

DAILY SCIENCE LOG BOOK

MISSION
NUMBER

2024-008

DATE:

From: 14 SEPTEMBER

To: 30 SEPTEMBER 2024

VESSEL:

JOHN P TULLY

PROJECT(S):

LINE P

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

WaterProperties.ca

Captain: RHONA LETTAU First Officer: ALLAN RAMSAY
 Second Officer: AARON BANBURY Third Officer: DAVID BOLTEN
 Fishing Master: — Chief Engineer: MARTIN LEMOINE

A

Mission Participants / Agencies:

DFO-IOS; UBC; UVIC; MUN; GEORGIA TECH

**** Chief Scientist to tape Scientific Personnel section of their cruise plan here ****

This is accessed from your WaterProperties.ca Dashboard or from here:
<https://www.waterproperties.ca/requests/cruiseplanview.php?cruiseid=YYYY-NNN>

MARIE ROBERT	A	06-18
MICHAEL ARYCHUK	C	06-18
MOIRA GALBRAITH	D	12-24
STEPHEN ROMAINE	E	00-12
MORGAN GRIFFITH	E	12-24
CHRISTINA KONG	F	00-12
LYNN WHARRAM	F	12-24
SILE KAFRISSEN	G	00-12
KAILEE CLARKE	G	12-24
ERICA STROPE	H	18-06
AMANDA TIMMERMAN	H/D	06-18 / 00-12

**** 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: LEVANO TRIAK CENTER 102

Data acquisition program: SEASAVE

CTD deck unit make: SBE model: 11+ serial number: 508

Primary CTD

Make: SBE model: 9+ serial number: 443

Primary temperature serial number: 2106 P

Primary conductivity serial number: 2754 P

Secondary temperature serial number: 5130

Secondary conductivity serial number: 1766

Transmissometer: 1 Model: CSTAR serial: 1185 DR

Transmissometer: 2 Model: CSTAR serial: 1883 DG

Fluorometer: Model SEAPoint Cable gain: _____ serial: 7186 P, S or NO pump?

Fluorometer: Model SBE Cable gain: 3x serial: _____ P, S or NO pump?

Oxygen sensor: SBE Model: 43 serial: 4372 P, S or NO pump?

PAR sensor: BOSPHERICAL Model: QSP2350 serial: 70613 Surface PAR? Y / N

Other sensors: ECO FLUOROMETER serial: 2216 P, S or NO pump?

Other sensors: PAR 10C serial: _____ P, S or NO pump?

Other sensors: PAR 10C serial: _____ P, S or NO pump?

Other sensors: ALTIMETER 500 serial: 6341 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: _____ serial: _____

Transmissometer: _____ Model: _____ serial: _____

Fluorometer: Model _____ Cable gain: _____ serial: _____ P, S or NO pump?

Fluorometer: Model _____ Cable gain: _____ serial: _____ P, S or NO pump?

Oxygen sensor: _____ Model: _____ serial: _____ P, S or NO pump?

PAR sensor: _____ Model: _____ serial: _____ Surface PAR? Y / N

Other sensors: _____ serial: _____ P, S or NO pump?

Other sensors: _____ serial: _____ P, S or NO pump?

Other sensors: _____ serial: _____ P, S or NO pump?

Other sensors: _____ serial: _____ 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 (typical on small launches).

Rosette Setup:

Number of bottles: 24
Manufacturer: OCEANTEST OCEANICS
Volume of bottles (litres): 10 L

Rosette/Niskin Bottle Serial Numbers:

1: 2019-10-01 2: 2016-10-05 3: 2016-10-06 4: 2016-10-07 5: 2016-10-18
6: 2016-10-11 7: 2000-10-29 8: 2016-10-09 9: 2000-10-33 10: 2000-10-30
11: 2018-10-04 12: 2016-10-10 13: 2016-10-11 14: 2000-10-34 15: 2000-10-24
16: 2016-10-12 17: 2000-10-23 18: 2016-10-13 19: 2016-10-14 20: 2016-10-15
21: 2018-10-03 22: 2016-10-16 23: 2016-10-17 24: 2000-10-35

Make sure to note any bottle changes or repairs during your cruise in this log book.

Winches:

1. Make: HAWBOLT Model: AUG 2024 Serial #: 17027 Used for: ROSETTE
2. Make: HAWBOLT Model: APR 2024 Serial #: 17026 Used for: MPS
3. Make: HAWBOLT Model: NO SERVICE Serial #: 10760 Used for: TM

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

4 SWAN JAN 2024 1482 BONGO

Salinometer:

Make: _____ Model: _____ Serial Number: _____

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

Label Printers:

Primary Printer Kit #: #2 LAPTOP EVA6BDHQ LABEL PRINTER #6 BRADY
Secondary Printer Kit #: _____ SHEET 11 PRIMARY BROTHER
Software Version: _____

Thermosalinograph System (SBE21/45):

Program: LOGGER NET Version: RTMC RUNTIME
Sampling interval (seconds): 20 SECS
TSG serial number: 45-0620
Fluorometer sensor serial number: WS CHL-1656

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

ADCP Setup:

Computer time zone: UTC 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/ SOBR #1	Frame Size: <u>60</u> cm	Mesh: <u>230</u> μ m	Flowmeter: <u>5333 RBR SILVER</u>
Bongo/ SOBR #2	Frame Size: _____ cm	Mesh: _____ μ m	Flowmeter: _____
_____	Frame Size: _____ cm	Mesh: _____ μ m	Flowmeter: _____
_____	Frame Size: _____ cm	Mesh: _____ μ m	Flowmeter: _____

Multinet ☒ BIONESS ☐ Neuston ☐ Others:

MPS I + DECK UNIT MESH 250

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:

p0.5/23

MOST ROSETTE/CTD CASTS:

CTD @ SURFACE, PUMPS ON. DOWN TO 10m FOR 30 SEC

BACK TO SURFACE FOR 30 SEC DURING WHICH TIME START ARCHIVING
START CAST.

INLET STATIONS (Rivers, Smith, Knight):

CTD @ SURFACE. 1 MINUTE SOAK. DO CAST.

NISKIN: 60 SEC WAIT TIME FOR PRESSURES 400 (incl) to SURFACE ONLY WHEN OXY
SAMPLED.

30 SEC WAIT TIME FOR ALL OTHER BOTTLES.

DAILY SCIENCE LOG

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Month <u>Sept</u>			Year <u>2024</u>			Vessel <u>JP Tully</u>			Cruise ID <u>2024008</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Tms/FI Cleaned	Comments
01	SI	14	23:27	DE	MVP	/	48° 38.686	123° 29.542	167		/	/	MG	☐	JK TEST DE + RE
		15	00:02	RE			48° 36.131	123° 30.499		200	-			☐	
2	Har059	15	02:55	BE	NET	/	48° 36.829	123° 14.829	235		/	/	MG	☐	Bongo
			03:04	Bo			48° 36.846	123° 14.886		225	-			☐	
			03:08	EN			48° 36.832	123° 14.874			-			☐	
3	Har059	15	03:20	BE	ROS	US	48° 36.814	123° 14.882	235		1 - 12	12	MG	☒	
			03:26	Bo			48° 36.82	123° 14.881		235	-			☐	
			03:46	EN			48° 36.808	123° 14.865			5004			☐	
4	JF1	15	06:41	BE	LOOP	/	48° 15.99	123° 29.833	154	4.5	5004	/	MG	☐	2 chl INUT SAL SI
5	JF2	15	08:59	BE	ROS	US	48° 18.024	124° 0.164	187		13 - 15	3	SK	☒	
			09:02	Bo			48° 18.036	124° 0.179		178	-			☐	
			09:10	EN			48° 18.048	124° 0.192			-			☐	
6	JF2		09:21	BE	NET		48° 18.005	124° 0.061	186		/	/	SK	☐	
			09:27	Bo			48° 18.015	124° 0.11		176	-			☐	
			09:30	EN			48° 18.018	124° 0.128			-			☐	
7	JF3		11:32		LOOP	/	48° 26.978	124° 29.963	221	4.5	5007	/	SK	☐	2chl, 1nut, 1sal, 1SI
8	JF4		13:21	BE	LOOP	/	48° 32.289	124° 59.908	54	4.5	5008	/	SK	☐	2chl, 1nut, 1sal, 1SI
			:				.	.			-			☐	
			:				.	.			-			☐	

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

MVP =

Bottle Firing Method:

US = Up / Stop (default)

UN = Up / No stop

DN = Down / No stop

Notes:

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

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Month <u>September</u>			Year <u>2024</u>			Vessel <u>TU11Y</u>			Cruise ID <u>2024-008</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Tms/FI Cleaned	Comments
9	P1	15	15:23	BE	ROS	US	48°34.54	125°29.998	111		16 - 19	4	SK	☒ ☒	
			15:26	BO			48°34.548	125°30.006		105	-			☐ ☐	
			15:32	EN			48°34.557	125°30.01			-			☐ ☐	
10	P2	15	17:44	BE	NET	—	48°36.024	125°54.996	117		-		SK	☐ ☐	Bongo
			17:49	BO			48°36.006	126°0.023		110	-			☐ ☐	
			17:51	EN			48°36.001	126°0.042			-			☐ ☐	
11	P2	15	18:03	BE	ROS	US	48°36.012	126°0.036	117		20 - 37	19	SR	☒ ☒	
			18:06	BO			48°36.03	126°0.023		103	-			☐ ☐	
			18:20	EN			48°36.062	125°59.546			-			☐ ☐	
12	P3	15	20:42	BE	ROS	US	48°37.496	126°19.958	813		—	—	MG	☒ ☒	PAR CAST
			20:43	BO			°37.499	°19.956		10	-			☐ ☐	
			20:46	EN			°37.502	°19.95			-			☐ ☐	
13	P3	15	20:48	BE	ROS	US	48°37.506	126°19.95	813		38	1	MG	☒ ☒	DEEP CAST
			21:02	BO			°37.494	°19.929		809	-			☐ ☐	
			21:17	EN			°37.51	°19.938			-			☐ ☐	
14	P4	15	23:08	BE	ROS	US	48°38.919	126°40.042	1318		—	—	MG	☒ ☒	PAR CAST
			23:09	BO			°38.894	°40.002		10	-			☐ ☐	
			23:10	EN			°38.855	°39.971			-			☐ ☐	
			:				°	°			-			☐ ☐	

Event Type:

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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

Notes:

Time Code:

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Month <u>SEPT</u>			Year <u>2024</u>			Vessel <u>IP TULLY</u>			Cruise ID <u>2024 008</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information		Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
15	P4	15	23:14	BE	ROS	US	48° 38.805	126° 39.971	1324	600	39-56	18	MG	☒ ☒	DMS
			23:26	BO			° 38.73	° 39.913		600	-			☐ ☐	
			23:54	EN			° 38.7	° 39.85			-			☐ ☐	
16	P4	16	00:54	BE	BOT	MOR	48° 38.975	126° 38.965	1317		57-66	10	MGR	☐ ☐	TM
			01:41	BO			° 38.949	° 39.971		800	-			☐ ☐	
			01:52	MR			° 38.975	° 39.954			-			☐ ☐	
			02:39	EN			° 38.963	° 39.914			-			☐ ☐	
17	P4	16	03:05	BE	ROS	US	48° 38.959	126° 39.936	1318		67-85	19	MG	☒ ☒	DEEP CAST
			03:28	BO			° 38.954	° 39.987		1320	-			☐ ☐	
			04:16	EN			° 38.829	° 39.859			-			☐ ☐	
18	P4	16	05:02	BE	NET	-	48° 38.988	126° 39.972	1320		-	-	MG	☐ ☐	Bongo !!
			05:14	BO			48° 38.983	126° 40.045		250	-			☐ ☐	
			05:19	EN			48° 39.002	126° 40.062			-			☐ ☐	
19	P4	16	05:27	BE	Net	-	48° 38.993	126° 40.009	1318		-	-	MG	☐ ☐	Bongo!
			06:12	BO			48° 39.036	126° 40.274		1200	-			☐ ☐	
			06:32	EN			48° 39.091	126° 40.379			-			☐ ☐	
20	P4	16	06:48	BE	ROS	US	48° 39.005	126° 40.236	1321		86-105		SK	☒ ☒	PRODUCTIVITY
			06:54	BO			48° 38.965	126° 40.241		250	-			☐ ☐	
			07:05	EN			48° 38.887	126° 40.24			-			☐ ☐	

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 DRF = Drifter

Bottle Firing Method:

US = Up / Stop (default)
 UN = Up / No stop
 DN = Down / No stop

Notes:

Time Code:

BE = Beginning Time of Cast
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CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

DE = Deployment Time
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Month <u>Sev</u>			Year <u>2024</u>			Vessel <u>Tully</u>			Cruise ID <u>2024-003</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information		Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
							Latitude	Longitude							
21	P5	16	09:57	BE	ROS	US	48° 41.483	127° 9.944	2086	2005	106-107	2	SR	☒	
			10:35	BO			48° 41.457	127° 9.984			-			☐	
			11:09	EN			48° 41.456	127° 9.967			-			☐	
22	P6	16	14:00	BE	ROS	US	48° 44.612	127° 39.967	2156		108-109	2	SK	☒	V240 ONAr Bot 2
			14:34	BO			48° 44.597	127° 39.951		2005	108-109			☐	2 for Lynn
			15:08	EN			48° 44.602	127° 39.943			-			☐	
23	P7	16	17:25	BE	LOOP	/	48° 46.548	128° 9.022	2348	4.5	5023	/	SK	☐	2 HPLC, 2 CHL, 1 Sal, 1 nut
24	P8	16	19:42	BE	NET	US	48° 48.958	128° 39.939	2347		-		LW	☐	Bow G6
			19:52	BO			48° 48.938	128° 40.005		250	-			☐	
			19:58	EN			48° 48.928	128° 40.026			-			☐	
25	P8	16	20:13	BE	ROS	/	48° 48.966	128° 39.916	2514		-		MG	☒	PAR CAST
			20:14	BO			° 48.966	° 39.914		10	-			☐	
			20:16	EN			° 48.966	° 38.898			-			☐	
26	P8	16	20:18	BE	ROS	US	48° 48.958	128° 39.881	2514		110-133	24	MG	☒	DEEP → 2005 M
			20:54	BO			° 48.908	° 39.99		2005	-			☐	
			22:02	EN			° 48.823	° 40.01			-			☐	
27	P9	16	00:12	BE	LOOP	/	48° 58.346	129° 09.711	2370	4.5	5027	/	MG	☐	2 HPLC 1 nut 2 HPLC 1 oxy
			:				°	°			-			☐	
			:				°	°			-			☐	

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Bottle Firing Method:

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UN = Up / No stop
DN = Down / No stop

Notes:

Time Code:

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Month <u>Sept</u>			Year <u>2024</u>			Vessel <u>JP TULLY</u>			Cruise ID <u>2024 008</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
28	P10	17	02:36	BE	ROS	US	48° 53.585	129° 39.978	2635		134-135	2	MG	☒ ☒	
			03:12	BO			° 53.596	° 39.963		2005	-			☐ ☐	
			03:45	EN			° 53.601	° 40.017			-			☐ ☐	
29	P11	17	05:47	BE	LOOP	/	48° 56.081	130° 09.778	2748	4.5	5029	-	MG	☐ ☐	Isnl 2cml Nut 2 HPLC 100
30	P12	17	07:40	BE	Rosr	US	48° 58.21	130° 39.925	3223		136-155		SK	☒ ☒	P12 Productivity cast.
			07:45	BO			48° 58.201	130° 39.916		250	-			☐ ☐	
			07:55	EN			48° 58.182	130° 39.892			-			☐ ☐	
31	P12	17	08:	BE	NET		48° 58.188	130° 39.947	3223			8	SK	☐ ☐	Lots of detritoids
			08:15	BO			48° 58.192	130° 39.931		250	-			☐ ☐	
			08:18	EN			48° 58.193	130° 39.953			-			☐ ☐	
32	P12	17	09:00	BE	ROS	US	48° 58.204	130° 39.95	3221		156-177	22	SK	☒ ☒	PAR OFF - Deep
			09:56	BO			48° 58.252	130° 39.944		3277	-			☐ ☐	"
			11:20	EN			48° 58.265	130° 40.012			-			☐ ☐	
33	P12	17	12:32	BE	GO-FLO	MR	48° 58.218	130° 39.895	3222		178-187	10	SK	☐ ☐	TM GO-FLO
			13:15	BO			48° 58.174	130° 39.772		860	-			☐ ☐	
			13:21	MR			48° 58.174	130° 39.825			-			☐ ☐	
			14:19	EN			48° 58.148	130° 39.812			-			☐ ☐	
			:				°	°			-			☐ ☐	
			:				°	°			-			☐ ☐	

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Bottle Firing Method:

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Month <i>Sep</i>				Year <i>2024</i>			Vessel <i>Tully</i>			Cruise ID <i>2024-003</i>					
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information		Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Tms/FI Cleaned	Comments
							Latitude	Longitude							
34	P12	17	14:38	BE	NET	—	48°58.194	130°39.936	3223		—	—	SK	☐	Bongo
			15:24	Bo			48°58.207	130°39.917		1200	—			☐	
			15:46	EN			48°58.19	130°39.959			—			☐	
35	P12	17	16:03	BE	ROS	US	48°58.167	130°39.91	3221		188-206	152	SK	☒	Deep 2 bottles
			16:26	Bo			48°58.166	130°39.91		1000	—			☐	for m/mc
			17:00	EN			48°58.17	130°39.934			—			☐	PAC on
36	P13	17	20:50	BE	LOOP	—	49°02.471	131°40.056	3184	4.5	5036	—	LW	☐	1nut/sal/1oxy 2HPLC/2CHL
37	P14	17	00:24	BE	LOOP	—	49°06.913	132°39.941	3298	4.5	5037	—	LW	☐	" " " " "
38	P15	17	04:42	BE	LOOP	—	49°16.83	133°39.876	3365	4.5	5038	—	MGr	☐	nut/sal/oxy/HPLC/CHL
39	P16	18	08:26	BE	LOOP	—	49°15.606	134°39.946	3609	4.5	5039	—	SK	☐	2HPLC/2CHL/1nut/sal/oxy
40	P17	18	11:56	BE	LOOP	—	49°19.843	135°39.03	3666	4.5	5040	—	SK	☐	2HPLC/2CHL/1nut, sal
41	P18	18	15:24	BE	LOOP	—	49°25.356	136°38.813	3804	4.5	5041	—	SK	☐	2HPLC/2CHL/1nut, sal
42	P19	18	19:02	BE	LOOP	—	49°28.818	137°42.508	3904	4.5	5042	—	MGr	☐	2HPLC 2CHL 1nut/sal
43	P20	18	22:13	BE	LOOP	—	49°32.900	138°40.106	3986	4.5	5043	—	LW	☐	2HPLC 2CHL 1nut 1sal 1oxy
44	P21	18	01:37	BE	LOOP	—	49°37.168	139°40.042	3928	4.5	5044	—	MGr	☐	2HPLC 2CHL 1nut 1sal
45	P22	19	05:00	BE	LOOP	—	49°41.482	140°39.707	3921	4.5	5045	—	LW	☐	1nut/sal 2HPLC 2CHL 1oxy
46	P23	19	08:17	BE	LOOP	—	49°45.762	141°39.156	4017	4.5	5046	—	SK	☐	1nut/sal, 2CHL, 2HPLC
47	P24	19	11:37	BE	LOOP	—	49°50.085	142°39.106	4210	4.5	5047	—	SK	☐	1nut, 1sal, 2CHL, 2HPLC
48	P25	19	15:01	BE	LOOP	—	49°54.004	143°37.104	4099	4.5	5048	—	SK	☐	1nut, 1sal 2CHL, 2HPLC 1oxy

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 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

Notes:

Time Code:

BE = Beginning Time of Cast
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CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

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Month <u>Sep</u>				Year <u>2024</u>			Vessel <u>Tully</u>			Cruise ID <u>2024-008</u>					
*Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Tms/FI Cleaned	Comments
49	P35	19	:				.	.			227-226	20		☐ ☐	DMS/PAO
49	P35	19	17:20	BE	Loop	✓	45° 56.803	144° 17.920	4114	4.5	5049	✓	SR	☐ ☐	Isal 2CHL 2APLC 10XY
50	P26	19	19:53	BE	ROS	✓	50° 0.045	144° 59.98	4211	10	-		MG	☒ ☒	PAO
			19:54	BO			° 0.045	° 59.977		10	-			☐ ☐	
			19:56	EN			° 0.063	° 59.942			-			☐ ☐	
51	P26	19	19:59	BE	ROS	US	50° 0.086	144° 59.916	4213		207-226	20+3	MG	☒ ☒	DMS 3Bots for Bulk
			20:35	BO			° 0.016	° 59.733		2000	-			☐ ☐	
			21:34	EN			49° 59.96	° 59.957			-			☐ ☐	
52	P26	19	21:52	BE	NET	✓	50° 59.966	144° 59.966	4213	2000	-	✓	MG	☐ ☐	MPS Tow
			23:06	BO			° 59.896	145° 0.002		2005	-			☐ ☐	
			23:07	EN	NET 1		° 59.89	° 0.003		2000	-			☐ ☐	NET 1
			23:16	EN	NET 2		° 59.848	° 0.044		1500	-			☐ ☐	NET 2
			23:25	EN	NET 3		° 59.83	° 0.083		1000	-			☐ ☐	NET 3
			23:33	EN	NET 4		° 59.8016	° 0.096		500	-			☐ ☐	NET 4
			23:37	EN	NET 5		° .806	° 0.101		250	-			☐ ☐	NET 5
			23:41	EN			49° 59.78	145° 00.122		0	-			☐ ☐	ON DECK
53	P26	19	23:57	BE	ROS	US	50° 00.01	145° 00.00	4217		227-250	24	MG/MG	☒ ☒	Deep PAO OPP
		20	01:20	BO			49° 59.89	144° 59.94		4316	-			☐ ☐	D 4317 S 4215
			03:03	UN			49° 59.47	144° 59.999			-			☐ ☐	P 4235 A 10

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Month <u>Sept</u>			Year <u>2024</u>			Vessel <u>IP TULLY</u>			Cruise ID <u>2024.608</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
54	P26	20	03:58	BE	BOT	MR	50° 00. 01	144° 59. 84	4317		251-257	7	HGL	☐ ☐	TH SHALLOW
			04:25	BO			49° 59. 95	° 59. 74		100	-			☐ ☐	
			04:32	BE			° 59. 934	° 59. 706			-			☐ ☐	
			04:57	EN			° 59. 843	° 59. 554			-			☐ ☐	
55	P26	20	05:14	BE	NET	/	49° 59. 822	144° 59. 645	4321		-		MG	☐ ☐	Bonzo
			05:35	BO			° 59. 696	° 59. 573		250	-			☐ ☐	
			05:35	EN			° 59. 62	° 59. 54			-			☐ ☐	
56	P26	20	05:59	BE	ROS	US	50° 0. 045	144° 59. 947	4321		258-272	15	MG	☒ ☒	PROD PAR OFF
			06:04	BO			50° 0. 042	° 59. 933		250	-			☐ ☐	
			06:16	EN			50° 0. 037	° 59. 921			-			☐ ☐	
57	P25	20	12:41	BE	ROS	US	50° 0. 048	143° 36. 223	4200		273-274		SK	☒ ☒	PAR BACK ON
			12:58	BO			50° 0. 024	143° 36. 228		1005	-			☐ ☐	missed get on Sable 1
			13:17	EN			50° 0. 048	143° 36. 159			-			☐ ☐	
58	P25	20	13:19	BE	LOOP	/	50° 0. 041	143° 36. 098	4200	4.5	5058	/	SK	☐ ☐	2 Sal, 2 CHL
59	P24	20	17:18	BE	ROS	US	49° 50. 886	142° 39. 032	4179		275-291	17	SK	☒ ☒	
			17:35	BO			49° 50. 352	142° 39. 976		1005	-			☐ ☐	
			18:12	EN			49° 50. 281	142° 39. 992			-			☐ ☐	
			:				°	°			-			☐ ☐	
			:				°	°			-			☐ ☐	

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Month <u>Sept</u>			Year <u>2024</u>		Vessel <u>JP TULLY</u>			Cruise ID <u>2024-008</u>							
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
60	P23	20	22:33	BE	ROS	/	49° 46.018	141° 39.912	4021		-		MG	☒	PAR
			22:34	BO			° 46.013	° 39.906		10	-			☐	
			22:38	EN			° 45.999	° 39.915			-			☐	
61	P23	20	22:40	BE	ROS	US	49° 45.993	141° 39.898	4219		292-293		MG	☒	
			22:57	BO	r		° 46.00	° 39.91		1005	-			☐	
			23:18	EN			° 46.02	° 39.893			-			☐	
62	P22	21	03:53	BE	LOOP	/	49° 41.963	140° 39.042	3935	45	5062	-	MG	☐	15AL INUT 2HPLC 2CHR 1000
63	P21	21	08:01	BE	ROS	US	49° 38.068	139° 35.939	3382		294-295		SR	☒	+1000 5063
			08:19	BO			49° 38.058	139° 40.013		1005	-			☐	
			09:37	EN			49° 38.00	139° 35.993			-			☐	
64	P19	21	20:32	BE	ROS	/	49° 30.017	137° 39.926	3900		-	-	MG	☒	PAR
			20:33	BO			° 30.011	° 39.919		10	-			☐	
			20:34	EN			° 30.004	° 39.927			-			☐	
65	P19	21	20:36	BE	ROS	US	49° 30.004	137° 39.927	3900		296-309	14	MG	☒	PRODUCTIVITY
			20:55	BO			° 29.965	° 39.948		1005	-			☐	
			21:21	EN			° 29.885	° 39.928			-			☐	
66	P18	22	02:04	BE	ROS	US	49° 25.99	136° 39.931	3808		310-330	21	MG	☒	BULK DHS @ 2000
			02:39	BO			° 25.911	° 40.011		2005	-			☐	
			03:37	EN			° 25.913	° 40.03			-			☐	

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Bottle Firing Method:

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Month <u>Sept</u>			Year <u>2024</u>			Vessel <u>JP TULLY</u>			Cruise ID <u>2024008</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information		Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Tms/FI Cleaned	Comments
							Latitude	Longitude							
67	P17	22	08:06	BE	ROS	US	49° 21.007	135° 39.868	2050		331 - 332	2	SK	☒ ☒	Loop 5067 collected w/ bottle
			08:24	BO			49° 21.025	135° 39.915		1005	-			☐ ☐	
			08:42	EN			49° 21.005	135° 39.91			-			☐ ☐	
68	P16	22	12:51	BE	NET	US	49° 16.989	134° 39.867	B608		-		SK	☐ ☐	BONGO
			13:00	BO			49° 17.002	134° 39.854		250	-			☐ ☐	
			13:07	EN			49° 17.005	134° 39.854			-			☐ ☐	
69	P16	22	13:19	BE	ROS	US	49° 17.029	134° 39.904	B608		-			☐ ☐	
			13:23	BO			49° 17.039	134° 39.852		250	333 - 347	15	SR	☒ ☒	productivity cast
			13:33	EN			49° 16.982	134° 39.794			-			☐ ☐	
70	P16	22	14:18	BE	BOT		49° 16.99	134° 39.95	B608		348 - 357	10	MGR	☐ ☐	
			14:55	BO			49° 16.945	134° 39.93		800	-			☐ ☐	
			15:00	MR			49° 16.935	134° 39.936			-			☐ ☐	
71	P16	22	16:08	BE	ROS	US	49° 16.991	134° 39.944	(1571)		342 - 360		SK	☒ ☒	Samples 338-341 not taken
			16:45	BO			49° 16.971	134° 39.967	3604	2000	-			☐ ☐	>2000m
			17:44	EN			49° 16.942	134° 39.976			-			☐ ☐	
72	P16	22	18:01	BE	NET	✓	49° 16.982	134° 39.983	3612		-		SK	☐ ☐	Bongo
			18:44	BO			49° 16.97	134° 40.08		1200	-			☐ ☐	
			19:06	EN			49° 16.97	134° 40.26			-			☐ ☐	
			:				.	.			-			☐ ☐	

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This page is for any notes or observations

p10.5/23

EVENT 72

Bottle III is cracked on bottom → Leaky
Removed after deep cast.

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Month <u>SEPTEMBER</u>				Year <u>2024</u>		Vessel <u>TULLY</u>				Cruise ID <u>2024-008</u>					
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
73	P16	22	19:24	BE	ROS	US	49° 17.07	134° 40.09	3600		381-398	18	MG/MR	☒ ☒	DMS
			19:33	BO			° 17.055	° 40.108		400	-			☐ ☐	
			19:58	EN			° 16.97	° 40.05			-			☐ ☐	
74	P15	23	00:30	BE	ROS	US	49° 12.098	133° 40.009	3390		399-406	8	MG/MR	☒ ☒	RESET ACCUMULATORS @ 16
			01:06	BO			° 12.132	° 39.948		2005	-			☐ ☐	
			01:48	EN			° 12.149	° 39.878			-			☐ ☐	
75	P14	23	07:22	BE	ROS	US	49° 7.42	132° 39.92	3201		407-427	21	SK	☒ ☒	SEALED 11/21
			08:00	BO			49° 7.424	132° 39.954		2005	-			☐ ☐	
			08:59	EN			49° 7.406	132° 39.97			-			☐ ☐	
76	P13	23	13:57	BE	ROS	US	49° 2.58	131° 39.993	2814		-		SK	☒ ☒	
			14:25	BO			49° 2.495	131° 39.902	4152	2005	428-429	3		☐ ☐	+100p 5076
			15:05	EN			49° 2.34	131° 40.069			-			☐ ☐	
77	P13~	23	16:02	DE	MVP	/	49° 2.806	131° 41.536	3300	200	/		SK	☐ ☐	Deployed MVP after receiving P13
78	LOOP 78	23	22:26	BE	LOOP	UN	49° 52.222	131° 19.581	3100	4.5	5078	/	MG	☐ ☐	ISAL INUT 2CHL
79	SSON	24	06:34	RE	MVP	/	50° 56.808	130° 50.646	2531	0	/	/	LW	☐ ☐	PROFILER RECOVERY
80	SSO	24	07:15	BE	ROS	US	51° 0.059	130° 50.104	2625		/	/	SK	☒ ☒	
			07:47	BO			51° 0.005	130° 50.069		2005	-			☐ ☐	
			08:19	EN			51° 0.002	130° 49.98			-			☐ ☐	
			:				°	°			-			☐ ☐	

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Month <u>Sep</u>			Year <u>2024</u>			Vessel <u>Tully</u>			Cruise ID <u>2024-008</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
81	NLO1	24	10:44	BE	ROS	US	51°22.353	130°50.59	2193		431-431	1	SK	☒	
			11:17	BO			51°22.402	130°50.624		2005	-			☐	
			11:51	EN			51°22.332	130°50.642			-			☐	
82	505A	24	13:54	BE	ROS	/	51°41.405	130°53.312	1402		/	/	SK	☒	
			14:20	BO			51°41.383	130°53.304			-			☐	
			14:43	EN			51°41.382	130°53.313			-			☐	
83	505A	24	14:52	BE	NET		51°41.394	130°53.291	1420		-		SK	☐	Bongo UNH
			15:03	BO			51°41.386	130°53.299		250	-			☐	
			15:07	EN			51°41.394	130°53.291			-			☐	
84	511	24	17:37	BE	ROS	/	51°57.424	130°28.341	432		/		SK	☒	
			17:45	BO			51°57.423	130°28.419		427	-			☐	
			17:53	EN			51°57.403	130°28.511			-			☐	
85	511	24	18:02	BE	NET		51°57.362	130°28.584	435		-		SK	☐	Bongo UNH
			18:09	BO			51°57.351	130°28.606		250	-			☐	
			18:14	EN			51°57.349	130°28.521			-			☐	
86	NLO2	24	21:00	BE	ROS	/	51°33.463	130°16.19	841		-		MG	☒	
			21:16	BO			°33.451	°16.184		846	-			☐	
			21:30	EN			°33.464	°16.278			-			☐	
			:				°	°			-			☐	

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Month			Year			Vessel			Cruise ID						
SEPTEMBER			2024			JPTULLY			2024008						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information		Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
							Latitude	Longitude							
87	NL03	25	00:40	BE	ROS	US	51° 48.112	129° 40.139	295		432 - 432	1	MG	☒	
			00:45	BO			° 48.13	° 40.156		289	-			☐	
			00:52	EN			° 48.149	° 40.121			-			☐	
88	NL03	25	01:02	BE	NET	/	51° 48.035	129° 40.12	295		-	/	MA/KW	☐	BONGO
			01:13	BO	/		° 48.004	° 40.177		250	-			☐	
			01:18	EN			° 47.988	° 40.19			-			☐	
89	NL04	25	03:33	BE	ROS	/	51° 55.998	129° 12.073	168		-	/	MG	☐	
			03:36	BO			° 55.981	° 12.113		163	-			☐	
			03:39	EN			° 55.982	° 12.077			-			☐	
90	NL05	25	05:52	BE	ROS	US	51° 40.512	128° 54.43	44		433	1	MG	☒	
			05:53	BO			° 40.513	° 54.419			-			☐	
			05:55	EN			° 40.506	° 54.388			-			☐	
91	NL05	25	06:05	BE	NET	/	51° 40.406	128° 54.312	43		-	/	MG	☐	BONGO
			06:06	BO			° 40.458	° 54.314		39	-			☐	
			06:09	EN			° 40.452	° 54.324			-			☐	
92	SS5	25	08:17	BE	ROS	US	51° 28.037	128° 30.06	198		434	1	SK	☒	
			08:21	BO			51° 28.051	128° 30.037		190	-			☐	
			08:28	EN			51° 28.065	128° 30.002			-			☐	
			:				°	°			-			☐	

Event Type:

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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

Notes:

Time Code:

BE = Beginning Time of Cast
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CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

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RE = Recover Mooring Time

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Month <u>Sep</u>				Year <u>2024</u>			Vessel <u>Tully</u>			Cruise ID <u>2024-008</u>					
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
93	SS5	25	08:32	BE	NET	—	51°28.115	128°29.962	198	190	—	—	SK	☐ ☐	BONGO - lots of krill
			08:39	BO			51°28.135	128°30.06			-			☐ ☐	
			08:43	EN			51°28.146	128°30.104			-			☐ ☐	
94	C104	25	11:21	BE	ROS	—	51°19.172	129°2.91	257		—	—	SK	☒ ☒	
			11:27	BO	r		51°19.187	129°2.889		251	-			☐ ☐	
			11:31	EN			51°19.179	129°2.881			-			☐ ☐	
95	SS3	25	13:31	BE	ROS	US	51°15.005	129°21.316	290		435	1	SK	☒ ☒	
			13:36	BO			51°15.028	129°21.316		284	-			☐ ☐	
			13:42	EN			51°15.04	129°21.328			-			☐ ☐	
96	SS3	25	13:49	BE	NET	—	51°15.028	129°21.321	290		—	—	SK	☐ ☐	Bongo UNH
			13:50	BO			51°15.076	129°21.362		250	-			☐ ☐	
			14:02	EN			51°15.118	129°21.36			-			☐ ☐	
97	SS2	25	15:40	BE	ROS	US	51°13.04	129°42.934	575		—	—	SK	☒ ☒	
			15:51	BO			51°13.039	129°42.949	578	573	-			☐ ☐	
			16:01	EN			51°13.044	129°42.933			-			☐ ☐	
98	SS1	25	17:22	BE	ROS	US	51°11.986	129°59.923	492		436	1		☐ ☐	
			17:31	BO			51°11.98	129°59.923		483	-			☐ ☐	
			17:39	EN			51°11.961	129°59.942			-			☐ ☐	
			:				°	°			-			☐ ☐	

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Bottle Firing Method:

US = Up / Stop (default)
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Notes:

Time Code:

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Month <u>Sep</u>			Year <u>2024</u>			Vessel <u>Tilly</u>			Cruise ID <u>2024-003</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information		Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Tms/FI Cleaned	Comments
99	SS1	25	17:44	BE	NET	/	51° 11.97	129° 59.954	493		-		SK	☐ ☐	Bongo UNH
			17:53	BO			51° 11.992	129° 59.969		250	-			☐ ☐	
			17:57	EN			51° 11.992	129° 59.968			-			☐ ☐	
100	SCOTT 2	25	20:12	BE	ROS	US	51° 07.974	129° 29.356	280		437	1	MG	☒ ☒	
			20:17	BO			° 07.981	° 29.348		281	-			☐ ☐	
			20:24	EN			° 07.935	° 29.344			-			☐ ☐	
101	SCOTT 2	25	20:33	BE	NET	/	51° 07.913	129° 29.398	291		✓	✓	MG	☐ ☐	Bongo
			20:43	BO			° 07.905	° 29.392		250	✓	✓		☐ ☐	
			20:49	EN			° 07.932	° 29.417			-			☐ ☐	
102	CS09	26	01:03	BE	ROS	/	51° 12.46	128° 28.05	195		✓	✓	MG	☒ ☒	COMPUTER MESSAGE
			01:07	BO			° 12.463	° 28.055		186	-			☐ ☐	REBOOT B/O COMM
			01:11	EN			° 12.471	° 28.059			-			☐ ☐	ERROR MESSAGE
103	SS6	26	03:37	BE	ROS	US	51° 20.051	128° 0.023	179		438	1	MG	☒ ☒	
			03:41	BO			° 20.053	° 0.038		171	-			☐ ☐	
			03:45	EN			° 20.05	° 0.01			-			☐ ☐	
104	SS6	26	03:54	BE	NET	/	51° 20.022	128° 0.016	178		✓	✓	MG	☐ ☐	BONGO
			04:02	BO			° 20.018	128° 0.021		173	-			☐ ☐	
			04:06	EN			° 20.026	° 0.026			-			☐ ☐	
105	LOOP 105	26	04:45	BE	LOOP	UN	51° 22.543	127° 53.192	121	4.5	505	✓	MG	☐ ☐	INUT ISAL 2CHL

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Bottle Firing Method:

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Notes:

Time Code:

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Month <u>SEPT</u>			Year <u>2024</u>			Vessel <u>JP TULLY</u>			Cruise ID <u>2024 008</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Tms/FI Cleaned	Comments
106	SS7	26	05:18	BE	ROS	/	51°24.721	127°47.649	123		✓	✓	MG	☒ ☒	
			05:21	BO			°24.712	°47.665		115	-			☐ ☐	
			05:23	EN			°24.71	°47.671			-			☐ ☐	
107	Ri1	26	06:34	BE	ROS	US	51°26.412	127°38.428	312		439-452	14	MG	☒ ☒	
			06:40	BO	r		°26.416	°38.414		308	-			☐ ☐	
108	R		07:04	EN			°26.416	°39.368			-			☐ ☐	
108	Ri1	26	07:09	BE	NET	/	51°26.418	127°38.360	312		/	/	MG	☐ ☐	BONGO
			07:20	BO			51°26.408	127°39.367		300	-			☐ ☐	
			07:31	EN			51°26.475	127°38.282			-			☐ ☐	
109	Ri2	26	08:15	BE	ROS	US	51°31.161	127°33.622	326		/	/	SK	☒ ☒	
			08:22	BO			51°31.178	127°33.605		324	-			☐ ☐	
			08:28	EN	1		51°31.193	127°33.595			-			☐ ☐	
110	Ri3	26	09:07	BE	ROS	US	51°35.763	127°32.116	325		453		SK	☒ ☒	
			09:13	BO			51°35.767	127°32.119		322	-			☐ ☐	
			09:23	EN			51°35.775	127°32.106			-			☐ ☐	
111	Ri3	26	09:30	BE	NET		51°35.792	127°32.103	324	319	-		SK	☐ ☐	BONGO VNH
			09:41	BO			51°35.818	127°32.096		315	-			☐ ☐	
			:	EN			°	°			-			☐ ☐	
			:				°	°			-			☐ ☐	

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Month <u>Sep</u>			Year <u>2024</u>			Vessel <u>Tully</u>			Cruise ID <u>2024-008</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Tms/Fl Cleaned	Comments
112	Ri4	26	10:30	BE	ROS	/	51° 38.88	127° 26.984	298		-	/	SK	☒	
			10:36	BO			51° 38.875	127° 26.986		296	-			☐	
			10:41	EN			51° 38.876	127° 26.982			-			☐	
113	Ri5	26	11:20	BE	ROS	US	51° 40.687	127° 19.981	199		454		SK	☒	
			11:25	BO			51° 40.682	127° 19.963		196	-			☐	
			11:30	EN			51° 40.677	127° 19.929			-			☐	
114	Ri5	26	11:35	BE	NET	/	51° 40.678	127° 19.892	199		/	/		☐	BONGO VNH
			11:42	BO			51° 40.68	127° 19.872		190/98	-			☐	
			11:45	EN			51° 40.682	127° 19.866			-			☐	
115	Ri6	26	12:08	BE	ROS	/	51° 40.472	127° 17.118	143		/	/	SK	☒	
			12:11	BO			51° 40.474	127° 17.104		140	-			☐	
			12:13	EN			51° 40.481	127° 17.094			-			☐	
116	Sm1	26	17:39	BE	ROS	US	51° 18.71	127° 30.136	208		455	1	SK	☐	not at surface
			17:44	BO			51° 18.723	127° 30.165		198	-			☐	NOT
			:	EN			.	.			-			☐	APRETTIVED
117	Sm1	26	17:50	BE	ROS	US	51° 18.723	127° 30.15	207		455	1	SK	☐	Put back down
			17:54	BO			51° 18.726	127° 30.136		198	-			☐	not brought onto
			17:58	EN			51° 18.722	127° 30.125			-			☐	deck.
			:				.	.			-			☐	

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Month <u>Sep</u>			Year <u>2024</u>			Vessel <u>Tully</u>			Cruise ID <u>2024-008</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Tms/FI Cleaned	Comments
117	Sm 1	26	18:04	BE	NET		51° 18.707	127° 30.096	210	200	✓	✓	SK	☐ ☐	Bongo UNH
			18:11	BO			51° 18.699	127° 30.082			-			☐ ☐	
			18:15	EN			51° 18.702	127° 30.082			-			☐ ☐	
118	Sm 2	26	20:40	BE	ROS	✓	51° 17.992	127° 22.159	366		✓	✓	MG	☒ ☒	HELD @ SURFACE BY BRIDGE
			20:47	BO			° 18.002	° 22.15		367	-			☐ ☐	
			20:54	EN			° 18.004	° 22.144			-			☐ ☐	BOAT IN WATER →
119	Sm 3	26	22:14	BE	ROS	US	51° 18.538	127° 14.599	322		456	1	MG	☒ ☒	
			22:20	BO			° 18.534	° 14.615		320	-			☐ ☐	OIL DROPS FROM HEAD
			22:28	EN			° 18.524	° 14.607			-			☐ ☐	CLOSED ALL BOTTLES @ 5
120	Sm 3	26	22:40	BE	NET	✓	51° 18.492	127° 14.607	323		✓	✓	MA/MG	☐ ☐	Bongo
			22:52	BO			° 18.52	° 14.605		318	-			☐ ☐	
			22:58	EN			° 18.548	° 14.585			-			☐ ☐	
121	Sm 4	26	23:45	BE	ROS	✓	51° 21.595	127° 8.993	187		✓	✓	MG	☒ ☒	
			23:50	BO			° 21.601	° 8.972		181	-			☐ ☐	OIL DROPLETS
			23:56	EN			° 21.598	° 8.962			-			☐ ☐	CLOSED ALL BOTTLES @
122	Sm 4	27	00:05	BE	NET	✓	51° 21.571	127° 8.934	186		✓	✓	MA/MGR	☐ ☐	Bongo
			00:13	BO			° 21.569	° 8.952		180	-			☐ ☐	
			00:17	EN			° 21.567	° 8.956			-			☐ ☐	
			:				°	°			-			☐ ☐	

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EVENT 118 STARTED ACQUISITION @ SURFACE WHEN OIL WAS NOTICED IN WATER
 1910 SAT AT SURFACE APPROX 5 MINS THEN BROUGHT BACK TO DECK TO CHECK
 OIL FROM LAWS HEAD - SLACK WIRE BOOM UP + WORK ON RAM ON UPPER DECK
 2011 REPAIRS COMPLETE BUT BULLET NOT LATCHED - RESET HEAD
 2035 ACTUAL START
 2103 LAUNCH FRC CHECKING TANKS
 2130 RECOVERY

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Month			Year			Vessel			Cruise ID						
SEPT			2024			JP TULLY			2024 008						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
123	CPE1	27	04:51	BE	ROS	/	51° 0.041	127° 49.969	145		-		MG	☒ ☒	SEA LIONS
			05:02	BO			° 0.038	° 49.959		136	-			☐ ☐	
			05:05	EN			° 0.043	° 49.979			-			☐ ☐	CLOSED BOTTLES
124	CPE1	27	05:18	BE	NET	/	51° 0.047	127° 49.950	144		-		MG	☐ ☐	BONGO
			05:23	BO			51° 0.044	° 49.963		138	-			☐ ☐	
			05:26	EN			° 0.030	° 49.962			-			☐ ☐	
125	LBA-1	27	06:50	BE	ROS	/	50° 54.046	127° 38.453	447		-		SK	☒ ☒	KEPT BOTTLES CLOSED FOR CASTS
			06:59	BO			50° 54.059	127° 38.433		442	-			☐ ☐	
			07:06	EN			50° 54.053	127° 38.487			-			☐ ☐	
126	QCS3	27	09:38	BE	ROS	/	50° 43.788	127° 14.951	210		-		SK	☒ ☒	
			09:42	BO			50° 43.792	127° 14.984		203	-			☐ ☐	
			09:46	EN			50° 43.797	127° 14.99			-		SK	☒ ☒	
127	QCS2	27	10:58	BE	ROS	/	50° 46.623	127° 2.331	220		-		SK	☒ ☒	
			11:03	BO			50° 46.602	127° 2.311		213	-			☐ ☐	
			11:07	EN			50° 46.591	127° 2.296			-			☐ ☐	
128	QCS1	27	12:42	BE	ROS	/	50° 40.121	127° 46.283	155		-		SK	☒ ☒	
			12:46	BO			50° 40.128	127° 46.318		147	-			☐ ☐	
			12:49	EN			50° 40.116	127° 46.33			-			☐ ☐	
			:				°	°			-			☐ ☐	

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Month <u>Sep</u>				Year <u>2024</u>			Vessel <u>Tully</u>			Cruise ID <u>2024-003</u>					
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Tms/FI Cleaned	Comments
129	Kn00	27	14:44	BE	ROS	/	50°38.249	126°34.854	61		/	/	SK	☒ ☒	"start archiving" would not turn on, had to restart.
			14:55	Bo			50°38.248	126°34.893		54	-			☐ ☐	
			14:57	EN			50° .248	126°34.849			-			☐ ☐	
130	Kn01	27	15:46	BE	ROS	/	50°38.1	126°25.438	247		/	/	SK	☒ ☒	start archiving. would not start again → re-started data acquisition to fix it.
			15:50	Bo			50°38.114	126°25.414		246	-			☐ ☐	
			15:55	EN			50°38.124	126°25.399			-			☐ ☐	
131	Kn1.5	27	16:34	BE	ROS	/	50°38.323	126°18.089	206		/	/	SK	☒ ☒	
			16:38	Bo			50°38.336	126°18.096		203	-			☐ ☐	<u>NOTE</u> →
			16:42	EN			50°38.346	126°18.11			-			☐ ☐	
132	Kn1.5	27	16:46	BE	NET	/	50°38.36	126°18.101	207		-	/	SK	☐ ☐	Bongo unit
			16:54	Bo			50°38.337	126°18.139		197	-			☐ ☐	
			16:58	EN			50°38.321	126°18.152			-			☐ ☐	
133	Kn02	27	17:35	BE	ROS	/	50°39.263	126°11.029	184		/	/	SK	☒ ☒	
			17:39	Bo			50°39.258	126°11.023		183	-			☐ ☐	
			17:42	EN			50°39.248	126°11.015			-			☐ ☐	
134	Kn03	27	18:19	BE	ROS	/	50°40.216	126°3.947	190		-		SK	☒ ☒	
			18:23	Bo			50°40.227	126°3.94		185	-			☐ ☐	
			18:26	EN			50°40.23	126°3.937			-			☐ ☐	
			:				.	.			-			☐ ☐	

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MOR = Mooring
 NET = Plankton Net Haul
 DRF = Drifter

Bottle Firing Method:

US = Up / Stop (default)
 UN = Up / No stop
 DN = Down / No stop

Notes:

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
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EVENT 131

Rosette triskins appear less oily after cleaning with degreaser from galley (rag washed). Phyon is still quite oily, reapplied Simple Green to it. Bottles will remained closed for now to prevent contamination.

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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Month <u>SEPT</u>			Year <u>2024</u>			Vessel <u>JP TOLLY</u>			Cruise ID <u>2024008</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
135	Kn08.75	27	18:58	BE	ROS	/	50° 40.524	125° 59.418	115		-	-	MG	☒ ☒	UPSTREAM OF SILL
			19:01	BO			° 40.582	° 59.438		106	-			☐ ☐	
			19:03	EN			° 40.542	° 59.42			-			☐ ☐	
136	Kn03.5	27	19:17	BE	ROS	/	50° 40.622	126° 0.055	68		-	-	MG	☒ ☒	TOP OF SILL
			19:19	BO			° 40.632	° 0.055		66	-			☐ ☐	RESTART ARCHIVING
			19:21	EN			° 40.634	° 0.051			-			☐ ☐	
137	Kn08.25	27	19:33	BE	ROS	/	50° 40.614	126° 0.562	84		-	-	MG	☒ ☒	DOWNSSTREAM OF SILL
			19:36	BO			° 40.621	° 0.575		82	-			☐ ☐	
			19:38	EN			° 40.631	° 0.585			-			☐ ☐	
138	Kn04	27	20:09	BE	ROS	/	50° 40.762	125° 55.441	444		-	-	MG	☒ ☒	
			20:17	BO			° 40.76	° 55.418		444	-			☐ ☐	
			20:25	EN			° 40.755	° 55.384			-			☐ ☐	
139	Kn04	27	20:30	BE	NET	/	50° 40.757	125° 55.433	443		-	-	MG	☐ ☐	OPEN ALL BOTTLES
			20:47	BO			° 40.771	° 55.391		438	-			☐ ☐	BONGO
			20:55	EN			° 40.780	° 55.382			-			☐ ☐	
140	Kn05	27	21:38	BE	ROS	/	50° 41.586	125° 47.034	394		-		MG	☒ ☒	
			21:46	BO			° 41.555	° 47.028		396	-			☐ ☐	
			21:53	EN			° 41.544	° 47.016			-			☐ ☐	
			:				°	°			-			☐ ☐	

Event Type:

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

LOOP = Sea Water Loop

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DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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Month			SEPT		Year		2024		Vessel		JP TULLY		Cruise ID		2024 008	
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments	
141	Kn06	27	22:42	BE	RDS	/	50° 45.28	125° 41.142	519	/	/	/	MG	☒ ☒	REDO ARCHIVE	
			22:51	BO			° 45.289	° 41.148		519	-			☐ ☐		
			23:01	EN			° 45.307	° 41.175			-			☐ ☐		
142	Kn07	27	23:41	BE	RDS	/	50° 48.109	125° 37.315	515		/	/	MG	☒ ☒		
			23:50	BO			° 48.116	° 37.336		514	-			☐ ☐		
		28	00:00	EN			° 48.144	° 37.332			-			☐ ☐		
143	Kn07	28	00:34	BE	NET	/	50° 48.146	125° 37.430	515		/	/	MG	☐ ☐	BONGG	
			00:52	BO			° 48.152	° 37.485		510	-			☐ ☐		
			01:02	EN			° 48.146	° 37.449			-			☐ ☐		
144	Kn08	28	01:44	BE	RDS	/	50° 52.286	125° 38.80	488		/	/	MG	☒ ☒		
			01:53	BO			° 52.301	° 38.79		488	-			☐ ☐		
			02:02	EN			° 52.327	° 38.766			-			☐ ☐		
145	Kn09	28	02:40	BE	RDS	/	50° 54.282	125° 32.852	414		/	/	MG	☒ ☒		
			02:48	BO			° 54.283	° 32.853		414	-			☐ ☐		
			02:56	EN			° 54.29	° 32.84			-			☐ ☐		
146	Kn10	28	03:37	BE	RDS	/	50° 58.694	125° 33.386	327		/	/	MG	☒ ☒		
			03:43	BO			° 58.673	° 33.386			-			☐ ☐		
			03:50	EN			° 58.675	° 33.386			-			☐ ☐		
			:				°	°			-			☐ ☐		

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