



Shell

bio

bio

bio

bio

bio

bryozo

Shell

bio

bio

bio

bio

bio

bio

bio

bio



micrite drapping  
bryozoan

bio

bio

med. Sand

bio

bio

bio

bioclast. rich

bryozoan  
algae  
mud  
thin section?

bryozoan

bio

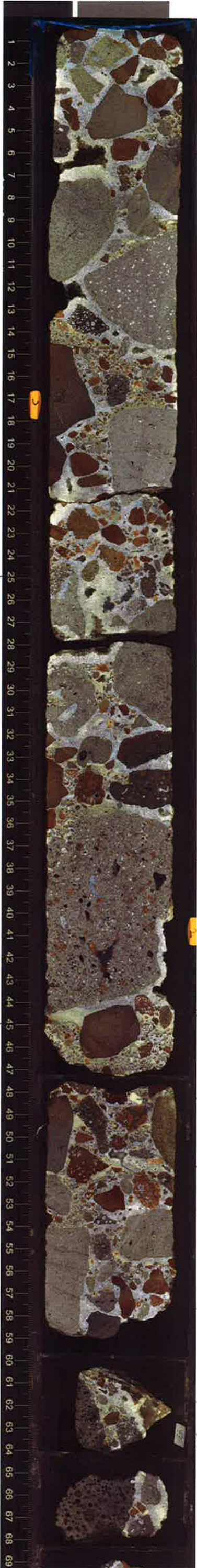
bioclast

Sandier (less micrite)

increased bioclast content

num. shell bio frag. echino? algae? both checked by thin-section

51



Mure abundant bio clasts  
Miche poor

φ50

φ54

φ55

φ81

=45

red algae

large bryo

φ55

φ57

φ52



φ59

φ51

φ79

φ21

φ61

φ50

φ54

"fallen block"  
or current  
winnowing

light  
fraction

cemented  
grains  
are more  
rounded  
bryozoan  
Annelids are  
actually bryozoans



*Brong*

*φ 05*

*φ 25*

*φ 49*

*φ 55*

*φ 45*

*φ 45*

*φ 45*



*φ 64*

*φ 55*

*φ 51*

*φ 48*

*φ 50*

*φ 55*

*φ 58*

*bc*

Breccia

(TS)

red. -

red. -

Red. + biocrust

Bioclast -  
fin

(P)



φ 78

φ 45

φ 47

34

43

φ 43

φ 43



φ 44

φ 46

large shell fragment

φ 49

φ 48

Breccia

Last occurrence of yellow micrite between clasts

conglomerate

geopetal  
last occ. of  
micrite



CONGLOMERATE



p10

shell frag

p51

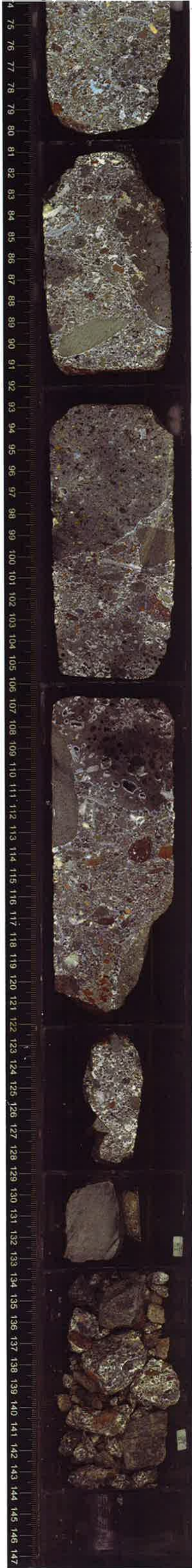
→ poorly cemented

p20

gastropod?

p5

shell frag



shell frag ✓  
 ✓  
 ← rich in shell  
 + bryo  
 + echino

694  
 SR

688  
 SR

✓  
 annelid/bryo  
 along shell ✓

695  
 A

658  
 SR

699  
 SR

692  
 A

699  
 SR  
 shell frag  
 611  
 SR



✓ bc

✓ p/b

✓ bry

✓ p/b

✓ p/b

✓ p/b

✓ bc

✓ p/b



✓ p/b

✓ p/b

✓ p/b

✓ p/b

✓ p/b

✓ p/b

✓ bry

✓ p/b



Handwritten annotations on the left side of the image, including:  
-  $\phi 31$   
-  $\phi 32$   
-  $\phi 33$   
-  $\phi 34$   
-  $\phi 35$   
-  $\phi 36$   
-  $\phi 37$   
-  $\phi 38$   
-  $\phi 39$   
-  $\phi 40$   
-  $\phi 41$   
-  $\phi 42$   
-  $\phi 43$   
-  $\phi 44$   
-  $\phi 45$   
-  $\phi 46$   
-  $\phi 47$   
-  $\phi 48$   
-  $\phi 49$   
-  $\phi 50$   
-  $\phi 51$   
-  $\phi 52$   
-  $\phi 53$   
-  $\phi 54$   
-  $\phi 55$   
-  $\phi 56$   
-  $\phi 57$   
-  $\phi 58$   
-  $\phi 59$   
-  $\phi 60$   
-  $\phi 61$   
-  $\phi 62$   
-  $\phi 63$   
-  $\phi 64$   
-  $\phi 65$   
-  $\phi 66$   
-  $\phi 67$   
-  $\phi 68$   
-  $\phi 69$   
-  $\phi 70$   
-  $\phi 71$   
-  $\phi 72$   
-  $\phi 73$   
-  $\phi 74$   
-  $\phi 75$   
-  $\phi 76$

Ammonite

TS



Handwritten annotations on the right side of the image, including:  
-  $\phi 78$   
-  $\phi 79$   
-  $\phi 80$   
-  $\phi 81$   
-  $\phi 82$   
-  $\phi 83$   
-  $\phi 84$   
-  $\phi 85$   
-  $\phi 86$   
-  $\phi 87$   
-  $\phi 88$   
-  $\phi 89$   
-  $\phi 90$   
-  $\phi 91$   
-  $\phi 92$   
-  $\phi 93$   
-  $\phi 94$   
-  $\phi 95$   
-  $\phi 96$   
-  $\phi 97$   
-  $\phi 98$   
-  $\phi 99$   
-  $\phi 100$   
-  $\phi 101$   
-  $\phi 102$   
-  $\phi 103$   
-  $\phi 104$   
-  $\phi 105$   
-  $\phi 106$   
-  $\phi 107$   
-  $\phi 108$   
-  $\phi 109$   
-  $\phi 110$   
-  $\phi 111$   
-  $\phi 112$   
-  $\phi 113$   
-  $\phi 114$   
-  $\phi 115$   
-  $\phi 116$   
-  $\phi 117$   
-  $\phi 118$   
-  $\phi 119$   
-  $\phi 120$   
-  $\phi 121$   
-  $\phi 122$   
-  $\phi 123$   
-  $\phi 124$   
-  $\phi 125$   
-  $\phi 126$   
-  $\phi 127$   
-  $\phi 128$   
-  $\phi 129$   
-  $\phi 130$   
-  $\phi 131$   
-  $\phi 132$   
-  $\phi 133$   
-  $\phi 134$   
-  $\phi 135$   
-  $\phi 136$   
-  $\phi 137$   
-  $\phi 138$   
-  $\phi 139$   
-  $\phi 140$   
-  $\phi 141$   
-  $\phi 142$   
-  $\phi 143$   
-  $\phi 144$   
-  $\phi 145$   
-  $\phi 146$   
-  $\phi 147$   
-  $\phi 148$   
-  $\phi 149$   
-  $\phi 150$   
-  $\phi 151$   
-  $\phi 152$   
-  $\phi 153$

shell frag

shell frag

Neat bryozoa



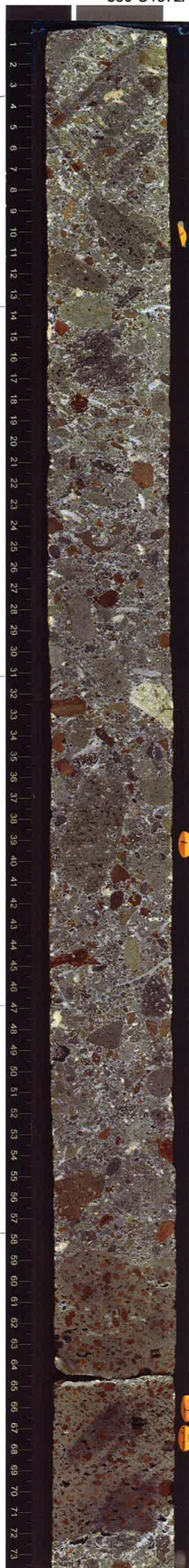
✓ hc

✓ shell

✓ shell frag

✓ algae

✓ hc



✓ hc

✓ hc

✓ hc

✓ hc

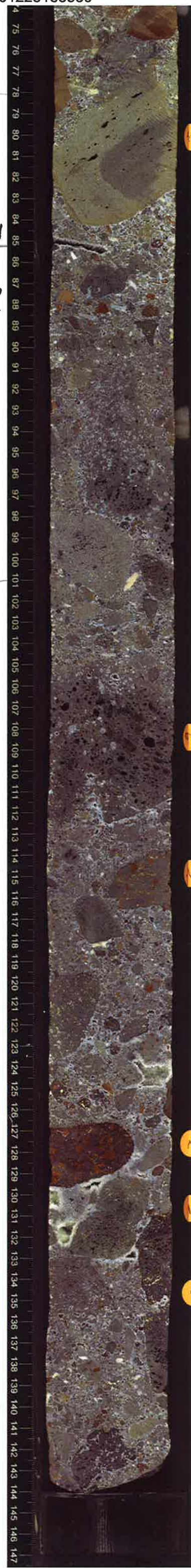
✓ shell frags

✓ hc

✓ hc

✓ dissolved shell or wood fragment?

✓ packstone grain



✓ hc

✓ hc

✓ hc

✓ hc

✓ hc

✓ hc

✓ hc

✓ hc



p438

p434

p470

p459

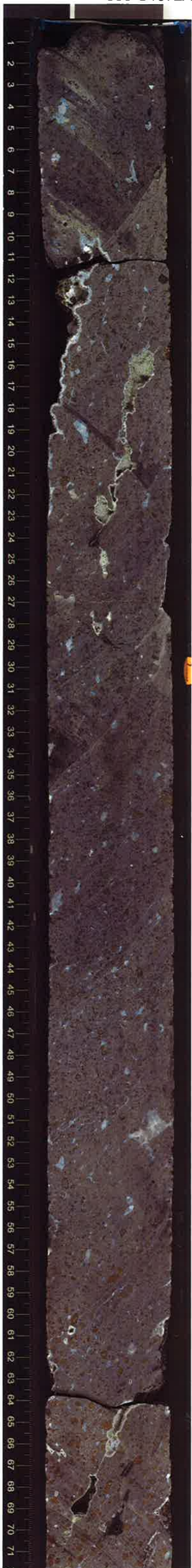
p1585

A

perpetal  
w/ brown micrite

cement  
biobasalt  
Very well rounded

↑  
1sr micrite  
bioblasts are broken  
(less rounded)  
↑ increased abundance



(20)  
Unit boundary  
(2e) cemented

brown micrite  
w/ broken forams  
& rads

cemented

85 =

→  
minor cement  
mostly brown  
micrite

gas trapped



bioclast-rich

limestone

w/ forams

Neat bedding  
structure



φ 89

φ 91

congl

Bioclast-rich zone  
limest.

congl

Bioclast-rich zone  
limest.

φ 96

congl

φ 98

✓  
bryozoan

large bryozoan  
partly cemented

φ 93

φ 94

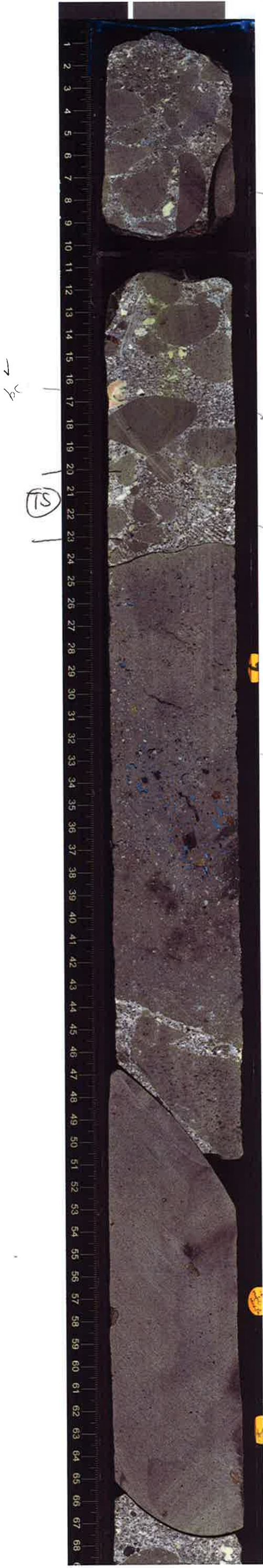
330-U1372A-7R-6-A\_SHLF2687911\_20101223170028



φ 5.5



edge



Basalt grains are carbonized  
 → roundness acquired in river?

layering

large red algae

bc

Brich  
bioclast rich

Pebbly

