

## Rosette Log for IOS Cruise ID 2019-86

Ship: FV Frosti

Program: CBS-MEA

Cast/Event #: 153UTC Date (ddmmmyyyy) 14 Aug | 2019Lat (N): 70 56Station Name: KUL\_03

UTC Time: \_\_\_\_\_

Lon (W): 134 45Christine Michael's Station #: 15CTD File: 2019-86-0153Water Depth(from surface): 200 mSound Speed used by depth sounder: 1462 m/s

CTD Operator: MD

In Air pressure (before/after) 0.19 - 0.03Weather/Sea State E 5-10 0.7 chop.

| Samp # | Target Property | Depth (m) | Niskin # | Firing Order | Bottle Integrity | Salinity | DIC/AIK | nuts | Comments                     |
|--------|-----------------|-----------|----------|--------------|------------------|----------|---------|------|------------------------------|
| 213    | Bot             | 187       | 1        | ✓            |                  | X        |         |      |                              |
| 214    | 133.1           | 166       | 2        | ✓            |                  | X        |         |      |                              |
| 215    | 100             | 150       | 3        | ✓            |                  | X        |         |      |                              |
| 216    | 50              | 100       | 4        | ✓            |                  | X        |         |      |                              |
| 217    | 50              | 80        | 5        | ✓            |                  | X        |         |      |                              |
| 218    | 50              | 70        | 6        | ✓            |                  | X        |         |      | team viewer crashed in snout |
| 219    | 50              | 60        | 7        | ✓            |                  | X        |         |      |                              |
| 220    | chl max         | 50        | 8        | ✓            |                  |          |         |      |                              |
| 221    | chl max         | 50        | 9        | ✓            |                  | X        |         |      |                              |
| 222    | ?               | 40        | 10       | ✓            |                  | X        |         |      |                              |
| 223    | ?               | 30        | 11       | ✓            |                  | X        |         |      |                              |
| 224    | ?               | 20        | 12       | ✓            |                  | X        |         |      |                              |
| 225    | ?               | 10        | 13       | ✓            |                  | X        |         |      |                              |
| 226    | ?               | 5         | 14       | ✓            |                  |          |         |      |                              |
| 227    | ?               | 5         | 15       | ✓            |                  |          |         |      |                              |
|        |                 |           | 16       |              |                  |          |         |      |                              |

Bottle integrity: First test lower petcock then test top valve. 'Check' means pass, 'X' means fail. If niskin fails, explain this in the comments column.

Comments:

# Rosette Log for IOS Cruise ID 2019-86

Ship: FV Frosti

Program: CBS-MEA

Cast/Event #: 163

UTC Date (ddmmmyyyy) 14 Aug 2019

Lat (N): 70 38.69

Station Name: KUL-01C

UTC Time: 2010

Lon (W): 134 28.07

Christine Michael's Station #: 16

CTD File: 2019-86-0163

Water Depth(from surface): 61 m

Sound Speed used by depth sounder: 1462 m/s

In Air pressure (before/after) 0.04, 0.03

CTD Operator: MD

Weather/Sea State E10 30-45 choppy

| Samp # | Target Property | Depth (m) | Niskin # | Firing Order | Bottle Integrity | Salinity | DIC/AIK | nuts | Comments |
|--------|-----------------|-----------|----------|--------------|------------------|----------|---------|------|----------|
| 228    | Bot             | 50        | 1        |              |                  | X        |         |      |          |
| 229    | chl             | 42        | 2        |              |                  | X        |         |      |          |
| 230    | chl             | 42        | 3        |              |                  | X        |         |      |          |
| 231    | "               | 30        | 4        |              |                  | X        |         |      |          |
| 232    |                 | 20        | 5        |              |                  | X        |         |      |          |
| 233    |                 | 10        | 6        |              |                  | X        |         |      |          |
| 234    |                 | 5         | 7        |              |                  | X        |         |      |          |
| 235    |                 | 5         | 8        |              |                  | X        |         |      |          |
| 236    |                 |           | 9        |              |                  |          |         |      |          |
|        |                 |           | 10       |              |                  |          |         |      |          |
|        |                 |           | 11       |              |                  |          |         |      |          |
|        |                 |           | 12       |              |                  |          |         |      |          |
|        |                 |           | 13       |              |                  |          |         |      |          |
|        |                 |           | 14       |              |                  |          |         |      |          |
|        |                 |           | 15       |              |                  |          |         |      |          |
|        |                 |           | 16       |              |                  |          |         |      |          |

Bottle integrity: First test lower petcock then test top valve. 'Check' means pass, 'X' means fail. If niskin fails, explain this in the comments column.

Comments:

## Rosette Log for IOS Cruise ID 2019-86

Ship: FV Frosti

Program: CBS-MEA

Cast/Event #:

175

UTC Date (ddmmmyyyy)

16

Aug | 2019

Lat (N):

69 38.22

Station Name:

AUS-01

UTC Time:

13

Lon (W):

120 45.26

Christine Michael's Station #:

18

CTD File: 2019-86-

0175

Water Depth(from surface):

56

m

Sound Speed used by depth sounder:

1462

m/s

In Air pressure (before/after)

0.03-0.07

CTD Operator: MD

Weather/Sea State

wind W 25 seas 1m.

| Samp # | Target Property | Depth (m) | Niskin # | Firing Order | Bottle Integrity | Salinity | DIC/Alk | nuts | Comments                                     |
|--------|-----------------|-----------|----------|--------------|------------------|----------|---------|------|----------------------------------------------|
|        |                 |           | 1        |              |                  |          |         |      | No Niskins                                   |
|        |                 |           | 2        |              |                  |          |         |      |                                              |
|        |                 |           | 3        |              |                  |          |         |      |                                              |
|        |                 |           | 4        |              |                  |          |         |      |                                              |
|        |                 |           | 5        |              |                  |          |         |      | Cast to 26 m brought back to 2m and repeated |
|        |                 |           | 6        |              |                  |          |         |      |                                              |
|        |                 |           | 7        |              |                  |          |         |      |                                              |
|        |                 |           | 8        |              |                  |          |         |      |                                              |
|        |                 |           | 9        |              |                  |          |         |      | - water thoroughly mixed to 39m.             |
|        |                 |           | 10       |              |                  |          |         |      |                                              |
|        |                 |           | 11       |              |                  |          |         |      |                                              |
|        |                 |           | 12       |              |                  |          |         |      |                                              |
|        |                 |           | 13       |              |                  |          |         |      |                                              |
|        |                 |           | 14       |              |                  |          |         |      |                                              |
|        |                 |           | 15       |              |                  |          |         |      |                                              |
|        |                 |           | 16       |              |                  |          |         |      |                                              |

Bottle integrity: First test lower petcock then test top valve. 'Check' means pass, 'x' means fail. If niskin fails, explain this in the comments column.

Comments:

## Rosette Log for IOS Cruise ID 2019-86

Ship: FV Frosti

Program: CBS-MEA

Cast/Event #: 177UTC Date (ddmmmyyyy) 16 Aug 2019Lat (N): 69 38.27Station Name: 005-02UTC Time: 1408Lon (W): 120 42.66Christine Michael's Station #: 17CTD File: 2019-86-0177Water Depth(from surface): 106 mSound Speed used by depth sounder: 1467 m/s

CTD Operator: MD

In Air pressure (before/after) 0.06, 0.05Weather/Sea State Wind W20 seas 1-m.

| Samp # | Target Property | Depth (m) | Niskin # | Firing Order | Bottle Integrity | Salinity | DIC/AIK | nuts | Comments |
|--------|-----------------|-----------|----------|--------------|------------------|----------|---------|------|----------|
| 236    | Bot             | 97        | 1        | ✓            |                  | X        |         |      |          |
| 237    |                 | 80        | 2        | ✓            |                  | X        |         |      |          |
| 238    |                 | 70        | 3        | ✓            |                  | X        |         |      |          |
| 239    | chlora          | 60        | 4        | ✓            |                  | X        |         |      |          |
| 240    | chlora          | 50        | 5        | ✓            |                  |          |         |      |          |
| 241    |                 | 40        | 6        | ✓            |                  | X        |         |      |          |
| 242    |                 | 30        | 7        | ✓            |                  | X        |         |      |          |
| 243    |                 | 20        | 8        | ✓            |                  | X        |         |      |          |
| 244    |                 | 10        | 9        | ✓            |                  | X        |         |      |          |
| 245    |                 | 5         | 10       | ✓            |                  | X        |         |      |          |
| 246    |                 | 3         | 11       | ✓            |                  | X        |         |      |          |
| 247    |                 |           | 12       | ✓            |                  |          |         |      |          |
|        |                 |           | 13       |              |                  |          |         |      |          |
|        |                 |           | 14       |              |                  |          |         |      |          |
|        |                 |           | 15       |              |                  |          |         |      |          |
|        |                 |           | 16       |              |                  |          |         |      |          |

Bottle integrity: First test lower petcock then test top valve. 'Check' means pass, 'x' means fail. If niskin fails, explain this in the comments column.

Comments:

# Rosette Log for IOS Cruise ID 2019-86 Ship: FV Frosti Program: CBS-MEA

Cast/Event #: 192

UTC Date (ddmmmyyyy) 17 | Aug | 2019

Lat (N): 69 43

Station Name: A03-04

UTC Time: 13

Lon (W): 119 56

Christine Michael's Station #: 20

CTD File: 2019-86-0192

Water Depth(from surface): 354 m

Sound Speed used by depth sounder: 1462 m/s

In Air pressure (before/after) 0810.120

Weather/Sea State low chop W < 10

CTD Operator: MD

| Samp # | Target Property | Depth (m) | Niskin # | Firing Order | Bottle Integrity | Salinity | DIC/Aik | nuts | Comments |
|--------|-----------------|-----------|----------|--------------|------------------|----------|---------|------|----------|
| 263    | Bot             | 343       | ✓1       |              |                  | x        |         |      |          |
| 264    |                 | 300       | ✓2       |              |                  | x        |         |      |          |
| 265    |                 | 1200      | ✓3       |              |                  | x        |         |      |          |
| 266    | 33.1            | 181       | ✓4       |              |                  | x        |         |      |          |
| 267    |                 | 150       | ✓5       |              |                  | x        |         |      |          |
| 268    |                 | 100       | ✓6       |              |                  | x        |         |      |          |
| 269    |                 | 80        | ✓7       |              |                  | x        |         |      |          |
| 270    |                 | 70        | ✓8       |              |                  | x        |         |      |          |
| 271    |                 | 60        | ✓9       |              |                  | x        |         |      |          |
| 272    |                 | 50        | ✓10      |              |                  | x        |         |      |          |
| 273    |                 | 40        | ✓11      |              |                  | x        |         |      |          |
| 274    | chase           | 30        | ✓12      |              |                  | x        |         |      |          |
| 275    | chase           | 30        | ✓13      |              |                  | x        |         |      |          |
| 276    |                 | 20        | ✓14      |              |                  | x        |         |      |          |
| 277    |                 | 10        | 15       |              |                  | x        |         |      |          |
| 278    |                 | 5         | 16       |              |                  | x        |         |      |          |

Bottle integrity: First test lower petcock then test top valve. 'Check' means pass, 'x' means fail. If niskin fails, explain this in the comments column.

Comments:

# Rosette Log for IOS Cruise ID 2019-86 Ship: FV Frosti Program: CBS-MEA

Cast/Event #: 185 UTC Date (ddmmmyyyy) 16 Aug 2019

Station Name: AUS-03 UTC Time: 1807

Christine Michael's Station #: 18

CTD File: 2019-86-0185

Lat (N): 69 39.05

Lon (W): 120 34.64

Water Depth(from surface): 211 m

Sound Speed used by depth sounder: 1462 m/s

CTD Operator: MD

In Air pressure (before/after) 0.10, 0.06

Weather/Sea State W10 low swell

| Samp # | Target Property | Depth (m) | Niskin # | Firing Order | Bottle Integrity | Salinity | DIC/Alk | nuts | Comments |
|--------|-----------------|-----------|----------|--------------|------------------|----------|---------|------|----------|
| 248    | 150             | 200       | 1        | ✓            |                  | X        |         |      |          |
| 249    | 33.1            | 150       | 2        | ✓            |                  | X        |         |      |          |
| 250    |                 | 150       | 3        | ✓            |                  | X        |         |      |          |
| 251    |                 | 100       | 4        | ✓            |                  | X        |         |      |          |
| 252    |                 | 80        | 5        | ✓            |                  | X        |         |      |          |
| 253    |                 | 70        | 6        | ✓            |                  | X        |         |      |          |
| 254    |                 | 60        | 7        | ✓            |                  | X        |         |      |          |
| 255    |                 | 50        | 8        | ✓            |                  | X        |         |      |          |
| 256    | Chlmax          | 44        | 9        | ✓            |                  | X        |         |      |          |
| 257    |                 | 44        | 10       | ✓            |                  |          |         |      |          |
| 258    |                 | 30        | 11       | ✓            |                  | X        |         |      |          |
| 259    |                 | 20        | 12       | ✓            |                  | X        |         |      |          |
| 260    |                 | 10        | 13       | ✓            |                  | X        |         |      |          |
| 261    |                 | 5         | 14       | ✓            |                  | X        |         |      |          |
| 262    |                 | 7         | 15       | ✓            |                  |          |         |      |          |
|        |                 |           | 16       |              |                  |          |         |      |          |

Bottle integrity: First test lower petcock then test top valve. 'Check' means pass, 'X' means fail. If niskin fails, explain this in the comments column.

Comments:

# Rosette Log for IOS Cruise ID 2019-86 Ship: FV Frosti Program: CBS-MEA

Cast/Event #: 198

UTC Date (ddmmmyyyy) 17 Aug 2019

Lat (N): 67 46.98

Station Name: 05-05

UTC Time: 1853

Lon (W): 119 24.24

Christine Michael's Station #: 21

CTD File: 2019-86-0198

Water Depth(from surface): 416 m

Sound Speed used by depth sounder: 1462 m/s

In Air pressure (before/after) 0.03 0.06

Weather/Sea State calm

CTD Operator: MD

| Samp # | Target Property | Depth (m) | Niskin # | Firing Order | Bottle Integrity | Salinity | DIC/Alk | nuts | Comments |
|--------|-----------------|-----------|----------|--------------|------------------|----------|---------|------|----------|
| 279    | Bot             | 406       | 14       | ✓            |                  | X        |         |      |          |
| 280    | "               | 300       | 2        | ✓            |                  | X        |         |      |          |
| 281    |                 | 200       | 3        | ✓            |                  | X        |         |      |          |
| 282    | 33.1            | 167       | 4        | ✓            |                  | X        |         |      |          |
| 283    |                 | 150       | 5        | ✓            |                  | X        |         |      |          |
| 284    |                 | 100       | 6        | ✓            |                  | X        |         |      |          |
| 285    |                 | 80        | 7        | ✓            |                  | X        |         |      |          |
| 286    |                 | 70        | 8        | ✓            |                  | X        |         |      |          |
| 287    |                 | 60        | 9        | ✓            |                  | X        |         |      |          |
| 288    |                 | 50        | 10       | ✓            |                  | X        |         |      |          |
| 289    |                 | 40        | 11       | ✓            |                  | X        |         |      |          |
| 290    | chm-x           | 31        | 12       | ✓            |                  | X        |         |      |          |
| 291    | chm-x           | 31        | 13       | ✓            |                  | X        |         |      |          |
| 292    |                 | 20        | 14       | ✓            |                  | X        |         |      |          |
| 293    |                 | 10        | 15       | ✓            |                  | X        |         |      |          |
| 294    |                 | 7         | 16       | ✓            |                  | X        |         |      |          |

Bottle integrity: First test lower petcock then test top valve. 'Check' means pass, 'X' means fail. If niskin fails, explain this in the comments column.

Comments:

# Rosette Log for IOS Cruise ID 2019-86 Ship: FV Frosti Program: CBS-MEA

Cast/Event #: 205 UTC Date (ddmmmyyyy) 18 | Aug | 2019

Lat (N): 6953.97

Station Name: Aus-07 UTC Time: 1323

Lon (W): 118 20.15

Christine Michael's Station #: 21

CTD File: 2019-86-0205

Water Depth(from surface): 506 m  
Sound Speed used by depth sounder: 1449.5 m/s

In Air pressure (before/after) 0.02, 0.11

Weather/Sea State calm

CTD Operator: MD

| Samp # | Target Property | Depth (m) | Niskin # | Firing Order | Bottle Integrity | Salinity | DIC/AIK | nuts | Comments                                                                    |
|--------|-----------------|-----------|----------|--------------|------------------|----------|---------|------|-----------------------------------------------------------------------------|
| 295    | 101             | 492       | 1        | ✓            |                  | X        |         |      | team viewer hung at 300m<br>closed and reopened connection<br>good at 480m. |
| 296    |                 | 300       | 2        | ✓            |                  | X        |         |      |                                                                             |
| 297    |                 | 200       | 3        | ✓            |                  | X        |         |      |                                                                             |
| 298    |                 | 190       | 4        | ✓            |                  | X        |         |      |                                                                             |
| 299    | 33.1            | 131       | 5        | ✓            |                  | X        |         |      |                                                                             |
| 300    |                 | 100       | 6        | ✓            |                  | X        |         |      |                                                                             |
| 301    |                 | 80        | 7        | ✓            |                  | X        |         |      |                                                                             |
| 302    |                 | 70        | 8        | ✓            |                  | X        |         |      |                                                                             |
| 303    |                 | 60        | 9        | ✓            |                  | X        |         |      |                                                                             |
| 304    | chl max         | 47        | 10       | ✓            |                  | X        |         |      |                                                                             |
| 305    | chl max         | 47        | 11       | ✓            |                  | X        |         |      |                                                                             |
| 306    |                 | 40        | 12       | ✓            |                  | X        |         |      |                                                                             |
| 307    |                 | 30        | 13       | ✓            |                  | X        |         |      |                                                                             |
| 308    |                 | 20        | 14       | ✓            |                  | X        |         |      |                                                                             |
| 309    |                 | 10        | 15       | ✓            |                  | X        |         |      |                                                                             |
| 310    |                 | 5         | 16       | ✓            |                  | X        |         |      |                                                                             |

Bottle integrity: First test lower petcock then test top valve. 'Check' means pass, 'X' means fail. If niskin fails, explain this in the comments column.

Comments:

# Rosette Log for IOS Cruise ID 2019-86 Ship: FV Frosti Program: CBS-MEA

Cast/Event #: 214 UTC Date (ddmmmyyyy) 18 Aug 2019

Station Name: DUS-08 UTC Time: 2017

Christine Michael's Station #: 22

CTD File: 2019-86-0214

Water Depth(from surface): 338 m

Sound Speed used by depth sounder: 1449.5 m/s

CTD Operator: MD

Lat (N): 69 56 62

Lon (W): 48 01 40

In Air pressure (before/after) 0.16, 0.22

Weather/Sea State SE 5-10 low swell

| Samp # | Target Property | Depth (m) | Niskin # | Firing Order | Bottle Integrity | Salinity | DIC/Alk | nuts | Comments |
|--------|-----------------|-----------|----------|--------------|------------------|----------|---------|------|----------|
| 3116   | Bot             | 334       | 1        |              |                  | X        |         |      |          |
| 312    |                 | 300       | 2        |              |                  | X        |         |      |          |
| 313    |                 | 200       | 3        |              |                  | X        |         |      |          |
| 314    |                 | 150       | 4        |              |                  | X        |         |      |          |
| 315    | 33.1            | 132       | 5        |              |                  | X        |         |      |          |
| 316    |                 | 100       | 6        |              |                  | X        |         |      |          |
| 317    |                 | 80        | 7        |              |                  | X        |         |      |          |
| 318    |                 | 70        | 8        |              |                  | X        |         |      |          |
| 319    |                 | 60        | 9        |              |                  | X        |         |      |          |
| 320    |                 | 50        | 10       |              |                  | X        |         |      |          |
| 321    |                 | 42        | 11       |              |                  | X        |         |      |          |
| 322    | chk             | 42        | 12       |              |                  | X        |         |      |          |
| 323    | chk             | 30        | 13       |              |                  | X        |         |      |          |
| 324    |                 | 20        | 14       |              |                  | X        |         |      |          |
| 325    |                 | 10        | 15       |              |                  | X        |         |      |          |
| 326    |                 | 5         | 16       |              |                  | X        |         |      |          |

Bottle integrity: First test lower petcock then test top valve. 'Check' means pass, 'x' means fail. If niskin fails, explain this in the comments column.

Comments:

Wishy-washy, middle block broken, bottom seal in lock - wiggled good

# Rosette Log for IOS Cruise ID 2019-86

Ship: FV Frosti

Program: CBS-MEA

Cast/Event #: 221

UTC Date (ddmmmyyyy) 19 Aug 2019

Lat (N): 69 58 24

Station Name: AUS-09

UTC Time: 1346

Lon (W): 117 42 43

Christine Michael's Station #: 221

CTD File: 2019-86-0221

Water Depth(from surface): 209 m

Sound Speed used by depth sounder: 1449.5 m/s

In Air pressure (before/after) 0.18, 0.17

Weather/Sea State SE 10 seas < 1/2 m

CTD Operator: MD

| Samp # | Target Property | Depth (m) | Niskin # | Firing Order | Bottle Integrity | Salinity | DIC/Alk | nuts | Comments |
|--------|-----------------|-----------|----------|--------------|------------------|----------|---------|------|----------|
| 327    | 150             | 150       | ✓1       |              |                  | X        |         |      |          |
| 328    | 160             | 160       | ✓2       |              |                  | X        |         |      |          |
| 329    | 170             | 170       | ✓3       |              |                  | X        |         |      |          |
| 330    | 180             | 180       | ✓4       |              |                  | X        |         |      |          |
| 331    | 190             | 190       | ✓5       |              |                  | X        |         |      |          |
| 332    | 200             | 200       | ✓6       |              |                  | X        |         |      |          |
| 333    | 210             | 210       | ✓7       |              |                  | X        |         |      |          |
| 334    | 220             | 220       | ✓8       |              |                  | X        |         |      |          |
| 335    | 230             | 230       | ✓9       |              |                  | X        |         |      |          |
| 336    | 240             | 240       | ✓10      |              |                  | X        |         |      |          |
| 337    | 250             | 250       | ✓11      |              |                  | X        |         |      |          |
| 338    | 260             | 260       | ✓12      |              |                  | X        |         |      |          |
| 339    | 270             | 270       | ✓13      |              |                  | X        |         |      |          |
| 340    | 280             | 280       | ✓14      |              |                  | X        |         |      |          |
| 341    | 290             | 290       | ✓15      |              |                  | X        |         |      |          |
|        |                 |           | 16       |              |                  |          |         |      |          |

Bottle integrity: First test lower petcock then test top valve. 'Check' means pass, 'x' means fail. If niskin fails, explain this in the comments column.

Comments:

## Rosette Log for IOS Cruise ID 2019-86

Ship: FV Frosti

Program: CBS-MEA

Cast/Event #: 229UTC Date (ddmmmyyyy) 19 | Aug | 2019Lat (N): 69 59.61Station Name: AUS-10UTC Time: 1851Lon (W): 117 31.41Christine Michael's Station #: 24CTD File: 2019-86-Water Depth(from surface): 114 mSound Speed used by depth sounder: 1447.5 m/sIn Air pressure (before/after) 0.14, 0.18

CTD Operator: MD

Weather/Sea State calm

| Samp #         | Target Property | Depth (m) | Niskin # | Firing Order | Bottle Integrity | Salinity | DIC/AIK | nuts | Comments             |
|----------------|-----------------|-----------|----------|--------------|------------------|----------|---------|------|----------------------|
| <del>342</del> | BOT             | 104       | 1        | ✓            |                  | X        |         |      |                      |
| <del>343</del> |                 | 80        | 2        | ✓            |                  | X        |         |      |                      |
| <del>344</del> |                 | 70        | 3        | ✓            |                  | X        |         |      |                      |
| <del>345</del> |                 | 60        | 4        | ✓            |                  | X        |         |      |                      |
| <del>346</del> |                 | 50        | 5        | ✓            |                  | X        |         |      |                      |
| <del>347</del> | chlora          | 38        | 6        | ✓            |                  | X        |         |      |                      |
| <del>348</del> | chlora          | 38        | 7        | ✓            |                  |          |         |      |                      |
| <del>349</del> |                 | 30        | 8        | ✓            |                  | X        |         |      |                      |
| <del>350</del> |                 | 20        | 9        | ✓            |                  | X        |         |      |                      |
| <del>351</del> |                 | 10        | 10       | ✓            |                  | X        |         |      |                      |
| <del>352</del> |                 | 5         | 11       | ✓            |                  | X        |         |      |                      |
| <del>353</del> |                 | 5         | 12       | ✓            |                  |          |         |      | slow leak bottom cap |
|                |                 |           | 13       |              |                  |          |         |      |                      |
|                |                 |           | 14       |              |                  |          |         |      |                      |
|                |                 |           | 15       |              |                  |          |         |      |                      |
|                |                 |           | 16       |              |                  |          |         |      |                      |

Bottle integrity: First test lower petcock then test top valve. 'Check' means pass, 'x' means fail. If niskin fails, explain this in the comments column.

Comments:

# Rosette Log for IOS Cruise ID 2019-86 Ship: FV Frosti Program: CBS-MEA

Cast/Event #: 245

UTC Date (ddmmmyyy) 22 Aug 2019

Lat (N): 123 69 42.01

Station Name: BPT-01

UTC Time: 1334

Lon (W): 123 46.39

Christine Michael's Station #: 25

CTD File: 2019-86-0245.nex

Water Depth(from surface): 76 m

In Air pressure (before/after) -0.06, -0.03

Sound Speed used by depth sounder: \_\_\_\_\_ m/s

Weather/Sea State 1m, variable winds

CTD Operator: MD JE

| Samp # | Target Property | Depth (m) | Niskin # | Firing Order | Bottle Integrity | Salinity | DIC/AIK | nuts | Comments              |
|--------|-----------------|-----------|----------|--------------|------------------|----------|---------|------|-----------------------|
| 354    | B <sub>0</sub>  | 69        | 1        |              |                  | ✓        | ✓       |      | extra bottle for eDNA |
| 355    | B <sub>0</sub>  | 60        | 2        |              |                  | ✓        | ✓       |      |                       |
| 356    |                 | 60        | 3        |              |                  | ✓        | ✓       |      |                       |
| 357    | C <sub>56</sub> | 50        | 4        |              |                  | ✓        | ✓       |      |                       |
| 358    | C <sub>46</sub> | 40        | 5        |              |                  | ✓        | ✓       |      |                       |
| 359    | C <sub>31</sub> | 30        | 6        |              |                  | ✓        | ✓       |      |                       |
| 360    | C <sub>31</sub> | 30        | 7        |              |                  |          |         |      |                       |
| 361    | 30              | 30        | 8        |              |                  |          |         |      |                       |
| 362    | 20              | 20        | 9        |              |                  | ✓        | ✓       |      | extra bottle for eDNA |
| 363    | 20              | 20        | 10       |              |                  |          |         |      |                       |
| 364    | 10              | 10        | 11       |              |                  | ✓        |         |      |                       |
| 365    | 5               | 5         | 12       |              |                  | ✓        | ✓       |      |                       |
| 366    | 5               | 5         | 13       |              |                  |          |         |      |                       |
|        |                 |           | 14       |              |                  |          |         |      |                       |
|        |                 |           | 15       |              |                  |          |         |      |                       |
|        |                 |           | 16       |              |                  |          |         |      |                       |

Bottle integrity: First test lower petcock then test top valve. 'Check' means pass, 'x' means fail. If niskin fails, explain this in the comments column.

Comments:

## Rosette Log for IOS Cruise ID 2019-86

Ship: FV Frosti

Program: CBS-MEA

Cast/Event #: 251UTC Date (ddmmmyyyy) 22 Aug | 2019Lat (N): 69 41.91Station Name: BPT-03UTC Time: 1709Lon (W): 123 26.47Christine Michael's Station #: 26CTD File: 2019-86-0251 hexWater Depth(from surface): 125 m

Sound Speed used by depth sounder: \_\_\_\_\_ m/s

In Air pressure (before/after) -0.07, -0.09CTD Operator: MD JEWeather/Sea State cloudy, wind ~20kt, 1.5 m seas

| Samp # | Target Property | Depth (m) | Niskin # | Firing Order | Bottle Integrity | Salinity | DIC/AIK | nuts | Comments |
|--------|-----------------|-----------|----------|--------------|------------------|----------|---------|------|----------|
| 367    | B <sub>6</sub>  | 119       | 1        |              |                  | ✓        |         |      |          |
| 368    | B <sub>0</sub>  | 119       | 2        |              |                  |          |         |      | eDNA     |
| 369    |                 | 100       | 3        |              |                  | ✓        |         |      |          |
| 370    |                 | 80        | 4        |              |                  | ✓        |         |      |          |
| 371    | ChlM            | 70        | 5        |              |                  | ✓        |         |      |          |
| 372    |                 | 60        | 6        |              |                  | ✓        |         |      |          |
| 373    | ChlM            | 55        | ✓7       |              |                  | ✓        |         |      |          |
| 374    | ChlM            | 55        | ✓8       |              |                  |          |         |      |          |
| 375    |                 | 40        | ✓9       |              |                  | ✓        |         |      |          |
| 376    |                 | 40        | ✓10      |              |                  |          |         |      | eDNA     |
| 377    |                 | 30        | ✓11      |              |                  | ✓        |         |      |          |
| 378    |                 | 20        | ✓12      |              |                  | ✓        |         |      |          |
| 379    |                 | 10        | ✓13      |              |                  | ✓        |         |      |          |
| 380    |                 | 5         | 14       |              |                  | ✓        |         |      |          |
| 381    |                 | 5         | 15       |              |                  |          |         |      | eDNA     |
|        |                 |           | 16       |              |                  |          |         |      |          |

Bottle integrity: First test lower petcock then test top valve. 'Check' means pass, 'x' means fail. If niskin fails, explain this in the comments column.

Comments:

# Rosette Log for IOS Cruise ID 2019-86 Ship: FV Frosti Program: CBS-MEA

Cast/Event #: 259 UTC Date (ddmmmyyyy) 23 | Aug | 2019

Lat (N): 69 41 88

Station Name: BPT-05 UTC Time: 1325

Lon (W): 123 11.34

Christine Michael's Station #: 27

CTD File: 2019-86-0259.hex

2655

Water Depth(from surface): 38 m

Sound Speed used by depth sounder: \_\_\_\_\_ m/s

In Air pressure (before/after) -0.13, 0.10

CTD Operator: MD JE

Weather/Sea State 15kt, 2m seas, no ice

| Samp # | Target Property | Depth (m) | Niskin # | Firing Order | Bottle Integrity | Salinity | DIC/Aik | nuts | Comments |
|--------|-----------------|-----------|----------|--------------|------------------|----------|---------|------|----------|
| 382    | B <sub>20</sub> | 29        | 1        |              |                  | ✓        | ✓       |      |          |
| 383    | B <sub>20</sub> | 29        | 2        |              |                  |          |         |      | eDNA     |
| 384    |                 | 20        | 3        |              |                  | ✓        | ✓       |      |          |
| 385    |                 | 20        | 4        |              |                  |          |         |      |          |
| 386    |                 | 20        | 5        |              |                  |          |         |      | eDNA     |
| 387    |                 | 10        | 6        |              |                  | ✓        |         |      |          |
| 388    |                 | 5         | 7        |              |                  | ✓        | ✓       |      |          |
| 389    |                 | 5         | 8        |              |                  |          |         |      | eDNA     |
|        |                 |           | 9        |              |                  |          |         |      |          |
|        |                 |           | 10       |              |                  |          |         |      |          |
|        |                 |           | 11       |              |                  |          |         |      |          |
|        |                 |           | 12       |              |                  |          |         |      |          |
|        |                 |           | 13       |              |                  |          |         |      |          |
|        |                 |           | 14       |              |                  |          |         |      |          |
|        |                 |           | 15       |              |                  |          |         |      |          |
|        |                 |           | 16       |              |                  |          |         |      |          |

Bottle integrity: First test lower petcock then test top valve. 'Check' means pass, 'x' means fail. If niskin fails, explain this in the comments column.

Comments:

# Rosette Log for IOS Cruise ID 2019-86 Ship: FV Frosti Program: CBS-MEA

Cast/Event #: 269 273 UTC Date (ddmmmyyyy) 24 | 1 | 2019 Lat (N): 20 13.31

Station Name: CPY-01 UTC Time: 1759 Lon (W): 124 29.78

Christine Michael's Station #: 29 30

CTD File: 2019-86--0269<sup>73</sup> net

Water Depth(from surface): 45 m

Ice Coverage 0 /10

Sound Speed used by depth sounder: \_\_\_\_\_ m/s

In Air pressure (before/after) 1-0.10

CTD Operator: JE

Weather/Sea State 20 kts, 2m waves

| Samp # | Target Property | Depth (m) | Niskin # | Firing Order | Bottle Integrity | Salt | DIC/AIK | Nut | Comments                                            |
|--------|-----------------|-----------|----------|--------------|------------------|------|---------|-----|-----------------------------------------------------|
| 390    | Bo              | 34        | 1        |              |                  | ✓    |         |     |                                                     |
| 391    | 60              | 29        | 2        |              |                  | ✓    |         |     |                                                     |
| 392    | 50              | 29        | 3        |              |                  |      |         |     |                                                     |
| 393    | .               | 20        | 4        |              |                  | ✓    |         |     |                                                     |
| 394    | .               | 10        | 5        |              |                  | ✓    |         |     |                                                     |
| 395    | .               | 5         | 6        |              |                  | ⓧ    |         |     | no stop for 2.5m bottles + protect wire - air valve |
| 396    | .               | 5         | 7        |              |                  |      |         |     |                                                     |
| 397    | 10              |           | 8        |              |                  |      |         |     |                                                     |
| 398    | 5               |           | 9        |              |                  |      |         |     |                                                     |
| 399    | 0               |           | 10       |              |                  |      |         |     |                                                     |
|        |                 |           | 11       |              |                  |      |         |     |                                                     |
|        |                 |           | 12       |              |                  |      |         |     |                                                     |

Bottle integrity: First test lower petcock then test top valve. 'Check' means pass, 'x' means fail. If niskin fails, explain this in the comments column.

Comments:

3191297  
3157355  
eft open  
bottle not used

# Rosette Log for IOS Cruise ID 2019-86

Ship: FV Frosti

Program: CBS-MEA

Cast/Event #: 276

UTC Date (ddmmmyyyy) 24 10 2019

Lat (N): 70 26 68

Station Name: CPY-03

UTC Time: 2115

Lon (W): 124 31.34

Christine Michael's Station #: 3628

CTD File: 2019-86-- 0276 hex

Water Depth(from surface): 198 m *getting deeper during cast.*

Ice Coverage 0/10

Sound Speed used by depth sounder: \_\_\_\_\_ m/s

In Air pressure (before/after) 0.1 / -0.02

CTD Operator: JE

Weather/Sea State wind 10-15 kts. 1.5m seas

| Samp # | Target Property | Depth (m) | Niskin # | Firing Order | Bottle Integrity | Salt | DIC/AIK | Nut | Comments |
|--------|-----------------|-----------|----------|--------------|------------------|------|---------|-----|----------|
| 397    | B0              | 204       | 1/       |              |                  | ✓    | ✓       |     |          |
| 398    | 38.1            | 163       | 2/       |              |                  | ✓    | ✓       |     |          |
| 399    | 32.1            | 150       | 3/       |              |                  | ✓    |         |     |          |
| 400    | 100             | 100       | 4/       |              |                  | ✓    | ✓✓      |     |          |
| 401    | 80              | 80        | 5/       |              |                  | ✓    |         |     |          |
| 402    | 70              | 70        | 6/       |              |                  | ✓    |         |     |          |
| 403    | 60              | 60        | 7/       |              |                  | ✓    |         |     |          |
| 404    | 50              | 50        | 8/       |              |                  | ✓    | ✓       |     |          |
| 405    | 40              | 40        | 9/       |              |                  | ✓    |         |     |          |
| 406    | 30              | 30        | 10/      |              |                  | ✓    |         |     |          |
| 407    | ChlMax          | 22        | 11/      |              |                  |      | ✓       |     |          |
| 408    | 20              | 22        | 12/      |              |                  | ✓    |         |     |          |

Bottle integrity: First test lower petcock then test top valve. 'Check' means pass, 'x' means fail. If niskin fails, explain this in the comments column.

409 10 10 13✓  
 Comments: 5 5 14✓  
 410 15  
 16

# Rosette Log for IOS Cruise ID 2019-86 Ship: FV Frosti Program: CBS-MEA

Cast/Event #: 284 UTC Date (ddmmmyyyy) 25 / 08 / 2019

Lat (N): 70 15.60

Station Name: CPY-02 UTC Time: 1353

Lon (W): 124 30.29

Christine Michael's Station #: 31 29

CTD File: 2019-86--00284.hct

Water Depth(from surface): 80 m

Ice Coverage 0 / 10

Sound Speed used by depth sounder: \_\_\_\_\_ m/s

In Air pressure (before/after) -0.10 / -0.03

CTD Operator: JE

Weather/Sea State 10-15kts, 1.5-2 m waves

| Samp # | Target Property   | Depth (m) | Niskin # | Firing Order | Bottle Integrity | Salt | DIC/AIK | Nut | Comments |
|--------|-------------------|-----------|----------|--------------|------------------|------|---------|-----|----------|
| 411    | B <sub>0</sub>    | 62        | ✓1       |              |                  | ✓✓   |         |     |          |
| 412    | B <sub>0</sub> 60 | 6062      | ✓2       |              |                  |      |         |     |          |
| 413    | 50                | 50        | ✓3       |              |                  | ✓    |         |     |          |
| 414    | 40                | 40        | ✓4       |              |                  | ✓    |         |     |          |
| 415    | 30                | 30        | ✓5       |              |                  | ✓    |         |     |          |
| 416    | Chl 20            | 20        | ✓6       |              |                  | ✓    |         |     |          |
| 417    | Chl 20            | 20        | ✓7       |              |                  |      |         |     |          |
| 418    | 10                | 10        | ✓8       |              |                  | ✓    |         |     |          |
| 419    | 5                 | 5         | ✓9       |              |                  | ✓    |         |     |          |
|        |                   |           | 10       |              |                  |      |         |     |          |
|        |                   |           | 11       |              |                  |      |         |     |          |
|        |                   |           | 12       |              |                  |      |         |     |          |

Bottle integrity: First test lower petcock then test top valve. 'Check' means pass, 'x' means fail. If niskin fails, explain this in the comments column.

Comments:

# Rosette Log for IOS Cruise ID 2019-86 Ship: FV Frosti Program: CBS-MEA

Cast/Event #: 290 UTC Date (ddmmmyyyy) 26 08 2019 Lat (N): 70 03.33  
 Station Name: AMG-01 UTC Time: 1334 Lon (W): 123 14.23  
 Christine Michael's Station #: 3P  
 CTD File: 2019-86-- 0289.hex

Water Depth(from surface): 205 m

Ice Coverage 0/10

Sound Speed used by depth sounder: \_\_\_\_\_ m/s

In Air pressure (before/after) 0.09 / 0.03

CTD Operator: JE

Weather/Sea State wind < 10kts, 0.5m seas

| Samp # | Target Property | Depth (m) | Niskin # | Firing Order | Bottle Integrity | Salt | DIC/AIK | Nut | Comments                   |
|--------|-----------------|-----------|----------|--------------|------------------|------|---------|-----|----------------------------|
| 420    | 30              | 196       | 1✓       |              |                  | ✓    |         |     |                            |
| 421    | 33.1            | 190       | 2✓       |              |                  | ✓    |         |     |                            |
| 422    | 150             | 150       | 3✓       |              |                  | ✓    |         |     |                            |
| 423    | 100             | 100       | 4✓       |              |                  | ✓    |         |     |                            |
| 424    | 80              | 80        | 5✓       |              |                  | ✓    |         |     |                            |
| 425    | 70              | 70        | 6✓       |              |                  | ✓    |         |     |                            |
| 426    | 60              | 60        | 7✓       |              |                  | ✓    |         |     |                            |
| 427    | 50              | 50        | 8✓       |              |                  | ✓    |         |     |                            |
| 428    | Chl M.          | 46        | 9✓       |              |                  | ✓    |         |     |                            |
| 429    | Chl M.          | 46        | 10✓      |              |                  |      |         |     |                            |
| 430    |                 | 40        | 11✓      |              |                  | ✓    |         |     |                            |
| 431    |                 | 30        | 12✓      |              | Vx               | ✓    |         |     | Lower end cap leak - first |

Bottle integrity: First test lower petcock then test top valve. 'Check' means pass, 'x' means fail. If niskin fails, explain this in the comments column.

432 20 13✓  
 Comments: 10 14✓  
 433 5 15✓  
 434

# Rosette Log for IOS Cruise ID 2019-86 Ship: FV Frosti Program: CBS-MEA

Cast/Event #: 297 UTC Date (ddmmmyyyy) 26 | 08 | 2019 Lat (N): 70 12.98  
 Station Name: AMG-02 UTC Time: 1839 Lon (W): 123 08.04  
 Christine Michael's Station #: 32  
 CTD File: 2019-86--0297

Water Depth(from surface): 367 m

Ice Coverage 0 /10

Sound Speed used by depth sounder: \_\_\_\_\_ m/s

In Air pressure (before/after) -0.03 / 0.02

CTD Operator: JE

Weather/Sea State broken cloud, light winds, 5m waves

| Samp # | Target Property | Depth (m) | Niskin # | Firing Order | Bottle Integrity | Salt | DIC/Alk | Nut | Comments                               |
|--------|-----------------|-----------|----------|--------------|------------------|------|---------|-----|----------------------------------------|
| 435/34 | Bo              | 354       | ✓1       |              |                  | ✓    |         |     |                                        |
| 436    |                 | 300       | ✓2       |              |                  | ✓    |         |     |                                        |
| 437    | 230 ← 260       | 260       | ✓3       |              |                  | ✓    |         |     | fired early unintentionally            |
| 438    | 33.1            | 178       | ✓4       |              |                  | ✓    |         |     |                                        |
| 439    |                 | 150       | ✓5       |              |                  | ✓    |         |     |                                        |
| 440    |                 | 100       | ✓6       |              |                  | ✓    |         |     |                                        |
| 441    |                 | 80        | ✓7       |              |                  | ✓    |         |     |                                        |
| 442    |                 | 70        | ✓8       |              |                  | ✓    |         |     |                                        |
| 443    |                 | 60        | ✓9       |              |                  | ✓    |         |     |                                        |
| 444    |                 | 50        | ✓10      |              |                  | ✓    |         |     |                                        |
| 445    |                 | 40        | ✓11      |              |                  | ✓    |         |     |                                        |
| 446    | CHIM            | 29        | ✓12      |              | ✓7               | ✓    |         |     | drip from lower cap (steady, not fast) |

Bottle integrity: First test lower petcock then test top valve. 'Check' means pass, 'x' means fail. If niskin fails, explain this in the comments column.

447 CHIM 29 ✓13  
 Comments: 20 ✓14  
 448 10 ✓15  
 449 5 ✓16  
 450

## Rosette Log for IOS Cruise ID 2019-86

Ship: FV Frosti

Program: CBS-MEA

Cast/Event #: 304UTC Date (ddmmmyyyy) 27 | 8 | 2019Lat (N): 70 33.15Station Name: AMG-03UTC Time: 1317Lon (W): 122 54.15Christine Michael's Station #: 33CTD File: 2019-86--0304Water Depth(from surface): 643 mIce Coverage 0/10

Sound Speed used by depth sounder: \_\_\_\_\_ m/s

In Air pressure (before/after) -0.05/ 0.01

CTD Operator: JE

Weather/Sea State 15-20kt winds, 1.5m seas.

| Samp # | Target Property | Depth (m) | Niskin # | Firing Order | Bottle Integrity | Salt | DIC/Aik | Nut | Comments |
|--------|-----------------|-----------|----------|--------------|------------------|------|---------|-----|----------|
| 451    | B <sub>0</sub>  | 620       | ✓1       |              |                  | ✓    |         |     |          |
| 452    |                 | 500       | ✓2       |              |                  | ✓✓   |         |     |          |
| 453    |                 | 300       | ✓3       |              |                  | ✓    |         |     |          |
| 454    |                 | 200       | ✓4       |              |                  | ✓    |         |     |          |
| 455    |                 | 150       | ✓5       |              |                  | ✓    |         |     |          |
| 456    |                 |           | 6        |              |                  |      |         |     |          |
| 4      |                 |           | 7        |              |                  |      |         |     |          |
|        |                 |           | 8        |              |                  |      |         |     |          |
|        |                 |           | 9        |              |                  |      |         |     |          |
|        |                 |           | 10       |              |                  |      |         |     |          |
|        |                 |           | 11       |              |                  |      |         |     |          |
|        |                 |           | 12       |              |                  |      |         |     |          |

Bottle integrity: First test lower petcock then test top valve. 'Check' means pass, 'x' means fail. If niskin fails, explain this in the comments column.

Comments:

Chl Max 36  
33.1 121

# Rosette Log for IOS Cruise ID 2019-86

Ship: FV Frosti

Program: CBS-MEA

Cast/Event #: 306

UTC Date (ddmmmyyyy) 27 | 8 | 2019

Lat (N): 70 33.26

Station Name: AMG-03

UTC Time: 1501

Lon (W): 122 54.79

Christine Michael's Station #: 33

CTD File: 2019-86--0306.hex

Water Depth(from surface): 647 m

Ice Coverage 0/10

Sound Speed used by depth sounder: \_\_\_\_\_ m/s

In Air pressure (before/after) -0.02 -0.04

CTD Operator: JE

Weather/Sea State Wind 15-20 kts, 2m Seas.

| Samp # | Target Property | Depth (m) | Niskin # | Firing Order | Bottle Integrity | Salt | DIC/Alk | Nut | Comments |
|--------|-----------------|-----------|----------|--------------|------------------|------|---------|-----|----------|
| 456    | 33.1            | 122       | ✓1       |              |                  | ✓    |         |     |          |
| 457    | 33.1            | 180       | ✓2       |              |                  | ✓    |         |     |          |
| 458    |                 | 180       | ✓3       |              |                  | ✓    |         |     |          |
| 459    |                 | 70        | ✓4       |              |                  | ✓    |         |     |          |
| 460    |                 | 760       | ✓5       |              |                  | ✓    |         |     |          |
| 461    |                 | 650       | ✓6       |              |                  | ✓    |         |     |          |
| 462    |                 | 540       | ✓7       |              |                  | ✓    |         |     |          |
| 463    | ChlMax          | 32        | ✓8       |              |                  | ✓    |         |     |          |
| 464    | ChlMax          | 32        | ✓9       |              |                  | ✓    |         |     |          |
| 465    | ChlMax          | 30        | ✓10      |              |                  | ✓    |         |     |          |
| 466    |                 | 20        | ✓11      |              |                  | ✓    |         |     |          |
| 467    |                 | 1020      | 12       |              |                  | ✓    |         |     |          |

Bottle integrity: First test lower petcock then test top valve. 'Check' means pass, 'x' means fail. If niskin fails, explain this in the comments column.

468  
Comments: 5/5 13 ✓ on the fly closure  
469 5 14 ✓

## Rosette Log for IOS Cruise ID 2019-86

Ship: FV Frosti

Program: CBS-MEA

Cast/Event #: 323UTC Date (ddmmmyyyy) 29 | 8 | 2019Lat (N): 69 37.99Station Name: FKN-07UTC Time: 1329Lon (W): 125 56.32Christine Michael's Station #: 34CTD File: 2019-86-- 0323\_hexWater Depth(from surface): 81 mIce Coverage 0/10

30.53

Sound Speed used by depth sounder: \_\_\_\_\_ m/s

In Air pressure (before/after) 0.161 0.05

CTD Operator: JE

Weather/Sea State calm 0.25m waves

| Samp # | Target Property | Depth (m) | Niskin # | Firing Order | Bottle Integrity | Salt | DIC/AIK | Nut | Comments |
|--------|-----------------|-----------|----------|--------------|------------------|------|---------|-----|----------|
| 469    | Bo              | 73        | ✓1       |              |                  | ✓    | ✓       |     |          |
| 470    |                 | 60        | ✓2       |              |                  | ✓    |         |     |          |
| 471    |                 | 50        | ✓3       |              |                  | ✓    | ✓✓      |     |          |
| 472    | 50              | 40        | ✓4       |              |                  | ✓    |         |     |          |
| 473    | 50              | 30        | ✓5       |              |                  | ✓    |         |     |          |
| 474    | 40              | 20        | ✓6       |              |                  | ✓    |         |     |          |
| 475    | CHIMax          | 9         | ✓7       |              |                  | ✓    | ✓       |     |          |
| 476    | CHIMax          | 9         | ✓8       |              |                  |      |         |     |          |
| 477    |                 | 5         | ✓9       |              |                  | ✓    | ✓       |     |          |
| 478    |                 | 5         | 10       |              |                  | ✓    |         |     |          |
|        |                 |           | 11       |              |                  |      |         |     |          |
|        |                 |           | 12       |              |                  |      |         |     |          |

Bottle integrity: First test lower petcock then test top valve. 'Check' means pass, 'x' means fail. If niskin fails, explain this in the comments column.

Comments:

# Rosette Log for IOS Cruise ID 2019-86

Ship: FV Frosti

Program: CBS-MEA

Cast/Event #: 330

UTC Date (ddmmmyyyy) 29/8/2019

Lat (N): 70 00.13

Station Name: FKN\_03

UTC Time: 1937

Lon (W): 126 15.48

Christine Michael's Station #: 35

CTD File: 2019-86-- 0330.hex

Water Depth(from surface): 210 m

Ice Coverage 0/10 nearby, 7-8/10<sup>ths</sup> within a mile

Sound Speed used by depth sounder: \_\_\_\_\_ m/s

In Air pressure (before/after) 0.12 / 0.16

CTD Operator: JE

Weather/Sea State sunny, light winds but 2kt current

| Samp # | Target Property | Depth (m) | Niskin # | Firing Order | Bottle Integrity | Salt | DIC/Alk | Nut | Comments                           |
|--------|-----------------|-----------|----------|--------------|------------------|------|---------|-----|------------------------------------|
| 478    | B <sub>0</sub>  | 200       | ✓1       |              |                  | ✓    | ✓       |     |                                    |
| 479    | 33.1            | 177       | ✓2       |              |                  |      | ✓       |     |                                    |
| 480    | 150             | 150       | ✓3       |              |                  |      |         |     |                                    |
| 481    |                 | 100       | ✓4       |              |                  |      | ✓✓      |     | water for plankton respiration etc |
| 482    |                 | 80        | ✓5       |              |                  |      |         |     |                                    |
| 483    |                 | 70        | ✓6       |              |                  |      |         |     | chl signal in fluorometer          |
| 484    |                 | 60        | ✓7       |              |                  |      |         |     |                                    |
| 485    |                 | 50        | ✓8       |              |                  |      | ✓       |     |                                    |
| 486    |                 | 40        | ✓9       |              |                  |      |         |     |                                    |
| 487    |                 | 30        | ✓10      |              |                  |      |         |     |                                    |
| 488    |                 | 20        | ✓11      |              |                  |      | ✓       |     |                                    |
| 489    |                 | 10        | ✓12      |              |                  | ✓    |         |     |                                    |

Bottle integrity: First test lower petcock then test top valve. 'Check' means pass, 'x' means fail. If niskin fails, explain this in the comments column.

490 ChlMax 5 ✓13  
 Comments: ChlMax 5 ✓14  
 491

# Rosette Log for IOS Cruise ID 2019-86

Ship: FV Frosti

Program: CBS-MEA

Cast/Event #: 339

UTC Date (ddmmmyyyy) 30 / 8 / 2019

Lat (N): 70 19 22

Station Name: AMG\_04

UTC Time: 1338

Lon (W): 124 24 93

Christine Michael's Station #: 36

CTD File: 2019-86--0339\_hex

Water Depth(from surface): 251 m

Ice Coverage 0 / 10

Sound Speed used by depth sounder: \_\_\_\_\_ m/s

In Air pressure (before/after) 0.19 / 0.13

CTD Operator: JE

Weather/Sea State calm < 25m waves

35  
40:35

| Samp # | Target Property | Depth (m) | Niskin # | Firing Order | Bottle Integrity | Salt | DIC/Alk | Nut | Comments |
|--------|-----------------|-----------|----------|--------------|------------------|------|---------|-----|----------|
| 492    | B0              | 242       | ✓1       |              |                  | ✓    | ✓       |     |          |
| 493    |                 | 200       | ✓2       |              |                  | ✓✓   | ✓       |     |          |
| 494    | 33.1            | 159       | ✓3       |              |                  | ✓    | ✓       |     |          |
| 495    | 150             | 150       | ✓4       |              |                  | ✓    |         |     |          |
| 496    |                 | 100       | ✓5       |              |                  | ✓    | ✓       |     |          |
| 497    |                 | 80        | ✓6       |              |                  | ✓    |         |     |          |
| 498    |                 | 70        | ✓7       |              |                  | ✓    |         |     |          |
| 499    | 60              | 60        | ✓8       |              |                  | ✓    |         |     |          |
| 500    | 50              | 50        | ✓9       |              |                  | ✓    | ✓       |     |          |
| 501    | 50              | 40        | ✓10      |              |                  | ✓    |         |     |          |
| 502    | 40              | 30        | ✓11      |              |                  | ✓    |         |     |          |
| 503    | 30              | 16        | ✓12      |              |                  | ✓    | ✓       |     |          |

Bottle integrity: First test lower petcock then test top valve. 'Check' means pass, 'x' means fail. If niskin fails, explain this in the comments column.

504 26 16 ✓13  
 Comments: 10 10 ✓14  
 505 5 5 ✓15  
 506

✓  
 ✓  
 ✓

# Rosette Log for IOS Cruise ID 2019-86

Ship: FV Frosti

Program: CBS-MEA

Cast/Event #: 346

UTC Date (ddmmmyyyy) 30 18 2019

Lat (N): 70 25 51

Station Name: AMG-05

UTC Time: 1928

Lon (W): 126 29 16

Christine Michael's Station #: 37

CTD File: 2019-86-- 0346

Water Depth(from surface): 280 m

Ice Coverage 0/10, but ice ~.75 nm away

Sound Speed used by depth sounder: 1449.6 m/s

In Air pressure (before/after) 0.21 / 0.11

CTD Operator: JE

Weather/Sea State light winds, seas < 0.25m

| Samp # | Target Property | Depth (m) | Niskin # | Firing Order | Bottle Integrity | Salt | DIC/Alk | Nut | Comments |
|--------|-----------------|-----------|----------|--------------|------------------|------|---------|-----|----------|
| 507    | Bo-10           | 270       | ✓1       |              |                  | ✓    |         |     |          |
| 508    |                 | 200       | ✓2       |              |                  |      |         |     |          |
| 509    | 331             | 166       | ✓3       |              |                  |      |         |     |          |
| 510    |                 | 150       | ✓4       |              |                  |      |         |     |          |
| 511    |                 | 100       | ✓5       |              |                  |      |         |     |          |
| 512    |                 | 80        | ✓6       |              |                  |      |         |     |          |
| 513    |                 | 70        | ✓7       |              |                  |      |         |     |          |
| 514    | 60              | 60        | ✓8       |              |                  |      |         |     |          |
| 515    | 60              | 50        | ✓9       |              |                  |      |         |     |          |
| 516    | Chl M           | 40        | ✓10      |              |                  | ✓    |         |     |          |
| 517    | Chl M           | 40        | ✓11      |              |                  |      |         |     |          |
| 518    | 30              | 30        | ✓12      |              |                  | ✓    |         |     |          |

Bottle integrity: First test lower petcock then test top valve. 'Check' means pass, 'x' means fail. If niskin fails, explain this in the comments column.

519 20 20 ✓13

Comments:

520 10 10 ✓14

521 5 5 ✓15

✓ bot's low end cap hung up between 16 and tube for sea cable

# Rosette Log for IOS Cruise ID 2019-86

Ship: FV Frosti

Program: CBS-MEA

Cast/Event #: 353

UTC Date (ddmmmyyyy) 31 | 8 | 2019

Lat (N): 70 32.25

Station Name: AMG-06

UTC Time: 1505

Lon (W): 126 36.94

Christine Michael's Station #: 38

CTD File: 2019-86-- 6353.hex

Water Depth(from surface): 327 m

Ice Coverage 3/10 air temp -1C on deployment

Sound Speed used by depth sounder: 1449.6 m/s

In Air pressure (before/after) 0.15/ 0.12

CTD Operator: JE

Weather/Sea State light airs, ripples.

| Samp # | Target Property | Depth (m) | Niskin # | Firing Order | Bottle Integrity | Salt | DIC/Alk | Nut | Comments                |
|--------|-----------------|-----------|----------|--------------|------------------|------|---------|-----|-------------------------|
| 522    | Bo-10           | 313       | ✓1       |              |                  | ✓    |         |     |                         |
| 523    |                 | 300       | ✓2       |              |                  | ✓    |         |     |                         |
| 524    | 33.1            | 226       | ✓3       |              |                  | ✓    |         |     | on the fly, no 30s wait |
| 525    | 33.1            | 167       | ✓4       |              |                  | ✓✓   |         |     |                         |
| 526    |                 | 150       | ✓5       |              |                  | ✓    |         |     |                         |
| 527    |                 | 100       | ✓6       |              |                  | ✓    |         |     |                         |
| 528    |                 | 80        | ✓7       |              |                  | ✓    |         |     |                         |
| 529    |                 | 70        | ✓8       |              |                  | ✓    |         |     |                         |
| 530    |                 | 66        | ✓9       |              |                  | ✓    |         |     |                         |
| 531    |                 | 50        | ✓10      |              |                  | ✓    |         |     |                         |
| 532    |                 | 38        | ✓11      |              |                  | ✓    |         |     |                         |
| 533    |                 | 30        | ✓12      |              |                  | ✓    |         |     |                         |

Bottle integrity: First test lower petcock then test top valve. 'Check' means pass, 'x' means fail. If niskin fails, explain this in the comments column.

534 30 ✓13  
 Comments: 20 ✓14  
 535 10 ✓15  
 536 5 ✓16  
 537

7:30