DAILY SCIENCE LOG BOOK

MISSION NUMBER 2022-052

DATE:

From: To:

VESSEL: (SWL) CCGS Sir Wilfrid Laurier

PROJECT(S): Kitikmeot Sea Science Study (K3S)

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

WaterProperties.ca

v. 2016

**** 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: Dell Micro PC SWL Primary

Data acquisition program: Seasave

CTD deck unit make: SBE model: 11+ serial number: 800

Primary CTD

Make: SBE model: 9+ serial number: 941

Primary temperature serial number: 5048

Primary conductivity serial number: 3579

Secondary temperature serial number: 5073

Secondary conductivity serial number: 3581

Transmissometer: WET labs Model: C-Star s/n: 9993

Transmissometer: _____ Model: _____ s/n: _____

Fluorometer: Model SCF Cable gain: _____ s/n: 3575 **P, S or NO pump?**

Fluorometer: Model ~~8~~ Cable gain: _____ s/n: _____ **P, S or NO pump?**

Oxygen sensor: SBE Model: 43 s/n: 1202 **P, S or NO pump?**

PAR sensor: _____ Model: _____ s/n: 70123 **Surface PAR? Y / N**

Other sensors: Rinko s/n: 9 **P, S or NO pump?**

Other sensors: Optode Aanderaa s/n: 163 **P, S or NO pump?**

Other sensors: SPAR s/n: 20281 **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): ~1m

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

Rosette Setup:
Number of bottles: 24
Manufacturer: _____
Volume of bottles (litres): 10L

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: on shore
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: Seasave Version: V7
Sampling interval (seconds): 5
Fluorometer sensor serial number: 3659
Comments on performance during cruise (comments should also be reflected in the post-cruise report):
_____

ADCP Setup: not used
Computer time zone: _____ User Exits: Name: _____ Exit points: _____
Sampling interval (sec): _____ Name: _____ Exit points: _____
Bin Length: (2^x): _____ Name: _____ Exit points: _____
Pulse Length: _____ Work File: _____
Buffer (bytes): _____
Gyro Offset: _____
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. Moorings
2. CHS operations
3. _____
4. _____
5. _____

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 1 of _____

Month AUGUST | **Year** 2022 | **Vessel** SWL | **Cruise ID** 2022-052

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
1	CGN-M	18	15:51	BE	ROS	US	68 °20.993	112 °21.394	223		1 - 13	13	KB	☑ ☐	Note →
	⏐	⏐	16:03	BO			°20.998	°21.382		203	-			☐ ☐	alt=5
	⏐	⏐	16:25	EN			°21.001	°21.332			-			☐ ☐	
2	CGN I-22	18	15:20	DE	MOR		68° 20.749	112° 21.122			-		PM	☐ ☐	
3	CGS I-22	19	00:23	DE	MOR		67° 53.893	111 ° 21.213			-		PM	☐ ☐	
4	CGS-M	19	00:43	BE	ROS	YoYo	67 °53.749	111 ° 20.942	395		14 - 30	17	KB	☑ ☐	
	⏐	⏐	01:00	BO			°53.760	°20.878		388	-			☐ ☐	alt = 4.5
	⏐	⏐	01:38	EN			°53.808	°20.752			-			☐ ☐	
5	BIW-M	20	13:55	BE	ROS	YoYo	67 °40.295	107 ° 57.764	227		31 - 44	14	KB	☐ ☐	Note →
	⏐	⏐	14:07	BO			°40.300	°57.686		220	-			☐ ☐	alt = 3.5
	⏐	⏐	14:37	EN			°40.288	°57.638			-			☐ ☐	
6	BI2A	20	15:00	RE	MOR		67 °.6716	107 °.9550	232		-		MD	☐ ☐	Note →
7	BI2-22	20	17:08	DE	MOR		67 °40.09	107 °57.28	223		-		PM	☐ ☐	
8	BI1-22	20	18:48	DE	MOR		67 °40.3584	107 °57.8614	225		-		PM	☐ ☐	
9	QD-M	21	18:56	BE	ROS	YoYo	68 °55.885	105 °49.846	118		45 - 56	12	KB	☑ ☐	
	⏐	⏐	19:05	BO			°55.903	°49.854		114.7	-			☐ ☐	alt = 4.8
	⏐	⏐	19:29	EN			°55.954	°49.826			-			☐ ☐	
10	QN1-22	21	19:57	DE	MOR		68 °55.9147	105 °49.7122	127		-		PM	☐ ☐	
			:				° .	° .			-			☐ ☐	

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

Event 1 : Rosette after mooring, but labels already made so left as event 1

Event 5: long SUNA file pre-deployment - sorry KAB! Ship wanted rosette prepped prior to arrival on station
* noticed after cast that tubing to DO sensor was leaking. Redid tubing.

Event 6: did not recover mooring. Last known location. Dragged 400m sweep = 1000m wire. No contact - MD

KB noticed winch counter loss at depth then pressure sensor. Seatrol? (was same for Leg 1)

CTD .322 wire changed in Dec 2021 - 6945m 0.322 (used from LSSL) replaced 4735m 0.316" wire.
- changed Seatrol calibration settings. * check for agreeeement between counter & CTD on next cast. MD

Event 9: no change in winch counter noticed at depth. Still 2m out at 100m. Reading 1 at surface, but likely due to sea state :. did not re-zero!

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month AUGUST | **Year** 2022 | **Vessel** SWL | **Cruise ID** 2022-052

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
11	DSS-M	21	22:30	BE	ROS	yoyo	68 °48.852	105 ° 6.256	62		57 - 65	9	KB	☑ ☐	
	↓	↓	22:37	BO			°48.850	° 6.221		55.5	-			☐ ☐	alt = 4.8
	↓	↓	22:56	EN			°48.846	° 6.187			-			☐ ☐	
12	DSE 1-22	22	00:08	DE	MOR		68 °48.9196	105 ° 6.5624	64		-		PM	☐ ☐	
13	QMG-M	23	13:44	BE	ROS	yoyo	68 °39.805	103 ° 0.724	118		66 - 77	12	KB	☑ ☐	
	↓	↓	13:51	BO			°39.731	° 0.668		115	-			☐ ☐	alt = 4.6
	↓	↓	14:14	EN			°39.478	° 0.456			-			☐ ☐	
14	QMG2-22	23	15:05	DE	MOR		68 ° 39.935	103 ° 0.8761	120		-		PM	☐ ☐	
15	QMG1-22	23	16:24	DE	MOR		68 39.3193	103 ° 0.5244	110		-		PM	☐ ☐	
16	VS-M	23	21:09	BE	ROS	yoyo	68 °53.458	101 ° 30.989	46		78 - 86	8	KB	☑ ☐	Note →
	↓	↓	21:14	BO			°53.506	°30.829		42.3	-			☐ ☐	alt = 3.9
	↓	↓	21:31	EN			°53.600	°30.781			-			☐ ☐	
17	VS1-22	23	21:52	DE	MOR		68 °53.4137	101 ° 31.1585	47		-		PM	☐ ☐	
			:				° .	° .			-			☐ ☐	
			:				° .	° .			-			☐ ☐	
			:				° .	° .			-			☐ ☐	
			:				° .	° .			-			☐ ☐	
			:				° .	° .			-			☐ ☐	
			:				° .	° .			-			☐ ☐	

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

Event 16: Station shallower than anticipated. No 40m bottle. Winch counter read 0 @ surface bottle