

UNIT 103

PIECE 1a-3

0-52R-2 48 cm
? dyke or small sheet.
APHYRIC BASALT

brownish gray streaky
variation in color and texture across core

aphyric basalt with moderately plagioclase-phyric patches

look like filled amygdalae (not calcite) but some have crystal outlines

IF plagioclase then 0-5%
3 mm max
2 mm modal
subhedral fresh.

less vesicular on this side

Vesicles 20-102 cm
5%
low sphericity subangular
5 mm max
1 mm modal
10/cm²
20% filled



0-2cm vesicles 50-140
2-10 cm vesicles 60-135
4-12cm vein 0.2mm 85-105

Plagiophanor.

small filled vesicles

13-17cm vein n=2
0.1mm branched

13-24cm vesicles 85-118
17-24cm vein network n=3
1mm curved

larger, open vesicles

24-34.5cm vein network n=3
75-275 2mm

24-46cm vesicles 85-270

more vesicular on this side

34.5-47cm vein network n=3
75-272 3mm

49-82cm vein network n=2
5-3mm 85-106

49-57cm vesicles 85-272

interface runs through core so not pipe structure
57-65cm vesicles 85-274

larger, open vesicles

small filled vesicles



larger, open vesicles

107-116cm vein 0.3mm straight 65-105

v. small vesicles

116-117cm conjugate vein 88-208
0.2mm straight

119-125cm vein 0.2mm straight 52-076

127-129.5cm vein 0.1mm straight 60-340

plagioclase phenocrysts

UNIT 103
CONT'D



0 cm vein 0.1mm pyrite
(most removed during drilling)

2-6cm vein 0.2mm
62 → 042°

10-19cm vein 0.1mm
70 → 062°

17-22cm vein branched
0.1mm PYRITE
90 → 030°

0-31cm
vesicles
90 → 380°

33-35cm vein 0.3mm
straight

40-46cm vein 0.2mm straight
80 → 110°

43.5-46cm vein 0.1mm straight
80 → 332°

46-48cm 0.1mm straight
vein 80 → 312°

53-59cm vein network 1mm
70 → 278°

Part of Unit 102
at margin of
small intrusive
sheet

61-70cm vein 0.2mm curved
70 → 285°

UNIT 103

APHYRIC BASALT

69-70cm vein 0.5mm straight 75 → 340
Medium gray
69.5-71.5cm vein 0.5mm straight 75 → 202°
no phenos.

76-82cm vein 0.5mm straight
74 → 106°

Vesicles in
interval 72-
80-81cm vein 0.1mm straight 55 → 036
52R-?, 44 cm.

82.5-84.5cm vein 0.1mm 70 → 150°
10%
84-88.5cm vein stepped 60 → 320
1mm max

0.5mm nodal
low sphericity
rounded

100/cm²
10% filled

87-94cm vein 0.5mm straight 25 → 232°

88-97cm vein 0.3mm straight 50 → 050°

103-108cm vein 0.2mm
single, straight 90 → 316°

Part of unit
102

PIECE 3-46
breccia at margin
of small intrusive
sheet

1% PLAGIOCLASE
SUBHEDRAL, SLIGHTLY ALTERED
1.5mm, 1mm

1% PYROXENE
SUBHEDRAL, FRESH
1mm, 1mm

MODERATELY PLAGIOCLASE - PYROXENE PHYRIC
BASALT BRECCIA

(OLIVINE IN BRECCIA MATRIX, BUT NOT CLASTIC)
↳ COMPLETELY ALTERED

UNIT (103)
 (Continued)
 aphyric basalt
 medium gray
 fine grained (0.1mm)



6-4cm vesicles 30-722
 9-20cm vein 0.2mm ^{curved} 75-7122
 11-12cm ^{conjugate} vein n=3 0.1mm irregular
 14-15cm ^{conjugate} vein straight 0.2mm 64-7030
 23.5-28cm vein 0.1mm straight 50-7030
 28-32cm vein 0.05mm 50-7275
 35-37cm vein 0.1mm stepped 70-7335
 38-42cm vein branched 0.1mm 75-7325

end of UNIT 103

UNIT (104)
 volcaniclastic breccia
 mottled gray-green-orange-white
 modal 5mm
 low spheroidal angular
 100% volcanic clasts cemented with calcite/zeolite
Bimodal

basalt fragment from Unit (103)



clasts
 moderate
 plagioclase-olivine
 - aphyric basalt
 3% plagioclase
 max 5mm
 modal 1mm
 subhedral, fresh
 2% augite (green)
 2mm max
 1mm modal
 subhedral, fresh
 1% olivine
 3mm max
 1mm modal
 subhedral, altered
 medium gray
 aphanitic

Unit (104)
(continued)

Same as
section 3



18.5-21cm var. 0.2mm
irregular



Unit (104)
(Continued)
as section 3



39-43 cm vein n=4
0.2mm magnification



Unit 104
(Continued)
as section?



0-11cm fracture
curved 85-2075°

7.5-11cm vein 0.5mm
irregular 75-270°

12-15cm vein n=2 0.5mm
irregular



138-139cm vein 0.5mm irregular

330-U1374A-52R-7-A_SHLF2809421_20110117202108

Unit (104)
(Continued)
as section 3



Unit (104)
(continues)

Volcaniclastic breccia

large (up to 15cm) subangular clasts in a matrix of smaller clasts

median 5mm

low sphericity subangular

small clasts mostly pervasively altered glass

Some fresh glass bimodal mottled green-gray

Clasts

moderately plagioclase - augite - olivine - phyric basalt

3% plagioclase

2mm max 1mm modal subhedral fresh

2% augite (green)

3mm max 1mm modal subhedral, fresh

1% olivine

4mm max 1mm modal subhedral, altered

aphanitic, medium gray, mostly non-vesicular

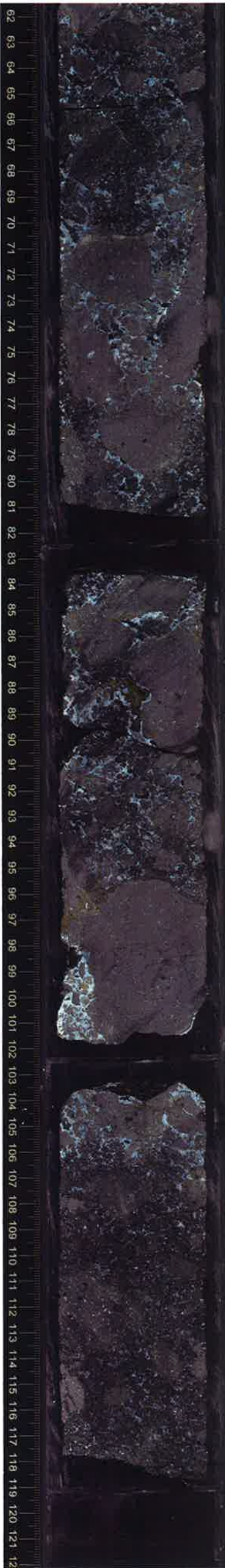
possibly pillow fragments in hyaloclastite matrix.



21-23.5cm vein width ~3mm

34-41cm vein width ~6 0.2mm branch

42-48cm vein width ~9 1mm to 0.5mm branch



96-101cm vein width ~10 0.1mm branch

Unit (104)
(Continued)

as for
section 1.

except for
appearance of
occasional,
small aphyric
basalt clasts



11-13cm vein = 1 irregular
0.3mm

66-70cm vein 5mm
irregular



aphyric
basalt

aphyric basalt

aphyric basalt

Unit (104)

(continued)

- as for section 1

Some small
aphyric basalt
clasts



104-106 cm vein zone irregular

Unit (104)
(Continued)

as for section 1

except

appearance of
first large aphyric
basalt clast
at 63 cm.



29-31cm vein n=3 0.1mm
irregular

96-101.5cm vein network n=5
0.1mm
irregular

108-114cm vein n=2 0.1mm
65 → 245° straight

aphyric
basalt clast

Unit 104
(Continued)



87 cm

36cm vein 1.5mm irreg

35-43cm vein 0.5mm brack irreg

← vesicle
45-47cm
vein n=2 0.2mm

124-126cm
vein 0.2mm
irreg

vein
56-59cm 0.1mm n=2
irreg

aphyric
basalt



conjugate
73-85cm vein 0.2mm
n=5 straight

77-84cm 80-90
vein 0.2mm straight

LAST

moderately
phy-aug-af
-phyric basalt

UNIT 105

Volcaniclastic
breccia

large (up to 7cm)

aphyric basalt

clasts in matrix
of smaller
clasts

modal 5mm

low sphericity

subangular

small clasts mostly
perovskite altered
glass; some
fresh glass

bimodal

mottled green-gray

Clasts

aphyric basalt
(no phenocrysts)

brownish gray
ophanitic

mostly non-vesicular

Unit (105)
(Continued)

as for section 5



vesicular
clast



100-102 cm vein 0.1 mm n=2
irregular

111.5-113.5 vein 0.1 mm irregular

129-134 cm vein n=2 irregular
0.1 mm

Unit (105)
(Continued)
as for section 5
except for
colour change
at
11 cm

Mottled orange-
gray

small, altered
glass clasts are
now oxidised



Carbonate
Cement
fewer small
glass clasts
- more void space

UNIT (105)

Volcaniclastic breccia

0-38 cm
mottled
medium gray
- white

10 mm modal

low sphericity
angular
poorly sorted
100% volcanic
fragments with
calcite cement

38 cm

38-123 cm

mottled gray -
orange - white

8 mm modal
low sphericity
angular
bimodal
100% volcanic
clasts with
calcite cement.

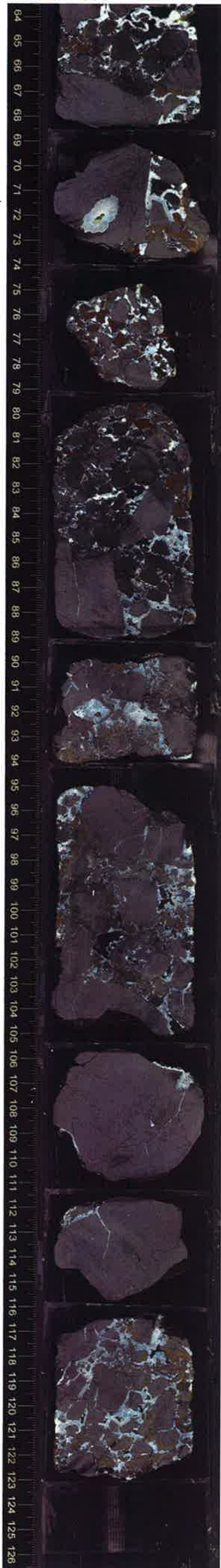


1-5cm vein n=2 0.1mm
irregular

71-73cm
vein 0.1mm
branch

17-20cm vein n=3 branch
0.3mm irregular

23-25cm vein 0.3mm
irregular



Clasts:

Aphyric basalt
dark gray
aphanitic

no phenocrysts
no vesicles

glass completely
altered

86-89 cm vein 0.3mm straight slight
25-5085°

90-91cm vein n=3 0.5mm irregular

96-98cm vein n=5 1 to 0.5mm
irregular

103-104.5cm vein 2mm irregular

107-110cm vein branch 0.5mm
irregular

112-116cm vein branch 0.5mm
irregular

Unit (105)
(continues)

Volcaniclastic breccia

5 mm nodal
low sphericity,
angular.

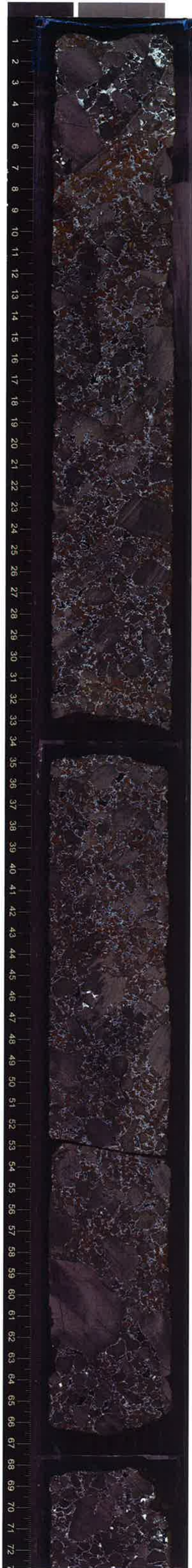
matrix gray-
brown-orange.

bimodal

clasts

aphyric basalt
dark gray

no phenocrysts
aphanitic



63-84cm vein n=1 0.1mm in clast

122-124cm vein n=5
2mm max 1mm avg irregular

59-63cm vein n=1
0.1mm
branched, irregular