DAILY SCIENCE LOG BOOK

MISSION NUMBER: 2023-053

DATE: From: 14 JUNE 2023 To: 26 JUNE 2023

VESSEL: CCG Sir John Franklin

PROJECT(S): Salmon Marine Interactions juvenile salmon survey

Water Properties Group
Fisheries and Oceans Canada
Institute of Ocean Sciences
Ocean Sciences Division
North Saanich, BC, Canada

WaterProperties.ca

Treat this daily science log as an invaluable source of information of what happened on your research mission. Months, years, or even decades after your research has been completed, people will still consult this logbook for information and as such, one should make all efforts to complete this logbook (and any associated sheets for rosettes, chemical analyses, fish sets, plankton tows, etc) as events unfold on a daily basis. This logbook has been supplied with extra sheets of paper for you to record any additional information.

***** This logbook should also be digitized following the cruise and placed on the WaterProperties.ca site *****

Please remember to record such events as:

CTD Notes: an observed failure or strange sensor reading, a computer crash or software issue, switching of a CTD or sensor unit (including the removal or replacement of a PAR or pH sensor), a bottle that fails to trip or bottles that are tripped without commands being sent to the pylon during the cast, a syringe that is left on a cell during a cast, the cleaning (or lack thereof) of a transmissometer or fluorometer, a nutrient sample from the seawater loop, a failure of a NMEA string input into the deck unit, failure of the CTD pump to turn on or failure to turn on the CTD pump during a cast, a CTD or rosette that is recovered with mud or jellyfish attached to it, a sample bottle is removed or switched or weights are added or removed from the rosette or CTD unit, etc.

Biological Notes: any unusual biological observations (e.g., large numbers of squid, jellyfish, birds, zooplankton swarms, thick waters due to phytoplankton)

Sampling Notes: any change in sampling protocols that either do not follow standard procedures or are using different standard procedures

► If there are no unusual occurrences at a station, then please make a note in the comments line, such as "Nothing to Report", "NTR", or even just a "☺"

Please ensure that you have reviewed the required standardized sampling protocols prior to taking any samples and current copies of sampling protocols may be found on the Water Properties website at WaterProperties.ca.

The format for sample labels is:

Sample Number	124
Sample Type	HPLC
Station Name	LBP06
Cruise ID	2016-20
Bottle Number	Bot 12

Water Properties Group Contacts:

CTD's, Rosettes, Sensors, and Salinities	Scott Rose, 250.363.6399 Hugh Maclean, 250.363.6594 Germaine Gatien (Data), 250.363.6560
Nutrients and Chlorophylls	Tamara Fraser, 250.363.6801 Mark Belton, 250.363.6544
Dissolved Oxygen:	Kenny Scozzafava, 250.363.6566
Other Questions:	Steve Romaine, 250.363.6868

Daily Science Log Book – What to Fill Out: Guide for CS's and Watch Leaders

The Chief Scientist is responsible for ensuring that at least the first pink sheet (both sides) is completed in this log book prior to the end of the cruise.

Scientific Personnel
You can enter this information or cut and paste (or tape) from your printed cruise plan.

CTD Configurations
If the CTD sections are not completed, physically inspect the CTD or CTD/Rosette unit and record all serial numbers of sensors prior to the first cast.
If you do not have a listed sensor, then mark the field with an "X" to indicate its absence.

If the CTD section was filled in prior to the cruise, confirm the information by making a visual inspection of the equipment.

Do not copy the information from the log of a previous cruise, even if the equipment has been left on board, and never copy configurations from a CON file – you must physically verify the serial numbers of the equipment!

If a sensor is swapped out during the cruise, then note this in the log book between stations and explain why. Do not remove the first pink page information for the sensors that are swapped out.

Single Niskin Bottles
If single calibration Niskins (non-rosette) are used (sometimes Vector and Ricker, Neocaligus, Walker Rock, and Charters), please note the depth above the CTD cage that the bottle is attached to the line. Typically a piece of electrical tape is wrapped 2m above the cage and then the bottle is attached just below the tape. This height should be noted at the bottom of the pink sheet on the first side.

Pink Sheet Back Side
You may need help from a Water Properties team member to complete some of these sections.
If the equipment is not present for your cruise, "X" it out to indicate it was not on board.

- Winches: inspect each winch and record serial numbers from the white sticker on the side
- Oxygen kit: Record the kit number used
- Thermosalinograph SBE21: Record serial number (on top of unit) and the serial number of the fluorometer used (if equipped).

What Gets an Event Number?
ANYTHING that is thrown into the water to sample receives a sequential event number. This includes CTD, Bongo, BIONESS, Multinet, Fish Sets, Drifters, ARGO floats, Moorings, XBTs, DIASY, Bucket, Acoustic calibrations with spheres, Loop Samples, etc. If appropriate, you may lump same events into one event number (e.g., one event number for one hour of hand casting, or one event number for one session of SCUBA diving). If a set, plankton net, and CTD all occur at the same station sequentially, then they all get their own event numbers. If a fault occurs with a piece of equipment and it is recovered and redeployed immediately then you may re-use the same event number or use the next event number, whatever is easier for you.

Things that do not get event numbers: Acoustic transects, hull-mounted ADCP, TSG's, etc (nothing is thrown into the water). Note that some CS's may choose to assign event numbers to these items, but this must be communicated prior to the start of the cruise. TSG samples usually are assigned their own sequential serial numbers during the cruise.

Loop Samples
If your vessel is equipped with a Thermosalinograph (TSG) and a loop sampler or there is a way to collect seawater while underway (e.g., hose on aft deck on Ricker, sampling sink on Vector), then you should collect loop samples every 4 hours while underway if possible. Sometimes loop samples are timed with a change of the watch or at 00, 04, 08, 12, 16, 20 hours). Such sampling may be suspended while other work is ongoing if it is too difficult to fit it in.

Please assign a sequential sample number and record that plus the exact time of sampling in the log book. Labels are usually hand-written, but can be printed on the label printer if desired. Labels must follow standard format as noted on the inside front cover of the Daily Log Book

Loop samples typically include a single salinity sample and a CHL *a* sample if there is a fluorometer on the TSG. Nutrients and dissolved oxygen samples are sometimes taken. Samples collected follow the same collection protocols as rosettes or niskin bottles

Salinity Calibration Samples on CTD Casts: When not regularly taking them on a Rosette

Salinities taken at depth allow us to confirm what is seen on the CTD. There are no fixed rules for how many samples should be taken for a particular cruise, so it is up to the Chief Scientist or CTD watch leader to pick locations for samples. If anything, some randomness is desired, provided you do plan to take at least a few samples during your cruise!

Typically try to pick deeper stations (>250m) where salinity gradients are low for salinity samples. It is preferable to take samples at least 10m above the bottom. A cruise of 20 CTD stations may aim for 3-5 calibration samples at different locations. A cruise of 60 samples may try and take 6-10 samples. If there is a very well-mixed surface layer, some of the calibration sampling could come from the surface.

Chemistry Sequential Sample Numbers

Sequential Sample Numbers (or sample serial numbers) are used where several water samples are taken during a cruise. This allows reliable tracking and processing of the samples. These numbers are recorded under the "Sample Numbers" column in the log book.

If you plan to take 19 samples on a rosette cast, then you assign the next 19 sample numbers to the samples. All samples taken out of the first bottle (e.g., salinity, nutrients, oxygen, etc) all have the same sample number. All samples out of the second bottle have the next sequential number, etc. You then note this as XX-XX+19 in the sample number column, e.g., 30-48. Record the sample number range in the CTD Daily Science Log Book in the line for that event, as well as on the rosette sheet. Use a yellow rosette sheet even if there is only 1 bottle fired.

Don't forget that loop samples and single Niskins also receive sample numbers.

Sample numbers are only used for water chemistry, not for plankton tows, fish sets, etc.

Captain: _____ First Officer: _____

Second Officer: _____ Third Officer: _____

Fishing Master: _____ Chief Engineer: _____

Mission Participants / Agencies:

_____

**** Chief Scientist to complete section below OR cut and tape from cruise plan ****

1st Leg Scientific Personnel: Chief Scientist: _____

Name	Watch	Cabin	Name	Watch	Cabin

2nd Leg Scientific Personnel: Chief Scientist: _____

Name	Watch	Cabin	Name	Watch	Cabin

**** The following 3 pages are VERY IMPORTANT as they document equipment and settings used on board ****

These pages are to be completed by the CTD Technician setting up the equipment, the Watch Leader on board, and the Chief Scientist MUST verify that all relevant sections are completed prior to leaving the vessel. *Any mid-cruise changes to be noted by watch leader in the notes.*

Data logging computer: _____

Data acquisition program: _____

CTD deck unit make: _____ model: _____ serial number: _____

Primary CTD

Make: _____ model: _____ serial number: _____

Primary temperature serial number: _____

Primary conductivity serial number: _____

Secondary temperature serial number: _____

Secondary conductivity serial number: _____

Transmissometer: _____ Model: _____ s/n: _____

Transmissometer: _____ Model: _____ s/n: _____

Fluorometer: Model _____ Cable gain: _____ s/n: _____ P, S or NO pump?

Fluorometer: Model _____ Cable gain: _____ s/n: _____ P, S or NO pump?

Oxygen sensor: _____ Model: _____ s/n: _____ P, S or NO pump?

PAR sensor: _____ Model: _____ s/n: _____ Surface PAR? Y / N

Other sensors: _____ s/n: _____ P, S or NO pump?

Other sensors: _____ s/n: _____ P, S or NO pump?

Other sensors: _____ s/n: _____ P, S or NO pump?

Other sensors: _____ s/n: _____ P, S or NO pump?

Secondary CTD

Make: _____ model: _____ serial number: _____

Primary temperature serial number: _____

Primary conductivity serial number: _____

Secondary temperature serial number: _____

Secondary conductivity serial number: _____

Transmissometer: _____ Model: _____ s/n: _____

Transmissometer: _____ Model: _____ s/n: _____

Fluorometer: Model _____ Cable gain: _____ s/n: _____ P, S or NO pump?

Fluorometer: Model _____ Cable gain: _____ s/n: _____ P, S or NO pump?

Oxygen sensor: _____ Model: _____ s/n: _____ P, S or NO pump?

PAR sensor: _____ Model: _____ s/n: _____ Surface PAR? Y / N

Other sensors: _____ s/n: _____ P, S or NO pump?

Other sensors: _____ s/n: _____ P, S or NO pump?

Other sensors: _____ s/n: _____ P, S or NO pump?

Other sensors: _____ s/n: _____ P, S or NO pump?

CTD calibration bottle location (height above CTD in metres): _____

This also includes the bottle location above the CTD on non-rosette casts (e.g., W.E. Ricker)

Rosette Setup:
Number of bottles: _____
Manufacturer: _____
Volume of bottles (litres): _____

Winches:
1. Make: _____ Model: _____ Serial #: _____ Used for: _____
2. Make: _____ Model: _____ Serial #: _____ Used for: _____
3. Make: _____ Model: _____ Serial #: _____ Used for: _____

Comments on performance during cruise (comments should also be reflected in the post-cruise report):
_____
_____
_____

Salinometer:
Make: _____ Model: _____ Serial Number: _____

Comments on performance during cruise (comments should also be reflected in the post-cruise report):
_____

Oxygen Kit(s):
Make: _____ Model: _____ Kit Number: _____
Make: _____ Model: _____ Kit Number: _____

Comments on performance during cruise (comments should also be reflected in the post-cruise report):
_____
_____

Thermosalinograph System (SBE21):
Program: _____ Version: _____
Sampling interval (seconds): _____
Fluorometer sensor serial number: _____

Comments on performance during cruise (comments should also be reflected in the post-cruise report):
_____

ADCP Setup:
Computer time zone: _____
Sampling interval (sec): _____
Bin Length: (2^x): _____
Pulse Length: _____
Buffer (bytes): _____
Gyro Offset: _____

User Exits: Name: _____ Exit points: _____
Name: _____ Exit points: _____
Name: _____ Exit points: _____
Work File: _____

Comments on performance during cruise (comments should also be reflected in the post-cruise report):
_____
_____

CTD Test Cast Information

Test Cast along side? Yes No
Comments _____

Test Cast in Saanich Inlet or other location? Yes No
Comments _____

CTD pressure reading on deck (db), before cast: _____ after cast: _____

Pumps working? Yes (0011) No (0010)

Secondary Temp – Primary Temp: _____
(Average from the mixed region)

Secondary Salinity – Primary Salinity: _____
(Average from the mixed region)

Additional Comments:
_____
_____
_____
_____

Scientific Equipment Used During Cruise
This sheet allows you to enter all of the equipment used while on board. Please use the separate CTD sheet for entry for SBE 9/16/19/25.

Other CTD units:
RBR Serial Number: _____ Sensors: _____

Others:
_____

Plankton Nets:
Bongo #1 Frame Size: _____cm Mesh: _____ µm Flowmeter: _____
Bongo #2 Frame Size: _____cm Mesh: _____ µm Flowmeter: _____
_____ Frame Size: _____cm Mesh: _____ µm Flowmeter: _____
_____ Frame Size: _____cm Mesh: _____ µm Flowmeter: _____

Multinet ☐ BIONESS ☐ Neuston ☐ Others:
_____

_____

Trawl Gear:
Midwater Trawls: SOG ☐ Highseas ☐ Pelagic ☐ Other: _____

Bottom Trawls: Atlantic Western IIA ☐ Yankee 36 Hard & Soft Bottom ☐ Other: _____

American Shrimp Trawl ☐

Notes:
_____

Trawl Doors: USA Jet ☐ Tyburon ☐ _____

Sounders : Wesmar 380 ☐ Others: _____

Acoustics:
Echosounder #1 _____ Frequencies (KHz): 12 ☐ 18 ☐ 38 ☐ 70 ☐ 120 ☐ 200 ☐

Others: _____

Echosounder #2 _____ Frequencies (KHz): 12 ☐ 18 ☐ 38 ☐ 70 ☐ 120 ☐ 200 ☐

Others: _____

Software & Notes:
_____

Other Gear in Operation:

1. _____
2. _____
3. _____
4. _____
5. _____

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sc

Month JUNE **Year** 2023 **Vessel** Sir John Franklin **Cruise**

* remember the first cast, cast 0 didnt go down and we arent using
* when uploading CTD data, cast 1 = #1

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Numb			s/Fl ened	Comments
1	[illegible]T	14	23:08	BE	SET		48° 56.999	123° 16.238			-			☐	
2	2	15	14:54	BE	SET		49° 19.671	123° 25.280			-			☐	
3	3	15	16:08	BE	SET		49° 20.43	123° 29.66			-			☐☐	
4	4	15	17:30	BE	SET		49° 21.135	123° 32.567			-			☐☐	
5	5	15	19:17	BE	SET		49° 19.35	123° 33.97			-			☐☐	
6	↓	↓	21:03	BE	CTD		49° 18.320	123° 34.928	286	275	-			☐☐	sit @ 5m 2min wire angle ~ 5°
↓	↓	↓	21:09	BO	↓		° no info recorded		↓	↓	-			☐☐	part of way down
↓	↓	↓	21:15	EN	↓		49° 18.32	123° 34.99	↓	↓	-			☐☐	
7	↓	↓	21:22	BE	NET		49° 18.33	123° 35.01	291	280	-			☐☐	some paint chips maybe from NET ?
↓	↓	↓	21:33	BO	↓		° no. info recorded		↓	↓	-			☐☐	
↓	↓	↓	21:44	EN	↓		49° 18.33	123° 35.07	↓	↓	-			☐☐	
8	6		22:08	BE	SET		49° 17.236	123° 35.820			-			☐☐	
9	7		23:29	BE	SET		49° 15.565	123° 36.660			-			☐☐	
10	1		01:04	BE	CTD		49° 13.25	123° 34.96	367	350	-			☐☐	CTD turned on @ 5:57 PDT
↓	↓		01:10	BO	↓		49° 13.20	123° 34.92	↓	↓	-			☐☐	went to 350 bc think was max
↓	↓		01:18	EN	↓		49° 13.226	123° 34.908	↓	↓	-			☐☐	
11	↓		01:32	BE	NET		49° 13.24	123° 34.83	367	350	-			☐☐	~45° wire at start of descent
↓	↓		01:45	BO	↓		49° 13.23	123° 34.78	↓	↓	-			☐☐	then straightened out. ~45° for
↓	↓	↓	02:00	EN	↓		49° 13.18	123° 34.76	↓	↓	-			☐☐	last 20m ascent ↳ cod end slight twist ↳ this cod end event

Event Type:
BOT = Bottle cast (no CTD)
CTD = Standalone CTD
ROS = CTD in Rosette
SET = Fish Set
LOOP = Sea Water Loop
MOR = Mooring
NET = Plankton Net Haul
DRF = Drifter
___ = _____

Bottle Firing Method:
US = Up / Stop (default)
UN = Up / No stop
DN = Down / No stop

Time Code:
BE = Beginning Time of Cast
BO = Bottom Time of Cast
EN = End Time of Cast
DE = Deployment Time
MR = Messenger Release Time
RE = Recover Mooring Time

CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

Notes: _____

This page is for any notes or observations

~~cast~~ event

- files will be saved as 2023-053-000#
- 1st cast (cast #0) started but didn't have enough weight so CTD turned off/on and cast 0 NOT recorded in log book; skipping/starting @ cast #1 as 1st cast
- did not get lat + long @ BO

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month JUNE | **Year** 2023 | **Vessel** Sir John Franklin | **Cruise ID** 2023-053

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
12	8	16	13:50	BE	SET		48° 52.707	123° 12.745			-			☐☐	
13	9		15:00	BE	SET		49° 52.33	123° 08.76			-			☐☐	
14			16:08	BE	CTD		48° 53.403	123° 11.339	136	125	-			☐☐	descent ~45° wire angle up straight
↓			16:10	BO	↓		48° 53.408	123° 11.327	↓	↓	-			☐☐	
↓			16:13	EN	↓		48° 53.395	123° 11.296	↓	↓	-			☐☐	
15			16:22	BE	NET		48° 53.397	123° 11.292	136	125	-			☐☐	wire angle ~45 descent + ascent
↓			16:27	BO	↓		48° 53.423	123° 11.317	↓	↓	-			☐☐	
↓	↓	↓	16:32	EN	↓		48° 53.455	123° 11.321	↓	↓	-			☐☐	
16	10		16:57	BE	SET		48° 54.1030	123° 12.3730			-			☐☐	
17	11		18:10	BE	SET		48° 56.88	123° 16.76			-			☐☐	
18	12		19:44	BE	SET		48° 57.25	123° 24.04			-			☐☐	
19	13		20:56	BE	SET		48° 59.533	123° 30.328			-			☐☐	
20			21:56	BE	CTD		49° 02.90	123° 33.87	193	180	-			☐☐	~10° wire angle descent
↓			21:59	BO	↓		49° 02.97	123° 33.97	↓	↓	-			☐☐	
↓			22:03	EN	↓		49° 03.03	123° 34.06	↓	↓	-			☐☐	
21			22:09	BE	NET		49° 03.13	123° 34.16	200	190	-			☐☐	all good ☺
↓			22:16	BO	↓		49° 03.21	123° 34.23	↓	↓	-			☐☐	
↓	↓	↓	22:23	EN	↓		49° 03.25	123° 34.26	↓	↓	-			☐☐	
22	14		22:46	BE	SET		49° 04.74	123° 35.39			-			☐☐	

Event Type:
BOT = Bottle cast (no CTD)
CTD = Standalone CTD
ROS = CTD in Rosette
SET = Fish Set
LOOP = Sea Water Loop
MOR = Mooring
NET = Plankton Net Haul
DRF = Drifter
___ = _____

Bottle Firing Method:
US = Up / Stop (default)
UN = Up / No stop
DN = Down / No stop

Time Code:
BE = Beginning Time of Cast
BO = Bottom Time of Cast
EN = End Time of Cast
DE = Deployment Time
MR = Messenger Release Time
RE = Recover Mooring Time

CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

Notes: _____

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month JUNE **Year** 2023 **Vessel** SIR JOHN FRANKLIN **Cruise ID** 2023-053

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
23	15		23:46	BE	SET		49° 07.64	123° 34.76			-			☐☐	
24	16	17	13:24	BE	SET		49° 09.55	123° 13.78			-			☐☐	
25	17		15:47	BE	SET		49° 02.41	123° 16.35			-			☐☐	
26			16:46	BE	CTD		49° 03.20	123° 17.98	98	85	-			☐☐	all good ☺
			16:48	BO			49° 03.16	123° 17.98			-			☐☐	
			16:50	EN			49° 03.16	123° 17.98			-			☐☐	
27			16:58	BE	NET		49° 03.16	123° 18.01	102	90	-			☐☐	ascending wire angle ~15°
			17:02	BO			no° info	recorded			-			☐☐	
			17:06	EN			49° 03.09	123° 18.02			-			☐☐	
28	18		17:55	BE	SET		49° 07.610	123° 19.703			-			☐☐	
29	19		19:43	BE	SET		49° 12.92	123° 23.09			-			☐☐	
30	20		20:45	BE	SET		49° 09.319	123° 23.654			-			☐☐	
31	21		21:57	BE	SET		49° 7.629	123° 27.909			-			☐☐	
32			23:05	BE	CTD		49° 10.69	123° 29.95	334	325	-			☐☐	turned on for about 6 min before entering water
			23:14	BO			49° 10.70	123° 29.91			-			☐☐	water choppy
			23:20	EN			49° 10.70	123° 29.89			-			☐☐	
33			23:27	BE	NET		49° 10.71	123° 29.86	333	320	-			☐☐	descending ~5° wire angle.
			23:39	BO			49° 10.73	123° 29.84			-			☐☐	ascending straight, water calmer
			23:51	EN			49° 10.72	123° 29.83			-			☐☐	

Event Type:
BOT = Bottle cast (no CTD)
CTD = Standalone CTD
ROS = CTD in Rosette
SET = Fish Set

LOOP = Sea Water Loop
MOR = Mooring
NET = Plankton Net Haul
DRF = Drifter
____ = _____

Bottle Firing Method:
US = Up / Stop (default)
UN = Up / No stop
DN = Down / No stop

Time Code:
BE = Beginning Time of Cast
BO = Bottom Time of Cast
EN = End Time of Cast
DE = Deployment Time
MR = Messenger Release Time
RE = Recover Mooring Time

CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

Notes: _____

Produced by the Water Properties Group, IOS

WaterProperties.ca
Version: 20 April 2016

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month JUNE | **Year** 2023 | **Vessel** SIR JOHN FRANKLIN | **Cruise ID** 2023-053

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
34	22	18	13:18	BE	SET		49° 10.441	123° 40.052			-			☐☐	
35	23		15:09	BE	SET		49° [illegible]	123° [illegible]			-			☐☐	
36	24		16:27	BE	SET		49° 130.69	123° 44.58			-			☐☐	
37			17:25	BE	CTD		49° 14.594	123° 39.636	383	350	-			☐☐	sunny, light chop on water
↓			17:31	BO	↓		49° 14.575	123° 39.639	↓	↓	-			☐☐	
↓			17:38	EN	↓		49° 14.557	123° 39.636	↓	↓	-			☐☐	
38			17:47	BE	NET		49° 14.538	123° 39.641	383	350	-			☐☐	all good
↓			18:00	BO	↓		49° 14.516	123° 39.594	↓	↓	-			☐☐	
↓			18:13	EN	↓		49° 14.504	123° 39.498	↓	↓	-			☐☐	
39	25		18:35	BE	SET		49° 14.75	123° 37.20			-			☐☐	
40	26		20:00	BE	SET		49° 15.88	123° 28.64			-			☐☐	
41	27		21:51	BE	SET		49° 22.12	123° 34.56			-			☐☐	
42	28		23:02	BE	SET		49° 24.25	123° 42.62			-			☐☐	
43			24:01	BE	CTD		49° 25.64	123° 48.01	159	150	-			☐☐	sunny, water calm. CTD came out of water halfway after 2min @
↓			24:03	BO	↓		49° 25.63	123° 48.02	↓	↓	-			☐☐	
↓			24:07	EN	↓		49° 25.62	123° 48.04	↓	↓	-			☐☐	5m before ↓ to 150
44			24:13	BE	NET		49 25.61	123° 48.04	158	145	-			☐☐	ascending ~10°
↓			24:18	BO	↓		49 25.61	123° 48.09	↓	↓	-			☐☐	wire angle
↓			24:24	EN	↓		49 25.58	123° 48.04	↓	↓	-			☐☐	

Event Type:
BOT = Bottle cast (no CTD)
CTD = Standalone CTD
ROS = CTD in Rosette
SET = Fish Set

LOOP = Sea Water Loop
MOR = Mooring
NET = Plankton Net Haul
DRF = Drifter
____ = _____

Bottle Firing Method:
US = Up / Stop (default)
UN = Up / No stop
DN = Down / No stop

Time Code:
BE = Beginning Time of Cast
BO = Bottom Time of Cast
EN = End Time of Cast
DE = Deployment Time
MR = Messenger Release Time
RE = Recover Mooring Time

CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

Notes: _____

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month JUNE | **Year** 2023 | **Vessel** SIR JOHN FRANKLIN | **Cruise ID** 2023-053

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
45	29	19	13:28	BE	SET		49°24.879	123°48.613			-			☐☐	
46	30		16:35	BE	SET		49°29.56	123°49.93			-			☐☐	
47			17:38	BE	CTD		49°21.370	123°55.453	374	350	-			☐☐	~.5m waves cloudy
↓			17:45	BO	↓		49°21.346	123°55.459	↓	↓	-			☐☐	
↓			17:51	EN	↓		49°21.319	123°55.452	↓	↓	-			☐☐	
48			17:56	BE	NET		49°21.301	123°55.440	369	350	-			☐☐	up until this event, the BONGO has
↓			18:03	BO	↓		49°21.268	123°55.427	↓	↓	-			☐☐	gone down @ .5m/s up up @ .5 m/s.
↓			18:16	EN	↓		49°21.239	123°55.441	↓	↓	-			☐☐	This event, BONGO went down at
49	31		18:35	BE	SET		49°22.458	124°55.509			-			☐☐	1 m/s and up at .5/m/s
50	32		19:51	BE	SET		49°26.72	124°54.73			-			☐☐	
51	33		21:02	BE	SET		49°27.34	124°58.96	351	345	-			☐☐	all good
52	34		22:18	BE	SET		49°28.37	124°03.03	357	345	-			☐☐	CTD ALL GOOD
53			23:23	BE	CTD		49°31.22	124°05.83	357	345	-			☐☐	
↓			23:29	BO	↓		49°31.23	124°05.81	↓	↓	-			☐☐	very windy
↓			23:36	EN	↓		49°31.23	124°05.81	↓	↓	-			☐☐	going down at ~45° angle for
54			23:41	BE	NET		49°31.24	124°05.810	353	340	-			☐☐	~5 min then straightened out
↓			23:54	BO	↓		49°31.23	124°05.81	↓	↓	-			☐☐	
↓			24:07	EN	↓		49°31.25	124°05.83	↓	↓	-			☐☐	
55	35	20	13:19	BE	SET		50°11.33	123°57.005			-			☐☐	

Event Type:
BOT = Bottle cast (no CTD)
CTD = Standalone CTD
ROS = CTD In Rosette
SET = Fish Set
LOOP = Sea Water Loop
MOR = Mooring
NET = Plankton Net Haul
DRF = Drifter
____ = _____

Bottle Firing Method:
US = Up / Stop (default)
UN = Up / No stop
DN = Down / No stop

Time Code:
BE = Beginning Time of Cast
BO = Bottom Time of Cast
EN = End Time of Cast
DE = Deployment Time
MR = Messenger Release Time
RE = Recover Mooring Time

CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

Notes: _____

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month JUNE **Year** 2023 **Vessel** Sir John Franklin **Cruise ID** 2023-053

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
56	35	20	14:00	BE	CTD		50° 10.25	123° 54.85	330	320	-			☐☐	water calm cloudy
↓	↓	↓	14:06	BO	↓		50° 10.25	123° 54.84	↓	↑	-			☐☐	CTD came up with sediment
↓	↓	↓	14:13	EN	↓		50° 10.245	123° 54.83	↓	↓	-			☐☐	on bottom... Took photo and
57			14:19	BE	NET		50° 10.25	123° 54.82	330	315	-			☐☐	sprayed mud off Freshwater
↓	↓	↓	14:24	BO	↓		50° 10.250	123° 54.793	↓	↓	-			☐☐	
↓	↓	↓	14:37	EN	↓		50° 10.265	123° 54.774	↓	↓	-			☐☐	
58	36	↓	14:57	BE	SET		50° 09.60	123° 53.28			-			☐☐	
59	37	↓	15:54	BE	SET		50° 07.486	123° 49.666			-			☐☐	
60	38	↓	16:43	BE	SET		50° 05.141	123° 47.45			-			☐☐	
61	39	↓	17:52	BE	SET		50° 02.75	123° 56.68			-			☐☐	
62	↓	↓	18:34	BE	CTD		50° 01.76	123° 52.87	473	350	-			☐☐	sat at 5m for 3 min before cast and
↓	↓	↓	18:41	BO	↓		50° 01.77	123° 52.84	↓	↓	-			☐☐	when it came to surface bere ↓ 350m
↓	↓	↓	18:47	EN	↓		50° 01.77	123° 52.83	↓	↓	-			☐☐	it came relatively out of water
63	↓	↓	18:57	BE	NET		50° 01.78	123° 52.82	530	350	-			☐☐	△ sampling to ↓ @ 1.0m/s, ↑ 1.0m/s
↓	↓	↓	19:10	BO	↓		50° 01.80	123° 52.81	↓	↓	-			☐☐	for all subsequent NET events
↓	↓	↓	19:17	EN	↓		50° 01.79	123° 52.83	↓	↓	-			☐☐	It is clear that event 63 event was not done at 1.0m/s down and up. Incorrect note.
64	40	↓	19:40	BE	SET		50° 01.1620	123° 54.638	-		-			☐☐	
65	41	↓	20:49	BE	SET		49° 58.6500	123° 59.4680			-			☐☐	
See	next page		:				° .	° .							

Event Type:
BOT = Bottle cast (no CTD)
CTD = Standalone CTD
ROS = CTD in Rosette
SET = Fish Set

LOOP = Sea Water Loop
MOR = Mooring
NET = Plankton Net Haul
DRF = Drifter
____ = _____

Bottle Firing Method:
US = Up / Stop (default)
UN = Up / No stop
DN = Down / No stop

Time Code:
BE = Beginning Time of Cast
BO = Bottom Time of Cast
EN = End Time of Cast

CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products
DE = Deployment Time
MR = Messenger Release Time
RE = Recover Mooring Time

Notes:

- On CTD cast event #55, bottom of CTD went into mud.. We rinsed it with fresh water and CS decided to cast it again then upload data. If data off, then switch CTD.

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month JUNE | **Year** 2023 | **Vessel** SIR JOHN FRANKLIN | **Cruise ID** 2023-053

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
66	41	20	21:57	BE	CTD		49°54.49	123°55.04	532	350	-			☐☐	changed to other CTD
↓	↓	↓	22:04	BO	↓		49°54.47	123°55.03	↓	↓	-			☐☐	10m for 2 min from nowon.
↓	↓	↓	22:10	EN	↓		49°54.44	123°55.00	↓	↓	-			☐☐	Before this event, we were doing 5m for 2min.
67	↓	↓	22:19	BE	NET		49°54.11	123°55.14	517	350	-			☐☐	
↓	↓	↓	22:32	BO	↓		49°54.50	123°55.15	↓	↓	-			☐☐	
↓	↓	↓	22:39	EN	↓		49°54.51	123°55.15	↓	↓	-			☐☐	
68	42	↓	23:10	BE	SET		49°52.3800	123°53.5440			-			☐☐	
69	43	1	24:14	BE	SET		49°48.11	123°56.99			-			☐☐	
70	44	21	13:23	BE	SET		49°43.440	124°38.374			-			☐☐	
71	45	↓	14:50	BE	SET		49°41.19	124°36.03			-			☐☐	
72	1	↓	15:46	BE	CTD		49°39.550	124°33.39	347	337	-			☐☐	10m for 2 min water rippled, sunny no wind
↓	↓	↓	15:52	BO	↓		49°39.56	124°33.38	↓	↓	-			☐☐	
↓	↓	↓	15:59	EN	↓		49°39.58	124°33.37	↓	↓	-			☐☐	
73	↓	↓	16:04	BE	NET		49°39.59	124°33.36	346	336	-			☐☐	all good
↓	↓	↓	16:16	BO	↓		49°39.597	124°33.36	↓	↓	-			☐☐	45049
↓	↓	↓	16:23	EN	↓		49°39.60	124°33.37	↓	↓	-			☐☐	-45052
74	46	↓	16:44	BE			49°38.9426	124°32.1700			-			☐☐	
75	47	↓	17:51	BE			49°36.957	124°28.219			-			☐☐	
76	48	↓	19:12	BE			49°33.305	124°25.82			-			☐☐	

Event Type:
BOT = Bottle cast (no CTD)
CTD = Standalone CTD
ROS = CTD in Rosette
___ = Fish Set

LOOP = Sea Water Loop
MOR = Mooring
NET = Plankton Net Haul
DRF = Drifter
___ = _____

Bottle Firing Method:
US = Up / Stop (default)
UN = Up / No stop
DN = Down / No stop

Time Code:
BE = Beginning Time of Cast
BO = Bottom Time of Cast
EN = End Time of Cast
DE = Deployment Time
MR = Messenger Release Time
RE = Recover Mooring Time

CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

Notes: _____

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month JUNE | **Year** 2023 | **Vessel** SIR JOHN FRANKLIN | **Cruise ID** 2023-053

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Tms/Fl Cleaned	Comments
77	48	21	20:10	BE	CTD		49° 33.46	124° 26.59	155	145	-			☐☐	
↓	↓	↓	20:13	BO	↓		49° 53.46	124° 25.59	↓	↓	-			☐☐	
↓	↓	↓	20:16	EN	↓		49° 33.47	124° 26.58	↓	↓	-			☐☐	
78	↓	↓	20:22	BE	NET		49° 33.47	124° 26.57	156	145	-			☐☐	
↓	↓	↓	20:28	BO	↓		49° 33.47	124° 25.55	↓	↓	-			☐☐	
↓	↓	↓	20:31	EN	↓		49° 33.47	124° 26.56	↓	↓	-			☐☐	
79	49	↓	20:53	BE	SET		49° 32.9400	124° 27.6820			-			☐☐	
80	50	↓	22:50	BE	SET		49° 30.150	124° 29.99			-			☐☐	
81	51	22	16:24	BE	SET		49° 47.74	124° 33.05			-			☐☐	
82	52	↓	18:07	BE	SET		49° 45.89	124° 29.88			-			☐☐	switched back to 1st CTD
83	↓	↓	19:05	BE	CTD		49° 45.48	124° 26.37	324	314	-			☐☐	
↓	↓	↓	19:11	BO	↓		49° 45.48	124° 26.39	↓	↓	-			☐☐	
↓	↓	↓	19:17	EN	↓		49° 45.47	124° 26.39	↓	↓	-			☐☐	
84	↓	↓	19:24	BE	NET		49° 45.46	124° 26.40	326	315	-			☐☐	45125 → 46847
↓	↓	↓	19:36	BO	↓		49° 45.45	124° 26.42	↓	↓	-			☐☐	windy down to 5 kts
↓	↓	↓	19:42	EN	↓		49° 45.45	124° 26.43	↓	↓	-			☐☐	
85	53	↓	20:08	BE	SET		49° 45.027	124° 24.266			-			☐☐	
86	54	↓	21:47	BE	SET		49° 44.382	124° 19.656			-			☐☐	
see next page			:				° '	° '							

CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

Event Type:
BOT = Bottle cast (no CTD)
CTD = Standalone CTD
ROS = CTD in Rosette
SET = Fish Set

LOOP = Sea Water Loop
MOR = Mooring
NET = Plankton Net Haul
DRF = Drifter
___ = _____

Bottle Firing Method:
US = Up / Stop (default)
UN = Up / No stop
DN = Down / No stop

Time Code:
BE = Beginning Time of Cast
BO = Bottom Time of Cast
EN = End Time of Cast
DE = Deployment Time
MR = Messenger Release Time
RE = Recover Mooring Time

Notes: _____

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month JUNE **Year** 2023 **Vessel** SIR JOHN FRANKLIN **Cruise ID** 2023-053

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
87	54	22	24:00	BE	CTD		49° 39. 51	124° 17. 88	279	269	-			☐☐	
↓			24:05	BO			49° 39. 55	124° 17. 91			-			☐☐	
↓			24:10	EN	↓		49° 39. 59	124° 17. 93			-			☐☐	46849 – 48305
88			24:18	BE	NET		49° 39. 63	124° 17. 98	280	270	-			☐☐	0.5m/s ↓, 1.0m/s ↑
			24:28	BO			49° 39. 72	124° 18. 06			-			☐☐	
↓			24:34	EN	↓		49° 39. 75	124° 18. 11			-			☐☐	
89	55	23	13:19	BE	SET		49° 39. 346	124° 15. 991			-			☐☐	CTD sat in air for couple min too
90	56		14:35	BE	SET		49° 36. 64	124° 07. 00			-			☐☐	water calm/sunny, no wind
91			15:41	BE	CTD		49° 34. 225	124° 05. 838	277	267	-			☐☐	* CTD went into mud again but
			15:46	BO			49° 34. 227	124° 05. 833			-			☐☐	We found no error in requested or winch
↓			15:51	EN	↓		49° 34. 226	124° 05. 824			-			☐☐	entered water at depth .5m/s then descend
92			16:00	BE	NET		49° 34. 219	124° 05. 811	276	256	RBRduet recorded depth as 262m			☐☐	@ 1.0m/s and ↑ 1.0m/s
			16:05	BO			49° 34. 211	124° 05. 803			-			☐☐	* put RBR on RBR BONGO #1
↓			16:11	EN	↓		49° 34. 203	124° 05. 799			-			☐☐	doing BONGO 20m less because
93	57		17:13	BE	SET		49° 33. 078	124° 5. 197			-			☐☐	winch may have error
94	58		18:57	BE	SET		49° 28. 85	124° 3. 24			-			☐☐	49304
95	59		20:29	BE	SET		49° 25. 80	124° 04. 08			-			☐☐	– 48419
96	60		22:14	BE	SET		49° 21. 241	124° 12. 643			-			☐☐	spun flowmeter manually before
97	61		23:30	BE	SET		49° 21. 90	124° 14. 14			-			☐☐	event 92, after event 88

Event Type:
BOT = Bottle cast (no CTD)
CTD = Standalone CTD
ROS = CTD in Rosette
SET = Fish Set

LOOP = Sea Water Loop
MOR = Mooring
NET = Plankton Net Haul
DRF = Drifter
___ = _____

Bottle Firing Method:
US = Up / Stop (default)
UN = Up / No stop
DN = Down / No stop

Time Code:
BE = Beginning Time of Cast
BO = Bottom Time of Cast
EN = End Time of Cast
DE = Deployment Time
MR = Messenger Release Time
RE = Recover Mooring Time

CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

Notes:

Produced by the Water Properties Group, IOS

WaterProperties.ca
Version: 20 April 2016

- Spun flowmeter manually before event 92 because we weren't sure if flowmeter was "stuck"

← we put an RBR on BONGO NET on event 92 and kept it on for all subsequent NET events
Due to winch errors in reading depth, NET went to deeper depths than requested.
Event #92 NET Max Cast Pressure was 262m and temperature was 8.5°C @ 262m

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month JUNE | **Year** 2023 | **Vessel** SIR JOHN FRANKLIN | **Cruise ID** 2023-053

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
98	62	24	13:24	BE	SET		49° 24.574	124° 17.947			-			☐☐	
99	63		14:40	BE	SET		49° 26.14	124° 20.91			-			☐☐	CTD/BONGO issue w/ winch system accurately measuring depth so we are doing 20m above bottom
100			15:45	BE	CTD		49° 25.91	124° 25.684	344	324	went to 339			☐☐	
↓			15:51	BO	↓		49° 25.919	124° 25.683	↓	↓	-			☐☐	windy, choppy water
↓			15:57	EN	↓		49° 25.928	124° 25.690	↓	↓	-			☐☐	we determined even giving 20m, we were 5 off bottom. So doing 30 ↑ bottom
101			16:06	BE	NET		49° 25.934	124° 25.669	343	313	-			☐☐	
↓			16:11	BO	↓		49° 25.946	124° 25.672	↓	↓	-			☐☐	
↓			16:19	EN	↓		49° 25.954	124° 25.668	↓	↓	-			☐☐	48421 → 484217
102	64		16:56	BE	SET		49° 25.553	124° 27.73			-			☐☐	flowmeter reading didn't change?
103	65		18:14	BE	SET		49° 23.76	124° 26.97			-			☐☐	manually spun flowmeter again
104	66		19:56	BE	SET		49° 25.33	124° 29.41			-			☐☐	after this event to see if it
105	67		21:14	BE	SET		49° 24.67	124° 33.37			-			☐☐	was stuck. It doesn't appear to
106	68		22:30	BE	SET		49° 23.712	124° 30.49			-			☐☐	be.
107			23:27	BE	CTD		49° 24.76	124° 26.32	314	290	← went to 309			☐☐	
↓			23:33	BO	↓		49° 24.76	124° 26.311	↓	↓	-			☐☐	
↓			23:38	EN	↓		49° 24.76	124° 26.311	↓	↓	-			☐☐	
108			23:48	BE	NET		49° 24.765	124° 26.33	318	290	← -			☐☐	
↓			23:54	BO	↓		49° 24.76	124° 26.35	↓	↓	-			☐☐	
↓			24:00	EN	↓		49° 24.76	124° 26.35	↓	↓	-			☐☐	

RBRduet3 recorded depth as 322m

RBRduet3 recorded depth as 299m

Event Type:
BOT = Bottle cast (no CTD)
CTD = Standalone CTD
ROS = CTD in Rosette
SET = Fish Set
LOOP = Sea Water Loop
MOR = Mooring
NET = Plankton Net Haul
DRF = Drifter
___ = _____

Bottle Firing Method:
US = Up / Stop (default)
UN = Up / No stop
DN = Down / No stop

Time Code:
BE = Beginning Time of Cast
BO = Bottom Time of Cast
EN = End Time of Cast
DE = Deployment Time
MR = Messenger Release Time
RE = Recover Mooring Time

CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

Notes: _____

Produced by the Water Properties Group, IOS

WaterProperties.ca
Version: 20 April 2016

This page is for any notes or observations

→ bottom temp 8.6°C event 101

→ bottom temp 8.7°C event 108

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month JUNE | **Year** 2023 | **Vessel** SIR JOHN FRANKLIN | **Cruise ID** 2023-053

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
109	69	25	13:22	BE	SET		49°45.364	124°42.45			-			☐☐	
110	70	|	15:00	BE	SET		49°44.00	124°48.4600			-			☐☐	
111	|	|	15:59	BE	CTD		49°45.47	124°46.00	357	327	← went to 341			☐☐	all good ☺
↓	|	|	16:05	BO	↓		49°45.45	124°46.00	↓	↓	-			☐☐	.5ft waves, sun
↓	|	|	16:12	EN	↓		49°45.43	124°45.99	↓	↓	-			☐☐	
112	|	|	16:18	BE	NET		49°45.41	124°45.98	354	334	←			☐☐	~5° wire angle ↓ to start then to 0°
↓	|	|	16:25	BO	↓		49°45.40	124°45.98	↓	↓				☐☐	up at ~30° angle
↓	|	|	16:32	EN	↓		49°45.40	124°46.01	↓	↓	-			☐☐	
113	71	|	17:18	BE	SET		49°39.976	124°47.69			-			☐☐	48543 →
114	72	|	19:33	BE	SET		49°38.27	124°44.45			-			☐☐	50561
115	73	|	20:53	BE	SET		49°35.48	124°42.74			-			☐☐	
116	74	|	22:15	BE	SET		49°38.125	124°43.704			-			☐☐	
117	75	|	23:29	BE	SET		49°40.2190	124°40.5360			-			☐☐	
118	76	26	13:25	BE	SET		49°49.843	124°43.321			-			☐☐	
119	77	|	14:48	BE	SET		49°50.14	124°47.66			-			☐☐	
120	|	|	15:36	BE	CTD		49°50.572	124°50.481	293	273	-			☐☐	all good
↓	|	|	15:42	BO	↓		49°50.560	124°50.473	↓	↓	-			☐☐	
↓	|	|	15:47	EN	↓		49°50.538	124°50.455	↓	↓	-			☐☐	
see next book for next event							° .	° .			-			☐☐	

RBRduet3 recorded depth as 344m

Event Type:
BOT = Bottle cast (no CTD)
CTD = Standalone CTD
ROS = CTD in Rosette
SET = Fish Set
LOOP = Sea Water Loop
MOR = Mooring
NET = Plankton Net Haul
DRF = Drifter
____ = _____

Bottle Firing Method:
US = Up / Stop (default)
UN = Up / No stop
DN = Down / No stop

Time Code:
BE = Beginning Time of Cast
BO = Bottom Time of Cast
EN = End Time of Cast
DE = Deployment Time
MR = Messenger Release Time
RE = Recover Mooring Time

CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

Notes:

→ temperature at bottom event 112 was 8.3°C

DAILY SCIENCE LOG BOOK

MISSION NUMBER 2023-053

DATE: From: 26 JUNE 2023 To: 2023

VESSEL: CCG Sir John Franklin

PROJECT(S): Salmon Marine Interactions Juvenile Salmon Survey

Water Properties Group
Fisheries and Oceans Canada
Institute of Ocean Sciences
Ocean Sciences Division
North Saanich, BC, Canada

35 Page Logbook

WaterProperties.ca

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month JUNE | **Year** 2023 | **Vessel** SIR JOHN FRANKLIN | **Cruise ID** 2023-053

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information: Latitude	Positional Information: Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
121	77	26	15:53	BE	NET		49°50.542	124°50.463	294	274	RBRduet3 recorded depth as 282m			☐☐	↓@ 1.0m/s and ↑ 1.0m/s for all
			15:58	BO			49°50.523	124°50.448						☐☐	BONGO
↓			16:03	EN	↓		49°50.511	124°50.436	↓	↓				☐☐	NET actual depth 280m
122	78		16:57	BE	SET		49°53.64	124°51.23			-			☐☐	flowmeter 50563 - 50595
123	79		20:55	BE	SET		49°50.6390	124°50.423			-			☐☐	
124	80	27	22:22	BE	SET		49°45.7620	124°54.3920			-			☐☐	
125	81		23:24	BE	SET		49°43.939	124°48.875	← FAILED SET		-			☐☐	
126	82	27	13:28	BE	SET		49°43.939	124°48.875			-			☐☐	
127			14:29	BE	CTD		49°41.389	124°45.971	157	137	-			☐☐	sun, water calm. all good
			14:32	BO			49°41.388	124°45.980			-			☐☐	
↓			14:34	EN	↓		49°41.386	124°45.985	↓	↓	-			☐☐	
128			14:41	BE	NET		49°41.371	124°45.995	156	136	-			☐☐	5095 - 51397
			14:46	BO			49°41.366	124°46.000			-			☐☐	NET went to depth
↓			14:49	EN	↓		49°41.365	124°45.998	↓	↓	-			☐☐	141m
129	83		15:43	BE	SET		49°46.524	124°53.373			-			☐☐	
130	84		16:46	BE	SET		49°48.66	124°55.50			-			☐☐	
131	85		20:11	BE	~~SET~~		49°53.84	124°56.69			-			☐☐	
132	86		21:28	~~BO~~	SET		49°57.92	124°58.46			-			☐☐	
133	87		22:34	BE	SET		49°58.998	125°3.414			-			☐☐	

Event Type:
BOT = Bottle cast (no CTD)
CTD = Standalone CTD
ROS = CTD in Rosette
SET = Fish Set
LOOP = Sea Water Loop
MOR = Mooring
NET = Plankton Net Haul
DRF = Drifter
____ = _____

Bottle Firing Method:
US = Up / Stop (default)
UN = Up / No stop
DN = Down / No stop

Time Code:
BE = Beginning Time of Cast
BO = Bottom Time of Cast
EN = End Time of Cast
DE = Deployment Time
MR = Messenger Release Time
RE = Recover Mooring Time

CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

Notes: _____

Produced by the Water Properties Group, IOS

WaterProperties.ca
Version: 17 Feb 2020

This page is for any notes or observations

→ event 121 actual Max Cast Pressure 282m and temp. at bttm was 8.2°C

→ event 128 actual Max Cast Pressure 141m and temp at bttm was 8.2°C

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month JUNE **Year** 2023 **Vessel** SIR JOHN FRANKLIN **Cruise ID** 2023-053

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
134	88	28	13:29	BE	SET		50°17.203	125°22.516			-			☐☐	
135	89		14:11	BE	SET		50°17.31	125°24.85			-			☐☐	
136	90		15:13	BE	CTD		50°18.952	125°25.605	227	207	-			☐☐	
			15:17	BO	↓		50°18.953	125°25.588	↓	↓	-			☐☐	
↓			15:21	EN	↓		50°18.962	125°25.583	↓	↓	-			☐☐	
137			15:26	BE	NET		50°18.967	125°25.578	229	209	-			☐☐	flowmeter
			15:30	BO	↓		50°18.962	125°25.582	↓	↓	-			☐☐	51396 - 51311
↓			15:34	EN	↓		50°18.970	125°25.615	↓	↓	-			☐☐	NET depth weird? went to 215m
138	90		16:07	BE	SET		50°20.99	125°24.99			-			☐☐	
139	91		16:57	BE	SET		50°22.30	125°21.96			-			☐☐	
140	92		17:53	BE	SET		50°24.27	125°19.87			-			☐☐	
141			18:42	BE	CTD		50°26.192	125°18.715	323	303	-			☐☐	
			18:48	BO	↓		50°26.18	125°18.73	↓	↓	-			☐☐	
↓			18:54	EN	↓		50°26.18	125°18.74	↓	↓	-			☐☐	NET actual depth went to 295m
142			19:01	BE	NET		50°26.17	125°18.75	308	288	-			☐☐	51311 → 51308?
			19:07	BO	↓		50°26.16	125°18.74	↓	↓	-			☐☐	to manually spin flowmeter after this event to see if 100th # would d. it did.
↓	↓	↓	19:13	EN	↓		50°26.15	125°18.71	↓	↓	-			☐☐	
143	93	29	15:37	BE	SET		50°0.89	125°5.83			-			☐☐	
144	94	1	16:54	BE	SET		50°02.96	125°07.70			-			☐☐	

Event Type:
BOT = Bottle cast (no CTD)
CTD = Standalone CTD
ROS = CTD in Rosette
SET = Fish Set

LOOP = Sea Water Loop
MOR = Mooring
NET = Plankton Net Haul
DRF = Drifter
___ = _____

Bottle Firing Method:
US = Up / Stop (default)
UN = Up / No stop
DN = Down / No stop

Time Code:
BE = Beginning Time of Cast
BO = Bottom Time of Cast
EN = End Time of Cast
DE = Deployment Time
MR = Messenger Release Time
RE = Recover Mooring Time

CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

Notes: _____

→ event 137 actual Max Cast Pressure was 215m and temp. at bttm was 10.0°C

→ event 142 actual Max Cast Pressure was 295m and temp at bttm was 9.9°C

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month JUNE | **Year** 2023 | **Vessel** SIR JOHN FRANKLIN | **Cruise ID** 2023-053

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
145	94	29	17:45	BE	CTD		50° 05.507	125° 07.567	258	238	-			☐☐	
↓			17:50	BO	↓		50° 05.514	125° 07.566	↓	↓	-			☐☐	
↓			17:54	EN	↓		50° 05.520	125° 07.566	↓	↓	-			☐☐	
146			17:59	BE	NET		50° 05.527	125° 07.556	258	238	-			☐☐	NET actual depth went 245
↓			18:03	BO	↓		50° 05.537	125° 07.564	↓	↓	-			☐☐	flowmeter 51410
↓			18:08	EN	↓		50° 05.546	125° 07.552	↓	↓	-			☐☐	→ 53890
147	95		20:15	BE	SET		50° 8.370	125° 2.905			-			☐☐	
148	96		20:39	BE	SET		50° 14.37	125° 00.88			-			☐☐	
149	97		22:03	BE	SET		50° 19.48	124° 57.39			-			☐☐	
150	98		23:35	BE	SET		50° 17.69	124° 49.04			-			☐☐	
151			24:31	BE	CTD		50° 18.43	124° 52.96	511	350	-			☐☐	
↓			24:37	BO	↓		50° 18.43	124° 52.95	↓	↓	-			☐☐	
↓			24:44	EN	↓		50° 18.44	124° 52.94	↓	↓	-			☐☐	NET actual depth went to 360m
152			24:50	BE	NET		50° 18.45	124° 52.94	511	350	-			☐☐	flowmeter
↓			24:56	BO	↓		50° 18.45	124° 52.93	↓	↓	-			☐☐	53890 → 53892
↓			01:02	EN	↓		50° 18.46	124° 52.93	↓	↓	-			☐☐	not sure why it didn't Δ much
153	99	30	13:25	BE	SET		50° 53.64	124° 50.36			-			☐☐	
154	100		14:20	BE	SET		50° 51.00	124° 53.03			-			☐☐	
155	101		15:28	BE	SET		50° 46.6930	124° 55.452			-			☐☐	

Event Type:
BOT = Bottle cast (no CTD)
CTD = Standalone CTD
ROS = CTD in Rosette
SET = Fish Set
LOOP = Sea Water Loop
MOR = Mooring
NET = Plankton Net Haul
DRF = Drifter
___ = _____

Bottle Firing Method:
US = Up / Stop (default)
UN = Up / No stop
DN = Down / No stop

Time Code:
BE = Beginning Time of Cast
BO = Bottom Time of Cast
EN = End Time of Cast
DE = Deployment Time
MR = Messenger Release Time
RE = Recover Mooring Time

CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

Notes:

→ event 146 Max Cast Pressure was 245m and temp @ bttm was 8.2°C

→ event 152 Max Cast Pressure was 360m and temp @ bttm was 8.6°C

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month JUNE / JULY | **Year** 2023 | **Vessel** SIR JOHN FRANKLIN | **Cruise ID** 2023-053

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
156	102	30	16:29	BE	SET		50°43.34	124°51.65			-			☐☐	
157			19:00	BE	CTD		50°54.51	124°50.25	130	110	-			☐☐	
↓			19:03	BO	↓		50°54.51	124°50.25	↓	↓	-			☐☐	
↓			19:05	EN	↓		50°54.51	124°50.25	↓	↓	-			☐☐	
158			19:16	BE	NET		50°54.50	124°50.28	133	113	-			☐☐	NET actual depth went to 118m
↓			19:18	BO	↓		50°54.50	124°50.28	↓	↓	-			☐☐	and temp @ bttm 8.5°C.
↓			19:20	EN	↓		50°54.50	124°50.28	↓	↓	-			☐☐	
159	103		20:19	BE	SET		50°53.01	124°51.218			-			☐☐	
160	104		21:38	BE	SET		50°46.80	124°55.62			-			☐☐	
161	104		22:20	BE	CTD		50°45.61	124°54.65	475	350	-			☐☐	
↓			22:26	BO	↓		50°45.59	124°54.65	↓	↓	-			☐☐	
↓			22:33	EN	↓		50°45.58	124°54.62	↓	↓	-			☐☐	
162			22:38	BE	NET		50°45.57	124°54.61	477	350	-			☐☐	no plankton
↓			22:40	BO	↓		50°45.56	124°54.60	↓	↓	-			☐☐	sample in jar as jar fell and
↓			22:52	EN	↓		50°45.56	124°54.60	↓	↓	-			☐☐	broke, spilling all
163	105		23:22	BE	SET		50°43.63	124°52.09			-			☐☐	contents
164	106	1	13:20	BE	SET		50°30.36	125° 1.59			-			☐☐	
165	107	1	14:28	BE	SET		50°34.48	124°57.40			-			☐☐	
See next page:							° .	° .			-			☐☐	

Event Type:
BOT = Bottle cast (no CTD)
CTD = Standalone CTD
ROS = CTD in Rosette
SET = Fish Set

LOOP = Sea Water Loop
MOR = Mooring
NET = Plankton Net Haul
DRF = Drifter
___ = _____

Bottle Firing Method:
US = Up / Stop (default)
UN = Up / No stop
DN = Down / No stop

Time Code:
BE = Beginning Time of Cast
BO = Bottom Time of Cast
EN = End Time of Cast
DE = Deployment Time
MR = Messenger Release Time
RE = Recover Mooring Time

CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

Notes: _____

Produced by the Water Properties Group, IOS

WaterProperties.ca
Version: 17 Feb 2020

→ event 162 Max Cast Pressure went to 358m and temp @ bttm was 8.8°C

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month JULY **Year** 2023 **Vessel** SIR JOHN FRANKLIN **Cruise ID** 2023-053

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
166	107	1	15:21	BE	CTD		50° 34.387	124° 54.852	641	350	-			☐☐	windy
↓			15:28	BO	↓		50° 34.381	124° 54.824	↓	↓	-			☐☐	all good. CTD paused at surface, dn ↑.
			15:35	EN	↓		50° 34.368	124° 54.798	↓	↓	-			☐☐	
167			15:44	BE	NET		50° 34.351	124° 54.781	641	350	-			☐☐	wind died down
↓			15:51	BO	↓		50° 34.334	124° 54.790	↓	↓	-			☐☐	flowmeter
↓			15:58	EN	↓		50° 34.315	124° 54.803	↓	↓	-			☐☐	53913 → 53939
168	108		16:15	BE	SET		50° 34.369	124° 56.882			-			☐☐	
169	109		17:08	BE	SET		50° 31.0570	124° 59.6980			-			☐☐	
170	110		18:17	BE	SET		50° 26.69	125° 4.76			-			☐☐	
171	111		20:40	BE	SET		50° 16.83	125° 02.04			-			☐☐	
172			21:28	BE	CTD		50° 15.37	124° 59.93	504	350	-			☐☐	~5ft waves, windy
↓			21:35	BO	↓		50° 15.37	124° 59.93	↓	↓	-			☐☐	
↓			21:41	EN	↓		50° 15.39	124° 59.94	↓	↓	-			☐☐	
173			21:47	BE	NET		50° 15.37	124° 59.89	505	350	-			☐☐	↓ @ ~45° for initial descent
↓			21:54	BO	↓		50° 15.42	124° 59.88	↓	↓	-			☐☐	then to ~5°. ↑ @ ~5°
↓			22:01	EN	↓		50° 15.45	124° 59.87	↓	↓	-			☐☐	flowmeter 53939
174	112	1	22:25	BE	SET		50° 6.4170	124° 51.9740			-			☐☐	→ 55027
175	113	2	13:33	BE	SET		50° 6.72	124° 47.401			-			☐☐	
176	114	1	14:36	BE	SET		50° 9.454	124° 42.374			-			☐☐	

Event Type:
BOT = Bottle cast (no CTD)
CTD = Standalone CTD
ROS = CTD in Rosette
SET = Fish Set
LOOP = Sea Water Loop
MOR = Mooring
NET = Plankton Net Haul
DRF = Drifter
___ = _____

Bottle Firing Method:
US = Up / Stop (default)
UN = Up / No stop
DN = Down / No stop

Time Code:
BE = Beginning Time of Cast
BO = Bottom Time of Cast
EN = End Time of Cast
DE = Deployment Time
MR = Messenger Release Time
RE = Recover Mooring Time

CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

Notes: _____

→ event 167 Max Cast Pressure was 358m and temp @ bttm was 8.8°C

→ event 173 Max Cast Pressure was 356 m and temp @ bttm was 8.3 °C

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month JULY **Year** 2023 **Vessel** SIR JOHN FRANKLIN **Cruise ID** 2023-053

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
177	114	2	15:19	BE	CTD		50° 09.825	124° 39.487	301	281	-			☐☐	Sunny, water flat all good
↓			15:24	BO	↓		50° 09.817	124° 39.493	↓	↓	-			☐☐	
↓			15:30	EN	↓		50° 09.811	124° 39.506	↓	↓	-			☐☐	
178			15:37	BE	NET		50° 09.802	124° 39.516	292	272	-			☐☐	* flowmeter side cod end locked like it may have had slight twist in it coming up
↓			15:43	BO	↓		50° 09.796	124° 39.525	↓	↓	-			☐☐	
↓			15:48	EN	↓		50° 09.788	124° 39.549	↓	↓	-			☐☐	
179	115		16:26	BE	SET		50° 11.56	124° 39.54			-			☐☐	flowmeter 55027
180	116		17:52	BE	SET		50° 7.163	124° 46.902			-			☐☐	→ 56598
181			18:43	BE	CTD		50° 07.172	124° 46.61	367	347	-			☐☐	all good
↓			18:50	BO	↓		50° 07.17	124° 46.62	↓	↓	-			☐☐	sunny, water calm
↓			18:57	EN	↓		50° 07.17	124° 46.62	↓	↓	-			☐☐	
182			19:04	BE	NET		50° 07.18	124° 46.63	366	346	-			☐☐	all good
↓			19:11	BO	↓		50° 07.18	124° 46.63	↓	↓	-			☐☐	flowmeter 56598
↓			19:17	EN	↓		50° 07.18	124° 46.62	↓	↓	-			☐☐	→ 58596
183	117		20:20	BE	SET		50° 0.32	124° 51.57			-			☐☐	
184	118		21:18	BE	SET		49° 59.24	124° 50.49			-			☐☐	
185	119		21:59	BE	CTD		50° 00.62	124° 51.91	255	235	-			☐☐	all good
↓			22:04	BO	↓		50° 00.58	124° 51.89	↓	↓	-			☐☐	sun, water calm
↓			22:08	EN	↓		50° 00.56	124° 57.90	↓	↓	-			☐☐	

Event Type:
BOT = Bottle cast (no CTD)
CTD = Standalone CTD
ROS = CTD in Rosette
SET = Fish Set
LOOP = Sea Water Loop
MOR = Mooring
NET = Plankton Net Haul
DRF = Drifter
____ = _____

Bottle Firing Method:
US = Up / Stop (default)
UN = Up / No stop
DN = Down / No stop

Time Code:
BE = Beginning Time of Cast
BO = Bottom Time of Cast
EN = End Time of Cast
DE = Deployment Time
MR = Messenger Release Time
RE = Recover Mooring Time

CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

Notes: _____

Produced by the Water Properties Group, IOS

WaterProperties.ca
Version: 17 Feb 2020

This page is for any notes or observations

→ event 178 Max Cast Pressure was 280m and temp @ bttm was 9.1°C

→ event 182 Max Cast Pressure was 356m and temp @ bttm was 8.9°C

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month JULY **Year** 2023 **Vessel** SIR JOHN FRANKLIN **Cruise ID** 2023-053

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
186	118	2	22:15	BE	NET		50° 00.55	124° 51.92	274	254	-			☐☐	came up ~10°
↓	↓	|	22:20	BO	↓		50° 00.52	124° 51.96	↓	↓	-			☐☐	angle
↓	↓	|	22:24	EN	↓		50° 00.51	124° 51.98	↓	↓	-			☐☐	NET went to 260m
			:				° .	° .			-			☐☐	
			:				° .	° .			-			☐☐	
			:				° .	° .			-			☐☐	
			:				° .	° .			-			☐☐	
			:				° .	° .			-			☐☐	
			:				° .	° .			-			☐☐	
			:				° .	° .			-			☐☐	
			:				° .	° .			-			☐☐	
			:				° .	° .			-			☐☐	
			:				° .	° .			-			☐☐	
			:				° .	° .			-			☐☐	
			:				° .	° .			-			☐☐	
			:				° .	° .			-			☐☐	
			:				° .	° .			-			☐☐	
			:				° .	° .			-			☐☐	
			:				° .	° .			-			☐☐	

Event Type:
BOT = Bottle cast (no CTD)
CTD = Standalone CTD
ROS = CTD in Rosette
SET = Fish Set
LOOP = Sea Water Loop
MOR = Mooring
NET = Plankton Net Haul
DRF = Drifter
___ = ______

Bottle Firing Method:
US = Up / Stop (default)
UN = Up / No stop
DN = Down / No stop

Time Code:
BE = Beginning Time of Cast
BO = Bottom Time of Cast
EN = End Time of Cast
DE = Deployment Time
MR = Messenger Release Time
RE = Recover Mooring Time

CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

Notes: ____________________

t 186 Max Cast Pressure was 262m and bttm temp. was 8.9 °C