

VESICLES

UNIT 6
Piece 1-12

Calcite + minor
clay filling
vesicles
Moderately
altered
Chromite ~ 90%
altered to
iddingsite

Interval 1 - PHENOCRYSTS.
0-4953
Altered Olivine
20%
Subhedral
12 mm MAX
5 mm MODAL

FINE GRAINED
0.1 mm
PORPHYRITIC
MOTTLED GREY REDDISH
BROWN

AMYGDALOIDAL TEXTURE

moderately
altered
olivine ~ 40%
altered to
iddingsite
light green clay
in vesicles

Interval 2 - PHENOCRYSTS
53 50.5 - 113.
MODERATELY ALTERED OL
15%
EQUANT
10mm MAX (10mm)
5mm MODAL

FINE-GRAINED
0.1 mm
PORPHYRITIC
MOTTLED G.R.B.
AMYGDALOIDAL

2 vesicles, isolated
non-oriented

Interval c
69-113
25%
ELONGATE
SUB-ROUNDED
10 mm
5mm

Interval a
0-26
25%
ELONGATE
SUB-ROUNDED
10 mm MAX
5 mm MODAL

26-20
1 vesicle, 2mm
straight, non-oriented

22.5-36
circular vesicles
aligned, 20°

* COINCIDES W/
FRESH OLIVINE

Interval d
113-124
30%
MODERATE
SUB-ROUNDED
MAX 5mm
MOD. 7mm

Interval b
26-67
5%
LOW SPHERICITY
SUB-ROUNDED
10mm MAX
5mm MODAL

Interval e
124-137
15%
LOW
SUB-ROUNDED
8mm MAX
5mm MOD.

62-72
2 vesicles straight
bowed 80°

Interval f

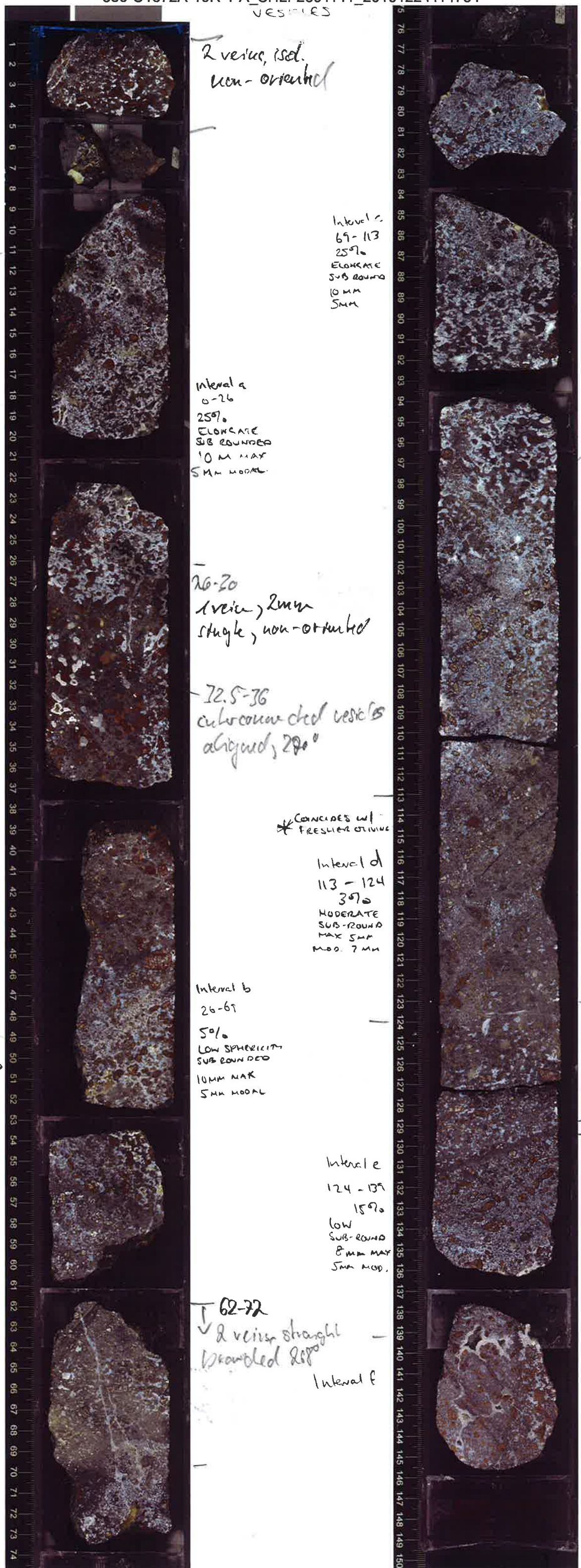
calcite in
vesicles

Interval 3 113-123
Same as 1 & 2
EXCEPT
WEAKLY ALTERED
OLIVINE

* COINCIDES W/
CHANGE IN VESICLES

Interval 4 123-137
Same as before
EXCEPT
MODERATELY ALT. OLIVINE
↳ non-vesicular band
145/67

Interval 5 137-END
could on 2A
moderately altered
chromite ~ 90%
altered to
iddingsite



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Interval 5

Olivines same
as before but
strongly altered.
15mm max
5mm mod.

Caliche veins

Moderately
altered
olivine ~90%
& iddingsite

36.5-52.5

1 vein, straight
sub. vol. 90°

Moderately
altered
olivine ~80%
iddingsite

56-56
1 vein, straight
steep dip. 120°

VESICLES

Interval f

0-25
10%
ELONGATE
ANGULAR
15mm max
7mm mod.

20-70
joint,
irreg.
non
orient.

97

Interval g

25-97
5%
MODERATE
SUB ROUNDED
13mm max
4mm mod.

highly
altered

highly
altered
oliv 100%
iddingsite

Caliche
veins

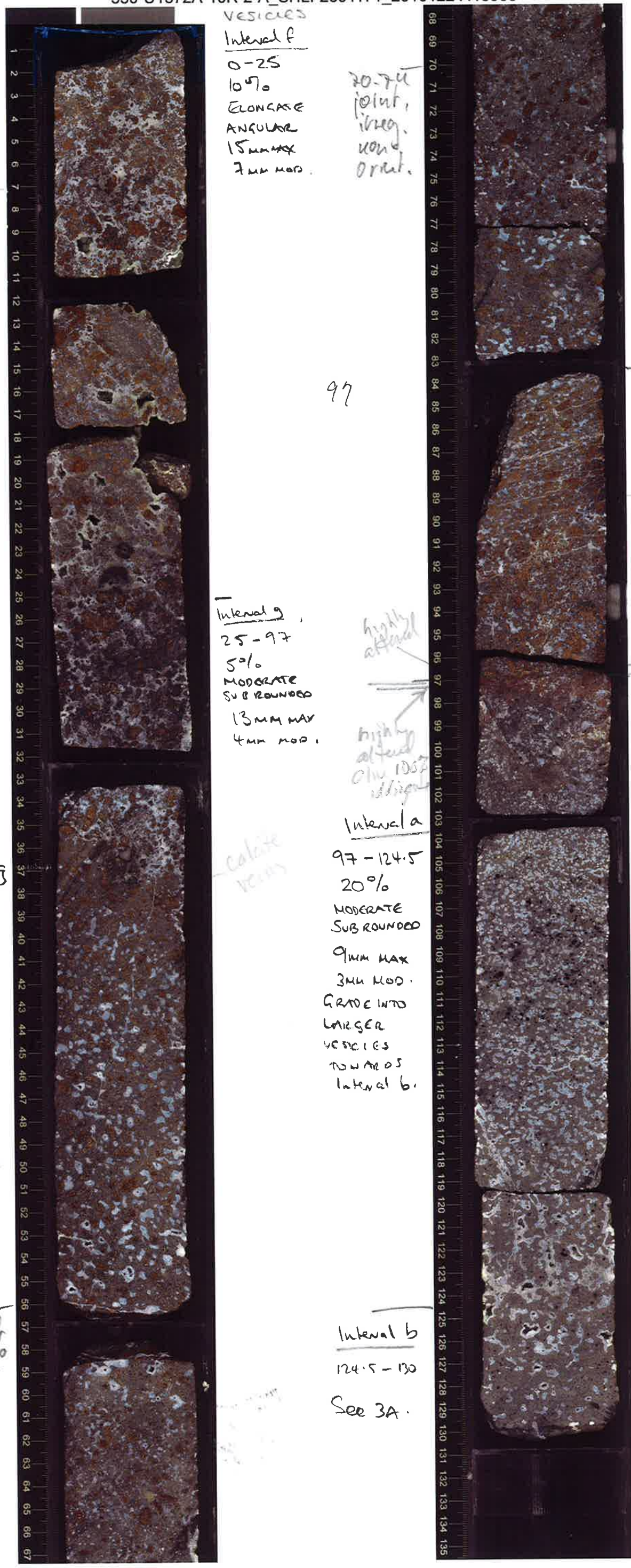
Interval a

97-124.5
20%
MODERATE
SUB ROUNDED
9mm max
3mm mod.
GRADE INTO
LARGER
VESICLES
TOWARDS
Interval b.

Interval b

124.5-130

See 3A.



83-92
band of vein, 20%
0.5mm straight
100/80
Caliche
veins

End of
Unit 6
Olivine disap.

UNIT 6

Oxidised top.
change in olivine size &
abundance.

UNIT 7

Interval 1

97 - End. 131
0.5%
SUBHEDRAL

0.5mm
0.5mm MODAL

APHYRIC
FINE GRAINED 0.2mm
MED. GRAY
AMYGOALOIDAL.

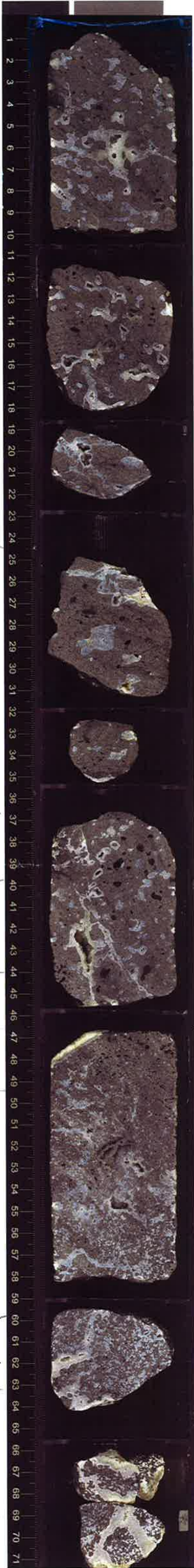
116-124
2 bands of vesicles
irregular, 100%
Moderately altered
olivine 100%
altered

0-114

Piece 1 - 15

VESICLES

Interval b
39.0 - 46.5
LOW
SUB ROUNDED
30mm MAX
8mm MOD.



Same as 2A.

Calcite veins

Moderately altered (less than 2A) Olivines ~100% iddiopside

36-44
band of vesicles & veins, irregular non-oriented

Calcite filling vesicles

57-57
2 veins, irregular network, non-oriented

60-63
1 vein, sub horiz.

68-71
1 vein, irregular, non-oriented

110-114
(thin network steeply dip)

114-124
vein network 12, non-oriented

Interval c
46.5-110
10%
MOD.
SUBROUND
MAX. 18mm
MOD. 3mm

132-139
vein network non oriented

End of Unit 7
veins filled w/ calcite

(no recovered) UNIT 8
large olivine scoriaceous

See 4A for Description and

Calcite filling veins

9mm OLIVINE
moderately altered Olivines 100% by iddiopside

UNIT 5
Pila 1a-1b.

TEXTURE

COMPLETELY ALT. OL.
MAX 8MM U-8
MOD 3MM vein,
10% irreg,
EQUANT non-orient
SUBHEDRAL

SPARSELY PORPHYRITIC
FINE GRAINED 0.1MM
MOTTLED BROWN GRAY

VESICLES, SCOREACEOUS
BLOCKS
V. VARIABLE - PATCHY
BASED ON THE
PATCHY MATERIAL.

10%
MAX 6MM 5-7
MOD. 1MM 2 veins, irr.
LOW non-orient
SUBROUNDED

VOCCANIC ATTRIBUTES -
SCOREACEOUS BLOCKS

Moderate alteration

Interval a
0-86.5
RUBBLY IN
APPEARANCE
VOIDS INFILLED/
RUBBLE CEMENTED
BY ALTERATION
MINERALS.

eg. AUTO BRECCIATED
TOP OF LAVA FLOW

Calcrete

Calcrete
veins

Interval b
GENERALLY
MORE MASSIVE
86.5-137
(9.5m
section SA)
MASSIVE

ZONES OF
VESICLES

PATCHES
~50MM

MASSIVE PATCHES
30% VESICLES
MAX 20MM
MOD 5MM
ELONGATE
ROUNDED,

Calcrete

PATCH OF
VESICULAR
100MM

77-93
vein network
irreg. non-orient.

SCOREACEOUS
BLOCK, eg.

Calcrete veins

VOCCANIC
ATTRIBUTES
eg. CORE OF
LAVA FLOW

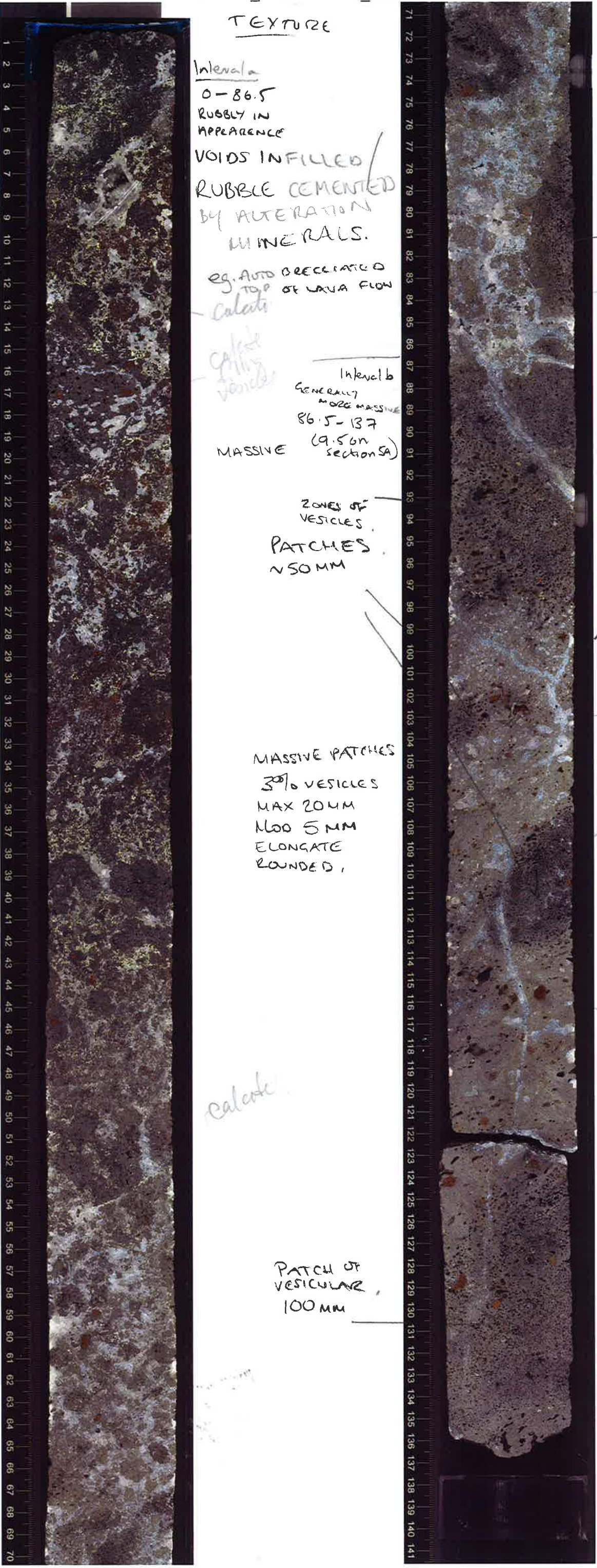
99-105 vein network
irreg. non-orient

Carbonate
veins

Moderately altered

111-132
vein network, irr.
non-orient

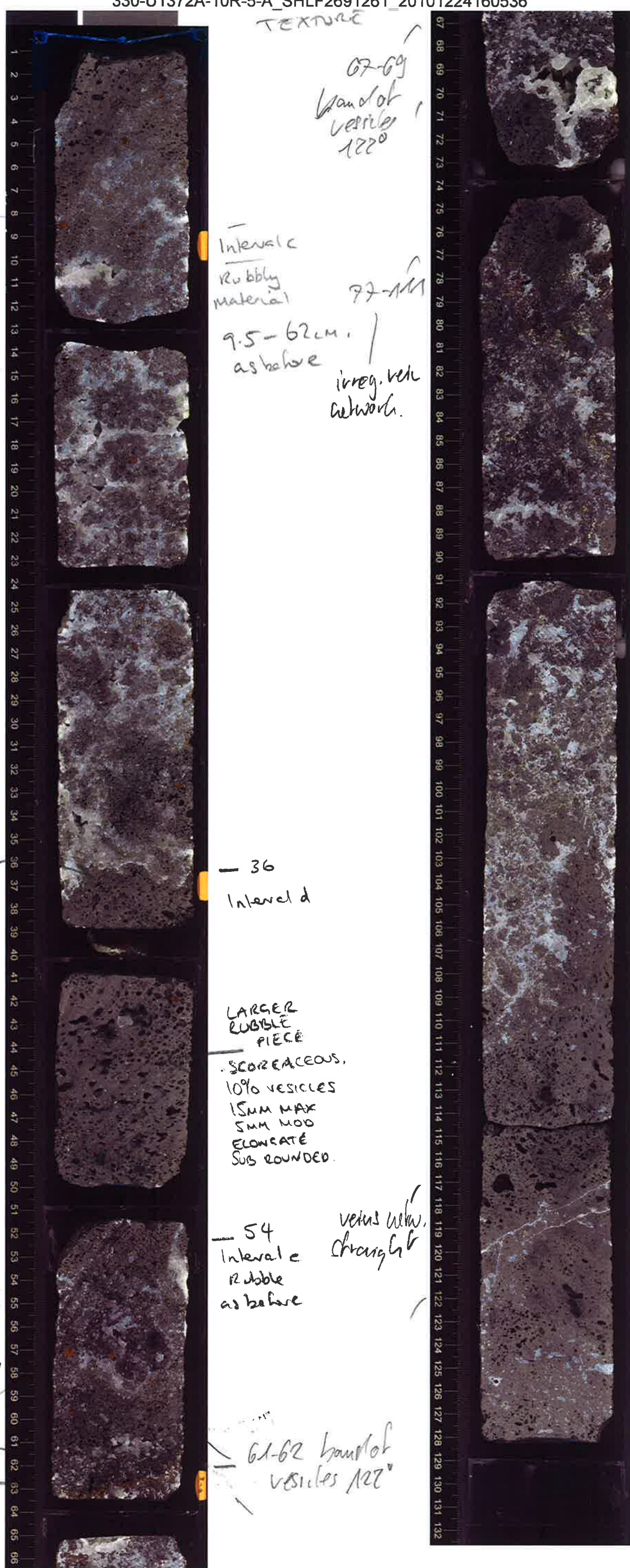
Calcrete veins
100% non-orient
reddish



UNIT 8
 PIECE 5 - 5
 0-62cm

UNIT 9
 PIECE 5 - 86
 62 - and 129

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MASSIVE W/PATCHY
 INTERVAL ENDS

At 9.5cm

vein network
 branching,
 steeply
 dipping

15-32
 to vein network
 irregular

modest
 alteration

44-46
 aligned vesic.
 180°

52-59
 vein network
 irreg. web.
 non-oriented

END OF UNIT 8
 RED TOP OXIDISED UNIT 9
 TOP OF UNIT 9.

TEXTURE

07-09
 band of
 vesicles
 122°

Interval c
 Rubbly
 material

9.5-62cm
 as before

irreg. vein
 network.

36
 Interval d

LARGER
 RUBBLE
 PIECE
 SCOREACEOUS,
 10% VESICLES
 1.5mm MAX
 5mm MOD.
 ELONGATE
 SUB ROUNDED.

54
 Interval e
 Rubble
 as before

vein network
 changing

61-62 band of
 vesicles 122°

UNIT 9
 RUBBLY,
 AS BEFORE

OLIVINE
 MAX 0.5mm
 MODAL 0.1mm
 0.5% ABUNDANCE

FINE-GRAINED
 0.1mm

SPARSELY PHYRIC
 MOTTLED GRAY, DARK
 GRAY, REDDISH GRAY

color -illy
 vesicles

103cm.

SCOREACEOUS BLOCK,
 103cm - 9cm GA
 10% VESICLES
 10mm MAX
 5mm MOD.
 LOW SPHE,
 SUB ROUNDED,

moderate alteration

color varies

GRADES INTO
 MASSIVE

UNIT

PIECE 1-9

UNIT 9 8-11
 AS PREVIOUS SECTION
 OLIVINE
 MAX 0.5mm ANKEDRAL
 MODAL 0.1mm
 0.5% ABUNDANCE
 FINE-GRAINED
 0.1mm
 SPARSELY HYALIC

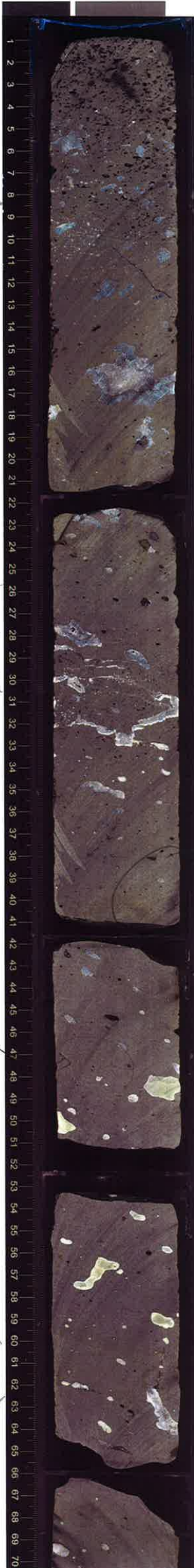
straight
 single
 vein
 270/42

moderate
 alteration

28-32
 vein network
 irreg.

46.5-49
 curved single
 vein

60-62
 vein 1680



SCOREALOUS



8.5cm
 (8.5-114cm)
 LESS VESICLES
 VESICLES



3%
 ELONGATE
 SUBROUNDED
 40mm MAX
 10mm MODAL
 MEDIUM GRAY

78.5-
 81
 vein, steeply
 dipping
 Z16

calat

SAMPLE

114cm

RUBBLY
 TEXTURE
 FROM 114cm

calat

SCOREALOUS
 BLOCK

FOR MODAL
 DESCRIPTION
 SEE NEXT
 CORE SECTION



82.5-86
 2 veins irreg network
 calat vein

88-100
 branched vein network
 predom. 250°

calat vein

101-102
 vein, 3mm, steeply dip
 100°

102-117
 vein network,
 isolated, 250°

moderate
alteration

calat B. Hays

PIECE 1-3

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UNITS

UNIT 9

→ PIECE 1

0.5-8
single point
~ 200°
Medial
abundant

UNTIL 16cm

↑

16cm UNIT BOUNDARY
OXIDISED LAYER

↓

UNIT 10

PIECE 1 →

UNIT 10 FROM 16cm

OLIVINE
2%
5mm MAX
1mm MODAL
SUBHEDRAL COMPLETELY
ALTERED

20-22
very weak
crosscut
220/130

PYROXENE (GLOMEROCRYSTIC)
0.5%

1.5mm MAX

0.5mm MOD

SUBHEDRAL FRESH

PHYRIC GROUNDMASS

0.1mm

FINE-GRAINED

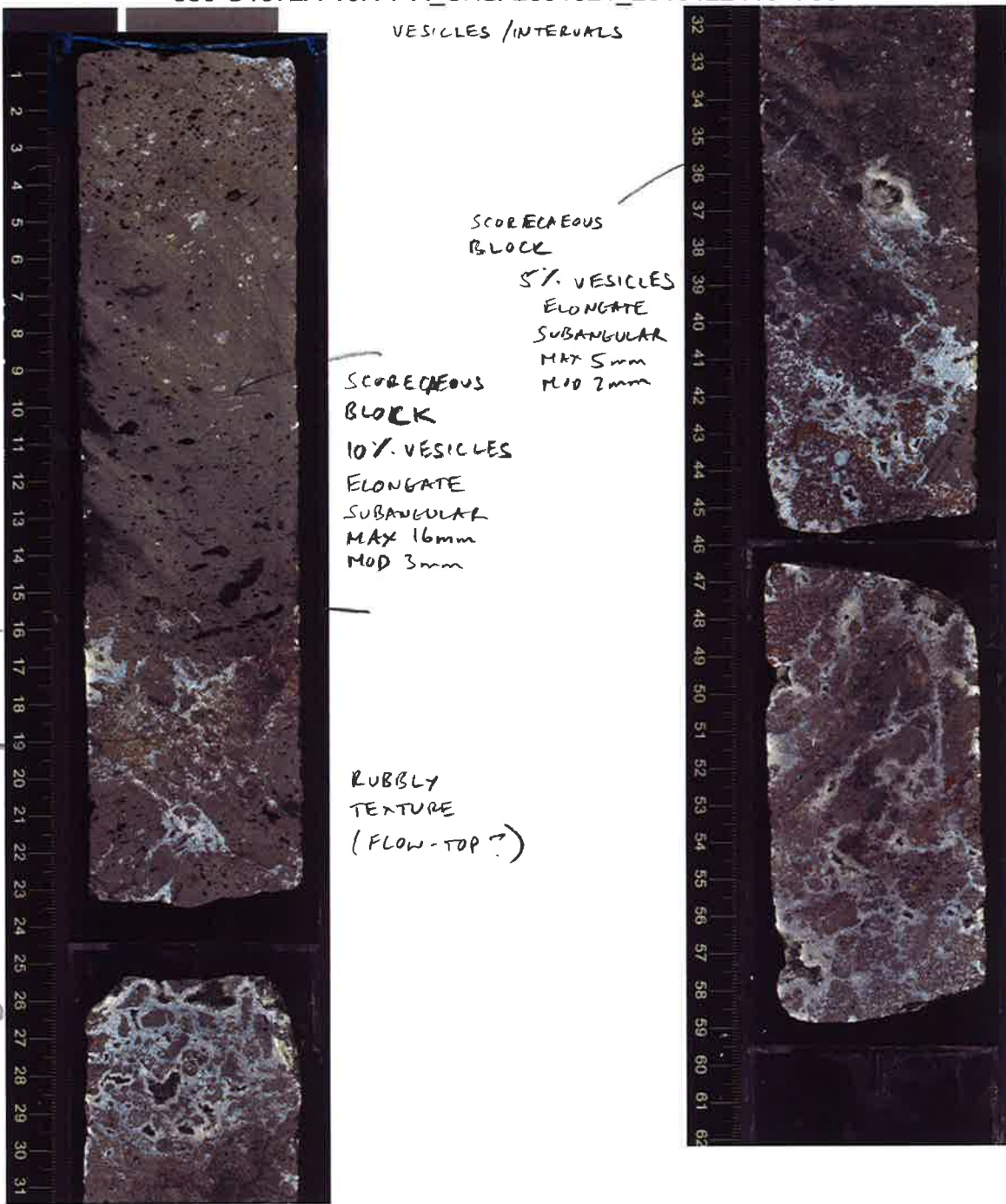
VESICLES / INTERVALS

SCORECAEOUS
BLOCK

5% VESICLES
ELONGATE
SUBANGULAR
MAX 5mm
MOD 2mm

SCORECAEOUS
BLOCK
10% VESICLES
ELONGATE
SUBANGULAR
MAX 16mm
MOD 3mm

RUBBLY
TEXTURE
(FLOW-TOP?)



UNITS

31-38
3 veins, isolated, very
oriented

Caloch alloys

MOTTLED GRAY/
REDDISH GRAY

Medial
abundant

UNIT 10
2a-10

NOT DESCRIBED,
RUBBLE.

Unit 10
Cont'd from
Core 10R-7A

PHENOCRYSTS

OLIVINE 2%
SUBHEDRAL
COMPLETELY ALTERED.
5mm MAX
1mm MODAL

GENERAL
OLIVINE-PHYRIC
BASALT

4-35cm
PHYRIC
FINE GRAINED, 0.1mm
MOTTLED GRAY-
REDDISH GRAY
AUTO-BRECCIA/RUBBLY
COLOUR CHANGE @ 35cm

35cm → BASE
11R 2A
START - 48cm

MED - GRAY
FINE G. 0.1
SPARSELY PORPHYRITIC
MORE MASSIVE
SPARSELY VESICULAR.

vein halo [43.5 to 44.5cm
vein, sigmoidal
steeply dipping
1mm wide

vein 46-61cm
sigmoidal
0.5mm wide
steeply dipping

63-63.5cm
vein
76mm
irregular, steeply
dipping

65-66.5cm
irregular vein
steeply dipping
10mm wide

71-74cm
joint
azimuth 155
steeply dipping

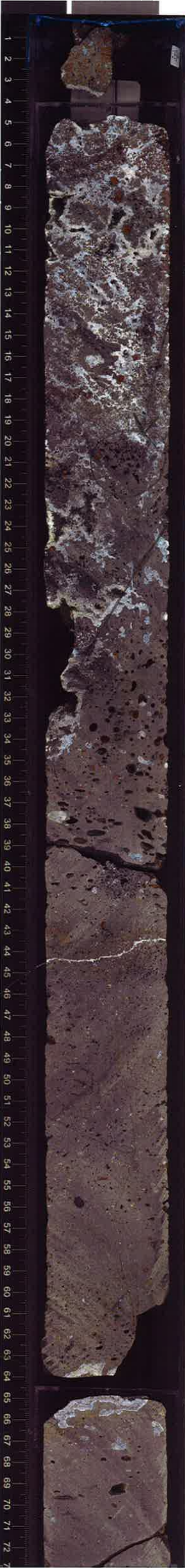
VESICLE

vein 72mm wide (other half
missing) - curved

Interval a 4-35
RUBBLY
SCOREACEOUS BLOCKS
30% VESICULAR
LOW SPHERICITY
ROUNDED
3mm MAX
1mm MOD.
4-35cm vesicled vein
network, irregular oriented

Interval b
24-43
5% VESICULAR
6mm MAX
3mm MOD
LOW SPHERICITY
ROUNDED.

Interval c
43 - Base
11R 2A
START - 48cm.
2% VESICULAR
15mm MAX
4mm MOD
MODERATE
ROUNDED.



joint 81 to 81.5cm
80 → 155

vein 86.5-92cm
stepped 2mm thick
70 → 120

99.5-101cm
vein 75 → 040
straight 1mm thick

vein 99.5-117cm
curved, steeply dipping 3mm
thick

vein 114-117cm 1mm thick

vein 118.5-124cm
1mm thick
90 → 260

125-129cm
vein <1mm thick
non-oriented piece

vein 140.5-142cm
7mm thick
non-oriented piece

UNIT 10
PIECES 1a-1c

Veins x3 9-11cm
< 0.5mm thick
80-100°

Vein 13-14cm
1mm wide
70-100°

Vein 14-15.5
0.5mm wide
sigmoidal
sharply dipping

joint
85-150°

ALIGNED VESICLES 90-100
INDICATING FLOW AT
BASE

UNIT 10 ↑

BASE OF UNIT 10
BOUNDARY C 48cm

UNIT 11 ↓

CHILLED MARGIN AT
48cm

DECREASE IN OLIVINE
ABUNDANCE AND MODAL
SIZE

UNIT 11
PIECES 1c-9



80-86cm
joint
85-110

vein vesicle
network
79-92.5cm
cement

88.5-92.5cm
joint
84-126°

vein vesicle
network
95-99cm
cement
95-99cm
2x joints
non-oriented

vesicle
train
network
100-113cm
cement

joint 100-106cm
80-070°

vesicle +
vein
network
cement
114-120.5

48cm

vein + vesicle network cement
48-65cm

Scoriaceous
top of
Unit 11

vein vesicle network
66-78cm cement



Scoriaceous top
48cm →

Section 3A
63cm

aphyric basalt
0.1% of microphenos

Colour: light reddish
grey

Vesicles

2%

Max. 3mm
Mode 1mm

5% filled

Mod spherulites

rounded

10/cm²

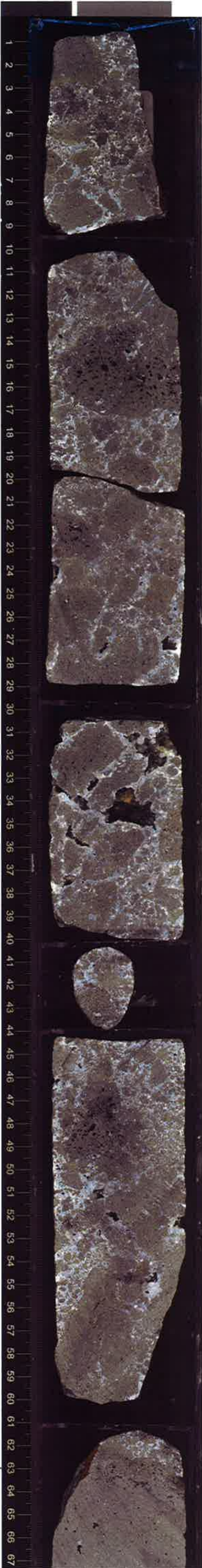
vesicle + vein network cement
122-130.5

132-139.5
vein + vein
network + cement

140-144
vein + vein
network + cement

144cm joint
non-oriented piece

0-63cm
vesicled vein
network
cementing
scoria fragments



vein
99-106cm
80-524
1mm wide

↑
Scoriaceous
flow top

Massive flow



72.5-73.5cm
sigmoidal vein
1mm wide
68-7004

89.5cm
vein
0.5mm wide
steeply dipping

Massive part
of Unit II

3A, 63 cm

→
7A, 9 cm

COLOUR
Top part, 63-

4A, 18 cm
light reddish gray

Base, 4A, 18 cm -
7A, 9 cm

mid gray

Aphyric basalt

Vesicles

see next sheet.

0 cm



0-2cm
vein 3mm wide
sigmoidal
90 → 192°

Massive
part of
Unit II

Vesicular - 3 groups
3A, 63 cm - 4A, 7 cm
4A, 7 cm - 4A, 114 cm
4A, 114 cm - 7A, 9 cm.

3A, 63 cm - 4A, 7 cm

1%

3mm max

1 mm nodal

elongate

Subangular

20% filled 0.5/cm²

4A, 7 cm - 4A, 114 cm

5%

20 mm max

3 mm nodal

mod. spheroidal

Sub rounded

90% filled 1/cm²

4A, 114 cm - 7A, 9 cm

0.5%

20 mm max

0.5 mm nodal

moderate spheroidal
rounded.

0.1/cm²

95% filled.

vein
53-61cm
1mm wide
40 → 058°



Massive
part of
Unit II

75-76.5 cm
vein 88-90°
0.5 mm thick
straight

106.5 - 107.5
vein
0.5 mm
straight
85-90°

vein
118-118.5
75-90°
0.5 mm thick



14-17cm
2mm vein
stepped
steeply
dipping

Vein 0.5mm
29.5-35cm
80-7316°
0.5mm wide

Magmatic
foliation
33-37cm
groundmass with
preferred
orientation
88-7010

different
orientation
to previous
next pieces.
This piece
has rotated.
38-43.5cm
g/mass with
orientation
90-7350

48-51cm
vein network
~6 veins
max width 3mm
avg width 1mm
80-7190°



54-56.3cm
vein 0.5mm
82-7022

Vein 84.5-85.5
sigmoidal
max width 3mm
avg width 1mm
80-7180°

entire section
11R-6A 0-150cm
has magnetic foliation
with orientation of
~ 85-190°



Massive
part of
Unit 11
(continued)



Vein
86-86.5cm
78-188°
1mm wide

98-113cm
vein
0.5mm wide
curved

116-120cm
vein
0.5mm
steeply dipping

121-124.5
vein
0.5mm
steeply dipping

vein ~ looks quite
90-100° like a joint
125-134cm exposed to
oxidation in
subaerial
environment.

vein network <0.5mm
110-149cm
steeply dipping
parallel to magnetic foliation.

OLIVINE ↑ from
0cm to 9cm
SETTLING AT BASE OF
FLOW UNIT 12
magmatic foliation
0-7.5cm

UNIT 11

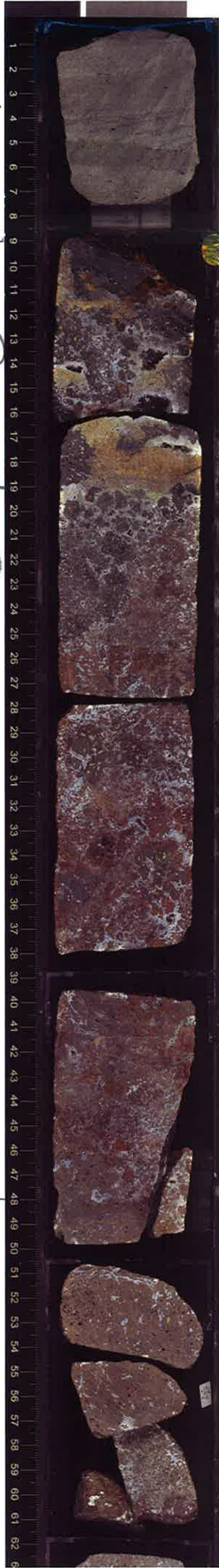
Scoriaceous
base of Unit (11)

Top of
Unit (12)

aphyric basalt
0-01% of phenos.
fine ground.

Scoriaceous
top.

Massive
flow
interior



9cm-17cm
vein + vesicle network

2 cm layer
of limestone

19cm-48cm
vein + vesicle network

Vesicle group ①
19cm-62cm
3%
5mm max
0.5mm modal
low sphericity
angular.
95% filled
10/cm²

↑ red
↓
reddish
brown



Vesicle group ②
62cm - 77cm
3%
elongate
Subrounded
8mm max
2mm modal
5/cm² 5% filled
↑ reddish brown

↓ Vesicle group ③
77cm - 122cm,
15%
high sphericity
Subrounded
11mm max
2mm modal
10/cm² 80% filled.
Reddish gray

bottom of
Unit (12)

0-3.5cm
vein network
max 10mm
Calc
minerals
network

7-9.5cm
vein network
max 5mm
Calc

UNIT 13

Scoriaceous
flow top
Calc
minerals
network

Dusky red
to 85cm
lava fragments
in gray matrix

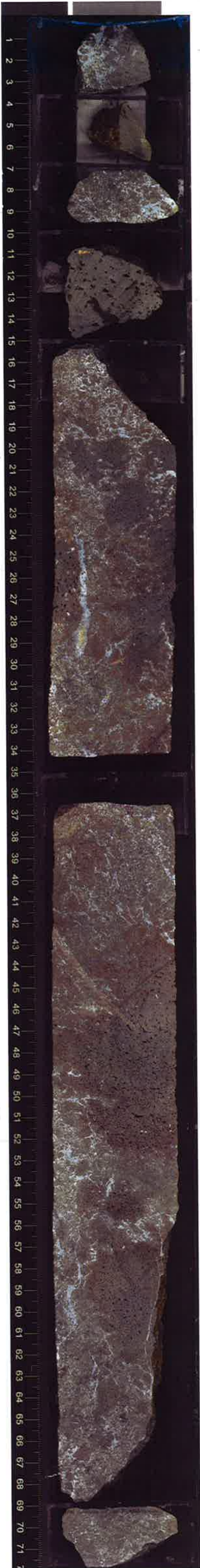
Vesicles to 129cm
5% vesicles in
patches

3mm max
0.5mm mode
elongate
subangular
50/cm² in
patches
5% filled

Aphyric

0.1% olivine
(alters)
1mm max

15-110cm
vesicle + vein
network



Pieces 2 & 4
are
drilling
debris

Pieces 1 & 3 could
be part of Unit 13

Slightly
reddish light gray
from 85cm
to Section 8
145cm

Vesicles from
129cm -
Section 2 118cm

10% vesicles
highly elongate
very angular
14mm max.
1mm mode
15/cm²
75% filled



Calc

Calc

minerals
network

Calc

Scoriaceous

Massive flow
interior
Slightly reddish
light gray