330-U1374A-64R-2-A_SH 826951_20110120092753

UNIT (135) (continued)

UNIT (136)

Aphyric basalt intrusive sheet

Top of unit at 1 cm.

Bottom of unit at 64R-3, 28 cm (piece 3)

Aphyric basalt
fine grained (0.2 mm)

Medium gray
no phenocrysts

Vesicles in bands parallel to sheet margin

5%
low sphericity
subrounded
13 mm max
0.5 mm modal
50/cm²
1% filled
(by number
- largest are filled)

ISC1 (3)

1 cm

1-20 vesicle band, 1, curved

1a

bands of vesicles

1b

small area of wall rock

12-18 fracture, 1, straight
90 -> 007

18-22 fracture, 1, straight

24-39 vesicle band, curved

32-38 vein, 1, straight
90 -> 218

moderately altered

2a

82-91
vein, straight, 1, 29->114

90-91 fracture, 1, straight
96 -> 200

92-98 vein, 1, straight
40 -> 127

2b

90-100 vein netw., n=2 irreg.

101-103 fracture, straight
61 -> 205

100-109 vein, 1, 0.1 mm irregular

108-111
fracture, straight

118-121 fracture, straight, 80 -> 211

122-131 vein netw, irreg. n=7, 01

2c

3

67-69 vein, 1, straight
70 -> 164

Unit (136)
(continued)
as in section 2

1

2

23-23
vein, α=1,
straight
41→354

Margin of sheet.

3

breccia

4

Margin of sheet.

Unit (137)

Volcaniclastic breccia

5

Greenish dark gray

5 mm modal

clasts up to 90 mm
Low sphericity
Angular
100% volcanic clasts

Bimodal

Clasts:
Aphyric basalt
No phenocrysts

Vesicles:
only in a few clasts
vesicular clasts have 5% vesicles
elongate
subangular

6

4 mm max
0.5 mm modal
10/cm² 0% filled

86-92 vein network, α=2
max. 3.5mm, mostly irregular in clast

7

8

134-159
vein network, α=4
9 0.7mm, irreg. in clast

Unit 137 (Continued)

as in section 3

1

2

3

4

5

50-55 very subrounded, 6-8, irreg. in clast

6

7

8

9

10

11

Unit (137)

as in section 3

6-8 vein netw. n=4 irreg. / in clast

1

19-21 vein netw, n=3 irreg. / in clast

2

3

70-72 vein netw., n=5, irreg. / in clast

4

82-84 vein netw. / n=4, irreg. / in clast

5

6

7

125-128 vein network, n=3, irreg. / in clast

133-138 vein network, n=7, irreg. / in clast

8

Unit (137)

(continued)

as in Section 3

3-11 vein network, n=12 width 0.3 avg. 0.1 mm irreg./in clast

11-18 vein netw., n=9 irreg./in clast

1

2

40-44 vein network n=6, straight/ in clast

3 43-45 vein netw, n=5, straight/ in clast

4

5

6

7

8

9

112-118 vein network, n=6 irreg./in clast

10

11

12

13

14

15

330-U1374A-65R-1-A_SHLF828741_20110120121734

UNIT (137) CONTD

PIECE 1-7

VOLCANICLASTIC BRECCIA
↳ LAVA FRAGMENTS

NO PHENOCRYSTS

▷ APHYRIC BASALT BRECCIA

GREENISH DARK GRAY

APHANITIC

PERVASIVELY ALTERED CLASTS

0-65 R4 113

95%

10mm

LOW, SUBANGULAR

VERY POOR

VESICLES

0-65 R 7 146cm

0.5%

LOW, MODERATE

3mm / 1mm

VESICULAR PATCHES

23-27 vein calc., n=6, straight in clast

VESICULAR CLAST 5%

41-46 vein calc., n=8 irreg. in clast

53-57 vein calc, n=3 irreg. in clast

VESICULAR CLAST 50%

VESICULAR CLAST 10%

108- 111 vein calcareous, n=3 irreg. in clast

116-119 vein calcareous, n=3 irreg. in clast

Entire core has moderately altered clasts in a dark glass-rich matrix.

330-U1374A-65R-2-A_SHLF2828771_20110120122306

UNIT 137 CONTD.

PIECE 1a-8

15-16 vein network, n=2 irreg. in clast

VESICULAR CLAST 10%.

26-29 vein network, n=6 irreg., in clast

PORPHYRITIC CLAST

2% PLAGIOCLASE

MODERATELY PHYRIC BASALT CLAST

VESICULAR CLAST 5%

VESICULAR CLAST 5%

133-135 vein network, n=3 0.2 mm, irreg., in clast

330-U1374A-65R-3-A_SHLF2828801_20110120122823

UNIT 137 CONTD.

PIECE 1a - 4

3.5
vein, w=1, straight
in clast

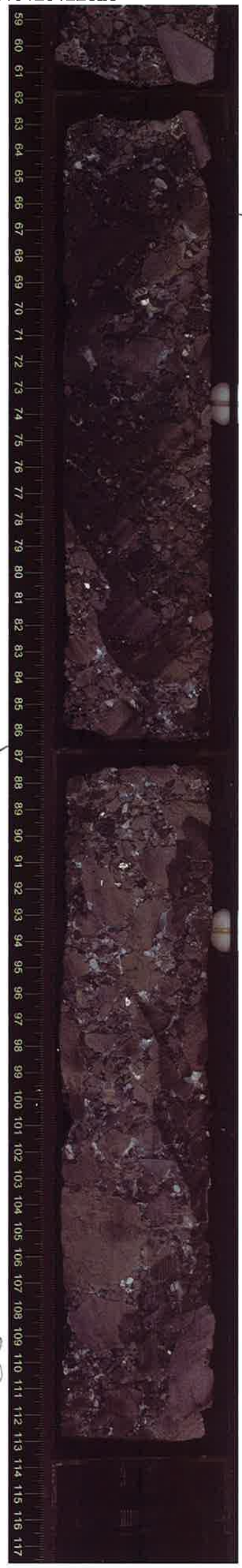
9-12
vein subv., w=1
irreg., in clast

VESICULAR CLAST
3%

19-22
vein subv., w=1
irreg. in clast

VESICULAR
CLAST 5%

VESICULAR
CLAST 3%



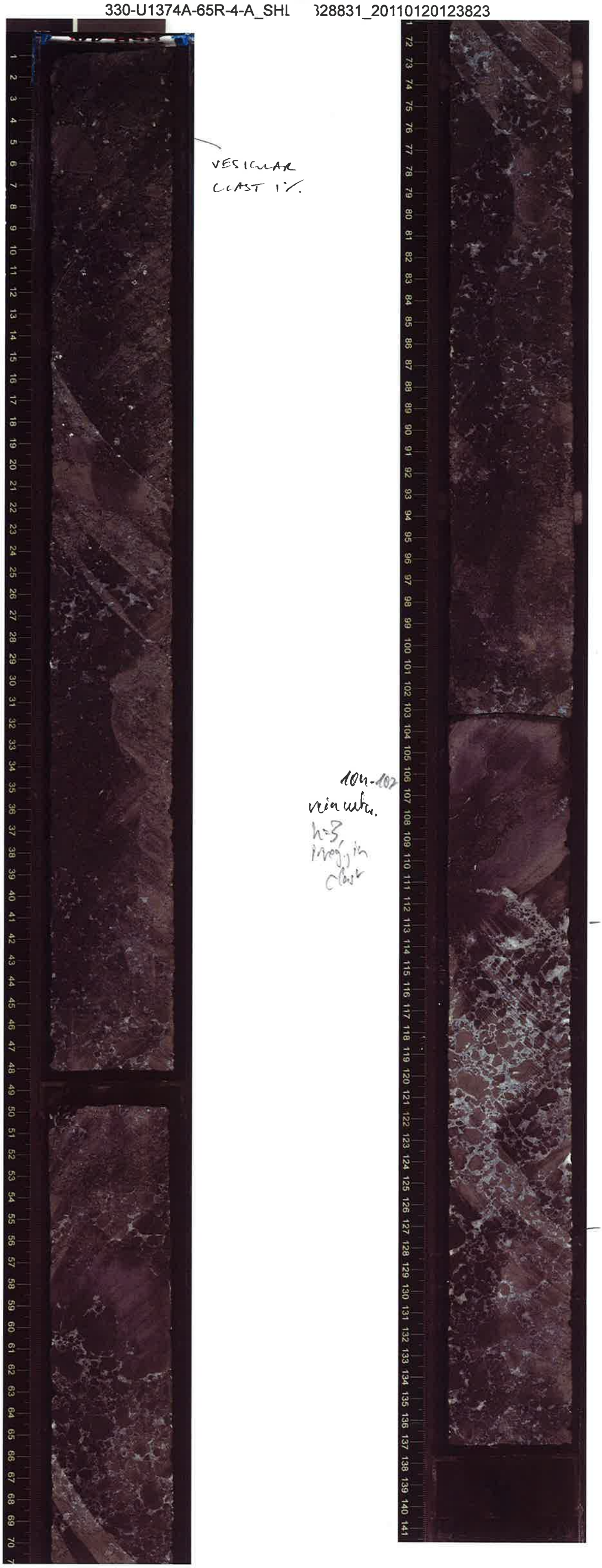
VESICULAR CLAST
1%

104-
107
vein subv.,
w=3, irreg.,
in clast

330-U1374A-65R-4-A_SHL 328831_20110120123823

UNIT (137) CONTD.

PIECE 1-26



VESICULAR CLAST 1%.

104-107 vesicular. h=3, phenocrysts in clast

113 VOLCANIC ATTRIBUTES

113-127

70%.
MODERATE, SUBANGULAR
5mm
MODERATELY SORTED

127cm - 65R7 22cm

95%.
LOW, SUBANGULAR
7mm
VERY POORLY SORTED

330-U1374A-65R-5-A_SHLF2828861_20110120125614

UNIT 137 CONTD.

PIECE 1-26

14-19
vein netw., n=5, irreg. in clast

42-48
vein network, n=13, irreg.) in clast

24-25
vein netw., n=5, irreg., in clast

UNIT (137) CONTD.
PIECE 1a-5

330-U1374A-65R-6-A_SHLF2828891_20110120130109

48-53
vein network,
n=12, irreg.,
in clast

95-98
vein netw.,
n=3, irreg.,
in clast

103-105
vein netw.,
n=11, 0.1
irreg., in clast

111-115
vein netw.,
n=8, irreg.,
in clast

330-U1374A-65R-7-A_SHLF2828921_20110120130725

UNIT (137) CONTD.

PIECE 1a - 4

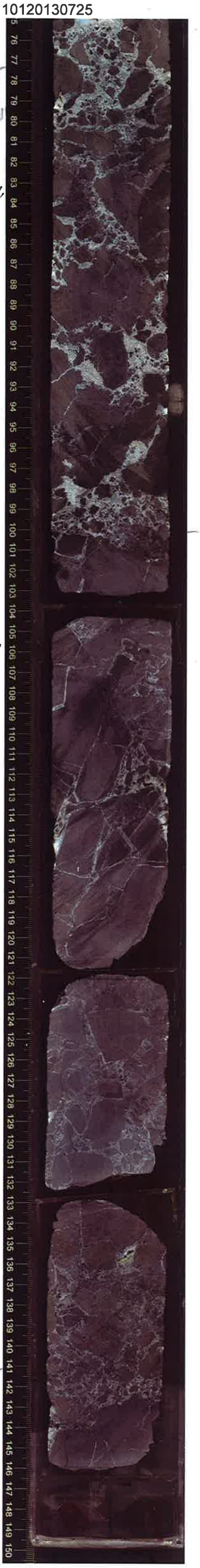
VOLCANIC ATTRIBUTES 22
70%
10mm
MODERATE, SUBROUNDED
POORLY SORTED

1-3 vein calc., n=5 0.2mm, irreg., in clast

84-86 vein calcareous, n=6, irreg., in clast

87-89 vein calc., n=5, irreg., in clast

92-97 vein calc., n=19, irreg., in clast



100 - 146cm

VOLCANIC ATTRIBUTES
90%
10mm
LOW, ANGULAR
MODERATE SORTING
JIGSAW-FIT TEXTURE

100-103 vein calcareous, max 2mm, irreg., in clast

104-121 vein calc. n=25, irreg., in clast

111-113 vein calc., max 0.2mm, irreg. in clast

137-145 vein calc., n=8, irreg., in clast

142-145 vein calc. n=15, irreg., in clast

68-74 vein calcareous n=9, max 1.5 avg. 0.3, irreg. in clast

330-U1374A-66R-1-A_SHLF2829921_20110120155043

UNIT 137

CONTD

PIECE 1-3C

VOLCANICLASTIC
↳ FRACTURED LAVA
▷ APHYRIC
BASALT BRECCIA

GREENISH GRAY

90%.

20mm

LOW, ANGULAR
MODERATELY SORTED

JIGSAW-FIT BRECCIA
ENDS

215cm

UNIT 138

PIECE 3C-5
21.5cm - 66R 9 87cm
TOP BOUNDARY

LARGER CLASTS NOT
AS COMMON

▷ APHYRIC BASALT
BRECCIA

GROUNDMASS FELDSPAR
LATHS IN SOME CLASTS

MOTTLED GREEN-GRAY
STAIN

FINE-GRAINED 0.2mm

COMPLETELY ALTERED
VOLCANIC ATTRIBUTES
100% CLAST/MATRIX
4mm
LOW, SUBANGULAR
MODERATE

CLAST BOUNDARIES
INDISTINCT -
ALTERATION (OF CLASS)
OR WELDING (OF CLASS)?

THIN
SECTION

SOME CLASTS
HAVE FLUIDAL EDGES

OTHER CLASTS ARE ANGULAR AND SMOOTH
AND NEXT TO THESE SMALL CLASTS HAVE DISTINCT
BOUNDARIES AND ARE ANGULAR

VESICLES
0%
0-21.5cm

10-15
vein network
irreg., incl

17-20, vein netw.,
irreg., incl

VESICLES
3%
LOW, SUBROUNDED
4mm/0.1mm

VESICLES OCCUR
IN THE GROUNDMASS
IN PATCHES PERHAPS
DEMARCATING
PREVIOUS CLASTS

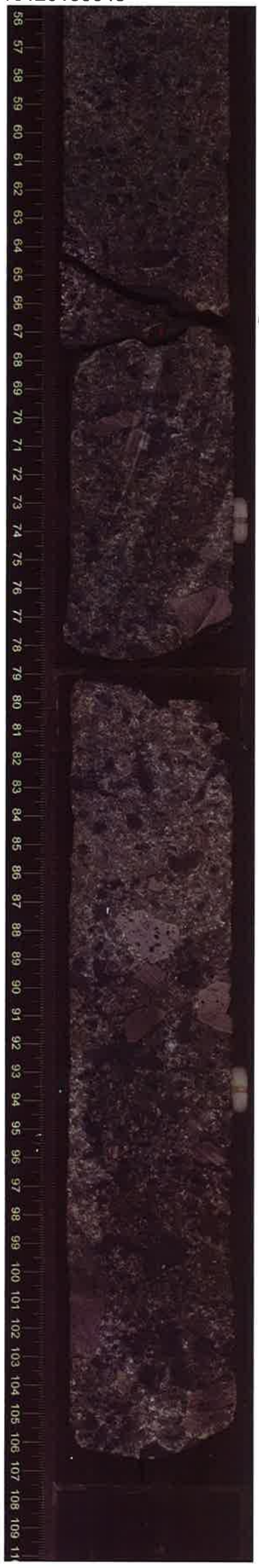
SOME ARE ELONGATE

SOME VESICULAR
CLASTS (30%)

21-40
drilling
disturb.

All section of 66R
have 3% by
irregular black
matrix w/ some
irregularly
shaped clasts.

VESICULAR
CLAST (DISTINCT
BOUNDARIES 10%)



64-67
drilling disturb.

330-U1374A-66R-2-A_SHLF2829951_20110120160043

UNIT 138
CONTD.
PIECE 1-3

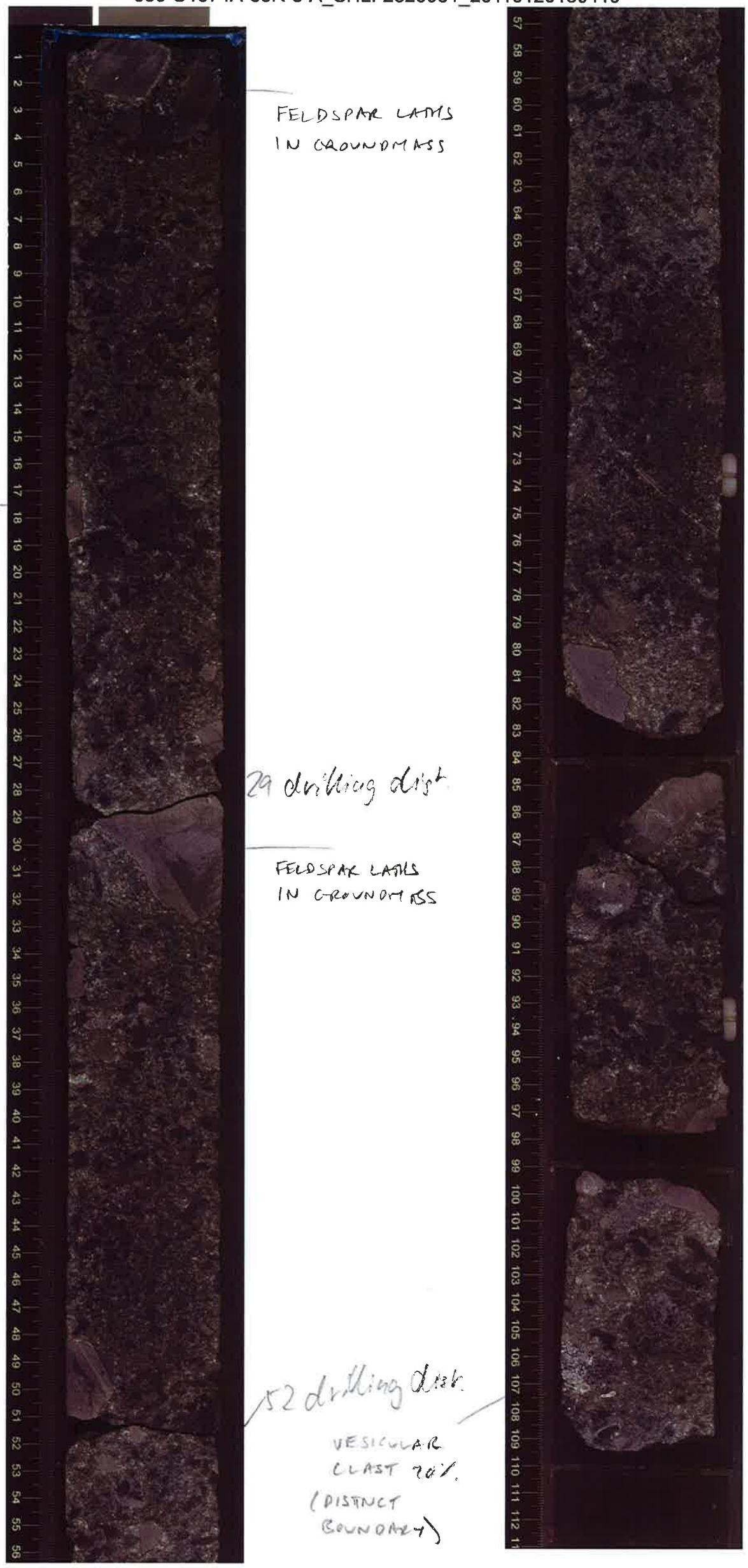
85-87 very, 0.1, irreg.
in clast

92-94 very, 0.1, irreg.
in clast

42-52 very,
1, mostly mm org, 2mm
straight 23->307

330-U1374A-66R-3-A_SHLF2829981_20110120160419

UNIT 138
CONTD.
PIECE 1a-3



FELDSPAR LATHS IN GROUNDMASS

29 drilling dist.

FELDSPAR LATHS IN GROUNDMASS

52 drilling dist.

VESICULAR CLAST 20%. (DISTINCT BOUNDARY)

black zone, 'baked'?

fluidal margin to clast.

was this clast emplaced hot & baked the surrounding groundmass??

UNIT 138

CONTD.

PIECE 1-2

330-U1374A-66R-4-A_SHLF2830011_20110120160735

FELDSPAR LATHS IN GROUNDMASS

VESICULAR CLAST 5%.

(DISTINCT CLAST)

68-69 vein network, n=4 (irreg.) in clast

330-U1374A-66R-5-A_SHL 830041_20110120161234

UNIT 13b
CONTD
PIECE 1a-2

drill disk

VESICULAR CLASTS WITH CLEAR MARGINS 5%

92-97 vein subhor, n=4
0.1, irreg., in clast

drill disk

330-U1374A-66R-6-A_SHLF2830071_20110120181124

UNIT 138

CONTD.

PIECE 1a-3

VESICULAR
CLAST 30%.
CLEAR BOUNDARY

Al drill dist

23-28 vein subhz, to 0.1mm, irreg.; in clast

VESICULAR
CLAST 30%.
DISTINCT BOUNDARY

84 drill dist

95-97 vein subhz, to 2 irreg.; in clast

VESICULAR
CLAST 30%.
DISTINCT BOUNDARY

UNIT (137)

PIECE 1a - 1b

vesicle-patches. dark patches. light patches.

smooth angular edge b clast.

fine clasts are easy to see & very angular.

away from clast, groundmass is made up of blk clas & dark material lighter material & vesicular patches

↓

↓

Possible large clast could x :. preventing welding along its margin & affecting alteration pattern??

VESICULAR CLAST 10%.

330-U1374A-66R-7-A_SHLF2830101_20110120181742

VESICULAR CLAST 10%

FELDSPAR LATHS IN GROUNDMASS

FELDSPAR LATHS IN GROUNDMASS

FELDSPAR LATHS IN GROUNDMASS

VESICULAR CLAST 20%.

VESICULAR CLAST 5%.

~57-60 vein network n=5, 0.4mm pinneg. in clast

330-U1374A-66R-8-A_SHLF2830131_20110120182217

UNIT 13S

PIECE 1A-1C

FELDSPAR LATHS AROUND EDGES

VESICULAR CLAST 30%.

VESICULAR CLAST 30%

VESICULAR CLASTS 30%

FP LATHS IN GROUNDMASS

Grading dish