**MAREANO - CAMPOD log GEO procedures.**

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**This document contains:**

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**Part 1 - Procedures for operating the Campod Logger**

**Where to find the campod logger: C:\Program Files\CampodLogger**

**Clic on “CampodLogger** *Havforskninginstitutet***”**

**A shortcut was created on the desktop (*shortcut to CampodLogger*)**

**ATTENTION: Before starting, check that the biologists have the same classes than us!! (see classes p3)**

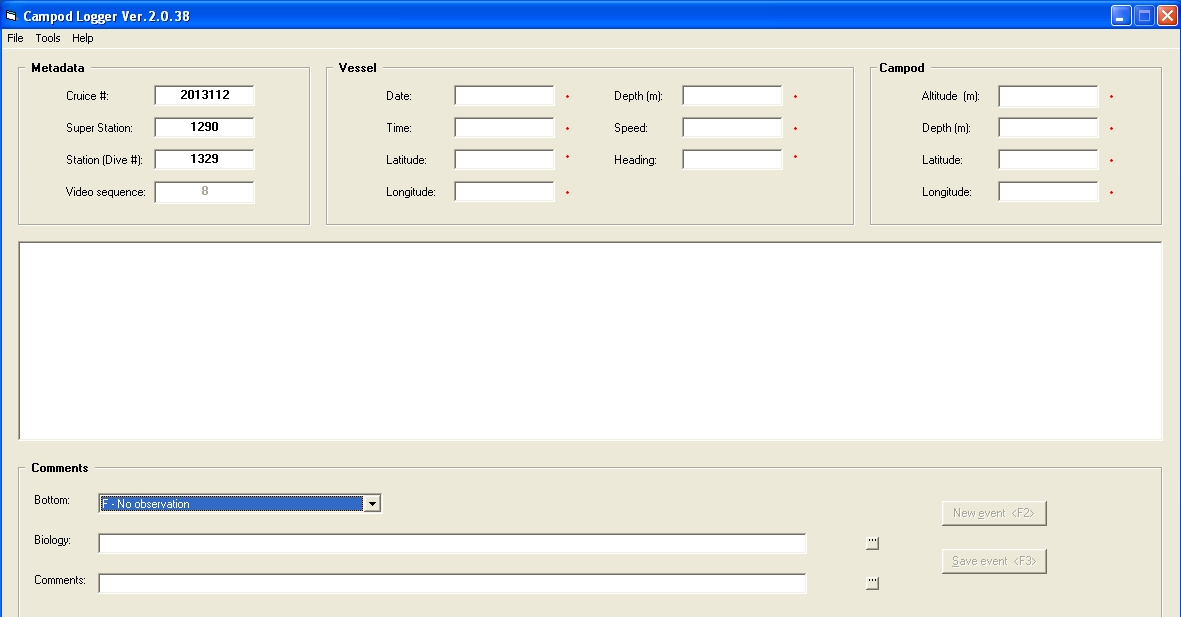
**It is possible to see / change the classes in this file: C:\Program Files\CampodLogger 🡪 “CampodLogger** *Configuration Settings***”**

**Common logging for the small CAMPOD laptop:**

**Login: feltgis**

**Password: geologi**

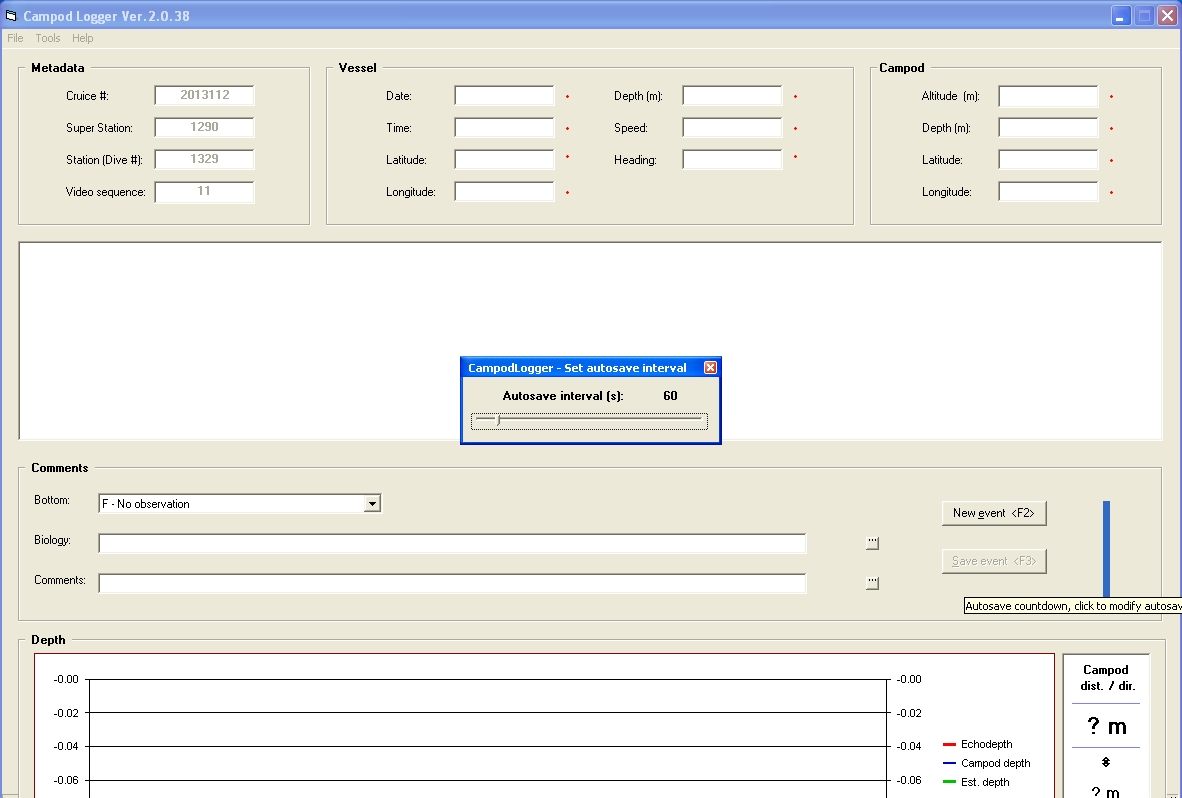
1. **Open CAMPOD logger.**
2. **2 windows appear. Minimise black window display showing depth etc. so that main CAMPOD logging is visible.**
3. **Enter R and VL number**
4. **File > New log file> R*x*VL*xx*\_geo**

****

VL

R

1. **New file is up and running. Check green input for lat, lon, time.** (Check lights on network cable.) If problems close CAMPOD logger, repeat steps 1-5.
2. **Set bottom to ‘No Observation’ prior to reaching seabed.**
3. **Once nearing seabed, click on blue bar at right of screen and change logging interval to 10 seconds.**

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Interval: 10 s

Bottom type

To check: dots MUST be green

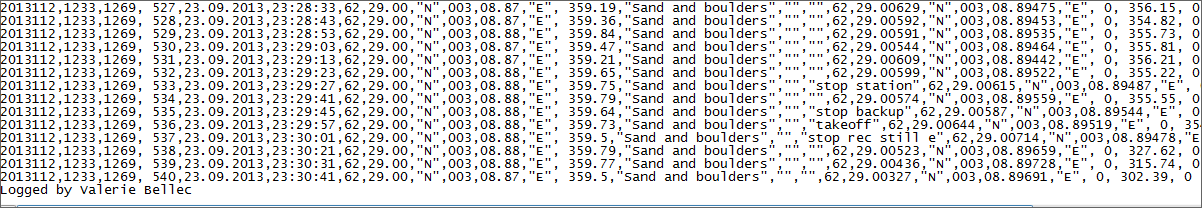
Campod logger is running 🡪 the blue bar appears

1. **AT SEABED. Start logging**
2. Note landed in comments field.
3. Transect will start in stationary position with detailed scanning of seabed. Enter ‘Start rec a’ in comments field (synchronise with biologists)
4. Enter bottom type as soon as possible to determine.
5. Add comments (see suggestions for comments below)
6. Update bottom type and comments as appropriate (e.g. when zoomed).
7. At end of stationary scanning ‘Stop rec still a’ when CAMPOD moving off (sync with biologists)
8. Start rec b (recording transect, part 1)
9. Update bottom type and comments as appropriate….
10. Note start/stop rec b, c, d along transect (sync with biologists who will count 123 before start and stop)
11. Transect will end with stationary scanning.

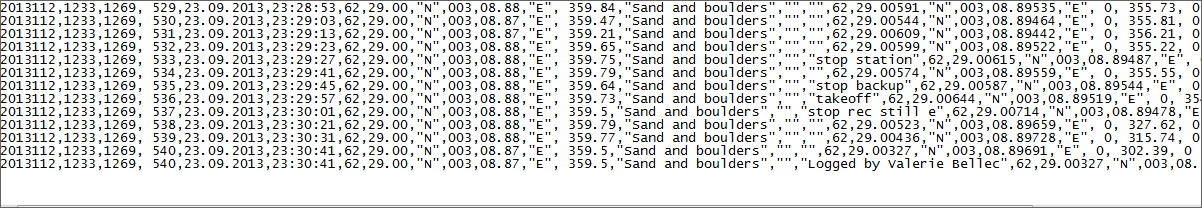
**CAMPOD going up. End logging. Insert ‘Logged by FULL NAME’ in comments field before closing log file.**

1. **File>Close log file. File is auto saved to folder on desktop.**
2. **Make any corrections to log file.** Open the file with Notepad or Wordpad. **ALWAYS CHECK** the file for misspelling or wrong bottom type. To do so, save the files under another name (RxxVLxx\_corr for example). Correct the spelling mistakes, comments and wrong bottom types. DO NOT SAVE the file with a new name (RxxVLxx\_corr) if you do not have time to correct it (quality check). Save the fine \_corr file when doing the quality check later (during transit for example).

**DO NOT ADD comment standing alone at the end of the text file.** If you need to have more lines, you can copy the entire last line, change the sequence number and then add your comment in the “comment” section.



NO X



To change 🡪 541

YES

1. **Save log file to Felles area. \\FIL-SARS\felles\MAREANO\_XXX\CAMPOD log GEO**

**Suggestions for relevant information to add in comments field (most important in bold)**

* **Any further comments on bottom type** e.g. cobbles, boulders which are additional to dominant sediment class. OK add comments with ‘?’ if unsure.
  + Campod feet sinking.
  + Lag deposit on till or muddy sediments, use surface for classification but note what you see underneath in comments
* **Currents** (weak, moderate, strong)
* **Any process related seabed features** – sandwaves, ripples, furrows, lineations
* Morphological features of interest e.g. crossing ridge, top of mound, pockmark area etc. (note – use multibeam on Olex display to help)
* Any biological observations that will be useful for memory of dive or geo interpretation e.g. sponge spicules, burrows, shells, forams etc. No need to try and keep up with everything biologists are logging!
* **Human impact** - trawl marks, rubbish, cables/lines etc.
* **Any operational issues** (abort dive, lights lost, pan & tilt problems etc.)

**Operational tips**

* Press space bar before comment to avoid bottom type class jumping
* If logging crashes DON’T PANIC the file is auto saved. Reopen CAMPOD logger and go to File > Open (Append to) log file to continue logging in the same file.
* Can put notes in comments field underway to remind you where errors need correcting afterwards.
* If cannot see seabed for more than 20 seconds on HD camera and estimate bottom type from pilot camera.
* If cannot see seabed for more than 30 seconds on HD camera and pilot camera change bottom type to ‘No Observation’

Shorcut to sediment classes: push “number” bottom to jump from class to class (bottom “0” to Coral, “9” to bedrock, etc…). From class 10 you need to push letter (A to F)

Type0 = Coral 🡪 push 0

Type1 = Mud 🡪 push 1

Type2 = Sandy mud 🡪 push 2

Type3 = Muddy sand 🡪 push 3

Type4 = Sand 🡪 push 4

Type5 = Gravelly sandy mud 🡪 push 5

Type6 = Gravelly muddy sand 🡪 push 6

Type7 = Gravelly sand 🡪 push 7

Type8 = Muddy sandy gravel 🡪 push 8

Type9 = Sandy gravel 🡪 push 9

Type10 = Gravel 🡪 push a

Type11 = Gravel, Cobbles and boulders 🡪 push b

Type12 = Sand, Gravel and Cobbles 🡪 push c

Type13 = Compacted sediments 🡪 push d

Type14 = Exposed bedrock 🡪 push e

Type15 = No observation 🡪 push f

It is important to have no observation as the last class as it is the class coming by default when you open the campod log.

**ATTENTION**:

* It is the bottom type which is used to classify the backscatter in ArcGIS. **Writing comments when the bottom type changes is not enough, the bottom type musts also to be changed** (for example is less than 30% gravel, Gravelly XX, if more than 30% gravel: Sandy gravel). DO NOT FORGET TO PUSH **ENTER** after each bottom changes.
* **Coral class** includes **coral rubbles** (more than 20% coverage), **dead and alive coral reefs**.

**Standard phrases and abbreviations for comments field.**

* Start rec X / Stop rec X
* TM trawl marks
* G gravel
* C cobbles
* B boulders
* GS: gravelly sand, SM: sandy mud, SG: sandy gravel…

**Check and copy log**

Open log file, correct as necessary including misclassifications of bottom type and typos.

Make sure your name is present at last entry in comments field

Save and copy to Felles, see above.

**Part 2 - Procedures for Quality Control using MARBUNN**

1. **Open MARBUNN (link…)**
2. **Load the Campod Geo Log from \\FIL-SARS\felles\MAREANO\_20xxxxx\CAMPOD log GEO if not already loaded**
3. **Do necessary corrections (any instructions available from Sjur?)**
4. **Make sure to add a comment in the last line stating: QC completed by “name” “date”**
5. **More?**

**Part 3 – List of sediment classes to be used in Campod Logger**

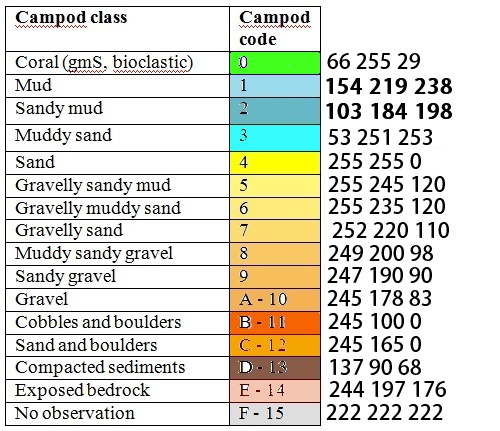
|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **SOSI name** | **SOSI abbr.** | **SOSI code** | **Campod class** | **Campod code** | **Comments** |
| Gravelly muddy sand | gmS |  | Coral  (bioclastic gmS) | 0 | Rubble  Dead  Live |
| Clay | C | 10 | Mud | 1 |  |
| Organic mud | (oM) | 15 |  |
| Mud | M | 20 |  |
| Sandy clay | sC | 30 | Sandy mud | 2 |  |
| Sandy mud | sM | 40 |  |
| Silt | Z | 50 |  |
| Sandy silt | sZ | 60 |  |
| Clayey sand | cS | 70 | Muddy sand | 3 |  |
| Muddy sand | mS | 80 |  |
| Silty sand | zS | 90 |  |
| Fine sand | (fS) | 95 | Sand | 4 |  |
| Sand | S | 100 |  |
| Coarse sand | (cS) | 105 |  |
| Gravelly mud | gM | 110 | Gravelly sandy mud | 5 |  |
| Gravelly sandy mud | gsM | 115 |  |
| Gravelly muddy sand | gmS | 120 | Gravelly muddy sand | 6 |  |
| Gravelly sand | gS | 130 | Gravelly sand | 7 |  |
| Muddy gravel | mG | 140 | Muddy sandy gravel | 8 |  |
| Muddy sandy gravel | msG | 150 |  |
| Sandy gravel | sG | 160 | Sandy gravel | 9 |  |
| Gravel | G | 170 | Gravel | A - 10 |  |
| Gravel, cobbles and boulders | GB | 175 | Gravel, cobbles and boulders |  | Not incl.\* |
| Cobbles and boulders | B | 180 | Cobbles and boulders | B - 11 |  |
| Sand, gravel and cobbles | SGB | 185 | Sand, gravel and cobbles |  | Not incl.\* |
| Sand and boulders | SB | 190 | Sand and boulders | C - 12 |  |
| Diamicton | D | 200 | Diamicton |  | Not incl.\* |
| Compacted sediments or sedimentary bedrock | (CSSB) | 300 | Compacted sediments | D - 13 |  |
| Thin or discontinuous sediment cover on bedrock. Sediments with varying grain size | (TDCB) | 1 | Thin or discontinuous sediment cover on bedrock. Sediments with varying grain size |  | Not incl.\* |
| Exposed bedrock | (XB) | 5 | Exposed bedrock | E - 14 |  |
| Unspecified | (Un) | 0 | No observation | F - 15 |  |

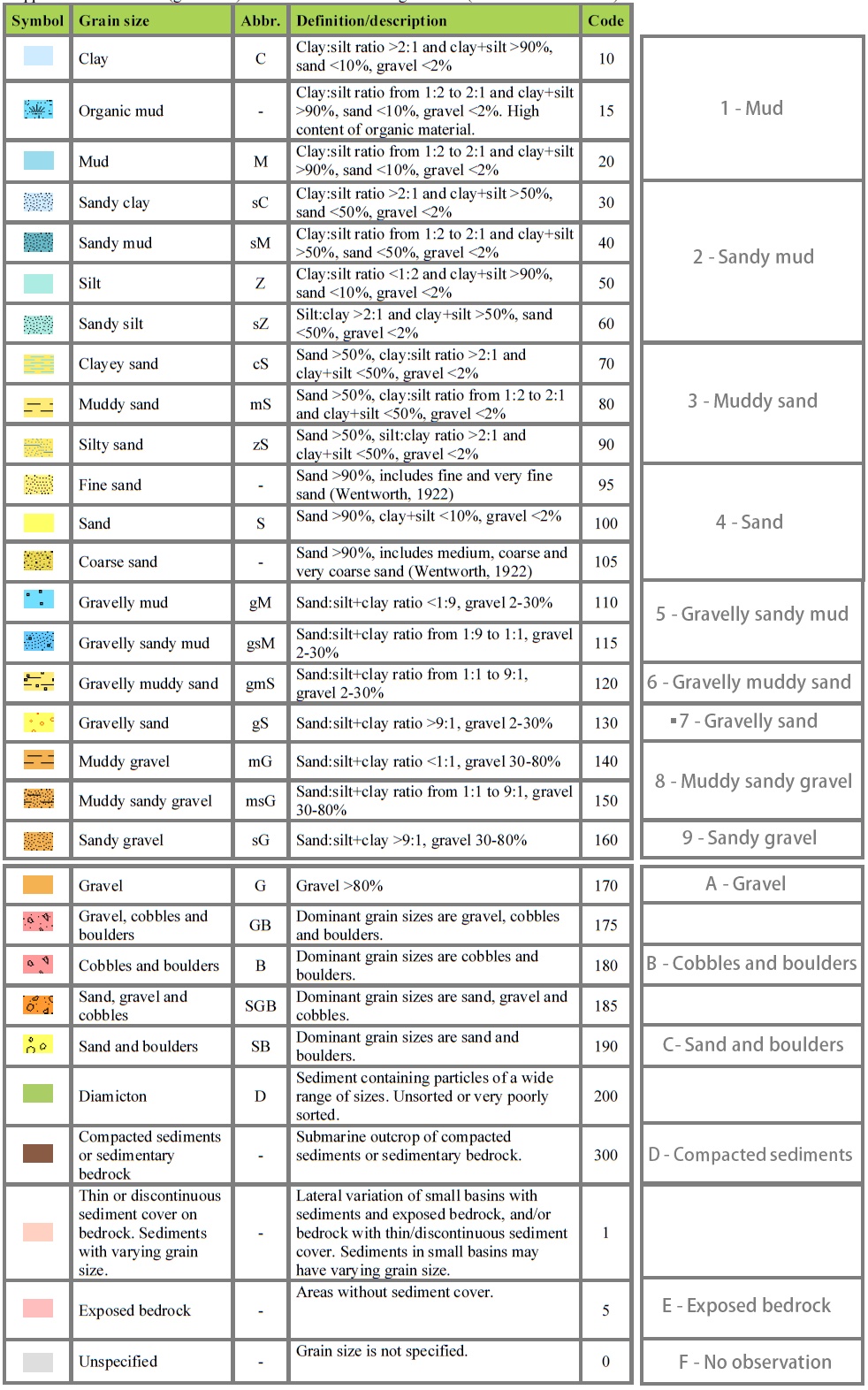
( ) – informal SOSI abbreviation; coral – reef forming coral; Not incl.\* - not included in Campod logger list because only 15 classes available

**Appendix 1 - Short list for help during logging**

|  |  |
| --- | --- |
| **Campod class** | **Campod code** |
| Coral (gmS, bioclastic) | 0 |
| Mud | 1 |
| Sandy mud | 2 |
| Muddy sand | 3 |
| Sand | 4 |
| Gravelly sandy mud | 5 |
| Gravelly muddy sand | 6 |
| Gravelly sand | 7 |
| Muddy sandy gravel | 8 |
| Sandy gravel | 9 |
| Gravel | A - 10 |
| Cobbles and boulders | B - 11 |
| Sand and boulders | C - 12 |
| Compacted sediments | D - 13 |
| Exposed bedrock | E - 14 |
| No observation | F - 15 |

**Appendix 2 - Campod colours in MARBUNN**

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**Appendix 3 – sediment classification according to SOSI, with Campod classes**

**Appendix 4 - Campod Logger ini file**

[NMEA]

RemoteHost = 10.3.32.255 ' Host transmitting NMEA telegrams

UDP\_Port1 = 5000

UDP\_Port2 = 5010

SerialPort = 1

PortSettings = 9600,n,8,1

[BottomType]

Type0 = Coral

Type1 = Mud

Type2 = Sandy mud

Type3 = Muddy sand

Type4 = Sand

Type5 = Gravelly sandy mud

Type6 = Gravelly muddy sand

Type7 = Gravelly sand

Type8 = Muddy sandy gravel

Type9 = Sandy gravel

Type10 = Gravel

Type11 = Cobbles and boulders

Type12 = Sand and boulders

Type13 = Compacted sediments

Type14 = Exposed bedrock

Type15 = No observation

[Station]

VideoSeq = 1

Cruise=2012110

Station=0

SuperStation=100

[Logging]

AutosaveInterval = 60