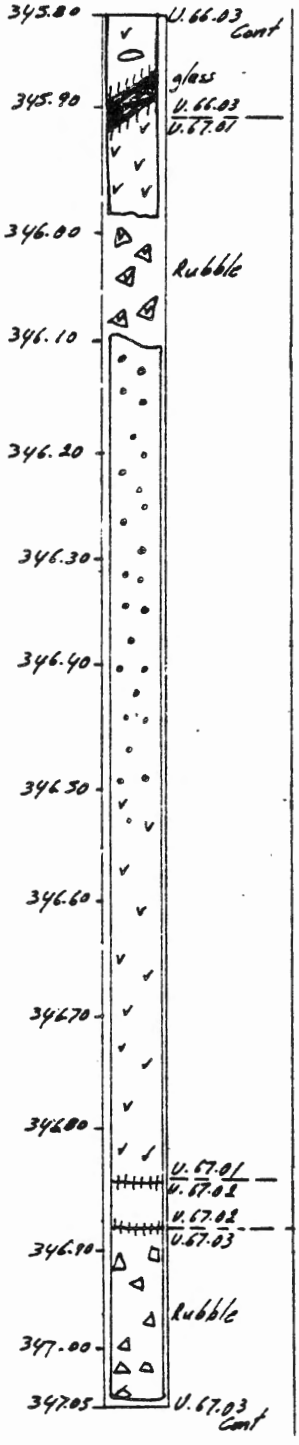
UNIT 66.03 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 67 Sheet 2

Visual Core Description Observer J. Mehegan & Hassan

Depth Interval 345.80 m to 347.05 m



UNIT 66.03 cont. Description - see Box 67, Sheet 1.

Light grey, medium-grained, aphyric basalt flow. There is chilling near the base of the unit.

UNIT 67.01 OVERALL DESCRIPTION

Upper contact - 345.90 m Intrusive(?). Fresh glass.
Lower contact - 346.85 m Intrusive(?).
Unit thickness - 0.95 m Type of unit - intrusive or sheet flow

Grey, vesicular, medium-grained, very slightly olivine phyric basalt with very fine-grained, aphyric margins.

Vesicles:- filling - some heulandite

UNIT 67.02 OVERALL DESCRIPTION

Upper contact - 346.85 m Truncated(?).
Lower contact - 346.88 m Intrusive.
Unit thickness - 0.03 m

Grey, aphyric intrusive.

UNIT 67.03 OVERALL DESCRIPTION

Upper contact - 346.88 m Truncated. Altered glass.
Lower contact - 347.10 m Truncated. Altered glass.
Unit thickness - 0.22 m

Grey, aphyric basalt.

Vesicles:- <1%

Veins:- 5% including glassy margins which are altered to layer silicates

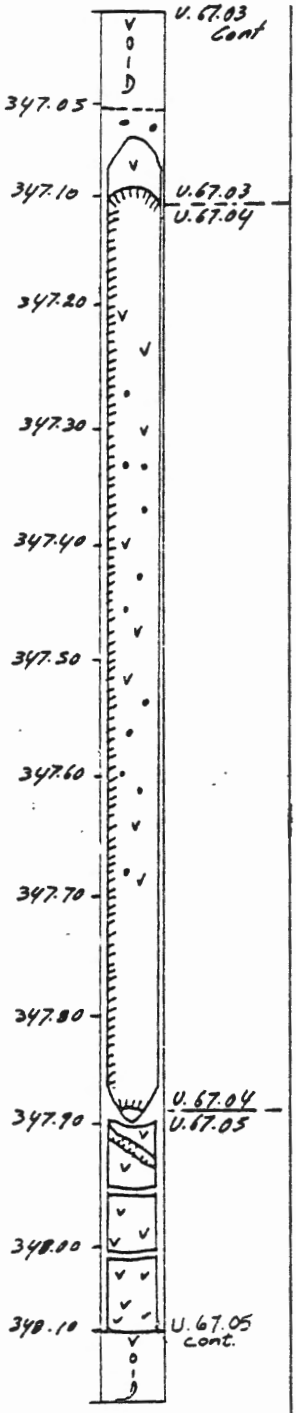
UNIT 67.03 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 67 Sheet 3

Visual Core Description Observer J. Mehegan & Hassan

Depth Interval 347.05 m to 348.10 m



UNIT 67.03 cont. Description - see Box 67, Sheet 2.

Grey, aphyric basalt.

UNIT 67.04 OVERALL DESCRIPTION

Upper contact - 347.10 m Fresh glass(?). Dip - 30°/270°.
Lower contact - 347.90 m Irregular intrusive contact, with small dykelet. Altered and fresh glass.
Unit thickness - 0.80 m Type of unit - intrusive

Intrusive unit with margins that are very fine-grained and chilled, while the center of the unit is medium-grained, vesicular and very sparsely olivine phyric.

UNIT 67.05 OVERALL DESCRIPTION

Upper contact - 347.90 m Truncated by Unit 67.04.
Lower contact - 348.16 m Slightly irregular. Contains 25 mm glassy margin. Dip - 15°.
Unit thickness - 0.26 m Type of unit - intrusive(?) or sheet flow

Fine-grained, very slightly olivine phyric basalt.

Phenocrysts:- <1% olivine
- size - 2-3 mm
- altered to clay and carbonate

Vesicles:- 1%
- open
- size - 1 mm

Veins:- 2%
- filling - altered glass (to layer silicates)

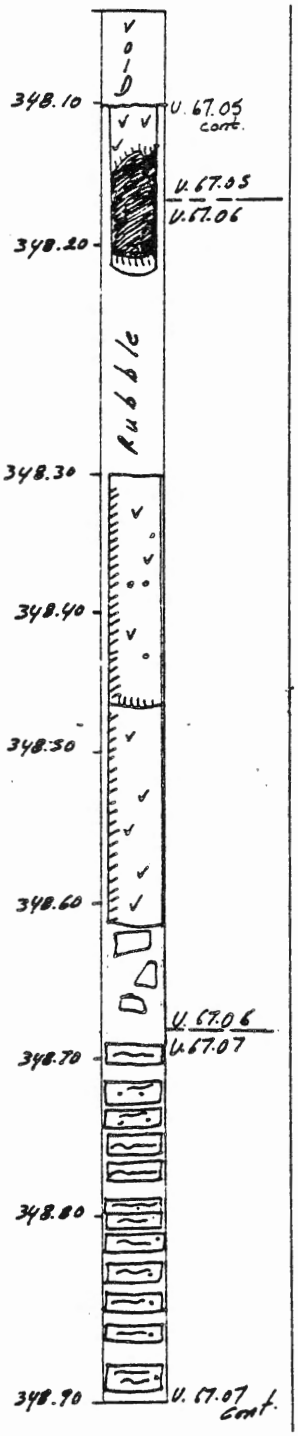
UNIT 67.05 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 67 Sheet 4

Visual Core Description Observer Jim Mehegan & Hassan

Depth Interval 348.10 m to 348.90 m



UNIT 67.05 cont. Description - see Box 67, Sheet 3.

Fine-grained, very slightly olivine phyric basalt

UNIT 67.06 OVERALL DESCRIPTION

Upper contact - 348.16 m Ambiguous. Fresh glass.
Lower contact - 348.68 m Ambiguous.
Unit thickness - 0.52 m Type of unit - intrusive(?) or sheet flow(?)

This unit may acutally be two units with a possible contact at 348.45 m marked by glass and a change in rock type. Above 348.45 m, the rock is fine-grained, aphyric, slightly vesicular basalt. Below 348.45 m, the rock is slightly coarser-grained, autobrecciated(?) basalt. Fragments are in a basalt matrix.

Vesicles:- 3%
- size - 0.5-3 mm
- filling - white zeolite and green clay

Veins:- <1%
- filling - white zeolite and green clay

UNIT 67.07 OVERALL DESCRIPTION

Upper contact - 348.68 m Ambiguous.
Lower contact - 349.15 m Depositional. Fresh and altered glass. Dip - 50°.
Unit thickness - 0.47 m Type of unit - pillow? flow?

Very fine-grained to glassy, aphyric, vesicular, black lava.

Vesicles:- 3% concentrated near lower contact
- size - 2 mm
- rounded
- filling - 50% open, 35% black and light blue clay, 15% zeolite (heulandite?)

Veins:- <1% (core is broken)

GMA:- 40% - to 80% sheet silicates, 20% zeolites

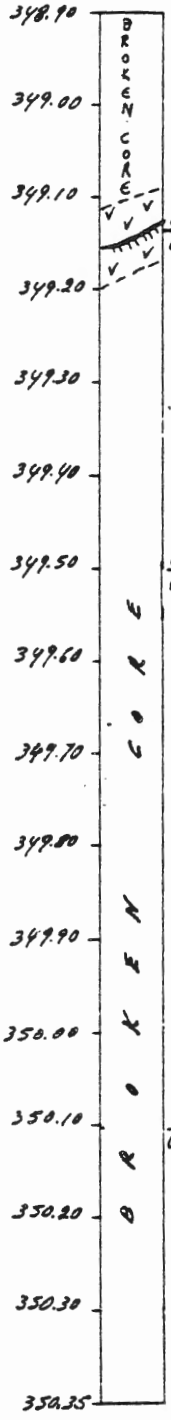
UNIT 67.07 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 68 Sheet 1

Visual Core Description Observer H. Elsbree

Depth Interval 348.90 m to 350.35 m



UNIT 67.07 cont. Description - see Box 67, Sheet 4.

Very fine-grained to glassy, aphyric, vesicular black lava with vesicles concentrated near the lower contact.

UNIT 68.01 OVERALL DESCRIPTION

Upper contact - 349.15 m Depositional. Altered glass. Dip - 50°. Greyish alteration (10 mm) grading into greyish-green unit.
Lower contact - 349.50 m Depositional. Altered glass. Blackish-filled vesicles concentrated at bottom contact.
Dip - 30°.
Unit thickness - 0.35 m Type of unit - pillow

Greyish-green, fine-grained, aphyric basalt.

Vesicles:- 3%
- size - 3 mm
- round
- filling - 30% layer silicates, 40% zeolite, 30% open

Veins:- 3%
- filling - 50% carbonate, 50% black layer silicates

GMA:- 40% - to 80% layer silicates, 20% zeolites

UNIT 68.02 OVERALL DESCRIPTION

Upper contact - 349.50 m Depositional. Altered glass. Dip - 30°.
Lower contact - 350.10 m Ambiguous. Vesicles concentrated towards bottom contact. Altered glass and a small amount (5%) fresh glass(?).
Unit thickness - 0.60 m Type of unit - pillow

Aphyric, fine-grained basalt with a slight increase in grain size towards the pillow center.

Vesicles:- 8%
- size - 3 mm
- filling - 50% layer silicates, 30% open, 20% zeolite

Veins:- <1% (core is broken)

GMA:- 40% - to 80% layer silicates, 20% zeolites

UNIT 68.03 Description - see Box 68, Sheet 2.

Greyish-green, fine- to medium-grained, aphyric pillow basalt.

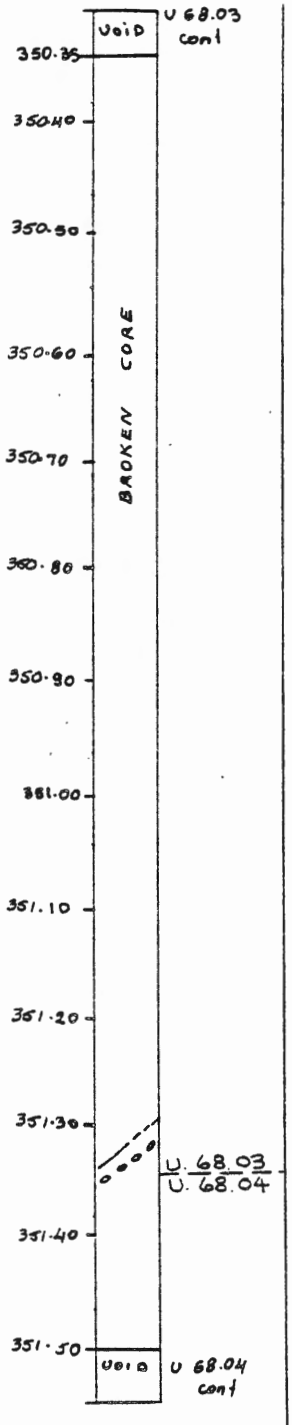
UNIT 68.03 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole CY-1

Core Box 68 Sheet 2

Visual Core Description Observer H. Elsbree

Depth Interval 350.35 m to 351.90 m



UNIT 68.03 cont. OVERALL DESCRIPTION

Upper contact - 350.10 m Ambiguous. Altered glass.
Lower contact - 351.35 m Brecciated zone of greenish basalt clasts in a yellow-white matrix. Dip - 60°. Altered glass.
Depositional.
Unit thickness - 1.25 m Type of unit - pillow? ambiguous

Greyish-green, aphyric basalt which is fine-grained at the upper contact, to medium-grained by 0.2 m below upper contact.

Vesicles:- 7% concentrated from 350.40-350.60 m
- size - 3.5 mm with some microvesicles (0.5 mm)
- round

Veins:- <1%

GMA:- 30% - to 70% layer silicates, 30% zeolites

UNIT 68.04 OVERALL DESCRIPTION

Upper contact - 351.35 m Depositional. Altered glass in a brecciated zone of greenish basalt clasts in a yellow-white matrix. Dip - 60°.
Lower contact - 351.60 m Depositional. altered glass.
Vesicles concentrated on either side of this contact. Dip - 50°.
Unit thickness - 0.25 m Type of unit - pillow

Grey-green, fine-grained, aphyric basalt.

Vesicles:- 3%
- filling - 50% open, 25% gypsum, 25% layer silicates
- size - 2 mm
- round

Veins:- 10%
- filling - 60% gypsum, 40% layer silicates

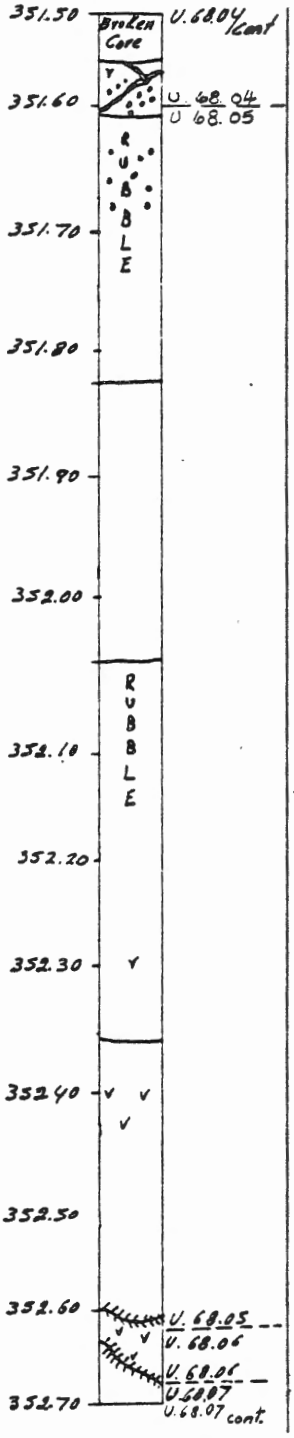
UNIT 68.04 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 68 Sheet 3

Visual Core Description Observer H.ELSBREE

Depth Interval 351.50 m to 352.70 m



UNIT 68.04 cont. Description - see Box 68, Sheet 2.

Grey-green, fine-grained, aphyric, pillow basalt.

UNIT 68.05 OVERALL DESCRIPTION

Upper contact - 351.60 m Depositional? Altered glass. Dip - 50°. Vesicles concentrated at this contact.
Lower contact - 352.60 m There is approximately 80 mm of a pillow edge (presumbably) penetrated here between Units 68.05 and 68.06. The 80 mm is not treated as a distinct unit. Depositional. Altered glass. Dip - 25°/180°.
Unit thickness - 1.00 m Type of unit - pillow

Grey-green, fine-grained, aphyric basalt.

Vesicles:- 5%
- size - 3 mm
- filling - 60% open, 30% layer silicates, 10% gypsum
- round

Veins:- 3%
- filling - 100% layer silicates
- concentrated at 351.90 m

GMA:- 40% - to 80% layer silicates, 20% zeolites

UNIT 68.06 OVERALL DESCRIPTION

Upper contact - 352.60 m Chilled against pillow rind.
Lower contact - 352.69 m Chilled against pillow rind.
Unit thickness - 0.09 m Type of unit - dyke

Thin, fine-grained, aphyric dyke between pillows.

UNIT 68.07 Description - see Box 68, Sheet 4.

Grey-green, fine-grained, aphyric pillow(?) basalt.

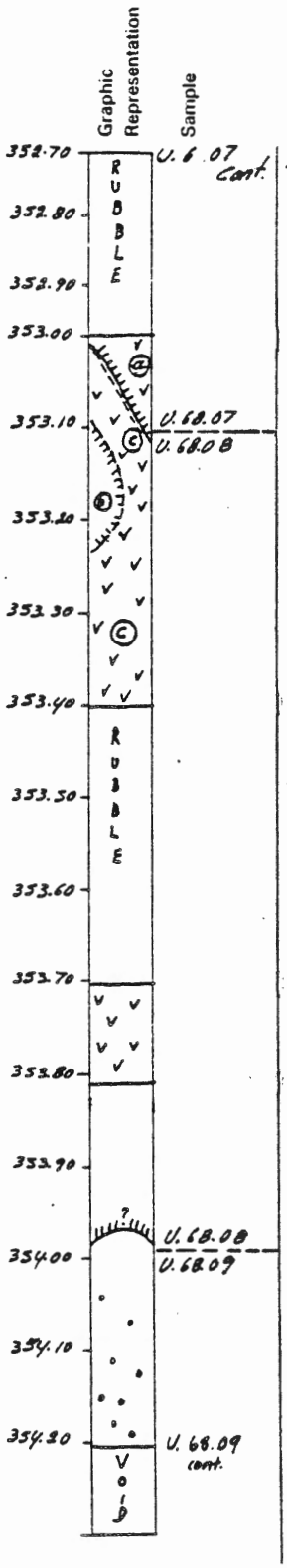
UNIT 68.07 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 68 Sheet 4a

Visual Core Description Observer HELSBREE

Depth Interval 352.70 m to 354.20 m



UNIT 68.07 cont. OVERALL DESCRIPTION

Upper contact - 352.69 m Depositional. Altered glass. Vesicles concentrated at top. Greyish-white colour at contact, grading into grey-green of unit. Dip - 60°.
Lower contact - 353.10 m Depositional. Altered glass. There is a corner of a third pillow near this contact. Dip - 65°.
Unit thickness - 0.41 m Type of unit - pillow (?)

Grey-green, aphyric basalt which is fine-grained, bordering on medium-grained at the center of the unit. There is a greyish-white layer at the base of the unit.

Vesicles:- 3%, concentrated at the base of the unit
- size - 2.5 mm
- filling - 50% open, 40% layer silicates, 10% zeolites

Veins:- 4% (in the margins)
- filling - layer silicates

GMA:- 40% - to 70% layer silicates, 30% zeolites

UNIT 68.08 OVERALL DESCRIPTION

Upper contact - 353.10 m Altered glass. Ambiguous. There is an alteration front that might be an intrusive contact. Dip - 65°.
Lower contact - 354.00 m Depositional. Altered glass. Dip - 40°.
Unit thickness - 0.90 m Type of unit - intrusive(?) or pillow(?)

Grey-green, fine-grained, aphyric basalt which is medium-grained from 353.40-353.90 m.

Vesicles:- 8%, concentrated at 354.00 m and 354.20 m
- size - 4 mm
- filling - 70% open, 10% gypsum, and 20% layer silicates

Veins:- 1%
- filling - 10% gypsum, 80% layer silicates, 10% zeolites

GMA:- 40% - to 80% layer silicates, 20% zeolites

Diagram code:- a=intrusive?
b=pillow?
c=intrusion?

UNIT 68.09 Description - see Box 68, Sheet 4b.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 68 Sheet 4b

Graphic Representation | Sample

Visual Core Description Observer HELSBREE

Depth Interval 352.70 m to 354.20 m

UNIT 68.09 OVERALL DESCRIPTION

Upper contact - 354.00 m Truncated(?).
Lower contact - 354.70 m Depositional? Altered glass.
Unit thickness - 0.70 m Type of unit - pillow

Greenish to grey-green basalt with an open, vesicular, medium-grained groundmass.

Vesicles:- 1% concentrated near contacts
- open

Veins:- rock is highly fractured with little or no secondary mineralization along fractures

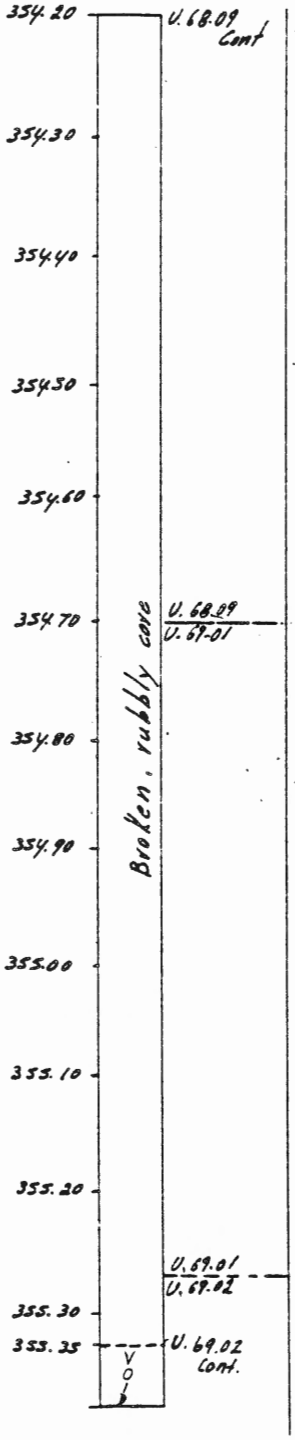
UNIT 68.09 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 69 Sheet 1

Visual Core Description Observer Hassan

Depth Interval 354.20 m to 355.35 m



UNIT 68.09 cont. Description - see Box 68, Sheet 4b.

Greyish to grey-green, pillow basalt with an open, vesicular, medium-grained groundmass.

UNIT 69.01 OVERALL DESCRIPTION

Upper contact - 354.70 m Depositional. Altered glass.
Lower contact - 355.28 m Depositional. Altered glass - 15 mm wide.
Unit thickness - 0.58 m . Type of unit - pillow

Grey, fine- to medium-grained basalt which is highly fractured with little or no secondary mineralization along fractures.

UNIT 69.02 Description - see Box 69, Sheet 2.

Grey-green, fine-grained, slightly phyric pillow basalt.

UNIT 69.02 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 69 Sheet 2

Visual Core Description Observer Hassan

Depth Interval 355.35 m to 356.50 m

Graphic Representation | Sample

355.35 — U. 69.02 cont.

355.40

355.50

355.60

355.70

355.80

355.90

356.00

356.10

356.20

U 69.02

U 69.03

356.30

356.40

356.50 — U 69.03 cont

UNIT 69.02 OVERALL DESCRIPTION

Upper contact - 355.28 m Depositional. Altered glass. Dip - 40°.
Lower contact - 356.28 m Depositional. Altered glass. Dip - 25°.
Unit thickness - 1.00 m Type of unit - pillow

Grey-green, fine-grained, slightly phyric basalt rubble.

Vesicles:- 1%
- size - 7 mm
- filling - 60% open, 40% sheet silicates
- round

GMA:- 45% - to smectite

UNIT 69.03 Description - see Box 69, Sheet 3.

Fine-grained pillow basalt.

UNIT 69.03 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 69 Sheet 3

Visual Core Description Observer Hassan

Depth Interval 356.50 m to 357.90 m

Graphic Representation | Sample

356.50 — U.69.03 Cont.

UNIT 69.03 OVERALL DESCRIPTION

Upper contact - 356.28 m Altered glass. Depositional. Dip - 25°.
Lower contact - 357.00 m Altered glass. Depositional. Dip - 40°.
Unit thickness - 0.72 m Type of unit - pillow

356.60

Fine-grained, basalt rubble.

356.70

Vesicles:- 1%
- round
- filling - 60% open, 40% sheet silicates
- size - 1 mm

356.80

GMA:- 40% - to smectite

356.90

357.00 — U.69.03 / U.69.04

UNIT 69.04 OVERALL DESCRIPTION

Upper contact - 357.00 m Depositional. Altered glass. Dip - 40°.
Lower contact - 357.83 m Depositional. Altered glass.
Unit thickness - 0.83 m Type of unit - pillow

357.10

Greenish-grey, fine-grained, slightly phyric, basalt rubble.

357.20

Vesicles:- 1%
- round
- filling - 50% open, 50% sheet silicates
- size - 1 mm

357.30

GMA:- 50% - to smectite

357.40

357.50

357.60

357.70

357.80 — U.69.04 / U.69.05

UNIT 69.05 Description - see Box 69, Sheet 4.

Grey, fine-grained, vesicular, aphyric pillow basalt.

357.90 — U.69.05 Cont.

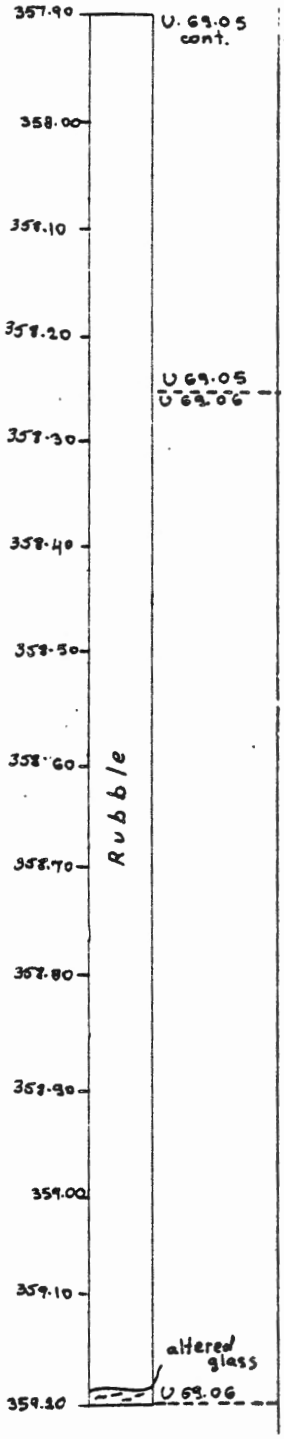
UNIT 69.05 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 69 Sheet 4

Visual Core Description Observer Hassan

Depth Interval 357.90 m to 359.20 m



UNIT 69.05 cont. OVERALL DESCRIPTION

Upper contact - 357.83 m Ambiguous. Depositional(?).
Lower contact - 358.25 m Depositional(?).
Unit thickness - 0.42 m Type of unit - pillow(?)

Grey-green, fine-grained, vesicular, aphyric basalt.

UNIT 69.06 OVERALL DESCRIPTION

Upper contact - 358.25 m Depositional. Altered glass. Dip - 75°.
Lower contact - 359.20 m Depositional. Altered glass. Dip - 45°.
Unit thickness - 0.95 m Type of unit - pillow

Grey-green, fine-grained basalt.

Vesicles:- 1%, concentrated from 358.40-358.50 m
- size - 1 mm
- filling - 60% open, 40% sheet silicates

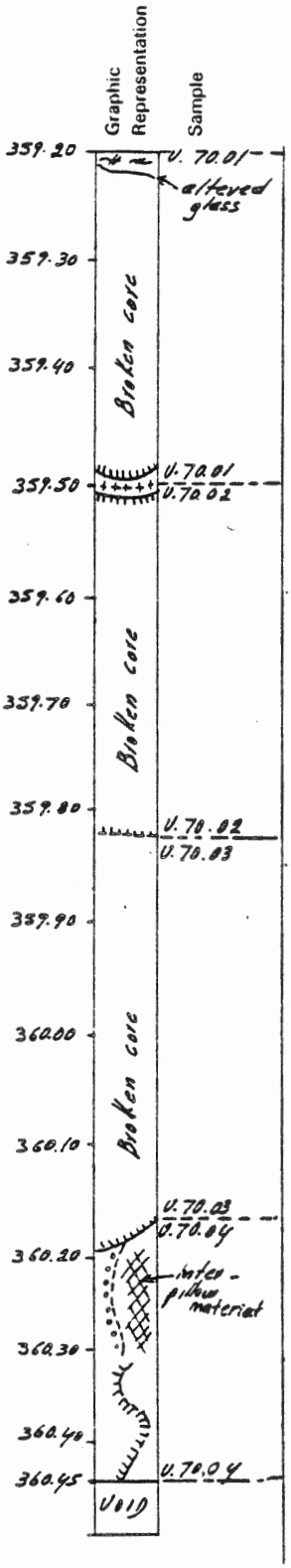
GMA:- 50% - to smectite

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 70 Sheet 1

Visual Core Description Observer C Milligan

Depth Interval 359.20 m to 360.45 m



UNIT 70.01 OVERALL DESCRIPTION

Upper contact - 359.20 m Depositional. Altered glass fragments. Dip - 30°.
Lower contact - 359.50 m Depositional. Altered glass fragments. Dip - 0°.
Unit thickness - 0.30 m Type of unit - pillow

Greenish-grey, fine-grained, non porphyritic basalt.

Vesicles:- 8% in upper part, 5% in lower part
- maximum size - 2 mm
- spherical
- center of unit is badly broken and vesicles are probably sparse
- filling - zeolite(?)

UNIT 70.02 OVERALL DESCRIPTION

Upper contact - 359.50 m Depositional. Altered glass fragments.
Lower contact - 359.82 m Depositional. Altered glass fragments. Dip - 0°.
Unit thickness - 0.32 m Type of unit - pillow

Grey, fine-grained, non-porphyritic basalt.

Vesicles:- 10%, concentrated from 359.60-359.70 m
- spherical
- maximum size - 2 mm but smaller at top and bottom
- filling - 50% open, 50% zeolites(?)

Veins:- some gypsum on fracture surfaces

GMA:- chlorite and ?

UNIT 70.03 OVERALL DESCRIPTION

Upper contact - 359.82 m Depositional. Altered glass fragments. Dip - 0°.
Lower contact - 360.18 m Ambiguous.
Unit thickness - 0.36 m

Grey, fine-grained, aphyric basalt.

Vesicles:- 1%
- size - <0.5 mm

UNIT 70.04 OVERALL DESCRIPTION

Upper contact - 360.18 m Ambiguous.
Lower contact - 360.45 m Altered glass down one side of core in interpillow breccia. Core cut one side of pillow, including the breccia.
Unit thickness - 0.27 m Type of unit - pillows

Brownish-grey, fine-grained, vesicular, aphyric basalt.

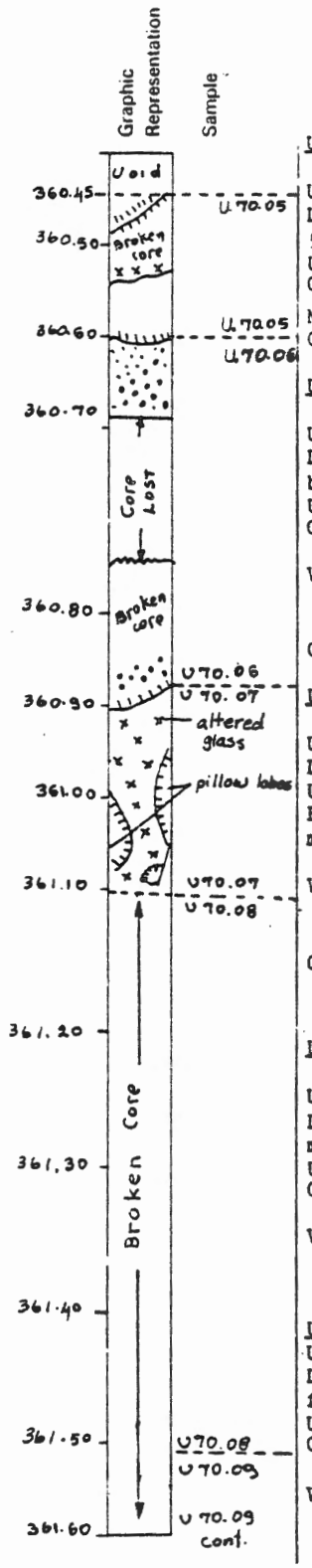
Vesicles:- 5%, concentrated near pillow margin
- maximum size - 2 mm
- filling - zeolite(?)

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 70 Sheet 2

Visual Core Description Observer C. Milligan

Depth Interval 360.45 m to 361.60 m



UNIT 70.05 OVERALL DESCRIPTION

Upper contact - 360.45 m Intrusive.
Lower contact - 360.60 m Intrusive. Chill 15 mm. Dip - 50.
Unit thickness - 0.15 m
Grey, very fine-grained, aphyric basalt dyke.

No vesicles.
GMA:- chlorite alteration

UNIT 70.06 OVERALL DESCRIPTION

Upper contact - 360.60 m Intruded by Unit 70.05.
Lower contact - 360.89 m Depositional. Altered glass below.
Unit thickness - 0.29 m
Grey, fine-grained, aphyric, vesicular basalt.

Vesicles:- 5%, uniformly distributed
- maximum size - 1 mm at 360.70 m
- filling - 60% open, 40% clays

GMA:- hematite on fractures

UNIT 70.07 OVERALL DESCRIPTION

Upper contact - 360.89 m Depositional. Altered glass.
Lower contact - 361.10 m Depositional. Altered glass.
Unit thickness - 0.21 m Type of unit - pillow lobe
Brownish-grey, very fine-grained, aphyric breccia. Pillow margins chilled (<10 mm) and vesicular.

Vesicles:- 5%
- maximum size - 1 mm
- filling - clay

GMA:- pervasively altered
- hairline hematite stringer in pillow margin at 361.10 m

UNIT 70.08 OVERALL DESCRIPTION

Upper contact - 361.10 m Depositional.
Lower contact - 361.50 m Depositional. Altered glass - 10 mm thick.
Unit thickness - 0.40 m
Grey, fine-grained, aphyric, massive basalt.

Vesicles:- 5% in upper 10 cm - average <1%
- maximum size - 3 mm
- filling - clay

UNIT 70.09 OVERALL DESCRIPTION

Upper contact - 361.50 m Depositional.
Lower contact - 361.80 m Depositional. Altered glass fragments.
Unit thickness - 0.30 m Type of unit - pillow margin
Grey, fine-grained, aphyric, vesicular basalt.

Vesicles:- 5% in pillow rim
- maximum size - 1 mm
- filling - clay

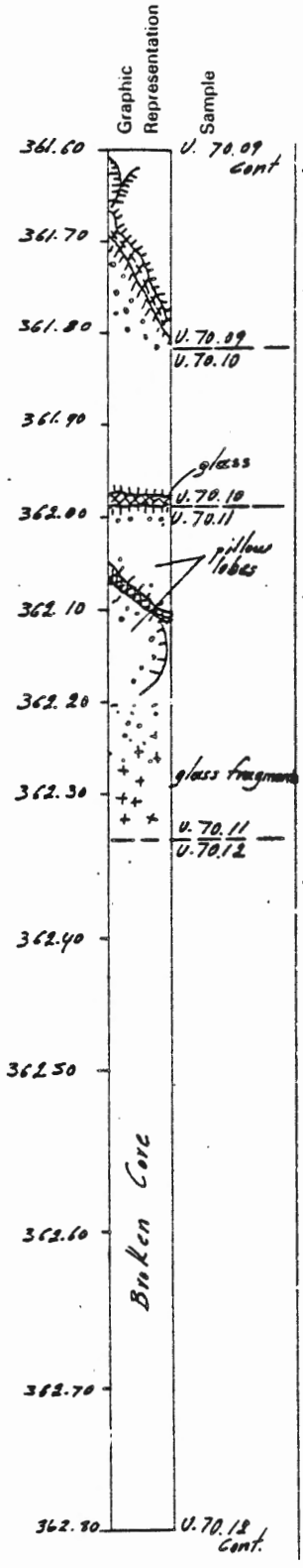
UNIT 70.09 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 70 Sheet 3

Visual Core Description Observer C. Milligan

Depth Interval 361.60 m to 362.80 m



UNIT 70.09 cont. Description - see Box 70, Sheet 2.

Grey, fine-grained, aphyric, vesicular basalt - pillow margin.

UNIT 70.10 OVERALL DESCRIPTION

Upper contact - 361.80 m Depositional.
Lower contact - 361.99 m Depositional. Altered glass fragments.
Unit thickness - 0.19 m

Grey, fine-grained, aphyric basalt.

Vesicles:- <1%
- maximum size - <1 mm
- filling - clay

UNIT 70.11 OVERALL DESCRIPTION

Upper contact - 361.99 m Depositional.
Lower contact - 362.35 m Depositional. Altered glass.
Unit thickness - 0.36 m Type of unit - pillow lobes

Fine-grained, vesicular, aphyric pillow lobes and breccia.

Vesicles:- 10% in pillow margins
- maximum size - 1 mm
- filling - clay

UNIT 70.12 OVERALL DESCRIPTION

Upper contact - 362.35 m Depositional. Altered glass.
Lower contact - 363.00 m Depositional. Contact based on fine grain size of fragments and presence of a few fragments of altered glass.
Unit thickness - 0.65 m

Greenish-grey, fine-grained, aphyric, vesicular basalt.

Vesicles:- up to 10%
- maximum size - 2 mm
- filling - 50% open, 50% clay

No veins.

UNIT 70.12 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 70 Sheet 4

Visual Core Description Observer C Milligan

Depth Interval 362.80 m to 364.00 m

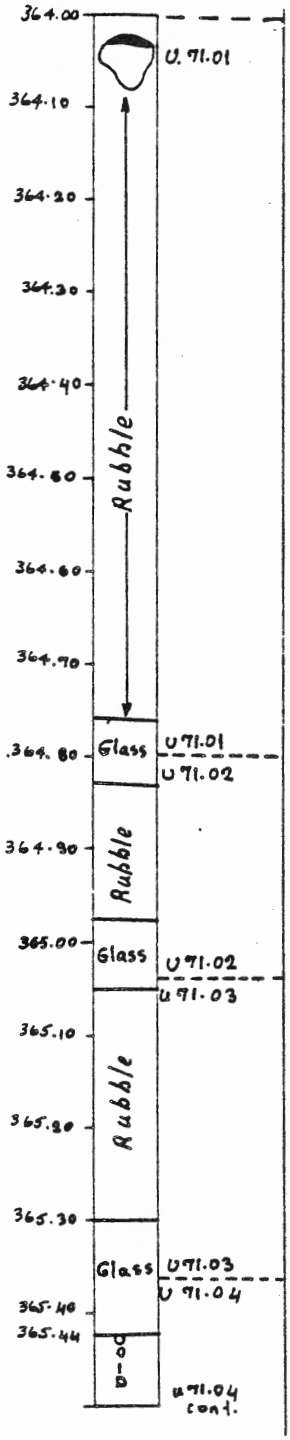
Graphic Representation	Sample	
362.80	U.70.12 cont.	UNIT 70.12 cont. Description - see Box 70, Sheet 3.
Broken core		Greenish-grey, fine-grained, aphyric, vesicular basalt.
362.90		
363.00	U70.12	UNIT 70.13 OVERALL DESCRIPTION
	U70.13	Upper contact - 363.00 m Depositional. Altered glass. Lower contact - 363.30 m Depositional. Altered glass fragments. Unit thickness - 0.30 m Type of unit - flow?
363.10		
Broken core		Greenish-grey, fine-grained, slightly vesicular basalt.
363.20		
363.30	U70.13	UNIT 70.14 OVERALL DESCRIPTION
	U70.14	Upper contact - 363.30 m Altered glass fragments. Lower contact - 364.00 m Altered glass fragments. Unit thickness - 0.70 m Type of unit - flow?
363.40		Light-grey, fine-grained, aphyric vesicular basalt.
		Vesicles:- up to 12% in upper 30 cm - maximum size - 4 mm - some irregular shape - filling - clay
363.60		No veins.
363.60		
Broken Core		
363.70		
363.80		
363.90		
364.00	U.70.14	

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 71 Sheet 1

Visual Core Description Observer J. Boyle

Depth Interval 364.00 m to 365.44 m



UNIT 71.01 OVERALL DESCRIPTION

Upper contact - 364.00 m Black clay, altered glass. Unoriented.
Lower contact - 364.80 m Rubble of unit passes into rubble of black clay altered glass.
Unit thickness - 0.80 m Type of unit - pillow

Dark grey (becoming darker and aphanitic at margins), slightly phyric, basalt. The centre of the pillow is glassy, with small feldspar laths.

Phenocrysts:- few small euhedral green phenocrysts
- some are elongate
- apparently fresh

Vesicles:- 1% in centre, 10% at margins
- average size - 2 mm, irregular voids - 5 mm
- maximum size - segregation vesicles up to 20 mm
- most are rounded, some spherical to elliptical
- filling - black clay lining or filling
- some have open centres
- some have buff centres
- some have peculiar intergrowth texture
- may be alteration of segregation vesicles or filling of voids
- seems to be clays

Veins:- approximately 5% altered glass
- there are fracture surfaces coated in pale to dark green sheet silicates (insignificant quantity)

GMA:- >50% - more than 50% "glass"
- altered to 95% clays, 5% zeolites
- rock is thumbnail soft

UNIT 71.02 OVERALL DESCRIPTION

Upper contact - 364.80 m Rubble of black, altered glass.
Lower contact - 365.04 m Rubble of black, altered glass.
Unit thickness - 0.24 m Type of unit - pillow rubble

This is the same rubble as Unit 71.01 except there is a greater abundance of vesicles and veins and the fillings are different.

Vesicles:- up to 5%
- filling - 90% clays. 10% white zeolite

Veins:- 20%
- filling - 95% layer silicates, 5% white zeolite

UNIT 71.03 OVERALL DESCRIPTION

Upper contact - 365.04 m Rubble of black, altered glass.
Lower contact - 365.36 m Rubble of black, altered glass.
Unit thickness - 0.32 m Type of unit - pillow rubble

Same pillow rubble as Unit 71.02.

UNIT 71.04 Description - see Box 71, Sheet 2.

Black altered glass in this section.

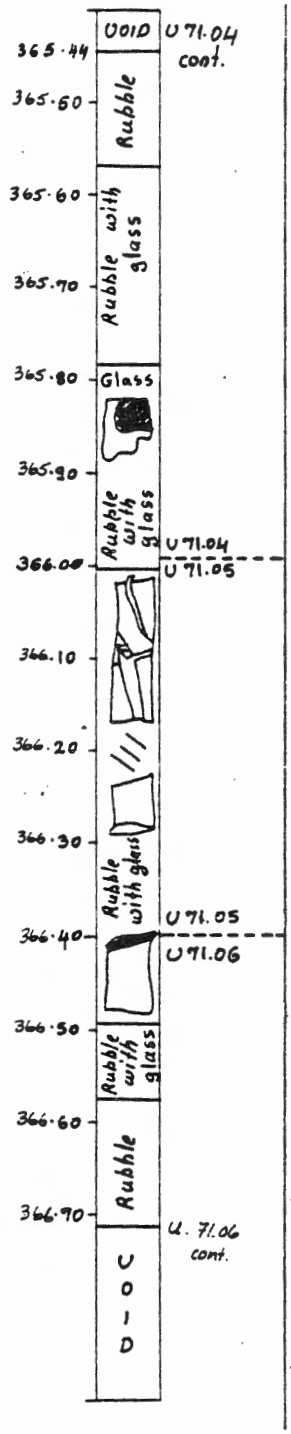
UNIT 71.04 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 71 Sheet 2

Visual Core Description Observer J Boyle

Depth Interval 365.44 m to 366.70 m



UNIT 71.04 OVERALL DESCRIPTION

Upper contact - 365.36 m Rubble.
Lower contact - 366.00 m Rubble with altered glass.
Unit thickness - 0.64 m Type of unit - pillow lobe breccia and hyaloclastite

Grey to dark grey (black at margins), aphanitic to fine-grained, slightly phyric basalt.

Phenocrysts:- insignificant abundance
- pale green transparent clinopyroxene
- slightly elongate crystals
- size - <1 mm
- fresh

Vesicles:- <1%
- filling - 100% clay

Veins:- no zeolite veins
- altered glass makes up 40% of rock

GMA:- 40%-50% - to black clays (thumbnail soft)

UNIT 71.05 OVERALL DESCRIPTION

Upper contact - 366.00 m Ambiguous. Rubble.
Lower contact - 366.40 m Grades into glass rubble.
Unit thickness - 0.40 m Type of unit - pillow, thin flow or intrusive?

Grey, fine-grained to aphanitic, slightly phyric basalt rubble.

Phenocrysts:- insignificant abundance
- pale green transparent clinopyroxene
- subhedral
- fresh

Vesicles:- 5-10%, occur in bands across the core
- average maximum size - 1 mm
- filling - 95% dark clays, 5% white zeolite

Veins:- no zeolite or clay veins
- altered glass makes up 5% of rock

GMA:- 40-50% - to dark clays

UNIT 71.06 Description - see Box 71, Sheet 3a.

Upper contact - 366.40 m Glass rubble.

Grey, becoming darker grey towards chill (black altered glass), fine-grained, slightly phyric basalt.

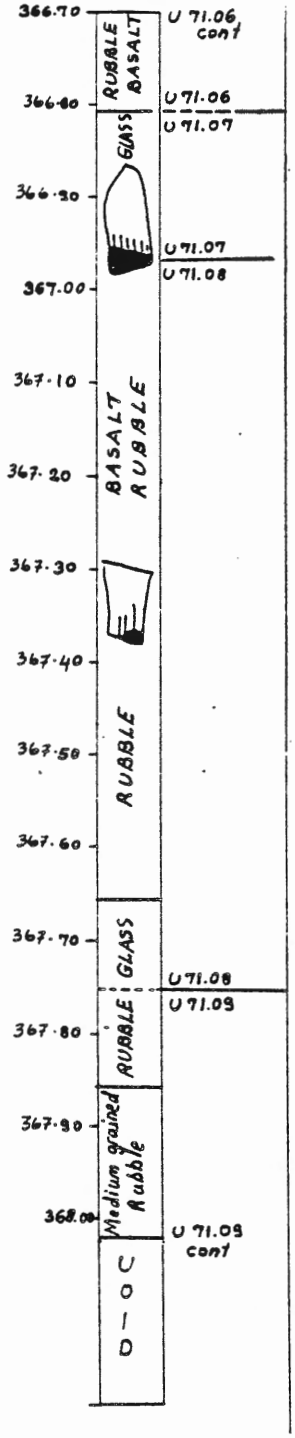
UNIT 71.06 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY- 1

Core Box 71 Sheet 3a

Visual Core Description Observer J. Boyle

Depth Interval 366.70 m to 368.00 m



UNIT 71.06 cont. OVERALL DESCRIPTION

Upper contact - 366.40 m Glass rubble
Lower contact - 366.80 m Glass margin perpendicular to core axis.
Unit thickness - 0.40 m Type of unit - pillow

Grey becoming darker grey towards chill (black altered glass), fine-grained, slightly phyric basalt.

Phenocrysts:- subhedral
- size - approximately 1 mm
- pale green transparent clinopyroxene
- fresh

Vesicles:- variable - some zones have 5% segregation vesicles, others have 5% voids
- average maximum size - 2 mm
- filling - 50% open, 50% dark and pale clays

Veins:- 5% at bottom
- size - thin, approximately 2 mm
- filling - 10% transparent crystalline zeolite, 90% altered glass

GMA:- 50% - to dark clays

UNIT 71.07 OVERALL DESCRIPTION

Upper contact - 366.80 m Broken with altered glass rubble.
Lower contact - 366.96 m Chill into altered glass. Dip - 85°/200°.
Unit thickness - 0.16 m Type of unit - pillow

Grey to dark grey at chills, fine-grained, aphyric basalt.

Vesicles:- 5%
- average maximum size - 1.5 mm
- filling - 50% dark clay filled or lined, 45% open, 5% white zeolite

Veins:- 20%
- two white zeolite veins at 30° to core axis
- zeolite is cleaved, colourless, transparent
- filling - 95% palagonite, 5% zeolite

GMA:- 50% - to clays

UNITS 71.08 and 71.09 Descriptions - see Box 71, Sheet 3b.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 71 Sheet 36

Graphic Representation | Sample

Visual Core Description Observer J Boyle

Depth Interval 366.70 m to 368.00 m

UNIT 71.08 OVERALL DESCRIPTION

Upper contact - 366.96 m Depositional. Altered glass. Chill zone. Dip - 85°.
Lower contact - 367.75 m Ambiguous - in rubble. Probably depositional. Altered glass.
Unit thickness - 0.79 m Type of unit - pillow(?)

Medium-grained, essentially aphyric basalt rubble. There is slight evidence for a contact also at 367.50 m but no lithologic change is observed. A few (< 1%) small (approximately 1 mm) clinopyroxene microphenocrysts occur.

Vesicles:- 5%, concentrated at bottom contact
- average size - <1 mm
- maximum size - 2 mm
- filling - 50% open, 25% black clays, 25% carbonate

Veins:- 3% - concentrated around contacts
- filling - layer silicates

GMA:- 40% - to 70% layer silicates, 30% zeolites

UNIT 71.09 OVERALL DESCRIPTION

Upper contact - 367.75 m Ambiguous - in rubble. Probably depositional. Altered glass.
Lower contact - 368.50 m Brecciated zone with clasts of basalt and zeolites in a matrix of blackish clays (or altered glass). Altered glass. Depositional. Dip - 60°.
Unit thickness - 0.75 m Type of unit - pillow

Fine- to medium-grained, slightly microphyric (a few clinopyroxene microphenocrysts) pillow basalt rubble.

Vesicles:- 2%
- size - 1 mm
- filling - 90% open, 10% layer silicates

Veins:- 5%
- filling - 30% gypsum, 70% layer silicates (including margins)

GMA:- 40% - to 70% layer silicates, 30% zeolites

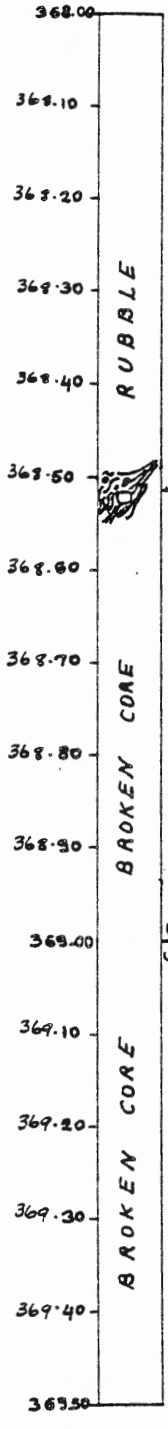
UNIT 71.09 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 71 Sheet 4

Visual Core Description Observer H. ELSBREE

Depth Interval 368.00 m to 369.50 m



UNIT 71.09 cont. Description - see Box 71, Sheet 3b.

Fine- to medium-grained, slightly microphyric pillow basalt rubble.

UNIT 71.10 OVERALL DESCRIPTION

Upper contact - 368.50 m Depositional. Altered glass in a brecciated zone with crystal zeolites. Slight decrease in grain size towards contact.
Lower contact - 369.00 m Slight decrease in grain size towards contact. Depositional. Altered glass. Small amount (<5%) of fresh glass.
Unit thickness - 0.50 m Type of unit - pillow

Grey, fine-grained, aphyric (but with about 1% green clinopyroxene microphenocrysts of about 1mm) pillow basalt.

Vesicles:- 2%
- size - 1 mm
- filling - 90% open, 10% layer silicates

Veins:- 4% - contact zones only, few real veins in the unit
- filling - zeolite and layer silicates

GMA:- 40% - to 70% layer silicates, 30% zeolites

UNIT 71.11 OVERALL DESCRIPTION

Upper contact - 369.00 m Ambiguous but assumed depositional. No glass.
Lower contact - 370.45 m Ambiguous. Assumed depositional if this is sediment. No glass.
Unit thickness - 1.45 m Type of unit - volcanic sediment, or breccia(?)

Grey mud with fragments of blackish, altered glass, zeolites, and volcanic-derived clays. Average clast size is 2 mm.

No vesicles.

No veins.

GMA:- 0%

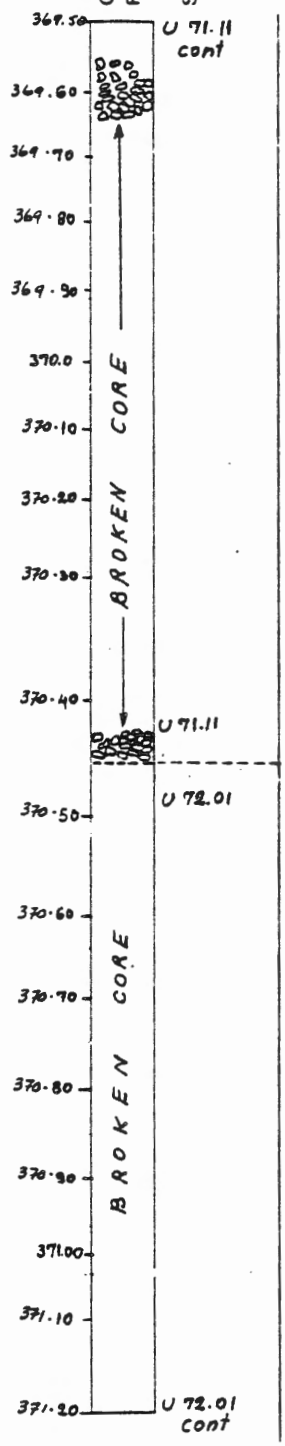
UNIT 71.11 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 72 Sheet 1

Visual Core Description Observer H. ELSBREE

Depth Interval 369.50 m to 371.20 m



UNIT 71.11 cont. Description - see Box 71, Sheet 4.

Volcanic sediment or breccia of grey mud with fragments of blackish glass, altered glass, zeolites and volcanic-derived clays. Average clast size is 2 mm.

UNIT 72.01 OVERALL DESCRIPTION

Upper contact - 370.45 m Ambiguous. Presumed depositional. No evidence of glass.
Lower contact - 372.93 m Truncated. Altered glass. Dip - 55°.
Unit thickness - 2.48 m Type of unit - flow (?) - by the length of the unit

Grey-green, medium-grained, aphyric basalt.

Vesicles:- 1%, concentrated from 371.10-371.20 m and again at 371.70 m
- size - 4 mm
- filling - 60% open, 40% layer silicates

Veins:- < 1%

GMA:- 40%- to 70% layer silicates, 30% zeolites
- some autobrecciation at 371.50 m

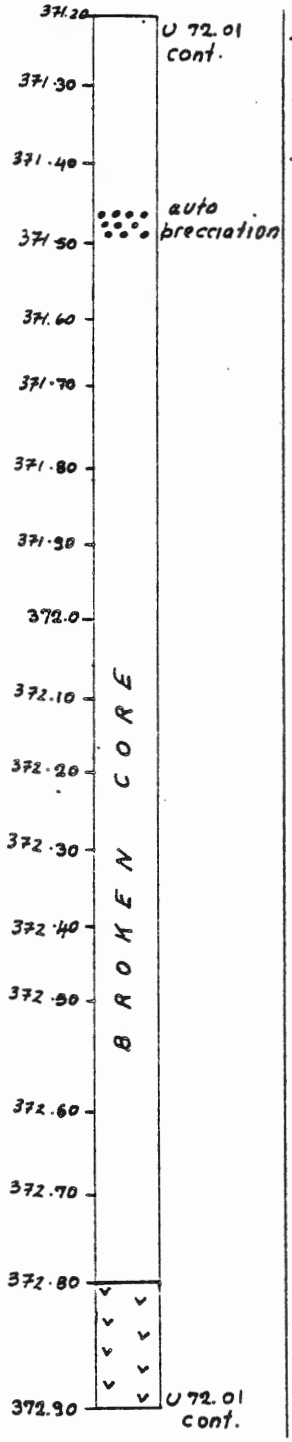
UNIT 72.01 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 72 Sheet 2

Visual Core Description Observer H. ELSBREE

Depth Interval 371.20 m to 372.90 m



UNIT 72.01 cont. Description - see Box 72, Sheet 1.

Grey-green, medium-grained, aphyric basalt flow(?) with vesicles concentrated at 371.70 m.

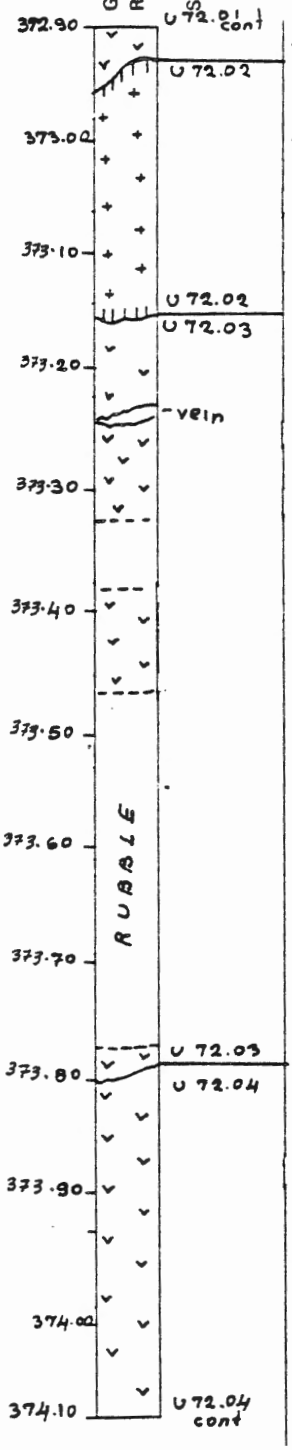
UNIT 72.01 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 72 Sheet 3

Visual Core Description Observer H.ELSBREE

Depth Interval 372.90 m to 374.10 m



UNIT 72.01 cont. Description - see Box 72, Sheet 1.

Grey-green, medium-grained, aphyric basalt flow(?).

UNIT 72.02 OVERALL DESCRIPTION

Upper contact - 372.93 m Intrusive. Mostly altered glass - some fresh glass (5%). Altered glass-filled veins concentrated at the top. Dip - 55°.
Lower contact - 373.15 m Intrusive. Altered glass. Grey-white zone at lower contact. Small (< 5%) amount fresh glass. Dip - 30°.
Unit thickness - 0.22 m Type of unit - intrusive

Grey, fine-grained basalt with subhedral microphenocrysts of clinopyroxene (<1 mm), at the top of flow.

Vesicles:- < 1%
- maximum size - 2 mm
- filling - 80% open, 10% layer silicates (smectite?) and 10% zeolites

Veins:- 3%
- fine vein network below upper contact
- filling - altered glass or black clay and <1% zeolites

GMA:- 25% - to 80% layer silicates, 20% zeolites

UNIT 72.03 OVERALL DESCRIPTION

Upper contact - 373.15 m Truncated. Altered glass. Dip - 30°.
Lower contact - 373.80 m Depositional with altered glass and 5% fresh glass. Dip - 20°.
Unit thickness - 0.65 m Type of unit - flow (by the length of the unit)

This unit is probably a continuation of Unit 72.01 and is the bottom of Unit 72.01 that was intruded by Unit 72.02. Grey-green, medium-grained, aphyric basalt.

Vesicles:- 3%
- size - 2 mm
- filling - 80% open, 20% layer silicates

Veins:- 40%, concentrated at 373.25 and 373.40 m
- filling - layer silicates (smectites, celadonite)

GMA:- 40% - to 70% layer silicates, 30% zeolites

UNIT 72.04 Description - see Box 72, Sheet 4.

Upper contact - 373.80 m Depositional. Altered glass.

Grey-green, medium-grained, aphyric basalt flow(?).

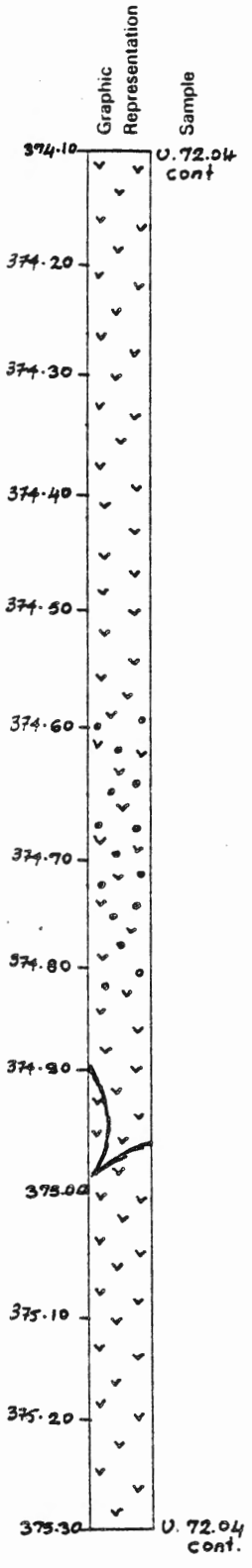
UNIT 72.04 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY 1

Core Box 72 Sheet 4

Visual Core Description Observer HELSBREE

Depth Interval 374.10 m to 375.30 m



UNIT 72.04 cont. OVERALL DESCRIPTION

Upper contact - 373.80 m Depositional. Altered glass, with cubic appearing zeolites (analcite?). Dip - 20°.
Lower contact - 375.67 m Irregular. Intrusive. No obvious chilled margin suggesting that this unit was still hot when the underlying unit was intruded or that Units 72.04 and 73.02 are the same.
Unit thickness - 1.87 m Type of unit - flow (by the length)

Grey-green to medium grey, fine-grained basalt with intersertal texture of plagioclase laths, including possible rare microphenocrysts and mafic minerals, probably clinopyroxene.

Vesicles:- 7% concentrated from 374.60-374.80 m
- filling - 60% open, 20% carbonate, 20% layer silicates
- size - 2 mm
- spherical to tubular shape

Veins:- 1%
- filling - 30% carbonate, 70% layer silicates
- carbonate veins thin (< 1 mm) and layer silicate filled veins approximately 1 mm

GMA:- 40% - to 70% layer silicates, 30% zeolites

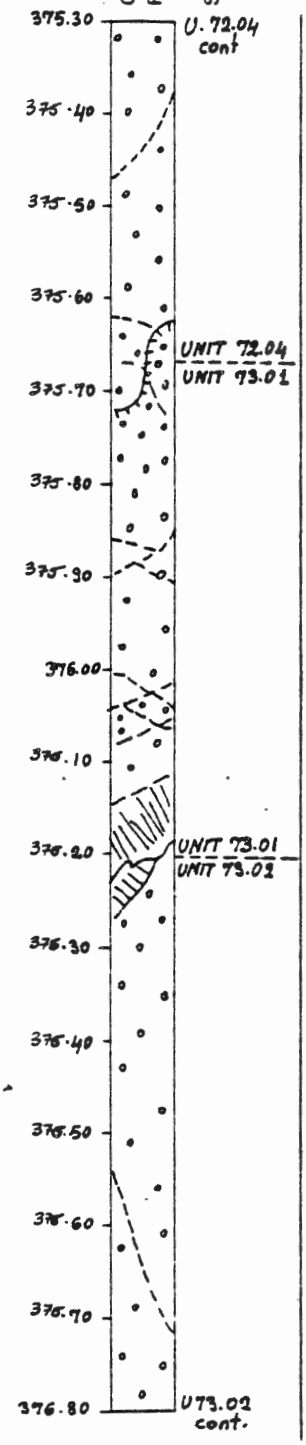
UNIT 72.04 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 73 Sheet 1

Visual Core Description Observer S A Pearce

Depth Interval 375.30 m to 376.80 m



UNIT 72.04 cont. Description - see Box 72, Sheet 4.

Medium grey, fine-grained massive basalt flow with an intersertal texture of plagioclase laths, including possible rare microphenocrysts, and mafic minerals, probably clinopyroxene. Degree of alteration uncertain.

UNIT 73.01 OVERALL DESCRIPTION

Upper contact - 375.67 m Highly irregular, but sharp contact. In places the unit is chilled, in others no chilling is observed. There are however, xenoliths of chilled rock in the overlying unit.
Lower contact - 376.20 m Sharp intrusive contact. Slightly wavy nature of contact (?load casts) may indicate that lower unit was not completely crystallized at the time. Very fine chill extends 5 mm, fine chill a further 40 mm. Dip - 75°.
Unit thickness - 0.53 m Type of unit - sill

Medium grey, fine-grained, olivine basalt with an intersertal texture of plagioclase and clinopyroxene(?).

Phenocrysts:- 2% olivine phenocrysts totally concentrated at the base of the unit (excluding chilled margin)
- maximum size - 3 mm
- subhedral
- pseudomorphed by a pale green material (calcite + clay) with a dark green sheet silicate (celadonite?) in fractures

Vesicles:- 5%
- filling - 50% open, 50% white calcite or pale green calcite + smectite
- maximum size - 25 mm
- mostly spherical

Veins:- <1%
- maximum size - 15 mm
- irregular
- filling - calcite and rare sheet silicate (celadonite?)

UNIT 73.02 Description - see Box 73, Sheet 2.

Upper contact - 376.20 m Truncated.

Medium grey (locally green-grey) fine- medium-grained, aphyric massive basalt with an intersertal texture of plagioclase and mafics.

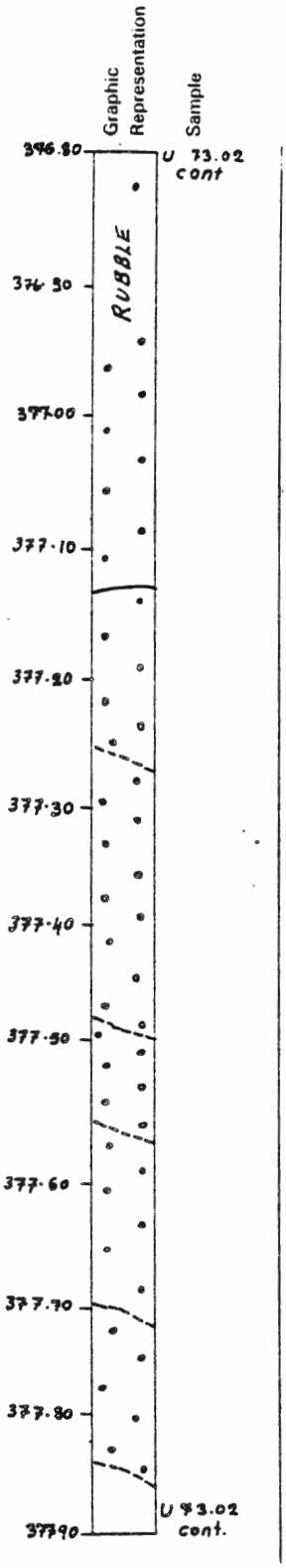
UNIT 73.02 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 73 Sheet 2

Visual Core Description Observer JAPearce

Depth Interval 376.80 m to 377.90 m



UNIT 73.02 cont. OVERALL DESCRIPTION

Upper contact - 376.20 m Slightly finer-grained. Cut obliquely by Unit 73.01. Dip (on chilled margin) - 70°.
Lower contact - 387.48 m Depositional(?). Excellent chilled margin. No glass. Fe-oxide stain penetrates from contact. Dip - 40°.
Unit thickness - 11.28 m Type of unit - massive flow

Medium grey (locally green-grey), fine- to medium-grained, aphyric basalt with an intersertal texture of plagioclase and mafics (mainly augite?). The degree of alteration is uncertain but zeolite and smectite are probably present.

Vesicles:- 5%
- maximum size - 0.2 mm
- filling - 70% open, 30% calcite, dark green sheet silicate (smectite)
- shape varies from spherical to tubular

Veins:- <<1%
- unit is cut by fractures spaced approximately 10 cm apart
- average size - 1 mm
- maximum size - 4 mm
- filling - dark green and blue green sheet silicates
- most common orientation is 70°
- also rare and very thin/irregular veins filled by calcite

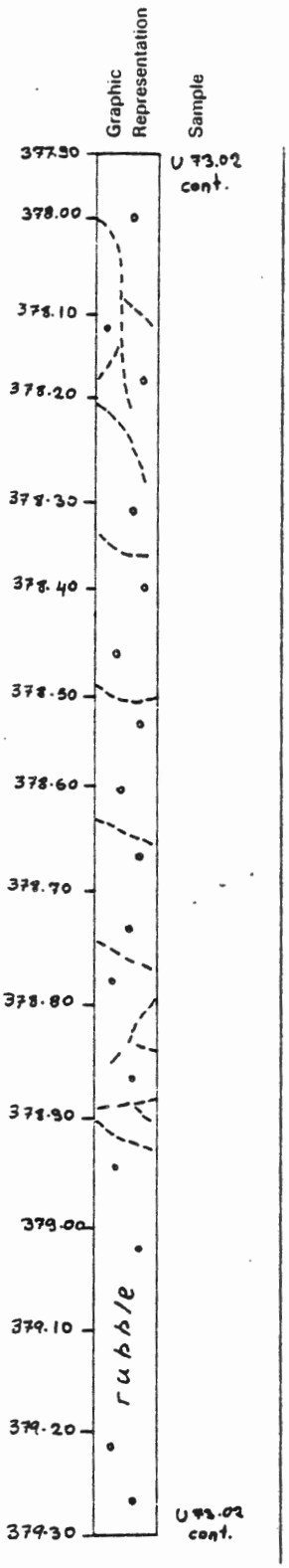
UNIT 73.02 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 73 Sheet 3

Visual Core Description Observer JA Pearce

Depth Interval 377.90 m to 379.30 m



UNIT 73.02 cont. Description - see Box 73, Sheet 2.

Medium grey (locally green-grey), fine- to medium-grained, aphyric basalt with an intersertal texture of plagioclase and mafics (mainly augite?).

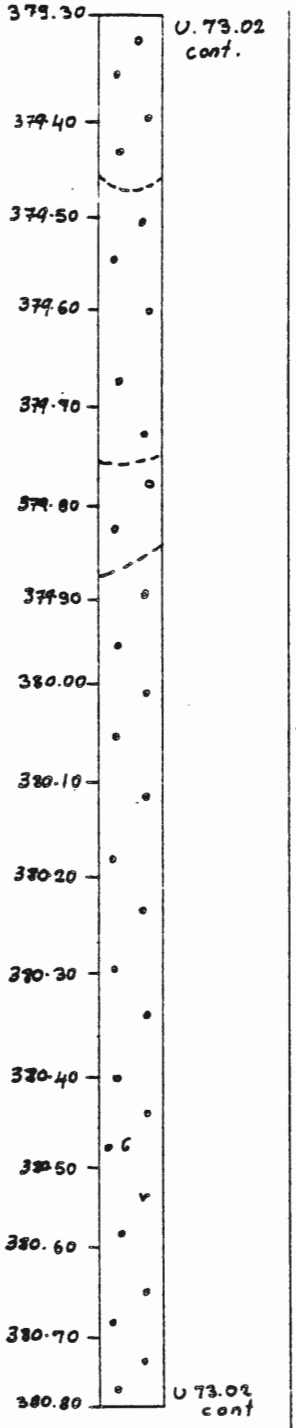
UNIT 73.02 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 73 Sheet 4

Visual Core Description Observer JA Pearce

Depth Interval 379.30 m to 380.80 m



UNIT 73.02 cont. Description - see Box 73, Sheet 2.

Medium grey (locally green-grey), fine- to medium-grained, aphyric basalt with an intersertal texture of plagioclase and mafics (mainly augite?).

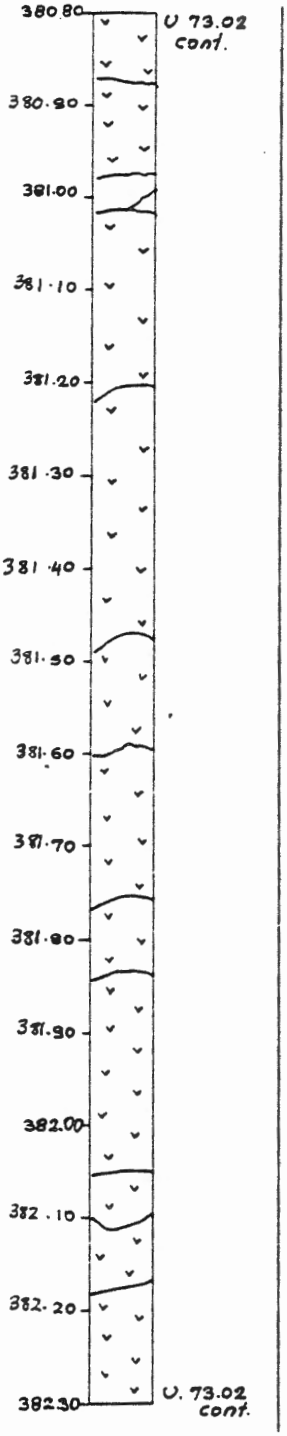
UNIT 73.02 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 74 Sheet 1

Visual Core Description Observer NBaglow

Depth Interval 380.80 m to 382.30 m



UNIT 73.02 cont. Description - see Box 73, Sheet 2.

Medium grey (locally green-grey), fine- to medium-grained, aphyric basalt with an intersertal texture of plagioclase and mafics (mainly augite?).

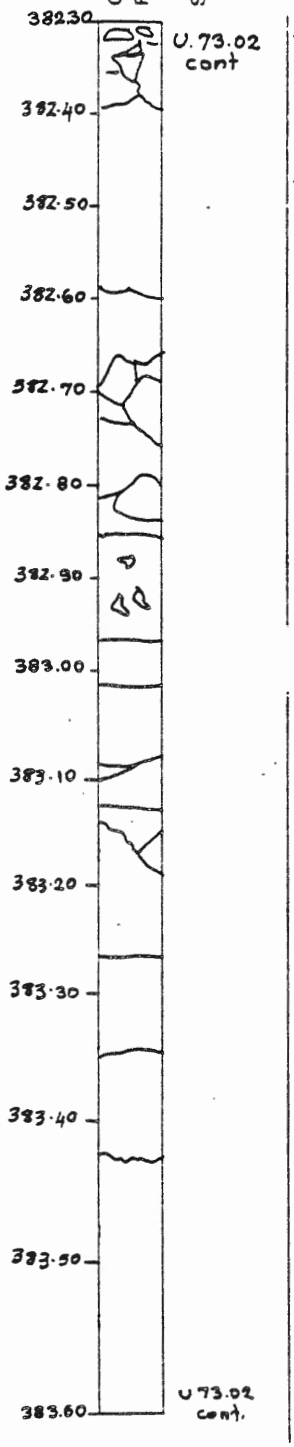
UNIT 73.02 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY 1

Core Box 74 Sheet 2

Visual Core Description Observer N.Baglow

Depth Interval 382.30 m to 383.60 m



UNIT 73.02 cont. Description - see Box 73, Sheet 2.

Medium grey (locally green-grey), fine- to medium-grained, aphyric basalt with an intersertal texture of plagioclase and mafics (mainly augite?).

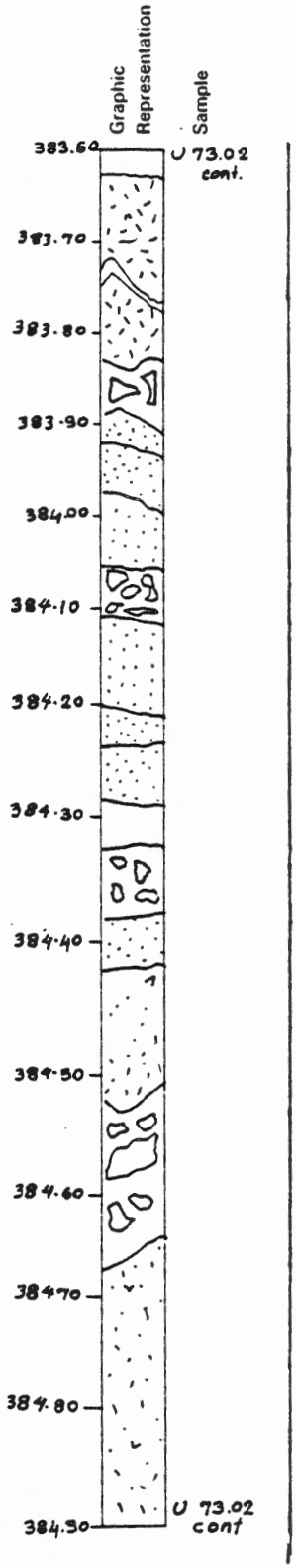
UNIT 73.02 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY 1

Core Box 74 Sheet 3

Visual Core Description Observer N.Baglow

Depth Interval 383.60 m to 384.90 m



UNIT 73.02 cont. Description - see Box 73, Sheet 2.

Medium grey (locally green-grey), fine- to medium-grained, aphyric basalt with an intersertal texture of plagioclase and mafics (mainly augite?).

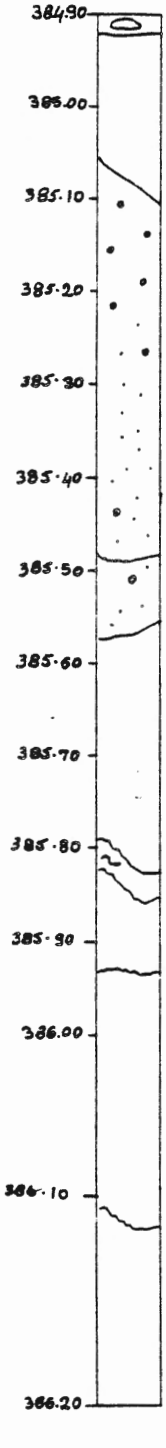
UNIT 73.02 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY- 1

Core Box 74 Sheet 4

Visual Core Description Observer N.Baglow

Depth Interval 384.90 m to 386.20 m



UNIT 73.02 cont. Description - see Box 73, Sheet 2.

Medium- to fine-grained, green to green-grey, aphyric massive basalt flow with an intersertal texture with clinopyroxene and plagioclase, giving rise to some speckled rock.

Vesicles:- 1%
- filling - 95% open, 5% carbonate
- size - filled 0.5-7 mm, open 0.2-1 mm

Veins:- <1%
- minor carbonate at some fractures
- slickensided sheet silicates are a feature of a number of joints
- patches of green smectite can extend away from the break for 10 mm
- filling - overall - 85% sheet silicates, 15% carbonate

GMA:- overall alteration is low with localized patches of more altered material
- N.B. celadonite is prevalent in Boxes 73 and 75

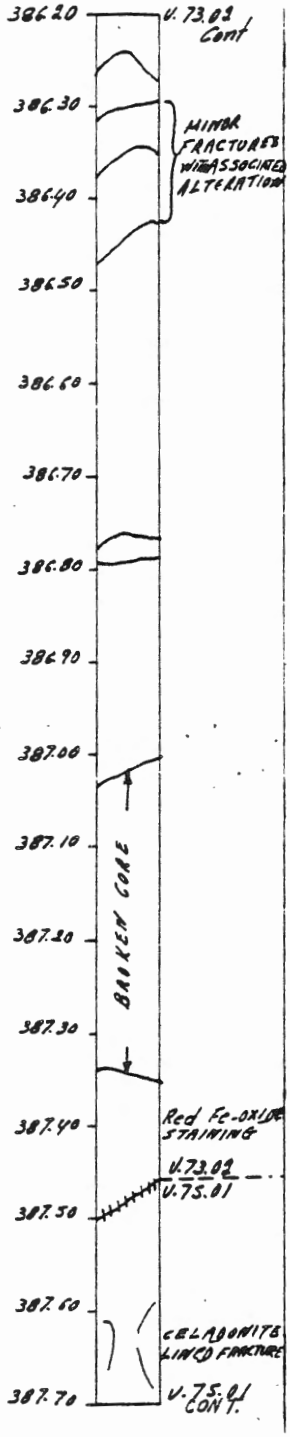
UNIT 73.02 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 75 Sheet 1

Visual Core Description • Observer D. Bailey

Depth Interval 386.20 m to 387.70 m



UNIT 73.02 cont. Description - see Box 73, Sheet 2.

Grey-green, fine-grained, aphyric basalt.

Vesicles:- very minor - <<1% - more common in lower 10 cm
- average maximum size - 0.5 mm
- filling - 70% smectites, 10% zeolites, 10% opaques, 10% carbonate (note: celadonite abundant at base of unit)

No veins.

GMA:- 60%

UNIT 75.01 OVERALL DESCRIPTION

Upper contact - 387.48 m Depositional. Altered glass common. Brown, fine-grained chilled margin. Smectite abundant. Chill zone approximately 40 mm. Orientation - irregular, approximately 40°.
Lower contact - 387.97 m Ambiguous. Large altered, angular glass fragments in sheared smectite matrix.
Unit thickness - 0.49 m Type of unit -pillow(?)

Light grey-brown, very fine-grained, aphyric basalt.

Vesicles:- 3% overall, most common in center of unit (approximately 387.60 m)
- average maximum size - approximately 3 mm
- filling - 80% layer silicates, 20% opaques, zeolites?, carbonate?

Veins:- insignificant
- very minor carbonate/zeolite?
- fractures lined with celadonite and smectite common.

GMA:- 60%

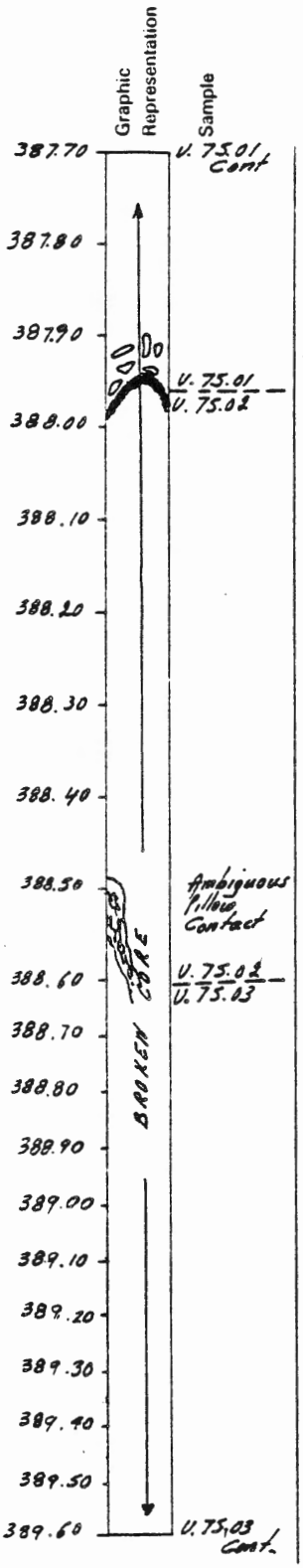
UNIT 75.01 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 75 Sheet 2

Visual Core Description Observer D Bailey

Depth Interval 387.70 m to 389.60 m



UNIT 75.01 cont. Description - see Box 75, Sheet 1.

Grey-green, fine-grained, aphyric pillow basalt.

UNIT 75.02 OVERALL DESCRIPTION

Upper contact - 387.97 m Depositional. Fine-grained, grey, chilled margin with minor altered glass.
Lower contact - 388.60 m Depositional. Ambiguous. Around 388.55 m, the core is subparallel to altered glassy pillow margin however it is not clear where Unit 75.02 ends and 75.03 begins. Placed at 388.60 m because of different appearance of core (highly vesicular!)
Unit thickness - 0.63 m Type of unit - pillow

Light grey, very fine-grained, aphyric basalt. This unit is all rubble.

Vesicles:- 2%
- average maximum size - approximately 1 mm
- filling - predominantly smectite, 70% layer silicates, 15% opaques, 5% zeolite, carbonate?

Veins:- difficult to determine in rubble
- fractures lined with smectite and celadonite common

GMA:- 50%?

UNIT 75.03 OVERALL DESCRIPTION

Upper contact - 388.60 m Ambiguous. Highly vesicular fragments preserved beneath thick altered, glassy zone at 388.50 m. No contact preserved.
Lower contact - 390.40 m Ambiguous. Altered glass fragments dispersed in rubble. Impossible to clearly define unit. Contact placed at 390.40 m because of excellent chill margin preserved in following Unit 75.04.
Unit thickness - 1.80 m Type of unit - fragmented pillow

Dark grey, fine-grained, clinopyroxene microphyric, basalt rubble.

Phenocrysts:- clinopyroxene microphyric, homogeneous distribution
- size - <0.5 mm
- shape - an-subhedral

Vesicles:- very minor - <1%
- average maximum size - approximately 0.5 mm
- filling - (?) - predominantly layer silicates

No veins - rubble makes it difficult.

GMA:- approximately 50%

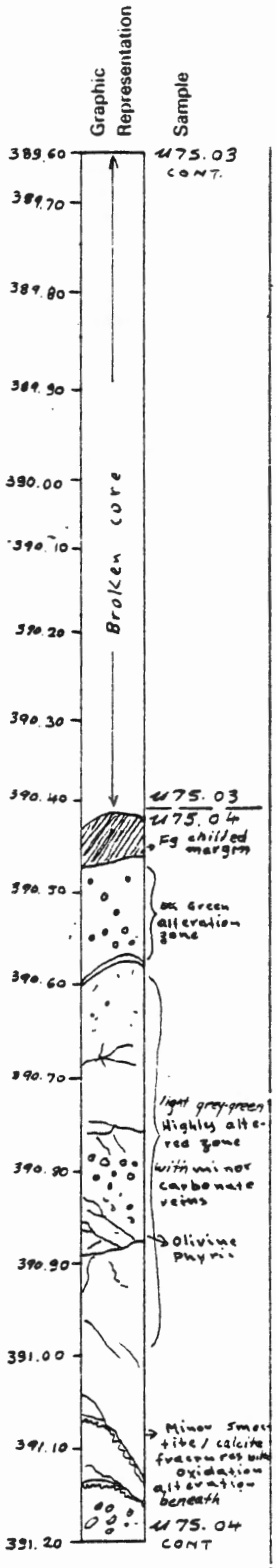
UNIT 75.03 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY1

Core Box 75 Sheet 3

Visual Core Description Observer D. Bailey

Depth Interval 389.60 m to 391.20 m



UNIT 75.03 cont. Description - see Box 75, Sheet 2.

Dark grey, fine-grained, clinopyroxene microphyric, pillow basalt rubble.

UNIT 75.04 OVERALL DESCRIPTION

Upper contact - 390.40 m Ambiguous. 4 mm of light grey, very fine-grained chilled margin present however contact with overlying unit is not preserved. No obvious glass fragments.
Lower contact - 391.50 m Well preserved. Thick (10 cm) chilled margin in sharp contact with Unit 75.05. Intrusive or depositional(?). Minor (2 mm) band of altered glass present. Extremely fine-grained. Dip - 60°.
Unit thickness - 1.10 m Type of unit - small intrusive

Variable dark green-grey to light grey-green, fine-grained, slightly olivine/clinopyroxene phyric basalt. This unit is continuous core of a small intrusive(?) and is quite distinct from surrounding units.

Phenocrysts:- 2-3% olivine
- concentrated from 390.75-390.90 m - settled?
- average maximum size - approximately 2 mm
- 100% altered to light and dark green clays
- difficult to distinguish from filled vesicles
- concentrated from 391.15-392.25 m
- subhedral to anhedral
- maximum size - 3 mm
- altered to light green smectite and brown Fe oxide
- <1% clinopyroxene
- average maximum size - 1 mm
- found along with olivine
- shape - anhedral

Vesicles:- minor - overall approximately 2%, concentrated in upper half of unit
- average maximum size - approximately 1 mm
- filling - 75% layer silicates, 10% carbonate, 10% opaques, 5% zeolite
- abundance, filling, etc. difficult to determine because those filled with smectites are often hard to distinguish from groundmass

Veins:- minor - approximately 1%
- carbonate veins <1 mm distributed throughout core along with very thin smectite-lined fractures

GMA:- approximately 55%
- alteration features quite interesting and variable

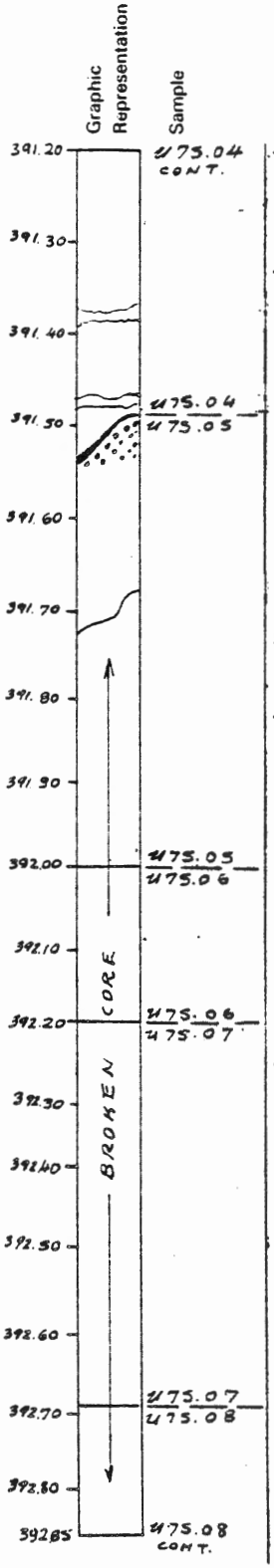
UNIT 75.04 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY.1

Core Box 75 Sheet 4

Visual Core Description Observer D. G. Bailey

Depth Interval 391.20 m to 392.85 m



UNIT 75.04 cont. Description - see Box 75, Sheet 3.

Variable dark green-grey to light grey-green, fine-grained, slightly olivine/clinopyroxene phyric basalt intrusion.

UNIT 75.05 OVERALL DESCRIPTION

Upper contact - 391.50 m Depositional. 20 mm chilled margin with braided altered glass. Dip - approximately 70°.
Lower contact - 392.00 m Depositional. Highly fragmented but relatively fresh glass and chilled margin are both present.
Unit thickness - 0.50 m Type of unit - pillow
Grey, extremely fine-grained, aphyric basalt.

Vesicles:- overall approximately 3%, concentrated in upper portion of unit (approximately 391.60 m)
- average maximum size - approximately 3 mm
- filling - 80% open, 15% layer silicates, 5% opaques, zeolite?

No veins.
GMA:- approximately 40%

UNIT 75.06 OVERALL DESCRIPTION

Upper contact - 392.00 m Depositional. Highly fragmented. Altered glass, minor chill.
Lower contact - 392.20 m Depositional. Highly fragmented. Altered glass, minor chill.
Unit thickness - 0.20 m Type of unit - pillow
Dark grey, extremely fine-grained, aphyric basalt similar to Unit 75.03.

Vesicles:- 1%, homogeneously distributed
- average maximum size - 1 mm

No veins.
GMA:- 45%

UNIT 75.07 OVERALL DESCRIPTION

Upper contact - 392.20 m Depositional. Highly fragmented. Dark black, vitreous, relatively unaltered glass. Dip not measureable.
Lower contact - 392.68 m Depositional. 10 mm chill margin with braided, altered glass and dark green smectites.
Unit thickness - 0.48 m Type of unit - pillow
Grey, very fine-grained, aphyric basalt similar to Units 75.05 and 75.06.

Vesicles:- <<1%, homogeneously distributed
- average maximum size - 0.5 mm
- segregation vesicles present along contacts

No veins.
GMA:- approximately 50%

UNIT 75.08 Description - see Box 76, Sheet 1.

Upper contact - 392.68 m Not well preserved. Apparently depositional.
Grey, fine-grained, aphyric, pillow(?) basalt which is highly fragmented.

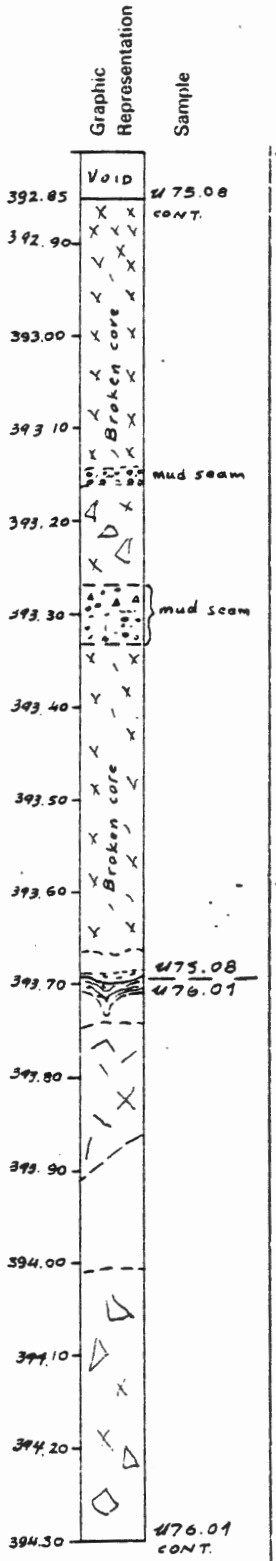
UNIT 75.08 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY 1

Core Box 76 Sheet 1

Visual Core Description Observer R. Baragar

Depth Interval 392.85 m to 394.30 m



UNIT 75.08 cont. OVERALL DESCRIPTION

Upper contact - 392.68 m Not well preserved. Apparently depositional.
Lower contact - 393.70 m Minimum of 10 mm of dark green to black layer silicates and pale grey lenses of possible smectite. This is assumed to be the lower contact but intervening core is so friable and disintegrated that other contacts could be present.
Unit thickness - 1.02 m Type of unit - pillow?

Dark grey, fine- to medium-grained aphyric basalt. Most of the unit is finely fractured and the remnants are friable. Some segments are little more than mudseams.

Vesicles:- not evidently abundant but most of what would be vesicular in the upper part of unit is highly fragmented
- filling - mostly open - about 20% are either small segregation vesicles or filled with dark smectite

No veins.

GMA:- 20-25% fracture coatings of dark green smectite

UNIT 76.01 OVERALL DESCRIPTION

Upper contact - 393.70 m 20 mm thick double margin of dark green smectite with lenses of pale grey secondary material (smectite). Contact irregular but at a high angle to core.
Lower contact - 395.30 m Contact not present. Basalt becomes markedly fine-grained as contact approached.
Unit thickness - 1.60 m Type of unit - pillow?

Dark grey, medium-grained, very slightly clinopyroxene microphyric basalt. The core is rather coarsely fractured with fragments several cms long alternating with segments in which fragments are 10 - 20 mm or less. Generally decipherable.

Phenocrysts:- bottle green clinopyroxene - 1% seen only in lower part of unit, hence settled
- size - 1-1.5 mm

Vesicles:- 15% in upper 30 cm, overall 5%
- average maximum size - 2-3 mm
- filling - 99% open, 1% dark green smectite

No veins.

GMA:- possibly 10-15%
- most fracture surfaces coated with slickensided dark green layer silicate - chlorite or celadonite

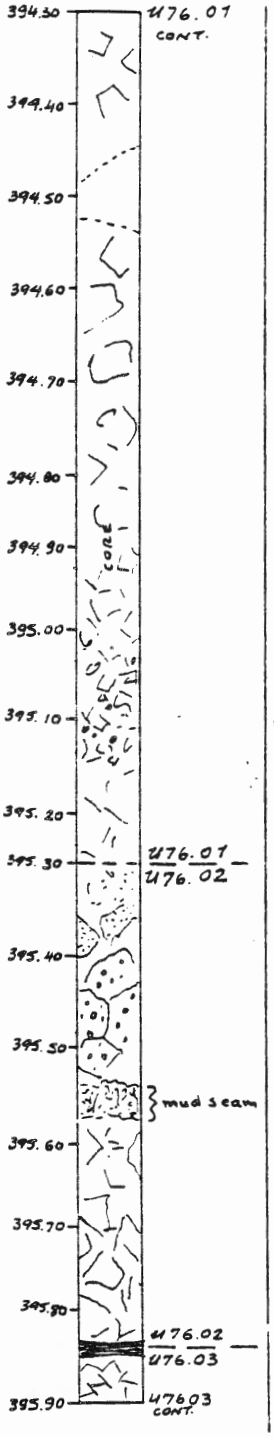
UNIT 76.01 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY 1

Core Box 76 Sheet 2

Visual Core Description Observer R. Baragar

Depth Interval 394.30 m to 395.90 m



UNIT 76.01 cont. Description - see Box 76, Sheet 1.

Dark grey, medium-grained, very slightly clinopyroxene microphyric basalt. The core is rather coarsely fractured with fragments several cm long alternating with segments in which fragments are 1-2 cm or less. Generally decipherable.

UNIT 76.02 OVERALL DESCRIPTION

Upper contact - 395.30 m Not present.
Lower contact - 395.84 m Double contact about 8 mm thick. Composed of dark green smectite with lenses of pale grey smectite(?). Dip - about 10°
Unit thickness - 0.54 m Type of unit - pillow

Dark grey, fine to medium-grained, very sparsely clinoyroxene phyric basalt. The core is coarsely fractured with fragments 2-5 cm long with one finely fractured mud seam.

Vesicles:- 7-10% overall, 15-20% in upper 20 cm
- average maximum size - 4 mm
- filling - 95% open, 5% green smectite

No veins.

GMA:- <5% slickensided dark green coating (smectite) on fracture surfaces

UNIT 76.03 Description - see Box 76, Sheet 3.

Upper contact - 395.84 m Thin, altered glassy margin. Double contact with Unit 76.02 totals 8 mm thick.

Dark grey, fine- to medium-grained, very sparsely clinopyroxene phyric pillow basalt.

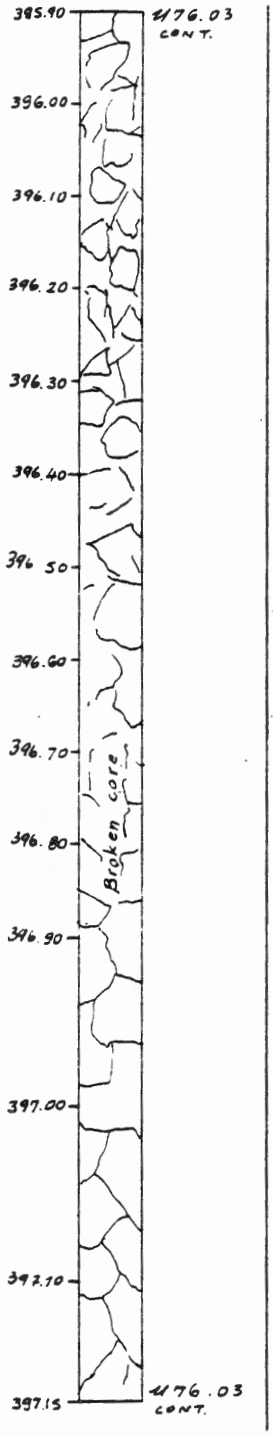
UNIT 76.03 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY 1

Core Box 76 Sheet 3

Visual Core Description Observer R. Bargar

Depth Interval 395.90 m to 397.15 m



UNIT 76.03 cont. OVERALL DESCRIPTION

Upper contact - 395.84 m Thin, altered glassy margin.
Double contact with unit 76.02 totals 8 mm thick.
Lower contact - 398.06 m Altered glassy contact about 3 cm thick for double margin (15 mm for each pillow) composed of dark and light green braided smectites enclosing lenses and blocks of pale grey mineral (zeolites-smectites), not carbonate. Dip - 15°.
Unit thickness - 2.22 m Type of unit - pillow

Dark grey, fine- to medium-grained, very sparsely clinopyroxene phyric basalt. The core is coarsely fractured with fragments ranging from about 2 to 10 cm.

Phenocrysts:- anhedral clinopyroxene
- size - <1 mm

Vesicles:- 5-10% large open vesicles most abundant in upper 80 cm of unit
- small (1 mm) vesicles filled with green smectite
- average maximum size - 3 mm

No veins.

GMA:- 2-3% - fractures all coated with dark green or bluish-green layer silicate - probably celadonite

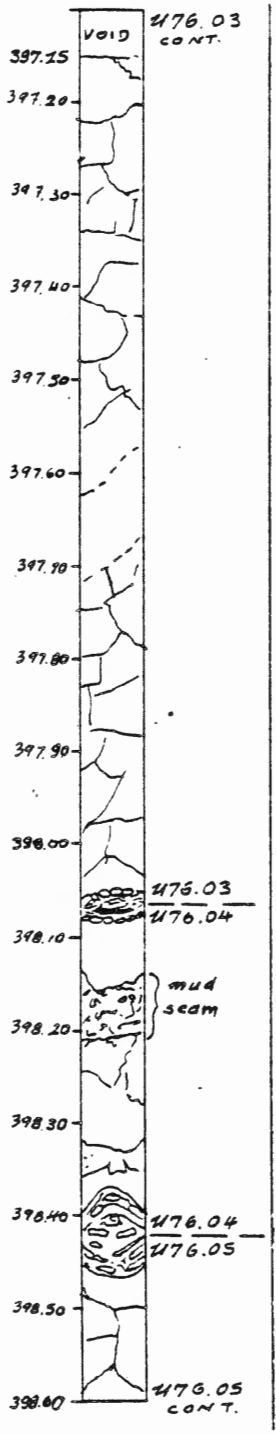
UNIT 76.03 cont..

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY1

Core Box 76 Sheet 4

Visual Core Description Observer R. Baragar

Depth Interval 397.15 m to 398.60 m



UNIT 76.03 cont. Description - see Box 76, Sheet 3.

Dark grey, fine- to medium-grained, very sparsely clinopyroxene phyric, fractured pillow basalt.

UNIT 76.04 OVERALL DESCRIPTION

Upper contact - 398.06 m Altered glassy contact about 3 cm thick for double margin (15 mm for each pillow) composed of dark and light green braided smectites enclosing lenses and blocks of pale grey mineral (zeolites-smectites), not carbonate. Dip = 15°
Lower contact = 398.42 m Thick altered glassy margin - evidently junction of 3 pillows in part - approximately at right angles to core. Total thickness of both margins is 2-2.5 cm. Composed of dark green smectite enclosing blocks of pale grey to buff, evidently more competent material.
Dip = about 60°
Unit thickness - 0.36 m Type of unit - pillow

Dark grey, aphanitic to fine-grained, sparsely phyric basalt.

Phenocrysts:- <1% clinopyroxene
- average size - <1 mm

Vesicles:- 5%
- average maximum size - 2 mm
- mud seam from 398.15-398.20 m may signify vesicle-rich band
- filling - 75% open, 25% green smectite

GMA:- 1-2% green fracture coatings

UNIT 76.05 Description - see Box 77, Sheet 1.

Upper contact - 398.42 m Thick altered glassy margin - evidently junction of 3 pillows in part - approximately at right angles to core. Total thickness of both margins is 2-2.5 cm. Composed of dark green smectite enclosing blocks of pale grey to buff, evidently more competent material.
Dip = about 60°

Dark grey, aphanitic, aphyric pillow basalt.

Vesicles:- 5%
- average maximum size - 2 mm
- filling - 90% open, 10% green smectite

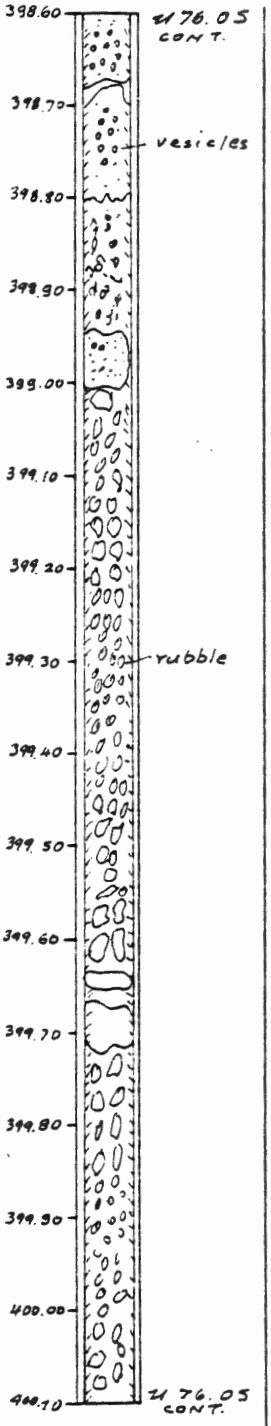
UNIT 76.05 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY 1

Core Box 77 Sheet 1

Visual Core Description Observer Hassan

Depth Interval 398.60 m to 400.70 m



UNIT 76.05 cont. OVERALL DESCRIPTION

Upper contact - 398.42 m Thick altered glassy margin - evidently junction of 3 pillows in part - approximately at right angles to core. Total thickness of both margins is 2-2.5 cm. Composed of dark green smectite enclosing blocks of pale grey to buff, evidently more competent material.
Dip - about 60°
Lower contact - 400.40 m Depositional. Some glass. Dip - 45°
Unit thickness - 1.98 m Type of unit - pillow

Grey-green, fine-grained, slightly phyric basalt rubble.

Vesicles:- 5%
- settling evident from 398.60 to 398.80 m
- round
- size - 2 mm
- filling - 50% sheet silicates, 50% open

GMA:- 65% - to smectite

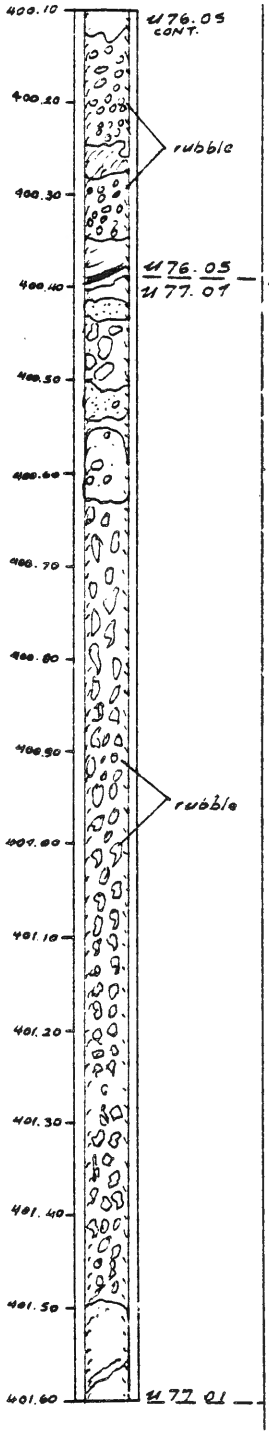
UNIT 76.05 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY 1

Core Box 77 Sheet 2

Visual Core Description Observer Hassan

Depth Interval 400.10 m to 401.60 m



UNIT 76.05 cont. Description - see Box 77, Sheet 1.

Grey-green, fine-grained, slightly phyric, pillow basalt rubble.

UNIT 77.01 OVERALL DESCRIPTION

Upper contact - 400.40 m Depositional. Some altered glass.
Dip - 45°
Lower contact - 401.60 m Depositional. Altered glass. Dip - 40°
Unit thickness - 1.20 m Type of unit - pillow

Grey-green, fine- to medium-grained, aphyric basalt rubble.

Vesicles:- few vesicles
- size - 2 mm
- filling - 60% open, 40% smectite
- round

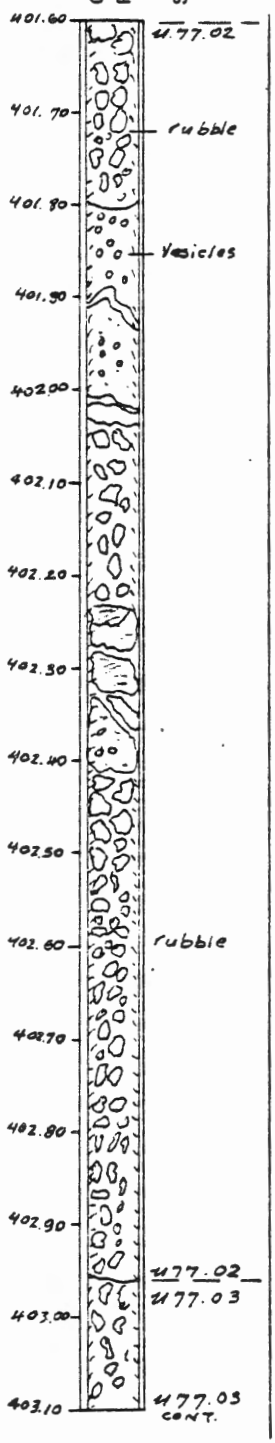
GMA:- 80% - to smectite

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY1

Core Box 77 Sheet 3

Visual Core Description Observer Hasson

Depth Interval 401.60 m to 403.10 m



UNIT 77.02 OVERALL DESCRIPTION

Upper contact - 401.60 m Depositional. Altered glass. Dip - 40°
Lower contact - 402.95 m Ambiguous - in rubble. Dip not clear.
Unit thickness - 1.35 m Type of unit - pillow

Grey-green, fine- to medium-grained, aphyric basalt rubble.

Vesicles:- 5%
- settling evident from 401.85 m to 402.00 m
- size - 2 mm
- filling - 50% smectite, 50% open

No veins.

GMA:- approximately 60% - to smectite
- some gypsum spots detectable

UNIT 77.03 Description - see Box 77, Sheet 4.

Upper contact - 402.95 m Ambiguous - in rubble. Dip not clear.

Grey-green, fine- to medium-grained, pillow basalt rubble.

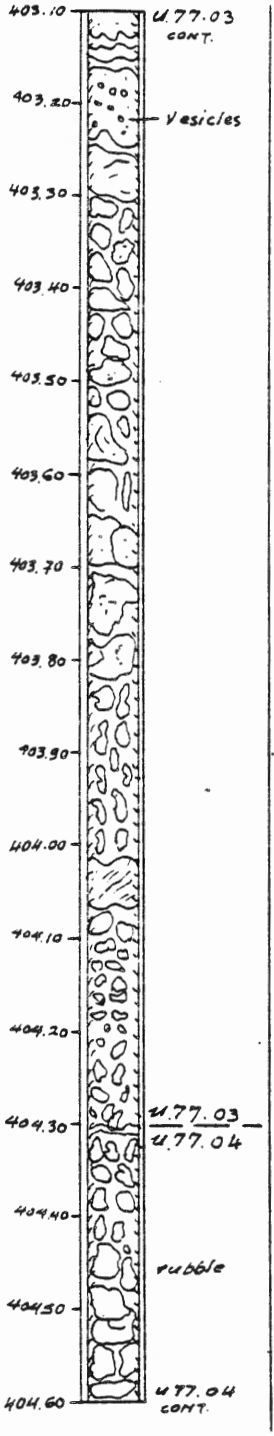
UNIT 77.03 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY1

Core Box 77 Sheet 4

Visual Core Description Observer Hassan

Depth Interval 403.10 m to 404.60 m



UNIT 77.03 OVERALL DESCRIPTION

Upper contact - 402.95 m Ambiguous - in rubble. Dip not clear.
Lower contact - 404.30 m Depositional. Some altered glass.
Dip - 10?
Unit thickness - 1.35 m Type of unit - pillow

Grey-green, fine- to medium-grained basalt rubble.

Vesicles:- 1%
- settling evident from 403.25-403.35 m
- size - 1-2 mm
- filling - 50% smectite, 50% open

GMA:- 50% - to smectite

UNIT 77.04 Description - see Box 78, Sheet 1.

Upper contact - 404.30 m Depositional. Dip - 10?

Grey-green, fine- to medium-grained, aphyric pillow basalt rubble.

Vesicles:- 1%
- size - 1 mm
- filling - 60% smectite, 40% open

No veins.

GMA:- 50% - to smectite

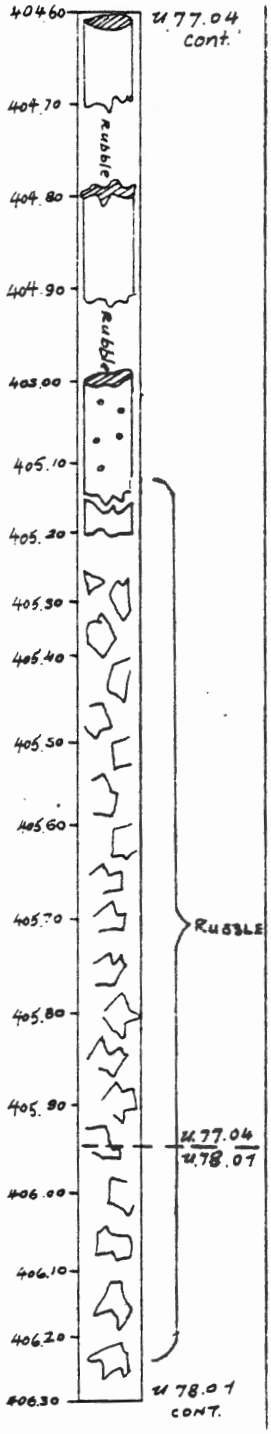
UNIT 77.04 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY 1

Core Box 78 Sheet 1

Visual Core Description Observer T. Purcell

Depth Interval 404.60 m to 406.30 m



UNIT 77.04 cont. OVERALL DESCRIPTION

Upper contact - 404.30 m Ambiguous - in rubble. Some altered glass.
Lower contact - 405.95 m Ambiguous - in rubble. Depositional with some black fresher glass from 405.90-406.15 m in rubble. Chilling on both sides of margin.
Unit thickness - 1.65 m Type of unit - pillow

Grey-green, medium-grained, slightly vesicular, aphyric basalt rubble. This unit is quite strongly variolitic, with glassy blotches distributed throughout the unit and fairly consistent in size between 1-2 mm.

Vesicles:- 4%
- open

No veins but 90% sheet silicates and 10% carbonate line fractures and margins.

GMA:- low

UNIT 78.01 Description - see Box 78, Sheet 2.

Upper contact - 405.95 m Ambiguous - in rubble. Depositional, with some black fresher glass from 405.90-406.15 m in rubble. Chilling on both sides of margin.

Grey-green, fine-grained, aphyric pillow basalt rubble.

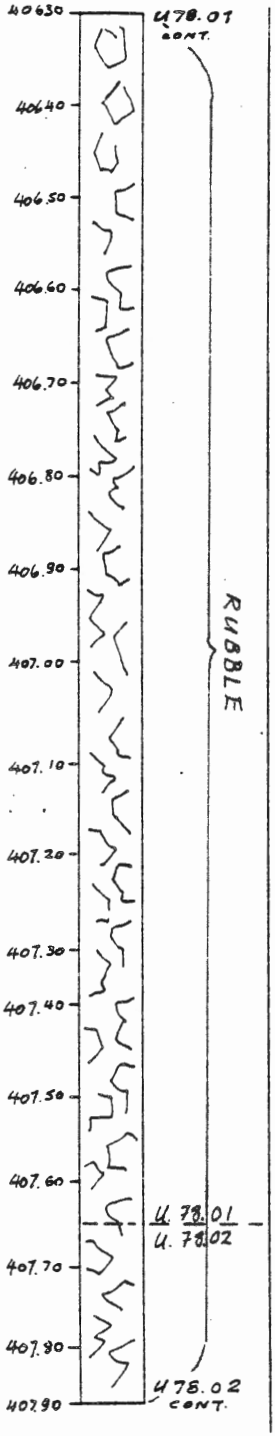
UNIT 78.01 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY 1

Core Box 78 Sheet 2

Visual Core Description Observer T. Purcell

Depth Interval 406.30 m to 407.90 m



UNIT 78.01 cont. OVERALL DESCRIPTION

Upper contact - 405.95 m Ambiguous - in rubble. Depositional, with some black fresh glass from 405.90-406.15 m in rubble. Chilling on both sides of margin.
Lower contact - 407.65 m Depositional with some black fresher glass and a fine-grained margin in the direction of chill.
Unit thickness - 1.70 m Type of unit - pillow rubble

Grey-green, fine-grained, aphyric basalt rubble. The core is variolitic with segregation vesicles that are 1-2 mm in size and more sparsely distributed than in Unit 77.04.

No veins but 90% sheet silicates and 10% carbonate line fractures and margins. At 407.20 m, altered glass and sheet silicate line a fracture.

GMA:- low

UNIT 78.02 Description - see Box 78, Sheet 3.

Upper contact - 407.65 m Ambiguous - in rubble. Depositional with fairly fresh black glass.

Grey-green, fine-grained, aphyric pillow basalt.

Vesicles:- 1-2% concentrated from 407.70-407.85 m

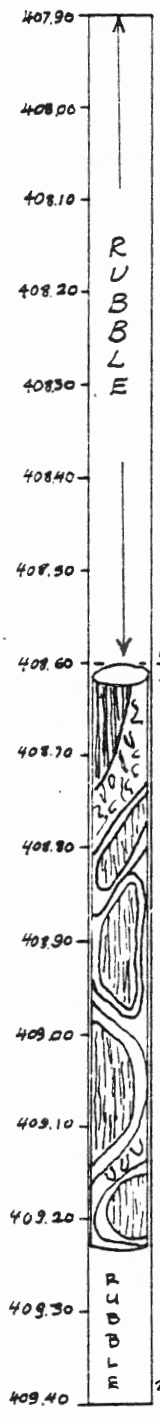
UNIT 78.02 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY 1

Core Box 78 Sheet 3

Visual Core Description Observer T. Purcell

Depth Interval 407.90 m to 409.40 m



UNIT 78.02 OVERALL DESCRIPTION

Upper contact - 407.65 m Ambiguous - in rubble.
Depositional, with fairly fresh black glass.
Lower contact - 408.60 m Ambiguous. Some altered glassy fragments in rubble.
Unit thickness - 0.95 m Type of unit - pillow

Grey-green, fine-grained, aphyric basalt.

Vesicles:- 1-2%, concentrated from 407.70-407.85 m
- segregation vesicles are in irregular shaped patches

No veins but 90% sheet silicates line fractures at the margin.

GMA:- low

UNIT 78.03 OVERALL DESCRIPTION

Upper contact - 408.60 m Ambiguous - in rubble. Fresh black glass in rubble.
Lower contact - 409.50 m Altered glass with chilling toward margin. Depositional.
Unit thickness - 0.90 m Type of unit - pillows

This unit is a section of four or more small pillows from 5-13 cm in length. Each pillow is surrounded by glassy pillow breccia (ranging from 5-11 cm in width) in which many of the brecciated fragments have been altered to smectite. These fragments are set in a very fresh glassy matrix. The rock is grey-green, fine-grained, aphyric basalt.

Vesicles:- <5%
- size - <<1 mm

Veins:- 2% carbonate veining in breccia

GMA:- low

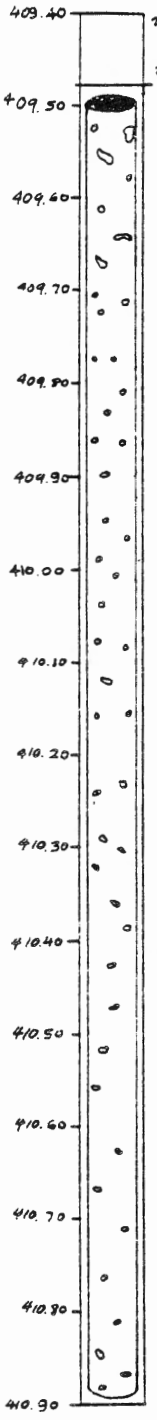
UNIT 78.03 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY 1

Core Box 78 Sheet 4

Visual Core Description Observer T. Purcell

Depth Interval 409.40 m to 410.90 m



UNIT 78.03 cont. Description - see Box 78, Sheet 3.

This unit is a section of four or more small pillows from 5-13 cm in length. Each pillow is surrounded by glassy pillow breccia (ranging from 5-11 cm in width) in which many of the brecciated fragments have been altered to smectite. These fragments are set in a very fresh glassy matrix. The rock is grey-green, fine-grained, aphyric basalt.

UNIT 78.04 OVERALL DESCRIPTION

Upper contact - 409.50 m Depositional. Altered glass with chilling toward margin.
Lower contact - 411.87 m Depositional. Chilled margin with minor altered glass. Fine-grained material is found in the rubble at 411.10 m but delineation of any unit contact would be extremely difficult.
Unit thickness - 2.37 m Type of unit - pillow or massive flow(?)

Grey-green, medium-grained, aphyric, vesicular basalt.

Vesicles:- 5-8%
- size - 1-10 mm
- filling - 50% open (concentrated from 409.50-410.00 m), 30% carbonate, 20% smectite
- filled vesicles concentrated from 410.00-410.90 m
- rounded to patchy

GMA:- low

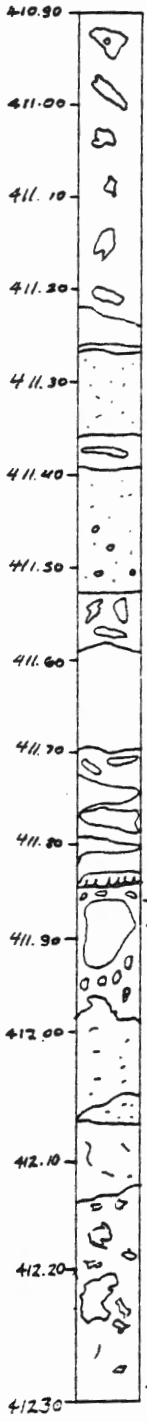
UNIT 78.04 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY1

Core Box 79 Sheet 1

Visual Core Description Observer N. Baglow

Depth Interval 410.90 m to 412.30 m



UNIT 78.04 cont.

Green-grey, fine-grained, aphyric basalt.

Vesicles:- 1-2%
- size - 0.5-5 mm
- filling - 80% open, 15% carbonate, 5% gypsum
- most are rounded

Veins:- 1%
- filling - 40% gypsum, 50% sheet silicates, 10% carbonate (all sheet silicates at lower margin and on fracture faces)

GMA:- smectite after euhedral clinopyroxenes (0.5-1.5 mm) are found around 411.50 m; though odd 6 sided crystal relicts are reminiscent of olivine in shape

UNIT 79.01 OVERALL DESCRIPTION

Upper contact - 411.87 m Ambiguous. Minor altered glass in boundary zone.
Lower contact - 412.80 m Ambiguous - in rubble. Altered glass.
Unit thickness - 0.93 m Type of unit = pillow

Green, fine-grained, aphyric basalt. Overall this unit is a fractured pillow with protruding margins of adjacent pillows.

No vesicles but there are very sporadic pin head voids.

Veins:- 20% (most of this is pillow margins)
- filling - 80% sheet silicates (dark green to black altered glass), 15% gypsum as internal veining (eg. 412.40 m) and 5% pale orange to colourless zeolite filling minute fractures

GMA:- low where core preserved

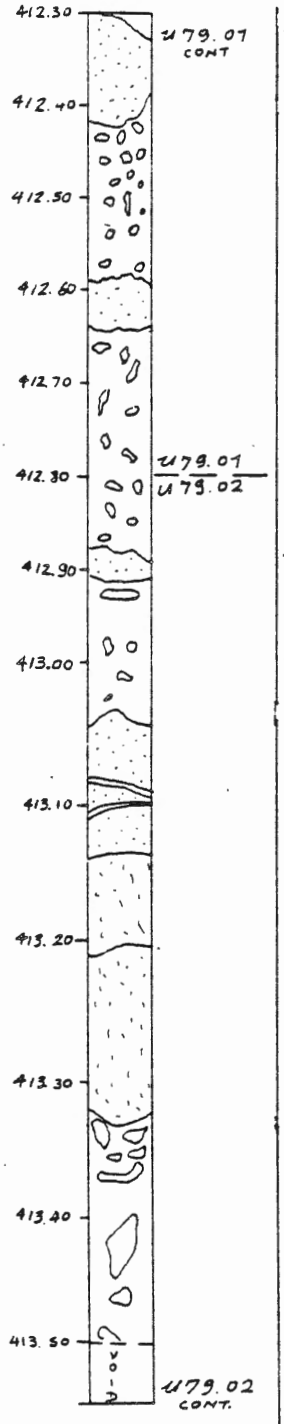
UNIT 79.01 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY 1

Core Box 79 Sheet 2

Visual Core Description Observer N. Baglow

Depth Interval 412.30 m to 413.50 m



UNIT 79.01 cont. Description - see Box 79, Sheet 1.

Green, fine-grained, aphyric basalt. Overall this unit is a fractured pillow with protruding margins of adjacent pillows.

Veins:- 20% (most of this is pillow margins)
- filling - 80% sheet silicates (dark green to black altered glass), 15% gypsum as internal veining (eg. 412.40 m) and 5% pale orange to colourless zeolite filling minute fractures

UNIT 79.02 OVERALL DESCRIPTION

Upper contact - 412.80 m Ambiguous. Altered glass.
Lower contact - 413.95 m Ambiguous. Altered glass.
Unit thickness - 1.15 m Type of unit - pillow(?)

Green-grey, fine-grained, aphyric basalt. For the most part the unit is massive, but with consolidated brecciated zones eg. at 413.36 m.

Vesicles:- 1-2%, sparsely distributed
- size - 1-3 mm
- most are near spherical
- filling - 60% open, 40% gypsum

Veins:- negligible, but marginal and slickensided fracture material accounts for 5%
- filling - 95% sheet silicates, 5% gypsum

GMA:- medium

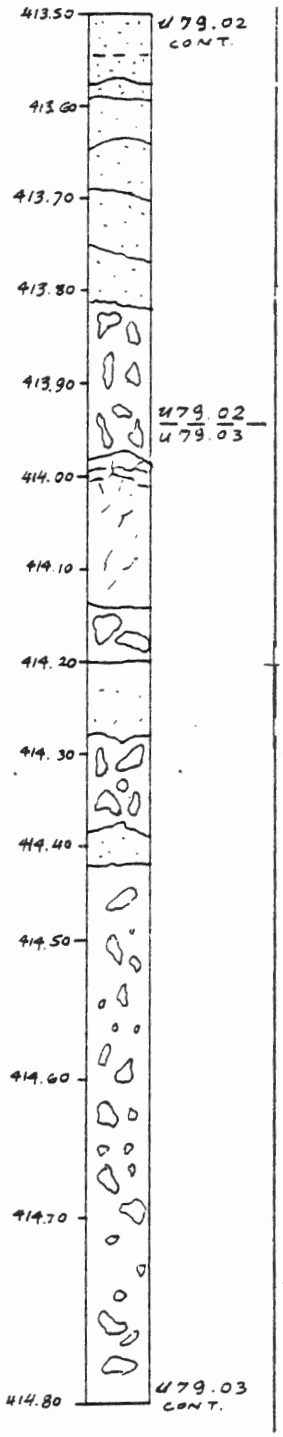
UNIT 79.02 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY 1

Core Box 79 Sheet 3

Visual Core Description Observer N. Baglow

Depth Interval 413.50 m to 414.80 m



UNIT 79.02 cont. Description - see Box 79, Sheet 2.

Green-grey, fine-grained, aphyric, pillow basalt.

UNIT 79.03 OVERALL DESCRIPTION

Upper contact - 413.95 m Ambiguous - in rubble. Altered glass. Minor brecciation at 414.00 m.
Lower contact - 417.87 m Depositional. Altered glass in the contact zone.
Unit thickness - 3.92 m Type of unit - massive flow(?)

Green-grey, fine-grained, aphyric basalt. Very fine-grained patches, such as at 415.40 m, could represent possible cooling contacts, but are too poorly defined and the rock type above and below is the same, therefore no boundaries are drawn.

Vesicles:- 2%
- size - 1-3 mm
- filling - most are essentially open with only 10% towards base with celadonite films
- predominantly spherical
- larger (up to 15 mm) weathered out voids are found (eg. at 414.90 m) but do not have typical vug shapes and are more akin to plucked out minor fractures

Veins:- negligible, but there are some dark segregation-like fine-grained veins and patches towards the top (eg. at 414.08 m)
- otherwise slickensided dark green sheet silicates film most fracture planes, accounting for 5% of the unit
- filling - 95% sheet silicates, 5% zeolite as small 0.5 mm pale yellow crystals on some fracture surfaces eg. at 415.28 m

GMA:- low to medium, greater towards base

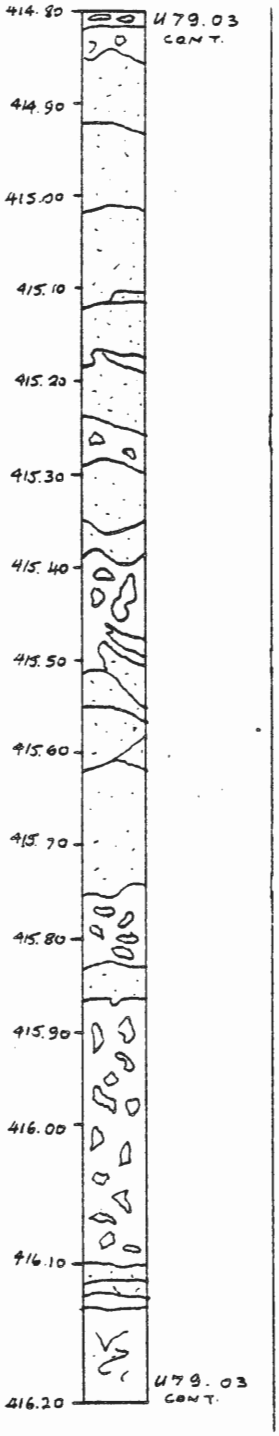
UNIT 79.03 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY 1

Core Box 79 Sheet 4

Visual Core Description Observer N. Baglow

Depth Interval 414.80 m to 416.20 m



UNIT 79.03 cont. Description - see Box 79, Sheet 3.

Green-grey, fine-grained, aphyric basalt. Very fine-grained patches, such as at 415.40 m could represent possible cooling contacts, but are too poorly defined and the rock type above and below is the same, therefore no boundaries are drawn.

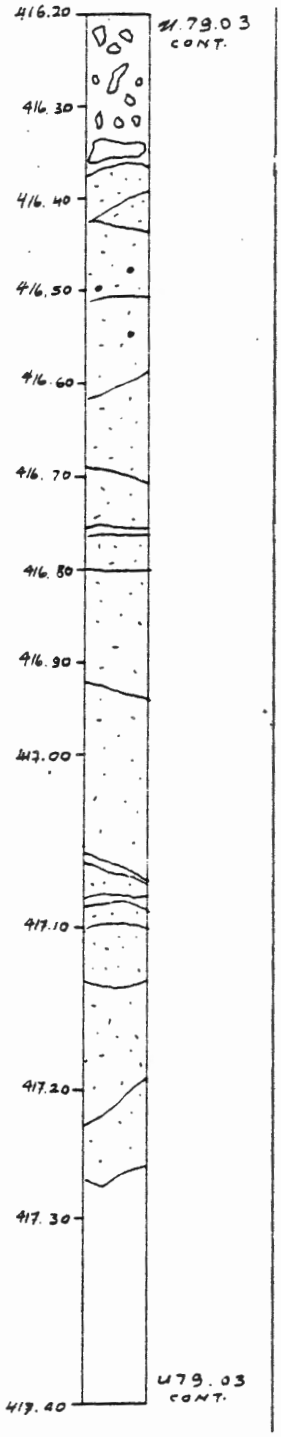
UNIT 79.03 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY 1

Core Box 80 Sheet 1

Visual Core Description Observer N. Baglow

Depth Interval 416.20 m to 417.40 m



UNIT 79.03 cont. Description - see Box 79, Sheet 3.

Green-grey, fine-grained, aphyric, massive basalt flow.

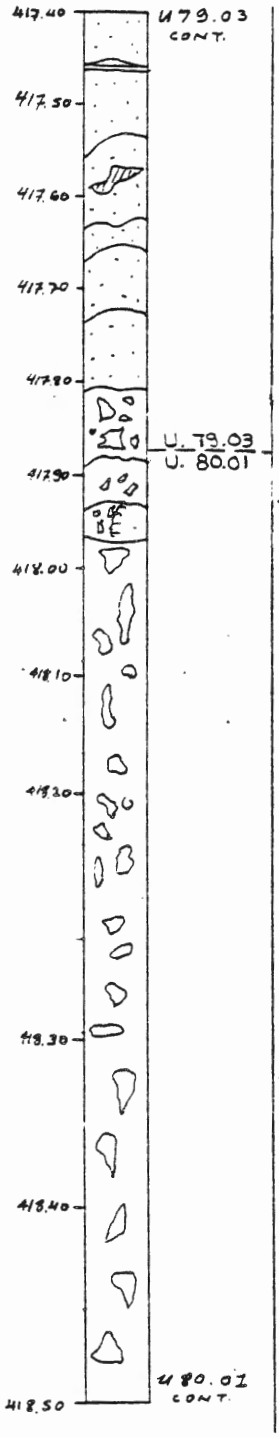
UNIT 79.03 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY 1

Core Box 80 Sheet 2

Visual Core Description Observer N. Baglow

Depth Interval 417.40 m to 418.50 m



UNIT 79.03 cont. Description - see Box 79, Sheet 3.

Green-grey, fine-grained, aphyric, massive basalt flow.

UNIT 80.01 OVERALL DESCRIPTION

Upper contact - 417.87 m Depositional. Altered (not highly) glass and minor fresh glass, zeolitised.
Lower contact - 418.57 m Depositional. Minor altered glass.
Unit thickness - 0.70 m Type of unit - pillow

Fine-grained, green-grey, aphyric basalt.

Vesicles:- 2%
- larger ones (2-4 mm) concentrated in upper part
- lower portion contains voids predominantly in the 0.2-1 mm size range

Veins:- internal veining negligible - total including margins is 5%
- filling - 70% sheet silicates, 20% zeolites, 5% gypsum, 5% fresh glass
- fractures of white zeolite(?) often rimmed by pale orange gmelinite (at upper contact)

GMA:- medium

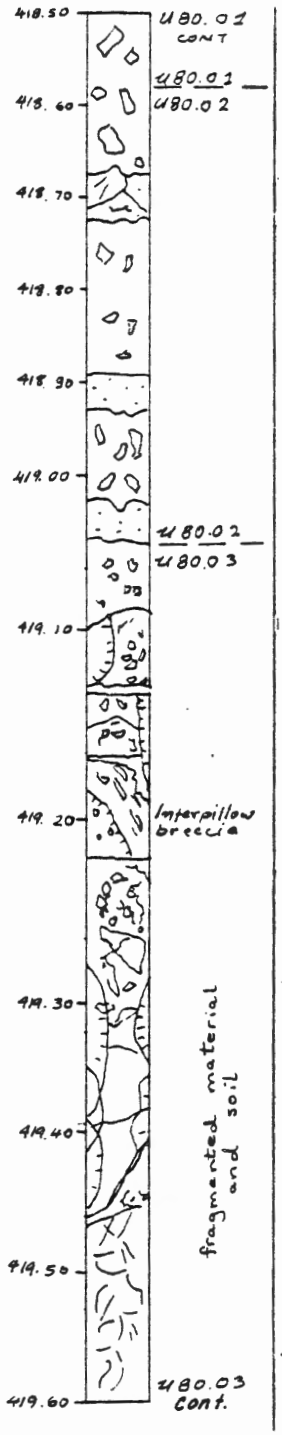
UNIT 80.01 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY7

Core Box 80 Sheet 3

Visual Core Description Observer N.Baglow/S Agrell

Depth Interval 418.50 m to 419.60 m



UNIT 80.01 cont. Description - see Box 80, Sheet 2.

Green-grey, fine-grained, aphyric, pillow basalt.

UNIT 80.02 OVERALL DESCRIPTION

Upper contact - 418.57 m Ambiguous - in rubble. Little or no glassy material.
Lower contact - 419.06 m Depositional (chilled margin) with no glass.
Unit thickness - 0.49 m Type of unit - pillow(?)

Fine-grained, grey-green, aphyric basalt.

Vesicles:- 2%
- size - 0.2-2 mm, larger and more abundant towards the top
- open
- 2-3 mm segregation vesicles are sporadically developed, eg. at 418.70 m

Veins:- negligible, as is definitely attributable marginal material

GMA:- medium
- some slickensiding along preserved joint planes (random)

UNIT 80.03 OVERALL DESCRIPTION

Upper contact - 419.06 m Chilled edge of small pillow. Some fragmented modified pillow rims in green smectite and altered glass.
Lower contact - 420.05 m Ambiguous - in rubble.
Unit thickness - 0.99 m Type of unit - pillow

Series of small pillows separated by altered rock fragments in altered green palagonite (smectite?). Grey-green, fine-grained, aphyric vesicular basalt. Between pillows is a "spall fragment" breccia of hyaline chill broken up into boxlike fragments replaced by milky smectite. Kernels of deep brown palagonite occur as residuals. Maybe this is a glassy chill altered to smectite in situ, replacing fracture pattern of originally vitric rock(?).

Vesicles:- 1% near pillow contact
- size - 2 mm
- filling - no calcite, dark rim and milky white filling (soft and waxy)

Veins:- size - <1 mm
- filling - white flaky material and glass

GMA:- 75% - to layer silicates

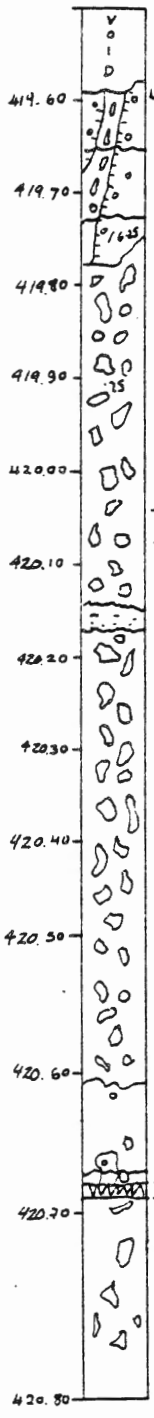
UNIT 80.03 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY 1

Core Box 80 Sheet 4

Visual Core Description Observer N. Baglow / S. Agrell

Depth Interval 419.60 m to 420.80 m



UNIT 80.03 cont. Description - see Box 80, Sheet 3.

This unit is a series of small pillows separated by altered rock fragments in altered green palagonite (smectite?). Grey-green, aphyric, fine-grained, vesicular basalt.

UNIT 80.04 OVERALL DESCRIPTION

Upper contact - 420.05 m Ambiguous - in rubble. Dark green smectite or altered glass in rubble.
Lower contact - 420.68 m Sharp. Chilled. No glass.
Unit thickness - 0.63 m Type of unit - pillow

This unit is largely rubble of grey, fine-grained, pillow basalt.

Vesicles:- 1%
- size - <1 mm
- filling - 80% open, 20% layer silicates

Nc veins but fractures are slightly slickensided.

GMA:- 70% - to layer silicates

UNIT 80.05 Description - see Box 81, Sheet 1.

Upper contact - 420.68 m Depositional. Chilled. No glass.

Green-grey, fine-grained, vesicular, pillow basalt.

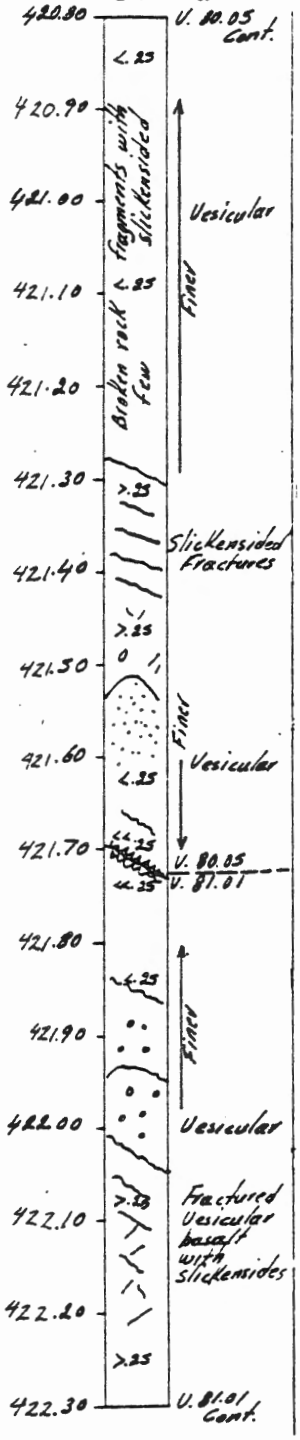
UNIT 80.05 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 81 Sheet 1

Visual Core Description Observer S.O. Agrell

Depth Interval 420.80 m to 422.30 m



UNIT 80.05 cont. OVERALL DESCRIPTION

Upper contact - 420.68 m Depositional. Chilled. No glass.
Lower contact - 421.70 m Depositional. Chill - over 10 cm.
Unit thickness - 1.02 m Type of unit - pillow

Green-grey, fine-grained, vesicular basalt. At 420.90 m there is possibly a minor chill - more probably a hydrothermal alteration zone adjacent to slickensided fractures. In the zone of broken fragments from 420.90-421.20 m, darker green alteration adjacent to most fractures and slickensides with deep, dull green surfaces are present. The zone from 421.30-421.50 m is distinctly coarser-grained (>0.25 mm) followed by a 20 cm zone of gradually decreasing grain size to the lower contact. From 421.30-421.40 m, there is a regularly spaced set of sub parallel fractures - all slickensided with dark green smectite coating.

Veins:- <1%

GMA:- 60% - to 100% layer silicates

UNIT 81.01 OVERALL DESCRIPTION

Upper contact - 421.70 m Depositional. Chilled. No glass. Progressively chilled for 20 cm.
Lower contact - 423.22 m Depositional. Gradual chill. No glass.
Unit thickness - 1.52 m

Green-grey, vesicular basalt with an intersertal texture and possibly a trace of olivine. There are slickensided fractures from 422.10-422.30 m and a broken zone of basaltic fragments broken along slickensided dark green fracture system. Grain size increases to >0.5 mm at 422.30 m and then gradually decreases to the lower contact.

Vesicles:- 3%
- size - <1-3 mm
- filling - 80% open, 20% layer silicates
- some large vesicles unevenly distributed

Veins:- <1% - slickensided fractures

GMA:- 60% - to 90% layer silicates, 10% carbonate

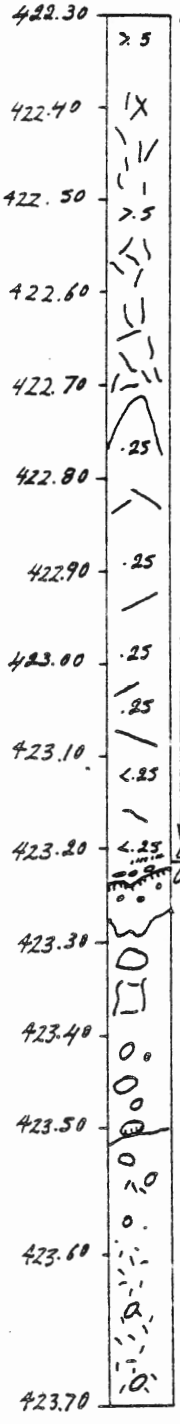
UNIT 81.01 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 81 Sheet 2

Visual Core Description Observer S.O.Agrell/M.Lambert

Depth Interval 422.30 m to 423.70 m



UNIT 81.01 cont. Description - see Box 81, Sheet 1.

Green-grey, vesicular basalt with an intersertal texture (as illustrated) and possibly a trace of olivine. Grain size increases to >0.5 mm at 422.30 m and then gradually decreases to the lower contact. From 422.40-422.70 m, there is a zone of rubbly fragments of slickensided basalt.

UNIT 81.02 OVERALL DESCRIPTION

Upper contact - 423.22 m Sharp contact marked by hyaloclastite 1-2 cm wide. Hyaloclastite is green alteration but there is some black glass.
Lower contact - 428.55 m Glassy chilled margin, 1-2 cm thick, altered buff on one clast of aggregated core.
Depositional.
Unit thickness - 5.33 m Type of unit - massive flow with rubbly and broken top

Aphyric, moderately altered basalt whose colour varies with grain size. It is aphanitic in the upper and lower parts of the unit which are dark green to green grey while the fine-grained center is brownish-grey. The aphanitic upper 1.5 to 2 m grades very gradually into the fine-grained lower central part (about 1.5 m) then back into the aphanitic basal section (30-40 cm). Microlites of feldspar are visible under hand lens.

Vesicles:- two size ranges:- 5% microvesicles and small vesicles form round to irregular spaces up to 1 mm throughout the unit
- 1-2% large round to oval forms range between 3 to 10 mm - some have irregular outlines
- tend to be sparser in the fine-grained parts
- large vesicles in upper 2 m of the flow are lined with green zeolite(?) - near 426.60 and 426.70 m amygdule fillings are white zeolite and calcite

Veins:- fractures - 2 sets of almost orthogonal fractures cut the core in section 4 at an angle of 30° to 45° (see graphic log)
- some surfaces are slickensided (425.80 m)
- veins occur along almost orthogonal fractures
- from 425.30 m and 425.40 m, fractures filled with green smectite; white zeolite and creamy white patches of crysotile (identified by S. Agrell)
- single tabular crystal of green gypsum(?) is 10x20 mm
- gypsum is common in most fractures

GMA:- moderate

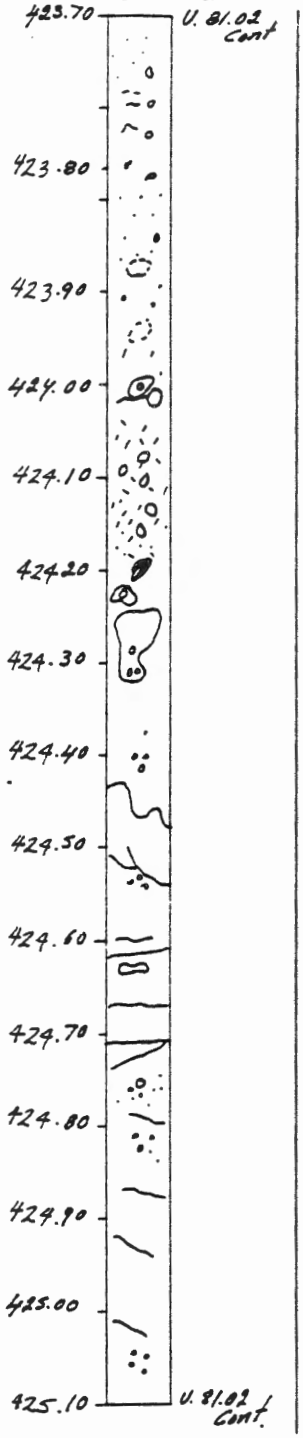
UNIT 81.02 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 81 Sheet 3

Visual Core Description Observer M. B. Lambert

Depth Interval 423.70 m to 425.10 m



UNIT 81.02 cont. Description - see Box 81, Sheet 2.

Aphyric, moderately altered basalt whose colour varies with grain size. It is aphanitic in the upper and lower parts of the unit which are dark green to green grey while the fine-grained center is brownish-grey. The aphanitic upper 1.5 to 2 m grades very gradually into the fine-grained lower central part (about 1.5 m) then back into the aphanitic basal section (30-40 cm). Microlites of feldspar are visible under hand lens.

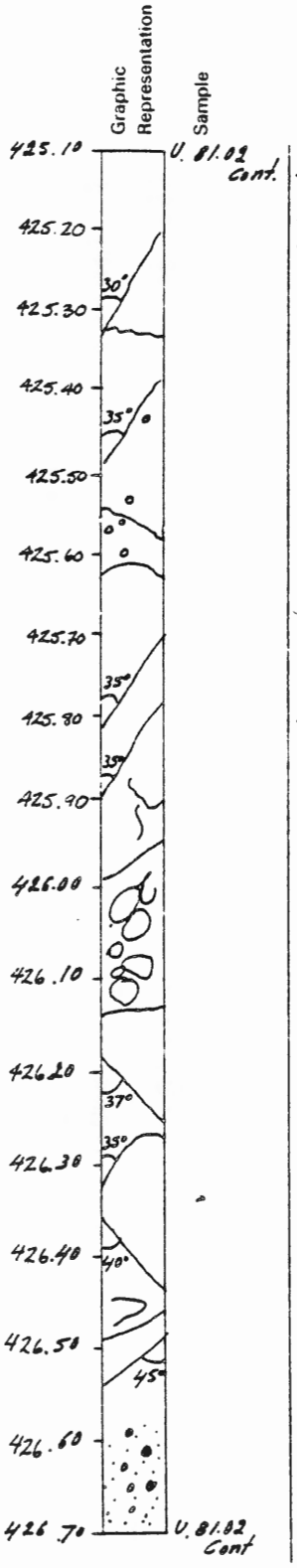
UNIT 81.02 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 81 Sheet 4

Visual Core Description Observer M. B. Lambert

Depth Interval 425.10 m to 426.70 m



UNIT 81.02 cont. Description - see Box 81, Sheet 2.

Aphyric, moderately altered basalt whose colour varies with grain size. It is aphanitic in the upper and lower parts of the unit which are dark green to green grey while the fine-grained center is brownish-grey. The aphanitic upper 1.5 to 2 m grades very gradually into the fine-grained lower central part (about 1.5 m) then back into the aphanitic basal section (30-40 cm). Microlites of feldspar are visible under hand lens.

Veins:- fractures - 2 sets of almost orthogonal fractures cut the core in section 4 at an angle of 30 to 45° (see graphic log)
- some surfaces are slickensided (425.80 m)
- veins occur along almost orthogonal fractures
- from 425.30 m and 425.40 m, fractures filled with green smectite; white zeolite and creamy white patches of crysotile (identified by S. Agrell)
- single tabular crystal of green gypsum(?) is 10x20 mm
- gypsum is common in most fractures

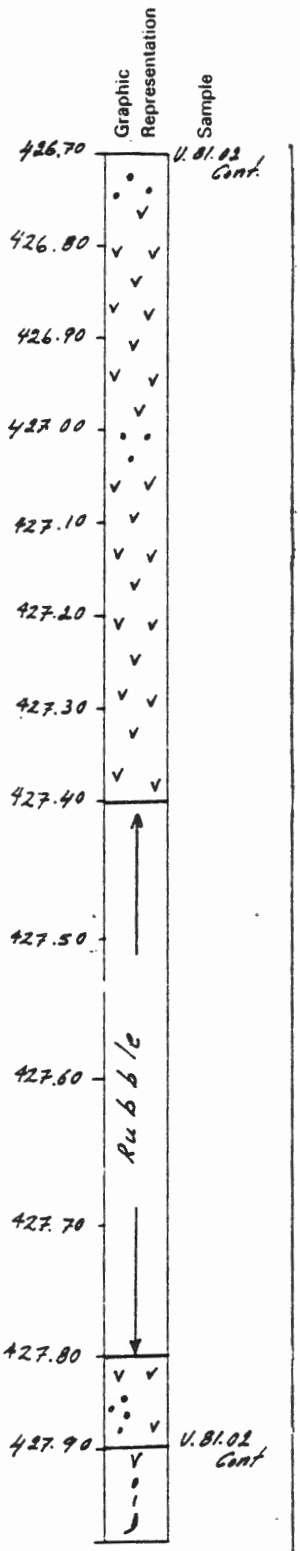
UNIT 81.02 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 82 Sheet 1

Visual Core Description Observer Hilligan & Elsbree

Depth Interval 426.70 m to 427.90 m



UNIT 81.02 cont. Description - see Box 81, Sheet 2.

Sheet flow or intrusive(?). Brownish-grey, fine-grained, aphyric basalt with some variation in grain size and with sparse fine-grained segregation phases. Unit is likely a massive flow.

Vesicles:- 5% distributed throughout - mostly very fine but <1% large ones
- maximum size - 5 mm
- most are empty

No veins.

UNIT 81.02 cont.

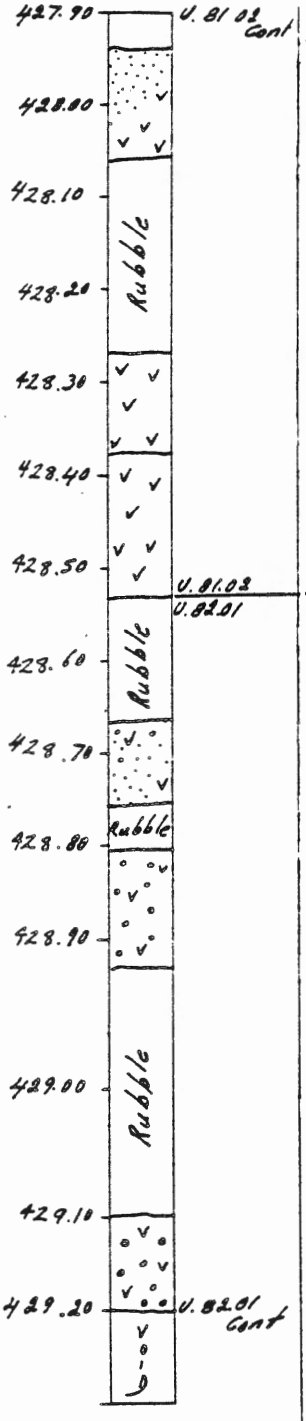
CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 82 Sheet 2

Graphic Representation | Sample

Visual Core Description Observer C. Milligan

Depth Interval 427.90 m to 429.20 m



U. 81.02 Cont

UNIT 81.02 cont. Description - see Box 81, Sheet 2.

Brownish-grey, fine-grained, aphyric basalt with some variation in grain size and with sparse fine-grained segregation phases. Unit is likely a massive flow.

U. 81.03

U. 82.01

UNIT 82.01 OVERALL DESCRIPTION

Upper contact - 428.55 m Altered glass.
Lower contact - 429.80 m Altered glass and decreased grain size.
Unit thickness - 1.25 m Type of unit - flow

Brownish-grey (greenish-grey at top), fine-grained, aphyric basalt.

Vesicles:- 8% - larger ones concentrated in top 30 cm
- maximum size - 8 mm (at 428.90 m)
- filling - 80% open, 20% carbonate

No veins.

UNIT 82.01 cont.

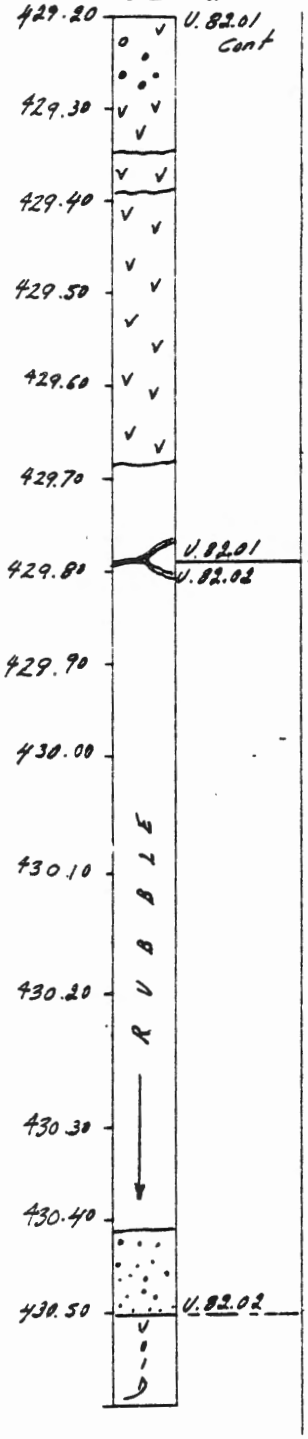
U. 82.01 Cont

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 89 Sheet 3

Visual Core Description Observer C. Milligan

Depth Interval 429.20 m to 430.50 m



UNIT 82.01 cont. Description - see Box 82, Sheet 2.

Brownish-grey (greenish-grey at top), fine-grained, aphyric basalt flow.

UNIT 82.02 OVERALL DESCRIPTION

Upper contact - 429.80 m Depositional. Altered glass.
Lower contact - 430.50 m Depositional. Altered glass.
Unit thickness - 0.70 m Type of unit - pillows

Fine-grained, grey, vesicular basalt. Some fragments of glass at 430.00 m suggest possibility of two pillows(?) here but position is doubtful because of the rubble.

Vesicles:- unsure of abundance
- maximum size - 4 mm in one fragment
- filling - clay lining, no filling

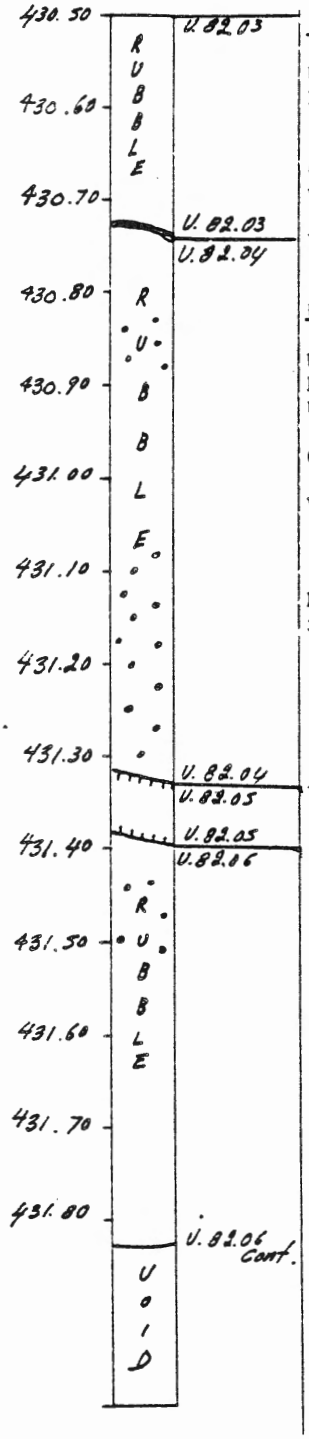
Veins:- ??

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 82 Sheet 4

Visual Core Description Observer C Milligan

Depth Interval 430.50 m to 431.80 m



UNIT 82.03 OVERALL DESCRIPTION

Upper contact - 430.50 m Altered glass. Intrusive?
Lower contact - 430.70 m Altered glass. Intrusive.
Unit thickness - 0.20 m Type of unit - possible dyke

Grey, fine-grained, aphyric basalt which is slightly vesicular at top.

Vesicles:- trace
- filling - clay

UNIT 82.04 OVERALL DESCRIPTION

Upper contact - 430.70 m Altered glass. Truncated?
Lower contact - 431.33 m Altered glass. Truncated.
Unit thickness - 0.63 m

Grey, fine-grained, vesicular, aphyric basalt.

Vesicles:- 10%
- maximum size - 4 mm
- filling - 90% open, 10% clay

No veins but pale green micaceous alteration occurs in fractures (chlorite?).

UNIT 82.05 OVERALL DESCRIPTION

Upper contact - 431.33 m Intrusive. Dip - 50°.
Lower contact - 431.39 m Intrusive. Dip - 50°.
Unit thickness - 0.06 m Type of unit - dyke

Dark grey, fine-grained basalt.

Vesicles:- 3%
- size - <0.5 mm
- filling - 100% clay

UNIT 82.06 Description - see Box 83, Sheet 1.

Upper contact: 431.39 m Truncated.

Grey, fine-grained, vesicular, aphyric basalt.

Vesicles:- 5%
- maximum size - 3 mm
- filling - 80% open, 20% clay

No veins.

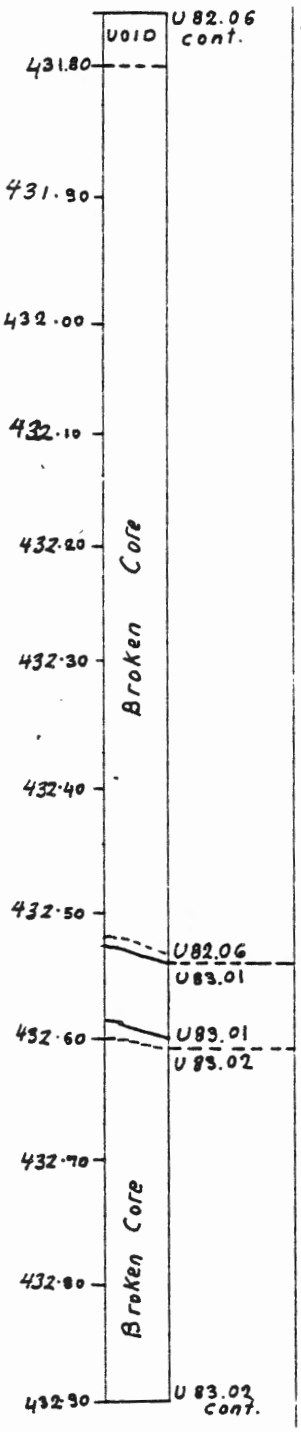
UNIT 82.06 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY- 1

Core Box 83 Sheet 1

Visual Core Description Observer R. Baragar

Depth Interval 431.80 m to 432.90 m



UNIT 82.06 cont. OVERALL DESCRIPTION

Upper contact - 431.39 m Truncated.
Lower contact - 432.53 m Thin altered glassy margin (4 mm) now composed of dark green smectite. Dip - 30°
Unit thickness - 1.14 m Type of unit - flow

Grey to greenish-grey, fine- to medium-grained, aphyric basalt.

Vesicles:- 10% in the upper part but <5% overall
- average maximum size - about 2-3 mm
- maximum size - 5 mm
- almost entirely open

No veins but counting pillow margins about - 1%.

GMA:- 3-5% dark green smectite coating on fracture surfaces
- some fractures have slickensides

UNIT 83.01 OVERALL DESCRIPTION

Upper contact - 432.53 m Seemingly chilled. Dip - 30°
Lower contact - 432.60 m Seemingly chilled. Dip - 20°
Unit thickness - 0.07 m Type of unit - probably a very small intrusive that has made its way along pillow margins

Purplish-grey, aphanitic and aphyric dykelet of possibly andesite.

Vesicles:- 2-3%
- size - all <1 mm
- filling - 75% pale bluish opalescent material (silica?), 25% open

Veins:- <1%
- filling - white zeolite

UNIT 83.02 Description - see Box 83, Sheet 2.

Upper contact - 432.60 m Very thin altered glassy contact (3-4 mm) between dykelet above and crystalline phase of pillow. Dip - 20°

Dark greenish-grey, medium-grained, aphyric basalt intrusion or flow.

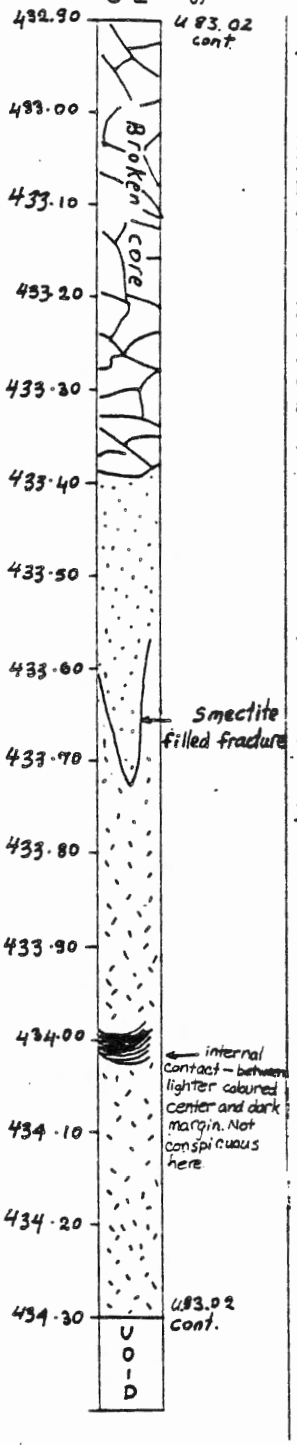
UNIT 83.02 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 83 Sheet 2

Visual Core Description Observer R. Barager

Depth Interval 432.90 m to 434.30 m



UNIT 83.02 cont. OVERALL DESCRIPTION

Upper contact - 432.60 m Very thin altered glassy contact (3-4 mm) between dykelet above and crystalline phase of pillow. Dip - 20°
Lower contact - 435.38 m Altered glassy pillow margin. Double margin pillow above and below is about 3-5 cm. Dip - 40°
Unit thickness - 2.78 m Type of unit - intrusive or flow

Dark greenish-grey (except for a central zone from 434.01-434.91 m which is lighter grey), medium-grained, aphyric basalt. Internal contacts - a central light coloured zone is set off from the remainder of the unit by sharp but not chilled contacts.

Vesicles:- 1-2%
- average maximum size - 2 mm
- filling - about 50% carbonate and most of remainder open
- in addition a second generation of vesicles can be seen in the interstices of the rock which may comprise an additional 1-2% and are commonly open

Veins:- about 1% including altered glassy rims
- size - internal veins generally 2-3 mm
- filling - 25% carbonate, 75% green smectite

GMA:- 5% - green layer silicate coatings on all fracture surfaces, slickensided in part

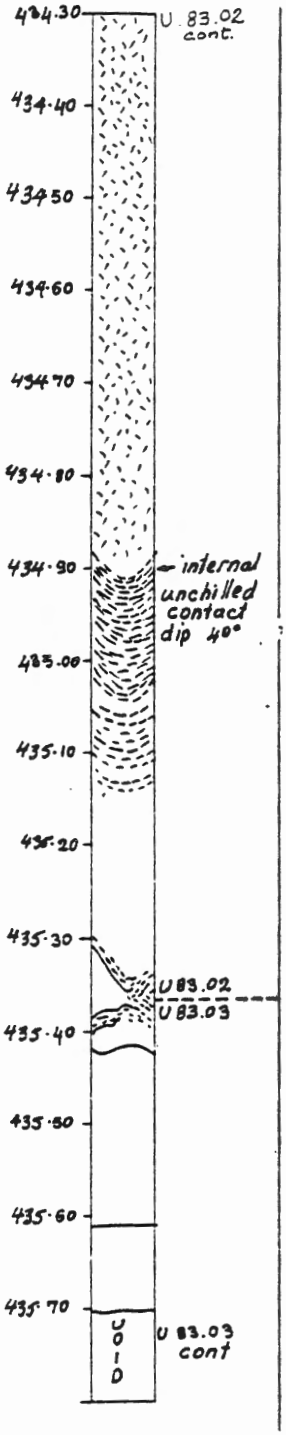
UNIT 83.02 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY- 1

Core Box 83 Sheet 3

Visual Core Description Observer R. Barager / P.T.R.

Depth Interval 434.30 m to 435.70 m



UNIT 83.02 cont. Description - see Box 83, Sheet 2.

Dark greenish-grey (except for a central zone from 434.10-434.91 which is lighter grey), medium-grained, aphyric basalt intrusive or flow. Internal contacts - a central light coloured zone is set off from the remainder of the unit by sharp but not chilled contacts.

UNIT 83.03 OVERALL DESCRIPTION

Upper contact - 435.38 m Glassy pillow margin.
Lower contact - 435.90 m Glassy pillow margin.
Unit thickness - 0.52 m Type of unit - pillow

Light grey, fine-grained, aphyric basalt pillow with glassy rinds.

Vesicles:- 1%
- size - 0.5 mm
- open
- irregular shape

Veins:- <<1%
- some veinlets in glassy margins
- filling - zeolites

GMA:- fresh

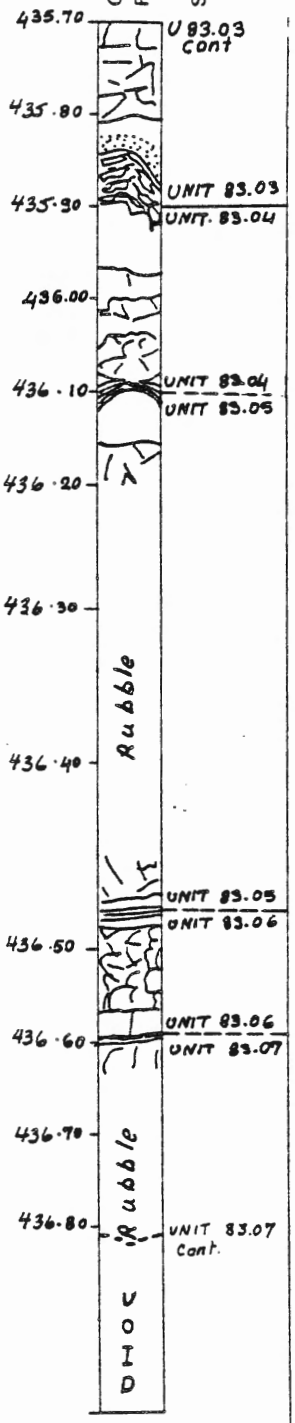
UNIT 83.03 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY- 1

Core Box 83 Sheet 4a

Visual Core Description Observer R. Baragar

Depth Interval 435.70 m to 436.80 m



UNIT 83.03 cont. Description - see Box 83, Sheet 3.

Light grey, fine-grained, aphyric pillow basalt with glassy rinds.

UNIT 83.04 OVERALL DESCRIPTION

Upper contact - 435.90 m Glassy pillow margin.
Lower contact - 436.10 m Minimum of 1.5 cm of dark green smectite. Some fresh glass. Dip - 20°
Unit thickness - 0.20 m Type of unit - pillow

Greenish-grey, aphanitic, aphyric basalt.

No vesicles.

No veins but 10% counting altered glassy margins - mainly smectite.

GMA:- 3-4% - greenish layer silicate coatings on fracture surfaces

UNIT 83.05 OVERALL DESCRIPTION

Upper contact - 436.10 m Altered glassy margin. Some fresh glass. Dip - 20°
Lower contact - 436.46 m Altered glassy margin. At high angle to core. However incomplete and not well defined.
Unit thickness - 0.36 m Type of unit - pillow

Greenish-grey, fine-grained, aphyric basalt.

No vesicles.

No internal veins but 3-4% if margins are included - all dark green smectite.

GMA:- 5% fracture surface coatings of dark green smectite or celadonite

UNIT 83.06 OVERALL DESCRIPTION

Upper contact - 436.46 m Altered glassy margin. Not well defined.
Lower contact - 436.60 m Very friable, altered glass - about 1 cm thick total - ie. both pillow margins. Dip - 10°
Unit thickness - 0.14 m Type of unit - pillow

Medium grey, fine-grained basalt. The core is highly fractured and in part it is mud cemented gritty material.

No vesicles.

Veins:- too fractured for identification
- margins compose 8% - all smectite

GMA:- 5% smectite coatings on minutely fractured core

UNIT 83.07 Description - see Box 83, Sheet 4b.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 83 Sheet 4b

Graphic Representation | Sample

Visual Core Description Observer R. Baragar

Depth Interval 435.70 m to 436.80 m

UNIT 83.07 OVERALL DESCRIPTION

Upper contact - 436.60 m Very friable, altered glass - about 1 cm thick total -ie. both pillow margins. Dip - 10°
Lower contact - 437.00 m
Unit thickness - 0.40 m Type of unit - pillow

Grey, fine-grained basalt. The core is highly fractured - 2-4 cm average size.

Vesicles:- few if any visible

Veins:- no internal veins, with pillow margins about 4%
- green smectite

GMA:- 5% green smectite coats fracture surfaces

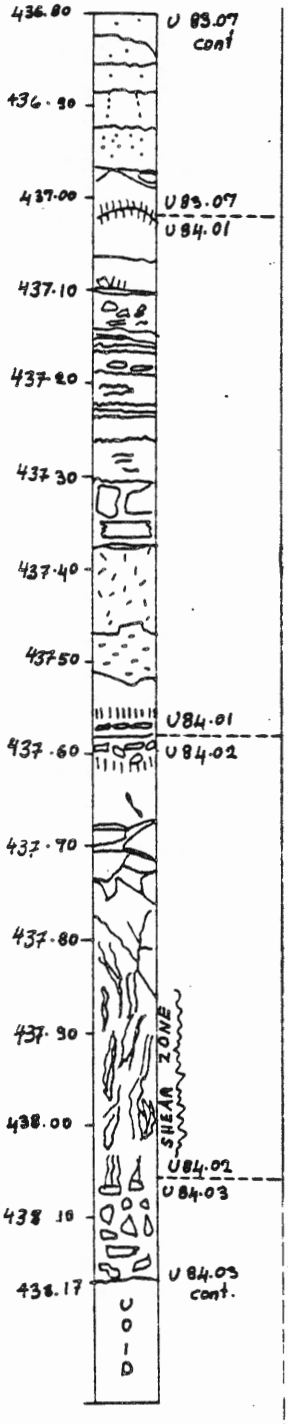
UNIT 83.07 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 84 Sheet 1

Visual Core Description Observer N.Baglow

Depth Interval 436.80 m to 438.17 m



UNIT 83.07 cont. Description - see Box 83, Sheet 4b.

Grey, fine-grained, basaltic pillow.

UNIT 84.01 OVERALL DESCRIPTION

Upper contact - 437.00 m Depositional with smectites (altered glass) over 0.5-1 cm.
Lower contact - 437.56 m Depositional with 2-4 cm zone of altered glass and basalt fragments.
Unit thickness - 0.56 m Type of unit - pillow.
Green-grey, fine-grained, aphyric basalt. Minor patches of mottling are found generally towards the base.

No vesicles - only very sparse pin head voids.
Veins:- internal veining slight, comprising hairline fractures and dilations
- filling - carbonate and white to colourless zeolite(?)
- pillow margins account for approximately 15% of the unit (high due to inclusion of marginal material from adjacent pillow)
- margin is 90% sheet silicates (smectites), 1% fresh glass as black vitreous 2-3 mm specks at 437.02 m, 5% zeolites (pale orange to white eg. at 437.40 m) and 4% carbonate
GMA:- medium

UNIT 84.02 OVERALL DESCRIPTION

Upper contact - 437.56 m Depositional.
Lower contact - 438.05 m Ambiguous with no glass. Pale green schist marks a shear zone from 437.85 to 438.05 m and above this the unit is strongly brecciated for a further 9 cm.
Unit thickness - 0.49 m Type of unit - pillow
Green-grey, fine-grained, aphyric basalt.

Vesicles:- <1%
- average size - 1 mm
- maximum size - 2 mm
- open
Veins:- slight, largely confined to fractures in upper portion lined with pale orange to white zeolites (?) and minor carbonate
- overall 60% of unit
- filling - 95% green sheet silicates, 3% zeolites and 2% carbonate (total includes solid brecciated zone but not shear zone, the width of which is difficult to determine)
GMA:- medium to high

UNIT 84.03 Description - see Box 84, Sheet 2.

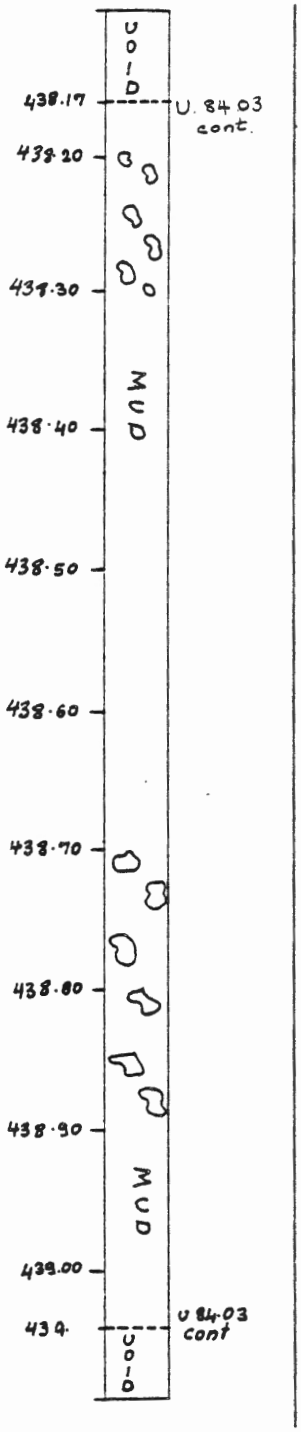
Upper contact - 438.05 m Ambiguous. No glass. Light green, sheared smectite zone marks contact. Dip not measurable.
Light grey-green to grey, aphanitic to very fine-grained, aphyric basalt rubble.
UNIT 84.03 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 84 Sheet 2

Visual Core Description Observer N. Baglow

Depth Interval 438.17 m to 439.05 m



UNIT 84.03 cont. OVERALL DESCRIPTION

Upper contact - 438.05 m Ambiguous. No glass. Light green, sheared smectite zone marks contact. Dip not measurable.
Lower contact - 439.40 m Depositional(?). Highly fragmented. No chill or glass preserved, however upper contact of Unit 84.04 is distinct and contains relatively fresh glass. Dip not measurable.
Unit thickness - 1.35 m Type of unit - ? - rubble

Light grey-green to grey, aphanitic to very fine-grained, aphyric fragmented basalt in a light green mud/clay matrix (shear zone?).

Vesicles:- very minor - <<1%
- average maximum size - <<0.5 mm
- filling - 30% layer silicates, 5% opaques, ? zeolite, ? carbonate, 65% open

No veins but thin carbonate fractures are present.

GMA:- 50% - to 80% layer silicates, 15% opaques, 5% zeolites

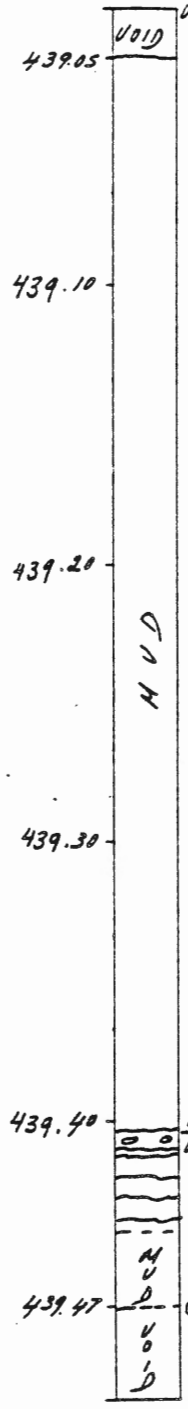
UNIT 84.03 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 84 Sheet 3

Visual Core Description Observer N.Baglow/D.Bailey

Depth Interval 439.05 m to 439.47 m



UNIT 84.03 cont. Description - see Box 84, Sheet 2.

Light grey-green to grey, aphanitic to very fine-grained, aphyric fragmented basalt in a light green mud/clay matrix (shear zone?).

UNIT 84.04 OVERALL DESCRIPTION

Upper contact - 439.40 m Thin (4 mm) zone of fresh black glass above contact approximately 2 cm thick. Light grey chilled margin. Depositional. Dip - not measurable. Slightly variolitic.
Lower contact - 439.90 m Ambiguous - "spin off" in drilling obscures contact. Change in rock type apparent though. Thin veins (smectite and carbonate) give brecciated appearance to lower 10 cm of unit. Slightly altered glass present within this zone but not a distinct contact.
Unit thickness - 0.50 m Type of unit - pillow?

Light grey-green (minor celadonite staining), fine- to medium-grained, aphyric, highly fragmented basalt.

Vesicles:- very minor - <<1% (essentially non-vesicular)

Veins:- minor - 1-2%, concentrated in lower 10 cm
- filling - predominantly smectite, minor zeolite and carbonate

GMA:- moderate - approximately 55% - to 85% layer silicates, 15% opaques

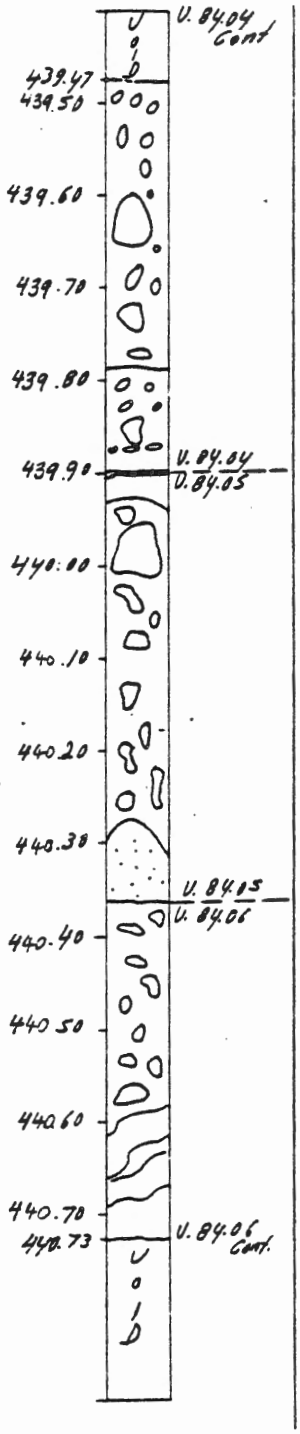
UNIT 84.04 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 84 Sheet 4

Visual Core Description Observer D. Bailey

Depth Interval 439.47 m to 440.73 m



UNIT 84.04 cont. Description - see Box 84, Sheet 3.

Light grey-green (minor celadonite staining), fine- to medium-grained, aphyric, highly fragmented basalt.

UNIT 84.05 OVERALL DESCRIPTION

Upper contact - 439.90 m Ambiguous - spin off in core. Perhaps intrusive.
Lower contact - 440.35 m Ambiguous. No glass. Apparently intrusive. Fine-grained chilled margin.
Unit thickness - 0.45 m Type of unit - ? dyke?

Light green-grey (highly celadonite stained), fine-grained, slightly olivine phyric basalt.

Phenocrysts:- 1% olivine phenocrysts apparently concentrated in lower 10 cm of unit
- average maximum size - 0.5 mm
- subhedral
- totally altered

Vesicles:- 1-2%
- average maximum size - 0.5 mm
- filling(?) - predominantly celadonite, smectite

Veins:- virtually 0%
- very minor celadonite/smectite, zeolite and carbonate line fractures

GMA:- 65% - to 90% layer silicates, 10% opaques

UNIT 84.06 OVERALL DESCRIPTION

Upper contact - 440.35 m Ambiguous - core extensively broken - <2 cm fragments.
Lower contact - 441.35 m Depositional(??) - in rubble.
Minor altered glass. Dip - 0?
Unit thickness - 1.00 m Type of unit - pillow?

Light grey-green, fine grained, aphyric basalt.

Vesicles:- very minor (essentially non-vesicular)
- average maximum size - 0.5 mm
- filling - predominantly celadonite/smectite

No veins but thin fractures lined with celadonite and smectite are common.

GMA:- approximately 60%

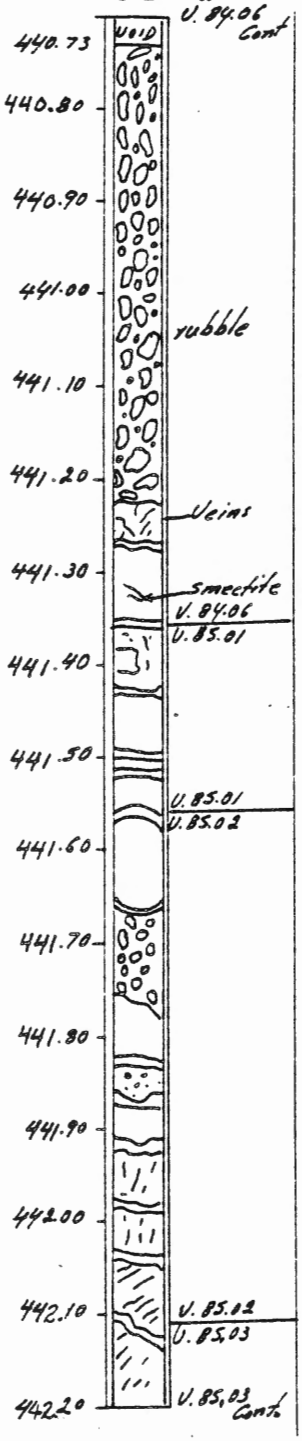
UNIT 84.06 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 85 Sheet 1

Visual Core Description Observer Hassan

Depth Interval 440.73 m to 442.20 m



UNIT 84.06 cont. Description - see Box 84, Sheet 4.

Greenish-grey, fine-grained, aphyric pillow basalt rubble.

Vesicles:- 1%
- round
- filling - smectite

Veins:- 1-2%
- size - 1 mm
- filling - 100% sheet silicates

GMA:- about 70% - to smectite

UNIT 85.01 OVERALL DESCRIPTION

Upper contact - 441.35 m Depositional. Altered glass. Dip - 40°.
Lower contact - 441.55 m Depositional. Dip - 45°
Unit thickness - 0.20 m Type of unit - pillow

Greenish, fine-grained, aphyric basalt.

Vesicles:- 1-2%
- elongated
- filling - smectite

Veins:- 1%
- size - 2 mm
- filling - smectite

GMA:- 5% - to smectite

UNIT 85.02 OVERALL DESCRIPTION

Upper contact - 441.55 m Depositional. Some altered glass. Dip - 45°.
Lower contact - 442.10 m Depositional. Some altered glass. Dip - 45°
Unit thickness - 0.55 m Type of unit - pillow

Greenish, fine-grained, aphyric basalt.

Vesicles:- 1-2%
- filling - 90% smectite, 10% opaques

Veins:- 1%
- size - 1 mm
- filling - smectite

GMA:- 40% - to smectite, opaques

UNIT 85.03 Description - see Box 85, Sheet 2.

Upper contact - 442.10 m Depositional. Some altered glass. Dip - 45°

Grey-green, fine-grained, aphyric, pillow basalt rubble.

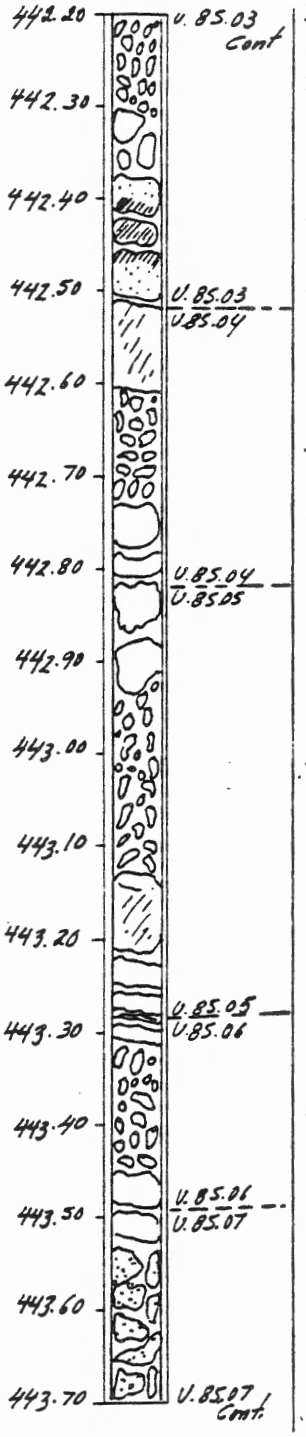
UNIT 85.03 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 85 Sheet 2

Visual Core Description Observer Hassan

Depth Interval 442.20 m to 443.70 m



UNIT 85.03 cont. OVERALL DESCRIPTION

Upper contact - 442.10 m Depositional. Some altered glass.
Dip - 45º
Lower contact - 442.50 m Depositional. Dip - 0º
Unit thickness - 0.40 m Type of unit - pillow

Grey-green, fine-grained, aphyric basalt rubble.

Vesicles:- 1-2%
- filling - 60% open, 40% smectite

Veins:- 1%
- size - 1 mm
- filling - smectite

GMA:- 50% - to smectite, opaques

UNIT 85.04 OVERALL DESCRIPTION

Upper contact - 442.50 m Depositional. Dip - 45º
Lower contact - 442.80 m Depositional. Dip - ambiguous.
Unit thickness - 0.30 m Type of unit - pillow

Greyish, fine-grained, aphyric basalt rubble.

Veins:- 1-2%
- size - 1 mm
- filling - smectite

GMA:- 70% - to smectite

UNIT 85.05 OVERALL DESCRIPTION

Upper contact - 442.80 m Depositional - ambiguous.
Lower contact - 443.30 m Depositional. Glass. Dip - 5º
Unit thickness - 0.50 m Type of unit - pillow

Grey-green, fine-grained, aphyric basalt rubble.

Vesicles:- some round vesicles
- filling - smectite

Veins:- <1%
- size - 1-2 mm
- filling - 70% smectite, 30% open

GMA:- 60% - to smectite

UNIT 85.06 OVERALL DESCRIPTION

Upper contact - 443.30 m Depositional. Dip - 5°.
Lower contact - 443.50 m Depositional. Dip - 0°.
Unit thickness - 0.20 m Type of unit - pillow

Grey, fine-grained, aphyric basalt rubble.

Veins:- size - 1-2 mm
- filling - smectite

GMA:- 60% - to smectite

UNIT 85.07 Description - see Box 85, Sheet 3.

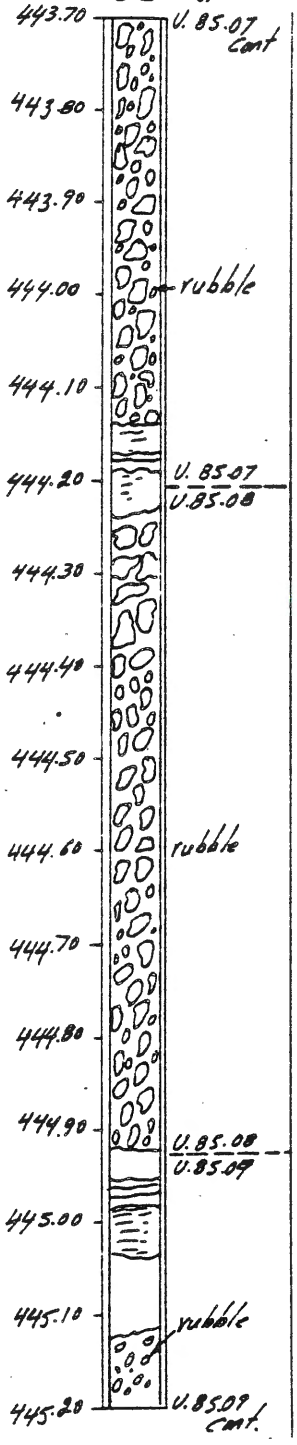
Grey, aphyric, pillow basalt rubble.
UNIT 85.07 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 85 Sheet 3

Visual Core Description Observer Hassan

Depth Interval 443.70 m to 445.20 m



UNIT 85.07 cont. OVERALL DESCRIPTION

Upper contact - 443.50 m Depositional. Altered glass. Dip - 0°
Lower contact - 444.20 m Depositional. Altered glass. Dip - 10°
Unit thickness - 0.70 m Type of unit - pillow

Grey, aphyric basalt rubble.

GMA:- 70% - to smectite

UNIT 85.08 OVERALL DESCRIPTION

Upper contact - 444.20 m Depositional. Altered glass. Dip - 20°
Lower contact - 444.90 m Ambiguous.
Unit thickness - 0.70 m Type of unit - pillow

Grey, fine-grained, aphyric basalt rubble.

Vesicles:- 1-2%
- filling - 80% open, 20% smectite
- round

GMA:- 65% - to smectite

UNIT 85.09 OVERALL DESCRIPTION

Upper contact - 444.90 m Depositional. Altered glass. Dip - 0°
Lower contact - 445.36 m Depositional. Dip - 5°.
Unit thickness - 0.46 m Type of unit - pillow

Grey, fine-grained basalt rubble.

GMA:- 95% - to smectite

UNIT 85.09 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 85 Sheet 4

Visual Core Description Observer Hassan

Depth Interval 445.20 m to 447.00 m

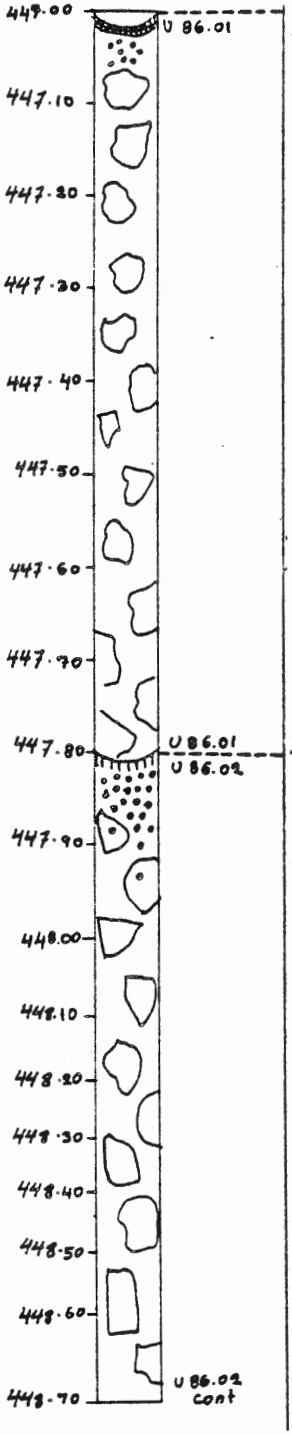
Graphic Representation	Sample	
445.20	U.85.09 Cont	UNIT 85.09 cont. Description - see Box 85, Sheet 3.
		Grey, fine-grained, pillow basalt rubble.
445.30	rubble	
	U.85.09 / U.85.10	UNIT 85.10 OVERALL DESCRIPTION
445.40		Upper contact - 445.36 m Depositional. Dip - 5°.
		Lower contact - 446.65 m Depositional. Dip - 0°.
		Unit thickness - 1.29 m Type of unit - pillow
445.50		Grey-green, fine- to medium-grained, aphyric basalt rubble.
		Vesicles:- 1%-2%
445.60		- round
		- filling - 60% open, 40% smectite
		Veins:- 1%
445.70		- size - 1 mm
		- filling - sheet silicates
445.80		GMA:- 70% - to smectite
445.90		
446.00		
446.10		
446.20		
446.30		
446.40		UNIT 85.11 OVERALL DESCRIPTION
		Upper contact - 446.65 m Depositional. Dip - 0°.
446.50		Lower contact - 447.00 m Depositional. Dip - 20°.
	U.85.10 / U.85.11	Unit thickness - 0.35 m Type of unit - pillow
446.60		Grey-green, fine-grained, aphyric basalt.
446.70		Vesicles:- 2%
		- round
		- filling - 50% smectite, 50% open
446.80		- size - 1-2 mm
		Veins:- 1% milky veins
446.90		- size - 1-2 mm
		- filling - smectite
447.00	U.85.11	GMA:- 20% - to smectite

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 86 Sheet 1

Visual Core Description Observer T. Purcell

Depth Interval 447.00 m to 448.70 m



UNIT 86.01 OVERALL DESCRIPTION

Upper contact - 447.00 m Ambiguous. Slightly altered glass over 5 cm.
Lower contact - 447.80 m Ambiguous. Vesicular with chilling and slightly altered glass.
Unit thickness - 0.80 m Type of unit - pillow

Green-grey, fine-grained, aphyric basalt.

Vesicles:- 4% concentrated at top and bottom of unit
- maximum size - 1 mm spheres
- filling - pale blue clay minerals (smectite)

GMA:- low to medium

UNIT 86.02 OVERALL DESCRITPION

Upper contact - 447.80 m Ambiguous. Vesicular with chilling and slightly altered glass.
Lower contact - 449.46 m 15 cm zone of vesicular chilled margin, containing fresh and altered glass. Depositional.
Unit thickness - 1.66 m Type of unit - pillow

Green-grey, fine-grained, aphyric basalt.

Vesicles:- 4% sparsely distributed throughout the unit but concentrated near the upper and lower contacts
- filling - those at the upper contact are open and those at the lower contact (1 mm) filled with pale blue clay minerals
- rarely vesicles are filled with greenish-brown zeolite

Veins:- carbonate veining present in the lower 25 cm of the unit (30% carbonate, 70% sheet silicates)
- sparse gypsum lines some fractures

GMA:- low to moderate

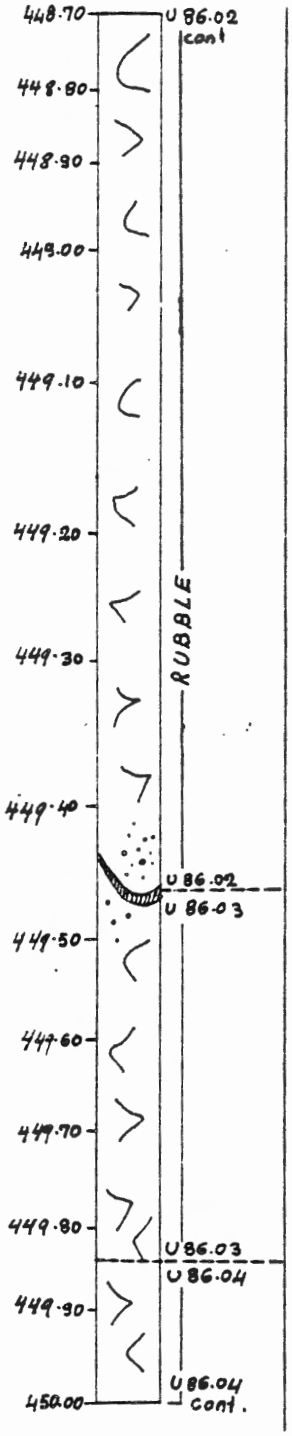
UNIT 86.02 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 86 Sheet 2

Visual Core Description Observer T. Purcell

Depth Interval 448.70 m to 450.00 m



UNIT 86.02 cont. Description - see Box 86, Sheet 1.

Green-grey, fine-grained, aphyric pillow basalt rubble.

UNIT 86.03 OVERALL DESCRIPTION

Upper contact - 449.46 m Depositional.
Lower contact - 449.84 m Ambiguous - it lies somewhere between 449.60-449.80 m. Vesicular with some altered glass and chilling.
Unit thickness - 0.38 m Type of unit - pillow

Green-grey, fine-grained, vesicular, aphyric basalt.

Vesicles:- 20%?
- size - 1-2 mm
- filling - pale blue smectite, and rarely a pale brown zeolite

Veins:- 3%
- filling - carbonate

GMA:- moderate

UNIT 86.04 OVERALL DESCRIPTION

Upper contact - 449.84 m Ambiguous. Vesicular with altered glass and chilling.
Lower contact - 450.30 m Depositional with a 2 cm altered glassy margin and a narrow chill zone.
Unit thickness - 0.46 m Type of unit - pillow

Grey-green, fine-grained, aphyric basalt.

Vesicles:- 3%? with glassy blotches 1 mm throughout the unit

No veins but sheet silicates line 1% fractures.

GMA:- low to moderate
- unit is mottled in lower 10 cm

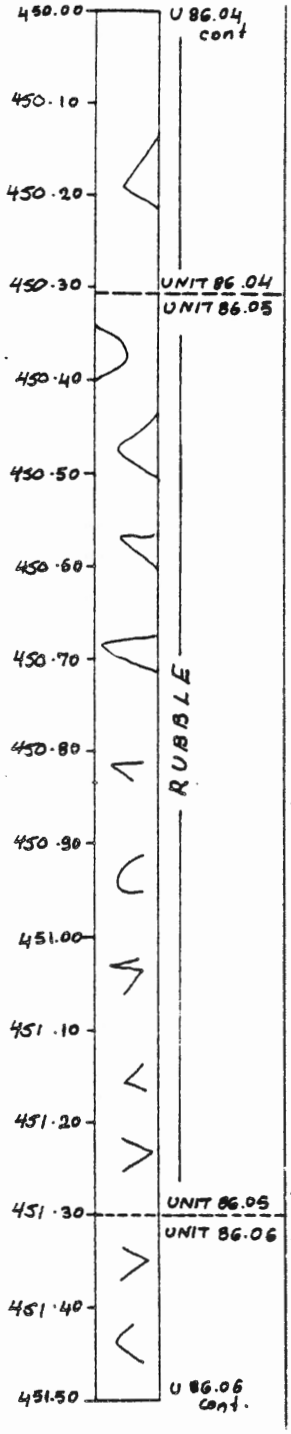
UNIT 86.04 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 86 Sheet 3

Visual Core Description Observer T. Purcell

Depth Interval 450.00 m to 451.50 m



UNIT 86.04 cont. Description - see Box 86, Sheet 2.

Grey-green, fine-grained, aphyric pillow basalt.

UNIT 86.05 OVERALL DESCRIPTION

Upper contact - 450.30 m Depositional.
Lower contact - 451.30 m Depositional. Vesicular with some altered glass and a chilled margin.
Unit thickness - 1.00 m Type of unit - pillow

Grey-green, fine-grained, aphyric, vesicular basalt.

Vesicles:- 5%
- size - 1-2 mm
- filling - pale blue smectite and translucent zeolite

No veins.

GMA:- moderate

UNIT 86.06 OVERALL DESCRIPTION

Upper contact - 451.30 m Depositional.
Lower contact - 452.00 m Depositional with a 5 cm zone of fairly fresh glass. This contact is vesicular and mottled.
Unit thickness - 0.70 m Type of unit - pillow

Vesicles:- 5%
- filling - pale blue smectite

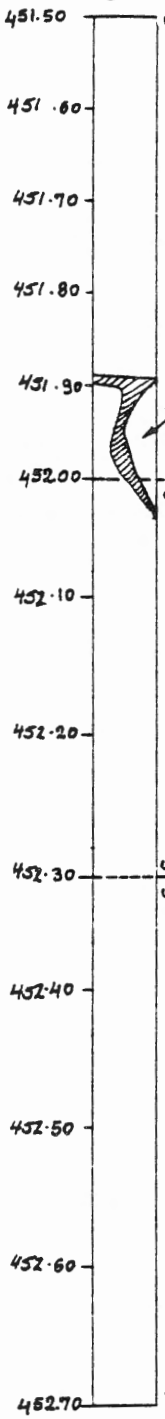
UNIT 86.06 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 86 Sheet 4

Visual Core Description Observer T. Purcell/N. Marsh

Depth Interval 451.50 m to 452.70 m



UNIT 86.06 cont. Description - see Box 86, Sheet 3.

Vesicular pillow basalt.

UNIT 86.07 OVERALL DESCRIPTION

Upper contact - 452.00 m Depositional.
Lower contact - 452.30 m Glass in rubble.
Unit thickness - 0.30 m Type of unit - pillow

Grey-green, fine-grained, aphyric, vesicular basalt.

Vesicles:- 25%?
- filling - 5% translucent zeolite, 95% sheet silicates

Veins:- 1%
- filling - carbonate

UNIT 86.08 OVERALL DESCRIPTION

Upper contact - 452.30 m Glass in rubble.
Lower contact - 452.90 m Change in lithology.
Unit thickness - 0.60 m Type of unit - glass and basalt rubble

Vesicular, grey-green to black, aphyric? basaltic glass (hyaloclastite). The glass is altered with some still black and vitreous pieces, and a large amount of uncemented glass breccia within unit. Also some green-grey, fine-grained, aphyric basalt fragments present in rubble.

Vesicles:- 5-10%, spherical
- size - <2 mm
- filling - lined and infilled by dark green, crystalline platy mineral, chlorite and opalescent pale coloured mineral (zeolite?)

Veins:- 1%
- size - <1 mm
- filling - lined by platy pale grey green-white mineral

GMA:- 50% - platy pale grey green-white mineral appears to be replacing glassy groundmass
- no carbonate

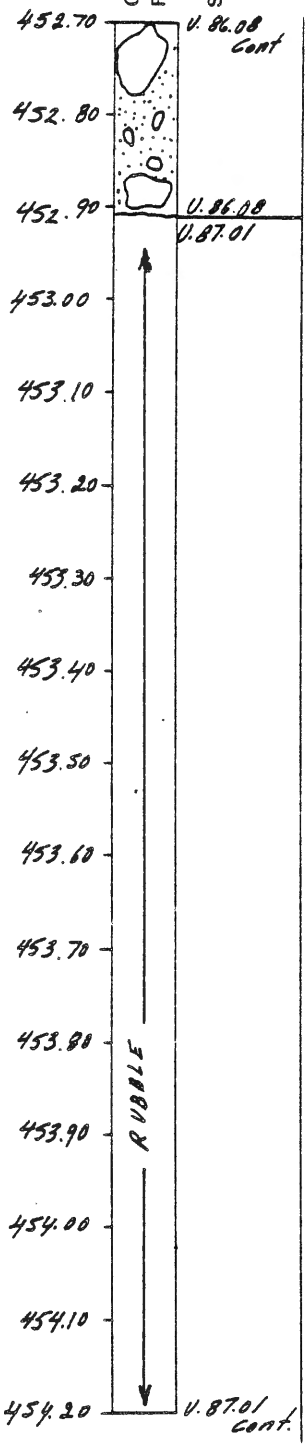
UNIT 86.08 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 87 Sheet 1

Visual Core Description Observer N. Marsh

Depth Interval 452.70 m to 454.20 m



UNIT 86.08 cont. Description - see Box 86, Sheet 4.

Vesicular, grey-green to black, aphyric? basaltic glass (hyaloclastite). The glass is altered with some still black and vitreous pieces, and a large amount of uncemented glass breccia within unit. Also some green-grey, fine-grained, aphyric basalt fragments present in rubble.

UNIT 87.01 OVERALL DESCRIPTION

Upper contact - 452.90 m Drawn at a change in lithology.
Lower contact - 455.35 m Drawn at a change in lithology.
Unit thickness - 2.45 m Type of unit - glassy basalt rubble

Glass pieces are scattered throughout. The unit is similar in appearance to the material in Unit 86.08 but a brown platey mineral is also present as an alteration product, (best example at 454.10 m). The majority of the material (90%) is heavily altered, light green-grey, slightly vesicular very friable basalt. There are also some clumps of soil horizon with root fibres-fallen material from top of hole?

Vesicles:- 1%
- size - <4 mm
- some small solution cavites present

GMA:- 90% - to 99% clays/chlorite, 1% carbonate

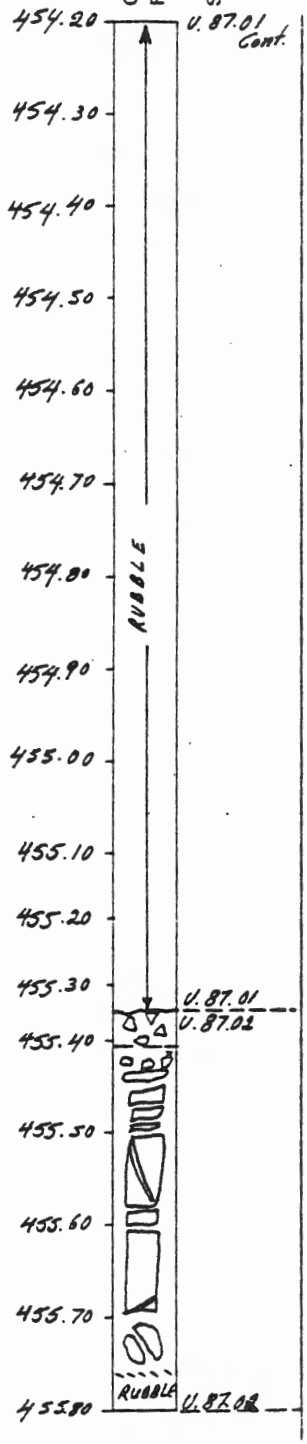
UNIT 87.01 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 87 Sheet 2

Visual Core Description Observer N. Marsh

Depth Interval 454.20 m to 455.80 m



UNIT 87.01 cont. Description - see Box 87, Sheet 1.

No glass in this section. The material consists of fragments of heavily altered, light green-grey basalt.

Vesicles:- varies from 0-15%
- size - <2 mm

GMA:- 90% - to 99% clays/chlorite, 1% carbonate

UNIT 87.02 OVERALL DESCRIPTION

Upper contact - 455.35 m Very friable glass zone. Drawn at lithologic change. Glass altered, 50% replaced horizontal glass zone?
Lower contact - 455.80 m Drawn at change in lithology. Glass margins occur throughout the unit. Altered. Orientation suggests section passes through margins of at least four pillows.
Unit thickness - 0.45 m Type of unit - pillow(s)

Dark grey-green, glassy slightly olivine phyric? basalt. At the base of the unit from 455.75-455.80 m, there is rubble with a few small pebbles of heavily altered, friable basalt material. There is no carbonate in this unit.

Phenocrysts:- 1% altered olivine
- totally replaced by Fe oxide-rich clays
- size - <1 mm

Vesicles:- 5-10%
- spherical
- size - <2 mm
- filling - lined and infilled by 95% very dark green platey mineral and 5% olive green clay or white opalescent mineral

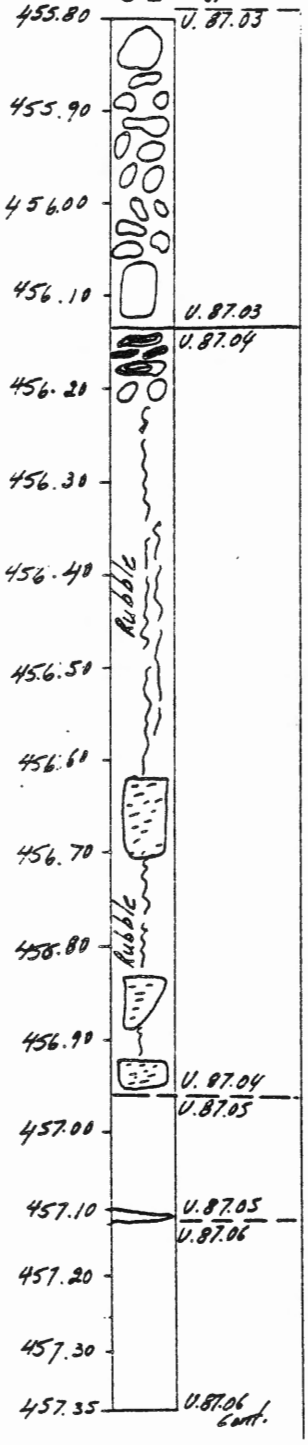
Veins:- 2% irregular
- size - <2 mm
- filling - lined with opalescent white platy mineral, often with Fe oxide staining or light olive green colour

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 87 Sheet 3a

Visual Core Description Observer N. Marsh

Depth Interval 455.80 m to 457.35 m



UNIT 87.03 OVERALL DESCRIPTION

Upper contact - 455.80 m Drawn at a change in lithology. No glass or chill zone recovered.
Lower contact - 456.12 m Chill zone. The glass is heavily altered. From the orientation of variolitic chill zone, glass margin is horizontal.
Unit thickness - 0.32 m Type of unit - pillow

Light grey-green, fine-grained, vesicular, aphyric basalt. The lower chill zone has a well developed variolitic texture, highlighted by alteration. Varioles are 2-3 mm across in a zone about 2 cms thick. Their abundance decreases rapidly towards chilled margin and increases towards interior where they coalesce. Groundmass texture varies from glassy/aphanitic at lower chilled margin to fine-grained, intersertal in unit interior.

Vesicles:- 1-5% spherical - more abundant in upper pieces of unit
- filling - lined by olive green clay but open
- 1 vug near lower chill zone at 456.10 m

Veins:- a few pieces have fine fractures
- most pieces are bounded by chloritic material
- the highly fractured state suggests breaking up during drilling along the fractures of a heavily veined unit

UNIT 87.04 OVERALL DESCRIPTION

Upper contact - 456.12 m Altered glass rich zone.
Lower contact - 456.95 m Not recovered. Band of clay cemented pillow breccia/interpillow sediment. The glass is heavily altered, devitrified, replaced by chlorite and cut by a gypsum bearing vein.
Unit thickness - 0.83 m Type of unit - pillow?

Light grey-green, fine-grained, vesicular, aphyric basalt. The groundmass is fine-grained/intersertal in unit interior and aphanitic to glassy at upper margin. Much of the material is drilling rubble with some broken up pieces of interpillow sediment(?). The rubble consists of heavily altered basalt fragments, sometimes bounded by chloritic material. This unit probably represents more than one cooling unit - some material from uphole??

Vesicles:- 1-5% - some pieces of rubble have up to 15%
- size - generally <2 mm
- filling - some lined by olive green clay but open
- vesicles in glassy zone are lined by dark mineral (clay?) and then lined or infilled by white mineral (gypsum?)

Veins:- <<1%, apart from gypsum lined veins cutting glassy upper margin

UNIT 87.05 Description - see Box 87, Sheet 3b.
UNIT 87.06 Description - see Box 87, Sheet 3b and Box 87, Sheet 4.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 87 Sheet 36

Graphic Representation | Sample

Visual Core Description Observer N. Marsh

Depth Interval 455.80 m to 457.35 m

UNIT 87.05 OVERALL DESCRIPTION

Upper contact - 456.95 m Not recovered. Overlain by interpillow(?) sediment.
Lower contact - 457.12 m Not recovered. Underlain by interpillow(?) sediment.
Unit thickness - 0.17 m Type of unit - pillow margin

Friable, altered basaltic glass to dark grey, aphanitic, aphyric basalt. There are a few possible varioles in the less glassy parts (<2 mm).

Vesicles:- 5% spherical
- size - <1 mm
- filling - dark clay(?) first then white mineral (gypsum?)

Veins:- 5% - network distribution
- filling - gypsum and chlorite lined, some stained by Fe oxides
- size - <2 mm

UNIT 87.06 Description - see Box 87, Sheet 4.

Upper contact - 457.12 m Ambiguous. Overlain by interpillow sediment.

Rubble of a variety of materials. Some very feldspar-rich, medium-grained basalt with some heavily altered pieces (from close to hydrothermal veins??). Mostly, the unit is fragments of grey-green, fine-grained, highly altered basalt.

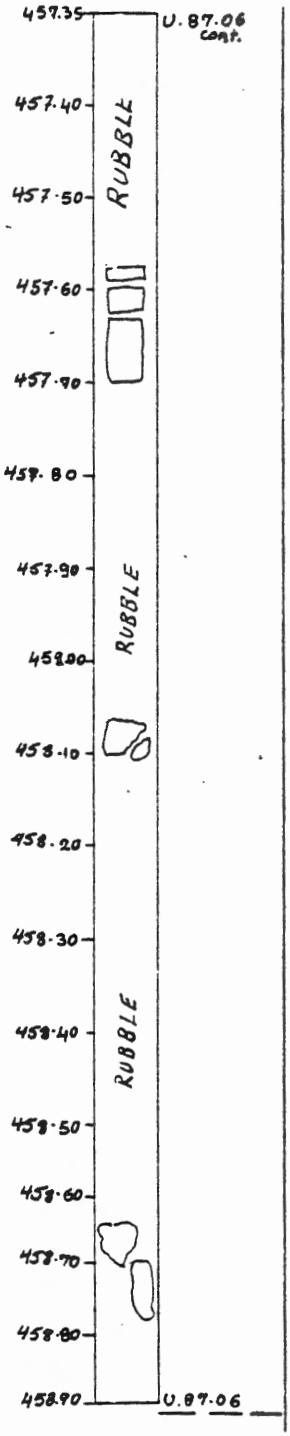
UNIT 87.06 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 87 Sheet 4

Visual Core Description Observer N. Marsh

Depth Interval 457.35 m to 458.90 m



UNIT 87.06 cont. OVERALL DESCRIPTION

Upper contact - 457.12 m Ambiguous. Overlain by interpillow sediment.
Lower contact - 458.90 m Ambiguous - in rubble.
Unit thickness - 1.78 m Type of unit - rubble

Rubble of a variety of materials. Some very feldspar-rich, medium-grained basalt with some heavily altered pieces (from close to hydrothermal veins??). Mostly, the unit is fragments of grey-green, fine-grained, highly altered basalt. The fragments were previously heavily veined with chlorite and gypsum. The few remaining large pieces break easily along fractures.

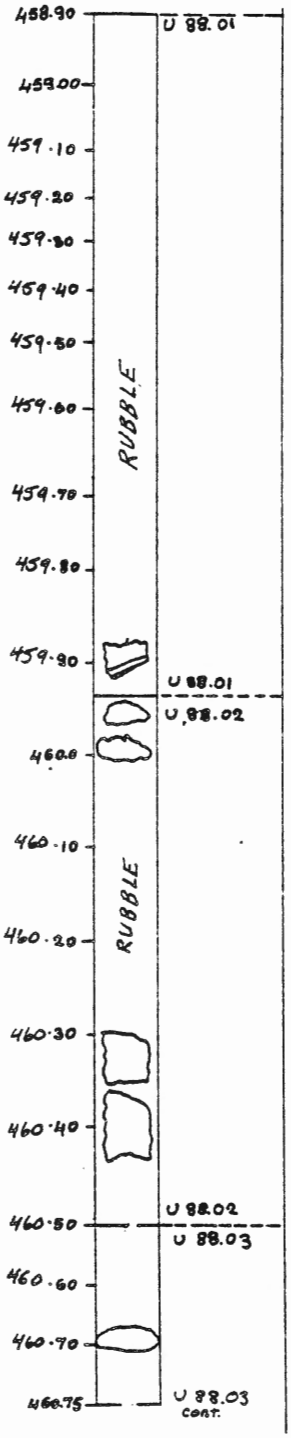
Vesicles:- <<1%

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 88 Sheet 1a

Visual Core Description Observer N.Marsh

Depth Interval 458.90 m to 460.75 m



UNIT 88.01 OVERALL DESCRIPTION

Upper contact - 458.90 m Ambiguous. The top 10 cms is heavily glass-rich material. Altered glass (lost vitreous lustre). Most small pieces coated with clay (green-grey colour).
Lower contact - 459.93 m Inclined chill zone with glass at base of cobble. No continuity with next unit. Glass is mildly altered in appearance - still black but lost vitreous lustre. Dip - 45?
Unit thickness - 1.03 m Type of unit - pillow

Cpx-olivine phyric, fine-grained, grey green basalt. A lot of rust streaks on the material may be from drilling - appear to be a drill cut surface fracture.

Phenocrysts:- 2% fresh green cpx
- size - <2 mm
- anhedral
- 1% olivine? pseudomorphed by Fe oxide rich (rust red) clays

No vesicles.

Veins:- recovered rock is heavily fractured
- most fractures have a thin lining (<<1 mm) of chloritic material
- slickensides probably due to drilling disturbance

UNIT 88.02 OVERALL DESCRIPTION

Upper contact - 459.93 m Ambiguous.
Lower contact - 460.50 m Ambiguous. Drawn at a decrease in grain size around 460.50 m and lithologic change.
Unit thickness - 0.57 m Type of unit - pillow

Olivine and cpx phyric, fine-grained, grey-green basalt. Similar to previous unit. Rust streaks occur on drill cut surfaces.

Phenocrysts:- 2% fresh green cpx
- size - <2 mm
- anhedral
- 2-3% olivine pseudomorphed by Fe oxide rich (rust red) clays

Veins:- recovered rock is heavily fractured
- fractures have thin linings of chloritic material
- slickensides due to drilling??

UNIT 88.03 Description - see Box 88, Sheet 1b.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy - 1

Core Box 88 Sheet 1b

Graphic Representation | Sample

Visual Core Description Observer N. Marsh

Depth Interval 458.90 m to 460.75 m

UNIT 88.03 OVERALL DESCRIPTION

Upper contact - 460.50 m Ambiguous. Drawn at a decrease in grain size and change in lithology.
Lower contact - 461.30 m Ambiguous. Terminated by rubble zone with possible interpillow sediment type material. No glass recovered for this unit.
Unit thickness - 0.80 m Type of unit - massive flow?

Fine- to medium-grained, grey-green, cpx phyric, vesicular basalt. Plagioclase microlites occur in the central section of unit - intersertal texture.

Phenocrysts:- 1% homogeneously distributed fresh cpx
- maximum size - 3 mm
- anhedral to rounded

Vesicles:- variable proportion - vesicle rich zone 15-20 cms below top of unit (460.65-460.70 m) has 15%
- maximum size - 3 mm
- rounded to subangular
- open
- <1% vesicles in middle and lower sections of unit
- open
- rounded
- size - <2 mm

Veins:- unit is heavily fractured
- fractures 80% unlined, 20% lined by chlorite material

Interpretation:- vesicularity, lack of olivine, and coarser grain size of central part of unit suggest that this may be an intrusive unit. However as no margins were recovered and the unit appears to be underlain by interpillow sediment, it has been called a massive flow.

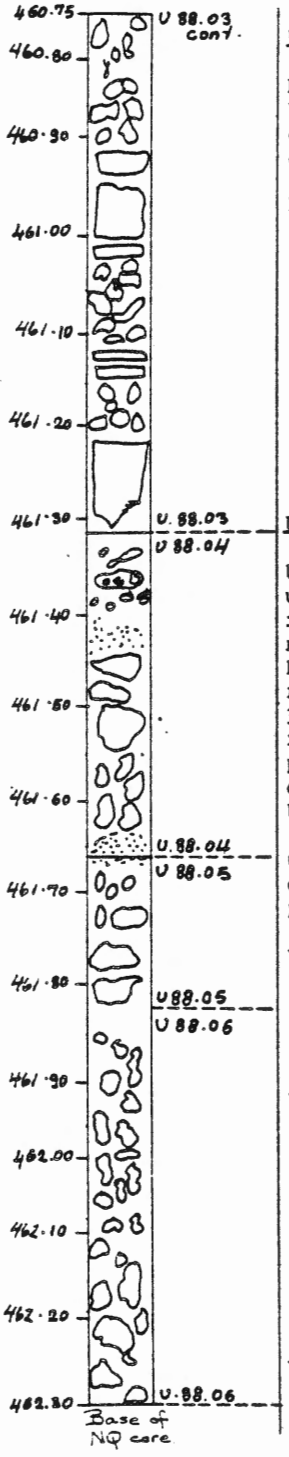
UNIT 88.03 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 88 Sheet 2a

Visual Core Description Observer N.M Marsh

Depth Interval 460.75 m to 462.30 m



UNIT 88.03 cont. Description - see Box 88, Sheet 1b.

Fine- to medium-grained, grey-green, cpx phyric, vesicular basalt. Plagioclase microlites occur in the central section of unit - intersertal texture. There are a few small pieces of glass at the top of this section, however the other fragments are still medium-grained and probably fell in from higher up.

UNIT 88.04 OVERALL DESCRIPTION

Upper contact - 461.30 m Ambiguous. Below base of previous unit there is a section of rubble and gravel with lumps of interpillow type material below which lies a zone of glass rich fragments, up to 1 cm across (very friable).
Lower contact - 461.65 m Ambiguous. Zone is rich in glass fragments. Glass is altered but has lost vitreous lustre - 30%? replaced by clay chloritic material. It is very friable and highly fractured with sand sized particles up to pieces 1 cm across. Most large pieces have disintegrated during handling.
Unit thickness - 0.35 m Type of unit - pillow

Grey-green, aphyric, fine-grained basalt. The central part of the unit is slightly more coarsely-grained than other parts.

Vesicles:- 2% confined to topmost coherent piece
- filled or lined by 50% dark chloritic clays? and 50% white mineral (gypsum?)
- size - <2 mm
- rounded

Veins:- larger pieces cut by veins lined by chloritic material and infilled by Fe oxide stained white platy mineral
- small pieces coated by vein lining material plus some gypsum (colourless soft platey mineral, micaceous reflective lustre)
- filling - 10% dark clays, 85% Fe oxide stained white clay, 5% gypsum

GMA:- 10% - Fe oxide staining

UNITS 88.05 and 88.06 Description - see Box 88, Sheet 2b.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 88 Sheet 26

Graphic Representation | Sample

Visual Core Description Observer N. Marsh

Depth Interval 460.75 m to 462.30 m

UNIT 88.05 OVERALL DESCRIPTION

Upper contact - 461.65 m Ambiguous. Glass rich zone. Glass from upper contact zone is altered, friable and has lost vitreous lustre. It is 30%? replaced by clay/chloritic material. Pieces are sand sized to 1 cm across. Larger pieces disintegrate when handled. It is difficult to evaluate whether glass belongs to this or the overlying unit.
Lower contact - 461.83 m No glass or chilling or fining of grain size. Glass margin well developed on lower unit, contact intrusive?
Unit thickness - 0.18 m

Grey-green, fine- to medium-grained, aphyric (2%) basalt with an intersertal texture, granular cpx? and plagioclase microlites. Glass is altered to brownish-grey clays and small patches of very dark clay.

Vesicles:- 1% in upper part of unit, 5-10% in lower part
- maximum size - 3 mm
- last two cobbles form vesicle-rich section
- at the top of this section the vesicles are spherical
- filling - 95% secondary minerals - up to 4 phases of infilling - mostly light or dark clays but possibly some zeolites?, 5% open
- lower parts of this section have more angular vesicles which are empty or thinly lined by grey-green clay
- some small irregular voids are unlined

Veins:- lightly fractured unit
- fractures lined by 50% dark chloritic material and 50% white platy mineral

UNIT 88.06 OVERALL DESCRIPTION
Upper contact - 461.83 m Glass and chill zone abuts against medium-grained material.
Lower contact - 462.30 m Not recovered. Unit is cut off by end of recovery of NQ core. Glass is altered and has lost its vitreous lustre. It is 30% replaced by greenish clays and white platy mineral.
Unit thickness - 0.47 m Type of unit - intrusive?

Grey-green, fine-grained, slightly olivine phyric basalt. Groundmass has an intersertal texture - granular cpx?, elongate plagioclase laths, and glass altered to clay with Fe oxide staining.

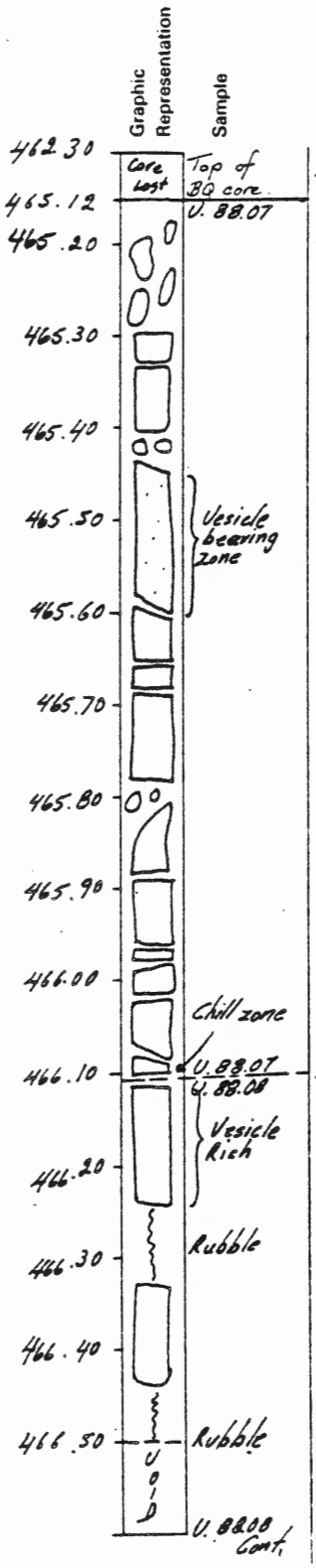
Phenocrysts:- 2% - olivine pseudomorphed by Fe oxide stained clays, rounded shape
Vesicles:- non vesicular except for last pieces which have 5% spherical vesicles
- filling - 99% open, 1% dark clays
Veins:- unit consists of many small pieces broken up along fractures by drilling
- some fractures lined by chloritic material and white platey mineral (10%)
- glass margin cut by chloritic and white platy mineral (gypsum?)

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 88 Sheet 3

Visual Core Description Observer N. Marsh

Depth Interval 462.30 m to 466.50 m



2.82 m CORE LOST - 462.30-465.12 m

UNIT 88.07 OVERALL DESCRIPTION

Upper contact = 465.12 m Ambiguous. Top of BQ core.
Lower contact = 466.10 m Chill zone and glassy margin.
Lack of evidence of chilling or reduction in grain size in top of next unit suggests an intrusive contact - may however reflect loss of material. Glass is present in a small amount and is highly altered - 80% replaced by clays. Many small inclusions of rounded chilled material, up to 8 mm across. Alteration products include green chloritic clay, white fibrous mineral - often with platy appearance (chrysotile?).
Unit thickness - 0.98 m Type of unit - intrusive?
Light grey-green, slightly olivine and cpx microphyric, slightly vesicular basalt. Groundmass is fine- to medium-grained with elongate grains, an intersertal texture and fresh appearance.

Phenocrysts:- 1% olivine
- size = <1 mm
- pseudomorphed by Fe oxide stained material (clay?)
- 1% dark green rounded cpx
- size = <2 mm
- in general phenocrysts appear to be about the same size as the groundmass minerals but the groundmass minerals are elongate
- phenocrysts show up better in fine-grained areas

Vesicles:- 2%, concentrated from 465.40-465.60 m
- size = <2 mm
- filling - 99% open, 1% lined by thin layer of light green clay (smectite?)

Veins:- 2-3%
- lined by platy green mineral (chlorite?) and white platy/fibrous mineral (chrysotile) with a minor amount of Fe oxide staining

UNIT 88.08 OVERALL DESCRIPTION

Upper contact = 466.10 m Not recovered. Unit appears truncated by Unit 88.07.
Lower contact = 466.95 m Not recovered. Terminates in rubble zone with altered glass and vein filling material overlying inclined chill zone and glass margin at top of underlying unit. Uncertain if glass belongs to this unit. It has lost lustre and is 5% replaced by clays.
Unit thickness - 0.85 m
Light grey-green, fine- to medium-grained, aphyric basalt. The groundmass has an intersertal texture with elongate plagioclase laths and granular cpx.

Phenocrysts:- <<1% rare rust specks - pseudomorphed olivine phenocrysts?
- size - <1 mm

Vesicles:- 5% confined to uppermost part of unit
- maximum size - 4 mm
- filling - 50% carbonate, 50% open

Veins:- material heavily broken up with chloritic coatings common on pieces
- 5-10% veins by volume??
- filling - 98% chloritic material, 2% carbonate

GMA:- 5% - glassy material replaced by brownish clays

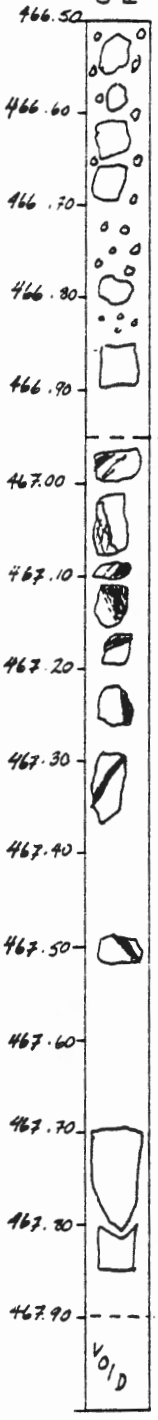
UNIT 88.08 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 88 Sheet 4

Visual Core Description Observer N. Marsh

Depth Interval 466.30 m to 467.90 m



UNIT 88.08 cont. Description - see Box 88, Sheet 3.

Light grey-green, fine- to medium-grained, aphyric basalt. The groundmass has an intersertal texture with elongate plagioclase laths and granular cpx.

UNIT 88.09 OVERALL DESCRIPTION

Upper contact - 466.95 m Inclined glass margin and chill zone.
Lower contact - 468.10 m Not recovered.
Unit thickness - 1.15 m Type of unit - sequence of pillow margins

Glass margins have altered glass which has lost its lustre, generally rich in rounded inclusions and 60-90% replaced by 33% chloritic material, 33% white platy mineral (no reaction with acid, hardness about 5) and 33% colourless platy mineral (opalescent lustre - much harder than gypsum - heulandite?). The rock is grey-green, aphanitic to fine-grained, aphyric basalt.

Phenocrysts:- very rare (<<1%) pseudomorphed olivine
- size - <<1 mm
- rust red clay replacement

Vesicles:- variable content, usually concentrated just below chill zones, where up to 5% occur
- size - 3 mm
- rounded to subangular
- filling - lined or infilled by 50% dark clay and 50% white mineral described above

Veins:- 5% veins and fractures
- size - <1 mm
- filling - 10% clay lining, 90% filled by white mineral

GMA:- 15% - replacement by brownish green clays

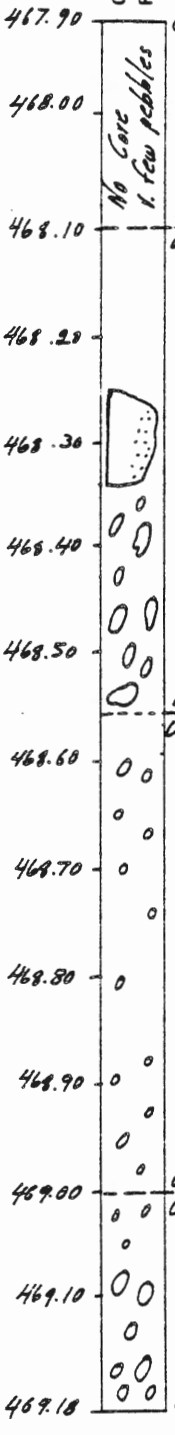
UNIT 89.09 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 89 Sheet 1

Visual Core Description Observer D. Murangari

Depth Interval 467.90 m to 469.18 m



UNIT 88.09 cont. Description - see Box 88, Sheet 4.

Grey-green, aphanitic to fine-grained, aphyric basalt pebbles.

UNIT 89.01 OVERALL DESCRIPTION

Upper contact - 468.10 m Ambiguous. Altered glass. Core broken up to pebble size material with largest piece about 5 cm.
Lower contact - 468.55 m Ambiguous, only determined by presence of sedimentary material. Minor altered glassy material in rubble associated with sedimentary material.
Unit thickness - 0.45 m Type of unit - pillow?

Green-grey, fine- to medium-grained basalt.

Vesicles:- <3%
- maximum size - 2 mm
- filling - zeolite

UNIT 89.02 OVERALL DESCRIPTION

Upper contact - 468.55 m Ambiguous. Defined by presence of sedimentary material.
Lower contact - 469.00 m Ambiguous. Defined by presence of sedimentary material.
Unit thickness - 0.45 m Type of unit - pillow?

A few pebbles of basaltic rock similar to that described above in clayey material.

UNIT 89.03 OVERALL DESCRIPTION

Upper contact - 469.00 m Ambiguous. Inferred from presence of sedimentary material.
Lower contact - 469.70 m Ambiguous. Altered glass and veinlets of white silicate material.
Unit thickness - 0.70 m

Pebbles of green-grey, fine- to medium-grained basaltic rock with isolated veinlets of white silicate and scattered vesicles up to 2 mm diameter.

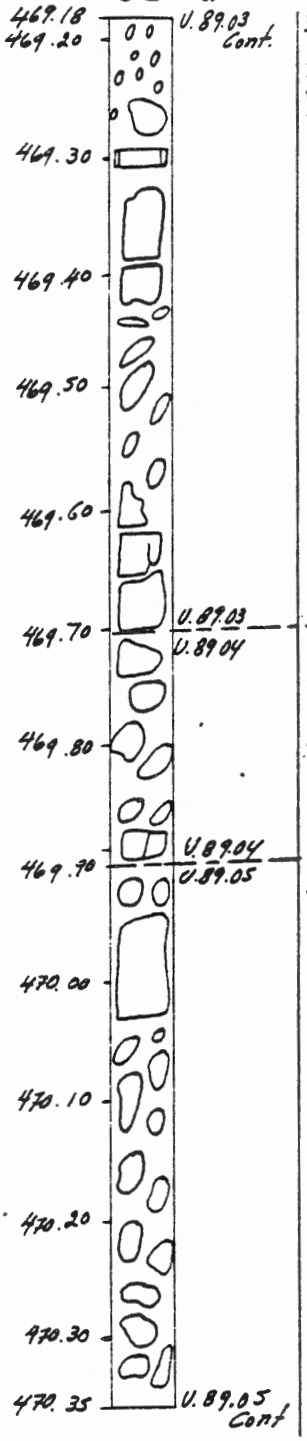
UNIT 89.03 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 89 Sheet 2

Visual Core Description Observer N Baglow ID Aurangan

Depth Interval 469.18 m to 470.35 m



UNIT 89.03 cont. Description - see Box 89, Sheet 1.

Pebbles of green-grey, fine- to medium-grained basaltic rock with isolated veinlets of white silicate and scattered vesicles up to 2 mm diameter.

UNIT 89.04 OVERALL DESCRIPTION

Upper contact - 469.70 m Ambiguous. Altered glass and veinlets of white silicate material.
Lower contact - 469.90 m Ambiguous. Broken up. Altered glass?
Unit thickness - 0.20 m

Greenish-grey, fine- to medium-grained aphyric, basaltic rock with scattered stringers of white silica.

UNIT 89.05 OVERALL DESCRIPTION

Upper contact - 469.90 m Ambiguous - in rubble.
Lower contact - 470.50 m Ambiguous. Altered and some fresh glass. Chilled on uphole side.
Unit thickness - 0.60 m

Green-grey, fine- to medium-grained basalt with minor vesicles (up to 8%) near upper contact. Core is broken up.

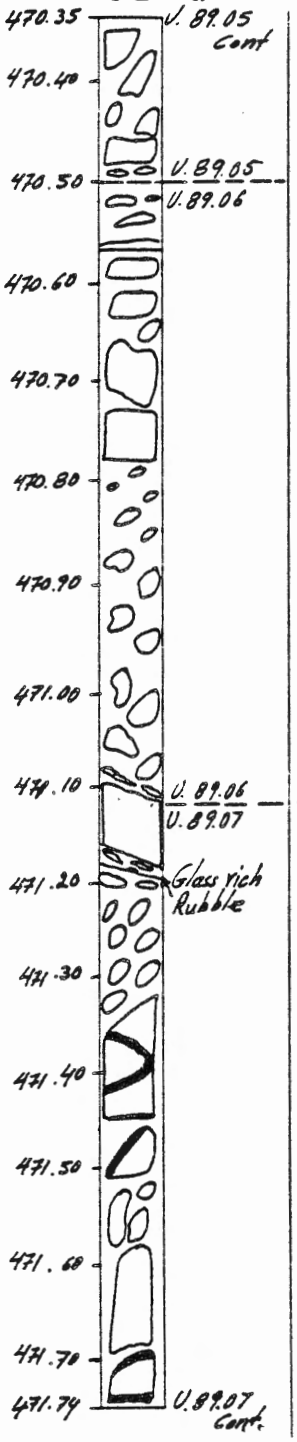
UNIT 89.05 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # Cy-1

Core Box 89 Sheet 3

Visual Core Description Observer N Baglow/ N. Marsh

Depth Interval 470.35 m to 471.74 m



UNIT 89.05 cont. Description - see Box 89, Sheet 2.

Green-grey, fine- to medium-grained basalt with minor vesicles (up to 8%) near upper contact. Core is broken up.

UNIT 89.06 OVERALL DESCRIPTION

Upper contact - 470.50 m Ambiguous - in rubble.
Lower contact - 471.10 m Depositional. Altered glass. Dip - 40°.
Unit thickness - 0.60 m

Broken, poorly recovered core. Fine-grained basalt with isolated rounded vesicles.

Vesicles:- <5%
- maximum size - 1 mm
- some rimmed with fresh glass

UNIT 89.07 OVERALL DESCRIPTION

Upper contact - 471.10 m Ambiguous. Drawn at a change in lithology from section of friable but cohesive material to small pebbles.
Lower contact - 471.90 m Ambiguous - in rubble.
Unit thickness - 0.80 m Type of unit - rubble sequence through pillow margins

Grey to grey-green, aphanitic, aphyric basalt. The glass is heavily altered and has lost its lustre. It is 50% replaced on average by clays and white mineral.

Vesicles:- <<1% restricted to areas below chill zones
- maximum size - 2 mm
- filling - dark clay and white mineral

Veins:- 5% veins and fractures
- lined by dark green clay and white non-lustrous mineral, often appears to be only a surface staining (harder than gypsum), rust streaks on several pieces

GMA:- 20% - to green clays

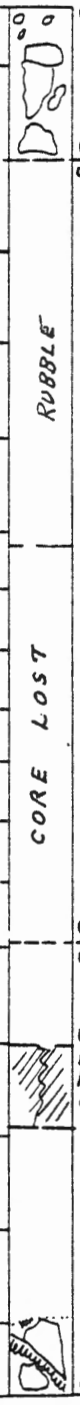
UNIT 89.07 cont.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 89 Sheet 4

Visual Core Description Observer N.Bagley

Depth Interval 471.74 m to 473.48 m



UNIT 89.07 cont. Description - see Box 89, Sheet 3.

Grey to grey-green, aphanitic, aphyric basalt. The glass is heavily altered and has lost its lustre. It is 50% replaced on average by clays and white mineral.

UNIT 89.08 OVERALL DESCRIPTION

Upper contact - 471.90 m Ambiguous - in rubble.
Lower contact - 473.00 m Ambiguous. At base of zone of lost core.
Unit thickness - 1.10 m Type of unit - rubble

Variably rounded to angular pebbles of grey, aphanitic to fine-grained, aphyric basalt.

No vesicles.

No veins or fractures survived drilling but many pieces are coated with vein linings of green clay/chlorite material. No white minerals. Plenty of rusty streaks and some interpillow sediment type material are observed.

CORE LOST - 472.30-473.00 m

UNIT 89.09 OVERALL DESCRIPTION

Upper contact - 473.00 m Ambiguous. Drawn at base of zone of lost core.
Lower contact - 473.48 m Ambiguous. Glass rich zone at base of core with chill zones on accompanying blocks. Dip - 45°.
Unit thickness - 0.48 m Type of unit - rubble

Grey-green, aphanitic to fine-grained, aphyric, mainly non vesicular basalt with some rust staining.

Vesicles:- a few occur near chill zone at base and in one or two other places
- filling - lined and filled by dark chloritic/clay material
- white powdery mineral fills small cracks in glass, chill zone and vesicles

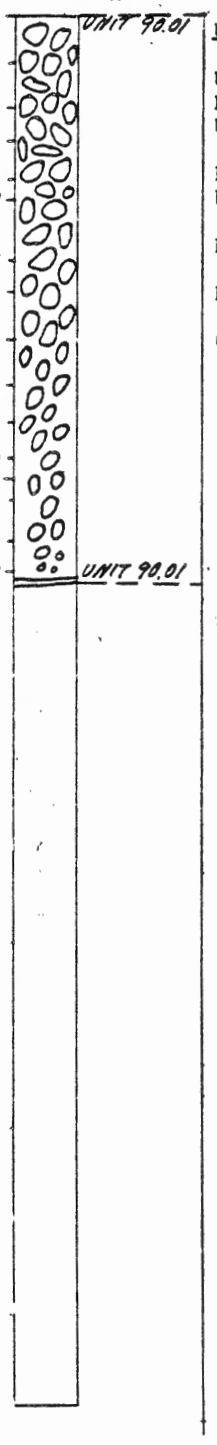
No veins or fractures survived drilling but many pieces are coated with clay/chlorite material.

CYPRUS RESEARCH DRILLING PROJECT / Drill Hole # CY-1

Core Box 90 Sheet 1

Visual Core Description Observer N. Baglow

Depth Interval 473.48 m to 474.88 m



UNIT 90.01 OVERALL DESCRIPTION

Upper contact - 473.48 m Ambiguous. Altered glass.
Lower contact - 474.88 m Ambiguous - at base of CY-1.
Unit thickness - 1.40 m

Poor core recovery - many fragments are from where the core barrel spun. Greenish-grey, fine-grained, aphyric basalt.

No vesicles - only very sparse pin head to 1 mm voids.

No veining, though a number of surfaces are slickensided.

GMA:- low to medium

BASE OF CY-1 AT 474.88 m.