



highly altered

moderately altered

54-57 vein network (irreg.) non-orient

62-64 vein network, (irreg.) non-orient

Colour mottled brown-gray-white



84-90 vein network, irreg; non-orient
82-94 conjugate vein, 60 -> 258
91-93 60 -> 152
91 - 92

dark gray aphanitic

Fresh olivine

116-117 vein, sub-horizontal -> 258
112-115 vein, sub-conv. -> 212

no vesicles

124-128 vein 70 -> 256

UNIT 79
Volcanic breccia
Mod. al.-phyric basalt
2% olivine
5 mm max
2 mm modal
altered, subhedral
Clast 15 mm modal
low spherulites, angular aphanitic

Continues in 39R-1

42 cm UNIT 78

Moderately olivine-phyric basalt.

lava lobe with fractures top

ISCI 2

3% olivine (no aug or plag)
7 mm max
2 mm modal
fresh, subhedral

UNIT 79

Piece 1-12

330-U1374A-39R-1-A_SHLF2779891_20110114140150

UNIT 79

Continues through
to 39R 5 @
38.5cm.

(altered, fragmented,
glassy margin on
Unit 80).

0% Pluc

0.1% Px

2.5mm MAX

1mm MOD.
FRESH

2% OLIVINE

PERVASIVELY ALTERED

5mm MAX

2mm MOD.

SUBHEDRAL

MODERATELY

OLIVINE-PHYRIC

BASALT BRECCIA

MOTTLED ORANGE

GRAY WHITE

APHANITIC

COMPLETELY
ALTERED.

MODERATELY
PHYRIC.

80% VOLCANIC

CLASTS.

5mm MOD.

SUBANGULAR

LOW

POOR SORTED.

0.1% VESICLES

HIGH
ROUNDED

1.5mm MAX

0.2mm MOD

5-10% IN
PATCHES.

caliche

moderate
alt

1%
vein network
u=15, irreg, non-
oriented

high alt

SANDY
INTERVALS

moderate
alt

high alt



← small pyroxene.

10% VESICLES
IN CLASTS
w/caliche

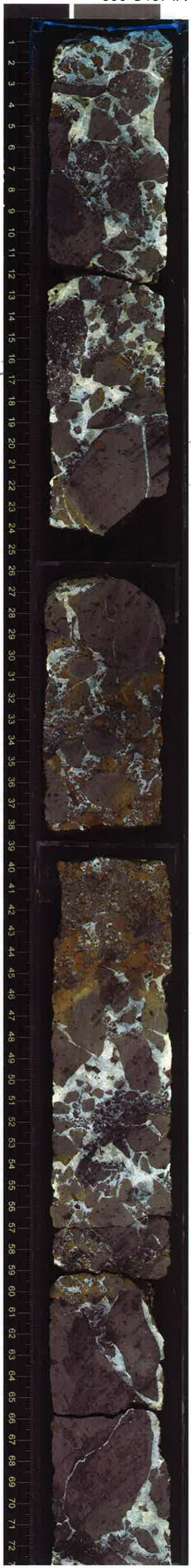
VESICLES.

moderate alt

← 10% VESICLES
IN CLASTS w/caliche

UNIT 79
Piece 1-9

10% vesicles
in casts.



moderate alt
- calcite

26-31
vesic, mag, non-ortho

high alt

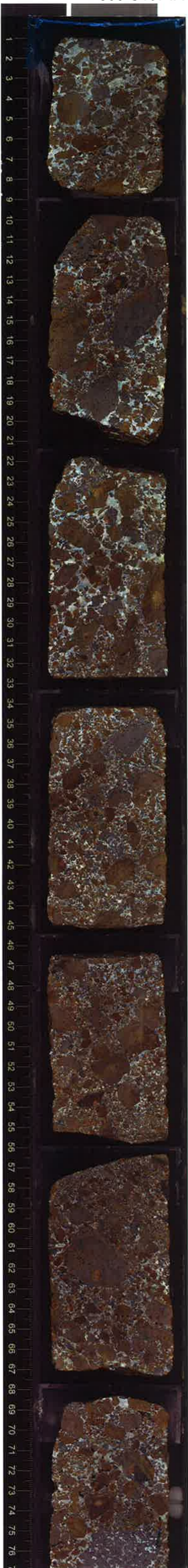
65-71
vesic, mag, clasp dcp



80-83
vein straight sub-
horizontal

10%
VESICLES IN
CASTS.

UNIT 79
Piece 1-11



medium alt

high alt

59% VESICLES
IN CUST



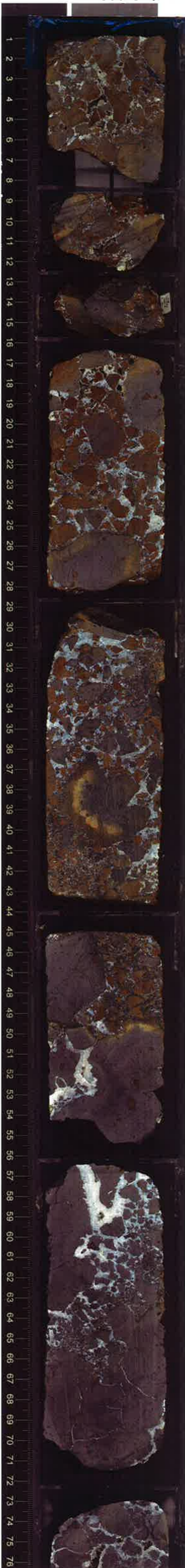
59% VESICLES
IN CUST

59%
VESICLES IN CUST

160%
VESICLES IN CUST

UNIT 7
1-10

high alt
(not alt)



44-48
vein network, mag.
non-oriented

50-53
vein network, n=6
mag. non-oriented

64-70
vein network, n=6
mag., non-oriented

medium alt.



UNIT 31

1-6

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1-2 vein straight
non-orient.

4-6 vein (wavy)
straight non-orient

85-87
Fracture
network,
straight,
non-orient.

82-87
vein, irreg,
steep dip

93-99
vein straight
86-2017

96-99
vein wavy
irreg. non
oriented

105-115
vein wavy
irreg. steep
dip

39-43 vein network
n=8, irreg, non-orient.

55-59
vein wavy
n=7, irreg,
non-orient

117-5 -
VESICLES
10%
LOW
SUB-R
3mm max
1mm mod.

61-69 vein network
n=6, irreg, non-orient

70-71
vein, straight
non-orient

UNIT 80

6-16

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MEDIUM GRAY
APHANITIC

COMPLETELY
ALTERED GLASS
ON MARGIN

MODERATELY-PHYRIC

MASSIVE

38 S-105 cm
VESICLES 0.1%
MODERATE, ROUNDED,
MAX 1MM, MOD 0.5MM

VESICLES 5%
105-117.5 cm.
ELONGATE, SUBROUNDED
MAX 6MM, MOD 1MM.

BOUNDARY NOT
RECOVERED.

UNIT 81 17-19

VOLCANIC
BRECCIA

FRAGMENTED LAVA

0.5% PX
EUCORAL
FRESH.

3mm max
1mm mod.

2% OLIVINE

4mm max
1mm mod

COMPLETELY
ALTERED
SUBCORAL.

MOTTLED ORANGE
GRAY WHITE

APHANITIC
COMPLETELY ALT.
GLASS.
BRECCIATED.

80% VOLCANIC CLASTS
7mm mod
LOW, SUBANGULAR
POORLY SORTED.

ALTERED
GLASSY MARGIN

UNIT 80

BASALT LAVA
FLOW OR FRAGMENT
SMALL LAVA LOBE

ISCI 1

TOP 35cm
IS BRECCIATED.

0% PLAC

10% PYROXENE
SUBCORAL, FRESH,
1.5mm max, 1mm mod.

2% OLIVINE
SUBCORAL, PERVASIVELY
ACT.

10mm max
2mm mod.

MODERATELY OLIVINE
-AUGITE-PHYRIC
BASALT

UNIT 81

PIECE 1-4

0-40 R6 97cm

BASALT BRECCIA
FRAGMENTED LAVA

2% OLIVINE
SUBHEDRAL, PERVASIVELY ALTERED
MAX 7mm, MODE 2mm

0.5% PYROXENE
SUBHEDRAL, FRESH
MAX 2mm, MODE 1mm

▷ MODERATELY OLIVINE-
PHYRIC BASALT
BRECCIA

MOTTLED GRAY-ORANGE-
WHITE

FINE-GRAINED

VOLCANIC ATTRIBUTES:

0-52cm
60% CLAST/MATRIX
11mm
LOW, SUBANGULAR
POORLY SORTED

VOLCANIC ATTRIBUTES

52-4022 17cm
80% CLAST/MATRIX
5mm
LOW, SUBANGULAR
VERY POORLY SORTED



VESICLES

0-40 R6 97cm

1%

LOW, SUBROUNDED

2.5mm

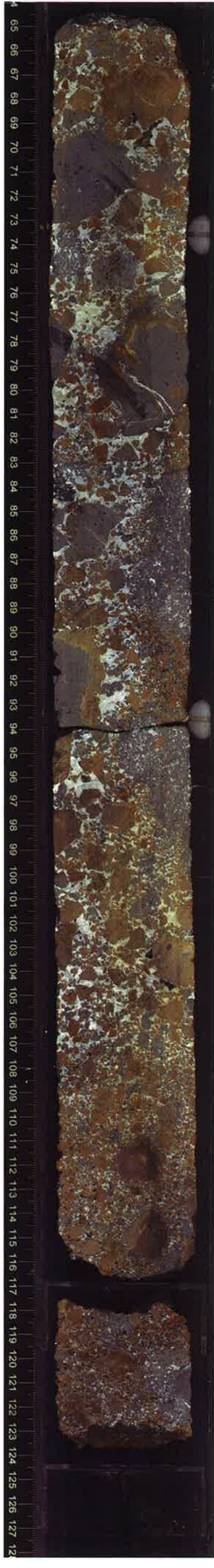
0.5mm

VESICULAR

CLASTS AND PATCHES

5-15%

26-40
vein, n=2
straight, non-
oriented



78-80 vein, branching &
reconnect.

VESICULAR
CLASTS
10%

grain size
decreasing

VESICULAR
CLASTS
5%

VESICULAR PATCHES
10%

UNIT 81
PIECE 1a-2

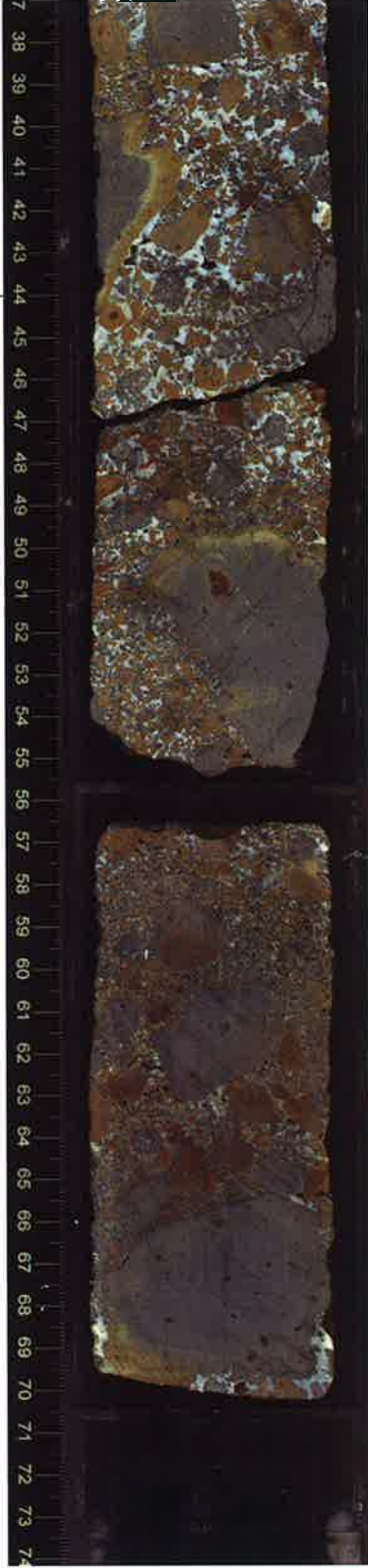


17

VOLCANIC ATTRIBUTES
17cm - 49cm
60% CLAST/MATRIX
9mm
LOW, SUBANGULAR
POORLY SORTED

VESICULAR
CLAST 5%

50-53 vein
network, irreg.
non-oriented
w=8



49cm

VOLCANIC ATTRIBUTES
49-70cm
85% CLAST/MATRIX
8mm
LOW, SUBANGULAR
VERY POORLY SORTED

grain size
↓ decreasing

70cm

UNIT (81)
PIECE 1a-4

VOLCANIC ATTRIBUTES
0-92cm
70% CLAST/MATRIX
8mm
LOW, SUBANGULAR
POORLY SORTED

VESICULAR
CLAST 10%



5-7 vein, sub-horiz
straight

VESICULAR
CLAST 3%

117-118
vein, irreg, non-orient

VESICULAR
CLAST
10%

116-117 vein network,
irreg, non-oriented



92
VOLCANIC ATTRIBUTES
92 - 90 & 16cm
80% CLAST/MATRIX
2mm
LOW, SUBANGULAR
VERY POORLY SORTED

115-116
vein, straight
90 - 250
119-120 vein
network, straight,
non-oriented

127-131
vein network
w=10 straight,
non-oriented

UNIT (81)
PIECE 1-13

VOLCANIC
ATTRIBUTES

16-58cm
90%
1mm
LOW, SUBANGULAR
VERY POORLY SORTED

16cm

VESICULAR
CLAST 7%

58

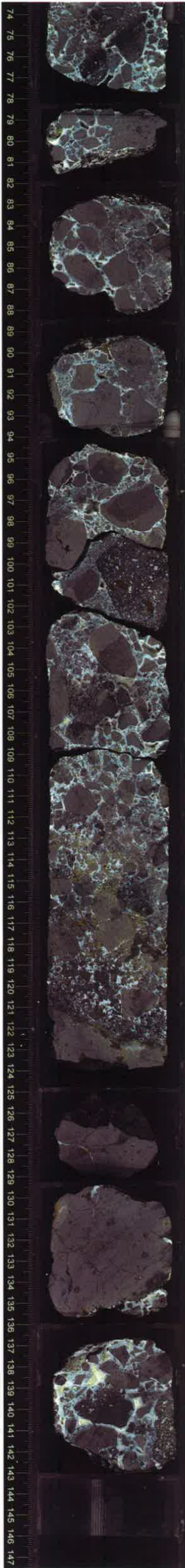
VOLCANIC
ATTRIBUTES

58-40 R 5 109cm
70%
12mm
LOW, SUBANGULAR
POORLY SORTED



56-58cm vein branched
0.5-1mm shaly

59-67cm vein network
branched, irregular
0.5-1mm



VESICULAR
CLAST 15%

127-129cm vein 0.5mm branched
curved

129.5-135.5cm vein network
0.5mm irregular

UNIT (81)
PIECE 1-15



VESICULAR
CLAST 10%

65-66cm vein 0.1mm
irregular



79-82cm vein 0.5mm
in clast

grain size
decreasing

109

VOLCANIC
ATTRIBUTES
109-40 R 6 68cm
85% CLAST/MATRIX
9mm
LOW, SUBANGULAR
VERY POORLY SORTED

UNIT 81
PIECE 1-7

330-U1374A-40R-6-A_SHLF2782051_20110114205219



77-80cm vein? 5mm
straight

95.5-98cm vein 1mm straight.

UNIT 81

(continued)

Volcanic breccia

Modal 20 mm
low sphericity
angular.

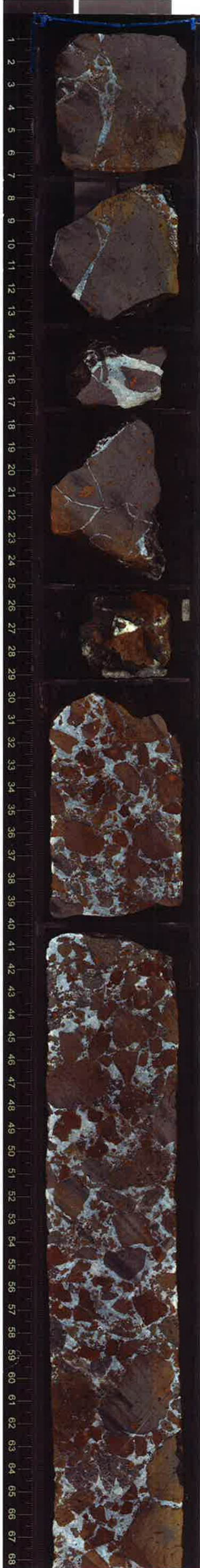
Mottled orange-
gray-white

Moderately olivine-
phyric basalt

2% olivine
altered

8 mm max
2 mm modal
subhedral
no plag. or augite

Most clasts
not vesicular
aphanitic



8-12 cm vein 2-4 mm
single, spherulitic, oriented

19-24 cm vein network
1 mm branch trachytic

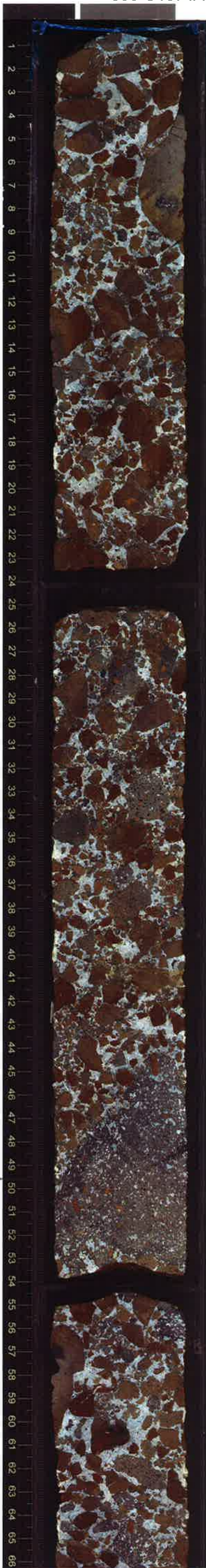


Unit (81)
(continued)
as far section 1



Unit (81)
(continued)

as for section 1
to 79 cm.



Vesicular
clast



79 cm
UNIT (82)

Moderately
olivine - plagioc
basalt

low labe

ISCI (2)

2% olivine phenos.
altered.

6 mm max.
2 mm modal
subhedral.

no plag. or augite

aphanitic

yellowish dark
gray

aphanitic

radiating
cracks

no vesicles

86-88cm
vein 0.5mm
stopped 88-89

91-103cm
vein network
85-062
Zinnony
6mm max

102-109cm
vein network
81-050

distinct
change in
orientation

108-111cm
vein netw
70-030