

DAILY SCIENCE LOG BOOK

MISSION
NUMBER

2022-22

DATE:

From: August 25

To:

Sept 4

VESSEL:

JP Tully

PROJECT(S):

La Perouse

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

WaterProperties.ca

**** 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.

WP 102
2022-022

Data logging computer: Sensave 7.26.7.121

CTD deck unit make: SBE model: 11 serial number: 425

Primary CTD

Make: SBE model: 9 serial number: 443

Primary temperature serial number: 4700
Primary conductivity serial number: 3531
Secondary temperature serial number: 4888
Secondary conductivity serial number: 4513

Transmissometer: Wetlabs Model: CSTAR serial: 1185DR
Transmissometer: " Model: " serial: 1883D6

Fluorometer: Model Seapoint SCF Cable gain: 3X serial: 3641 P, S or NO pump? P

Fluorometer: Model SBE Cable gain: 43 serial: 3791 P, S or NO pump? P

Oxygen sensor: SBE Model: 43 serial: 70613 P, S or NO pump? P

PAR sensor: Biospherical Model: 0592350 serial: 311618 P, S or NO pump? P

Other sensors: RBR I.D.O serial: 20295 P, S or NO pump? P
Other sensors: but indige- on rosette serial: SBE 9/11 P, S or NO pump? P

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: 105
Volume of bottles (litres): 101

Rosette/Niskin Bottle Serial Numbers:

1: <u>2016-10-01</u>	2: <u>2016-10-05</u>	3: <u>2016-10-06</u>	4: <u>2016-10-07</u>	5: <u>2016-10-08</u>
6: <u>2018-10-02</u>	7: <u>2000-10-29</u>	8: <u>2016-10-09</u>	9: _____	10: <u>2000-10-30</u>
11: <u>2018-10-04</u>	12: <u>2016-10-10</u>	13: <u>2016-10-11</u>	14: _____	15: <u>2000-10-24</u>
16: <u>2016-10-12</u>	17: <u>2000-10-23</u>	18: <u>2016-10-13</u>	19: <u>2016-10-14</u>	20: <u>2016-10-15</u>
21: <u>2016-10-16</u>	22: <u>2016-10-17</u>	23: <u>2016-10-18</u>	24: <u>2016-10-01</u>	

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

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):

Label Printers:

Primary Printer Kit #: _____
Secondary Printer Kit #: _____
Software Version: _____

Thermosalinograph System (SBE21/45):

Program: Campbell Scientific Version: _____

Sampling interval (seconds): _____

TSG serial number: SBE 45 SN 620

Fluorometer sensor serial number: WEFSTAR-SN1656

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

ADCP Setup:

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)

BOTTLES 400M AND 7400M
" " SHOWER → SOAK FOR 1 MIN
" " → SOAK FOR 30 SEC

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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Month Aug			Year 2022			Vessel Tully			Cruise ID 2022-022						
*Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
1	S105	25	00:50	BE	ROS	US	48°39.184	123°29.993	176		1 -	24		☒	MR on
			08:54	BO			48°39.184	123°29.987		170	-			☐	
			00:59	EN			48°39.187	123°29.989			-			☐	
2	S105	25	01:10	BE	VVP	/	48°39.179	123°30.002	178		-			☐	LISST
			01:13	BO			48°39.177	123°30.002		170	-		JS	☐	
			01:15	EN			48°39.178	123°29.998			-			☐	
3	S105	25	01:20	BE	VVP	/	48°39.182	123°29.986	178		-		JS	☐	Removed PVC funnel that separates LISST from UVP.
			01:22	BO			48°39.182	123°29.976		110	-			☐	
			01:24	EN			48°39.186	123°29.966			-			☐	
4	Haro 59	25	03:46	BE	NET	/	48°36.818	123°14.689	229		-		K400, JS	☐	Bongo
			03:54	BO			48°36.850	123°14.665	2	219	-			☐	
			03:59	EN			48°36.851	123°14.643			-			☐	
5	Haro 59	26	04:10	BE	VVP	/	48°36.834	123°14.720	230		-		JD/KS	☐	+ LISST
			04:15	BO			48°36.807	123°14.740		220	-			☐	
			04:18	EN			48°36.816	123°14.772			-			☐	
6	Haro 59	26	04:31	BE	ROS	US	48°36.821	123°14.790	233		2 - 13	12	RF	☒	
			04:35	BO			48°36.809	123°14.771		225	-			☐	
			04:55	EN			48°36.728	123°14.726			-			☐	
			:				°	°			-			☐	

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:

Produced by the Water Properties Group, IOS

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Month August			Year 2022		Vessel J-Track		Cruise ID 1022-027							
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
7	JFZ	26	10:47	BE	ROS	US	48° 17.840 124° 0.120	186		14-24	11	MB	☒	Boyle 11 for
			10:50	BO			48° 17.830 124° 0.140		183				☐	ABC used BY ROS
			11:05	EN			48° 17.850 124° 0.210						☐	FOR MORE 5m WATER
8	JFZ	26	11:18	BE	UVP	-	48° 17.853 124° 00.324	187			-	JS	☐	45L SST
			11:21	BO			48° 17.847 124° 00.366		177				☐	
			11:25	EN			48° 17.840 124° 00.314						☐	
9	JFZ	26	11:34	BE	NET		48° 17.889 124° 00.500	187				LH	☐	BONGO
			11:41	BO			48° 17.901 124° 00.618		177				☐	
			11:45	EN			48° 17.906 124° 00.708						☐	
10	LBI	26	16:42	BE	ROS	US	48° 40.440 124° 59.820	33		25-29 (5030)	6	MB	☒	ADDED 5030 for
			16:43	BO			48° 40.450 124° 59.820		29				☐	ABC
			16:50	EN			48° 40.470 124° 59.800						☐	
11	LBO2	26	17:18	BE	ROS	US	48° 39.060 124° 2.450	56					☒	
			17:19	BO			48° 39.070 124° 2.450		46	30-39	10	MB	☐	
			17:26	EN			48° 39.090 124° 2.440						☐	
12	LBO3	26	18:01	BE	ROS	US	48° 37.340 125° 5.570	94		40	1	MB	☒	
			18:03	BO			48° 37.350 125° 5.580		84				☐	
			18:06	EN			48° 37.370 125° 5.570						☐	
													☐	

CRD Transducer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

EVENT 10

CLEANING PRODUCT USED ON LARS 'BRACE', POTENTIAL NUTS CONTAIN? LBO1 & LBO2

EVENT 12

LARGE DIFFERENCE IN TWO SAMPLINGS @ TIDES DURING THE CAP? @ 25 → 40 dp AND HIGH VARIABILITY @ SRF. WATER APPEARS BROWN-GREEN @ SRF.

DAILY SCIENCE LOG

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Month			August		Year		2022		Vessel		JP TULSA		Cruise ID		2022-022	
*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/Fl Cleaned	Comments	
13	LB04	26	18:42	BE	ROS	US	48° 35.750	125° 8.720	112		41-47	7	MB	☒	COND DIFF	
			18:44	BO			48° 35.760	125° 8.730		102	-			☐	LOOKS GOOD	
			18:56	EN			48° 35.810	125° 8.750			-		RF	☐		
14	LB05	26	19:21	BE	ROS	US	48° 34.020	125° 11.850	104		48	1	RF	☒		
			19:31	BO			48° 34.020	125° 11.850		96	-			☐		
			19:34	EN			48° 34.030	125° 11.850			-			☐		
15	E1	26	21:11	BE	ROS	US	48° 31.760	125° 3.590	111		-	-	RF	☐		
			21:14	BO			48° 31.740	125° 3.560		101	-			☐		
			21:16	EN			48° 31.720	125° 3.534			-			☐		
16	E1	26	21:23	BE	NET	-	48° 31.741	125° 3.523	110		-	-	JD/KY	☐	BONGA	
			21:27	BO			48° 31.745	125° 3.521		100	-			☐		
			21:29	EN			48° 31.738	125° 3.502			-			☐		
17	E1	26	21:40	BE	UVP	-	48° 31.742	125° 3.507	110		-	-		☐		
			21:42	BO			48° 31.739	125° 3.493		100	-			☐		
			21:44	EN			48° 31.732	125° 3.477			-			☐		
18	LB06	26	23:01	BE	ROS		48° 32.210	125° 15.410	114		49-56	8	RF	☒		
			23:03	BO			48° 32.200	125° 15.390		104	-			☐		
			23:15	EN			48° 32.210	125° 15.380			-			☐		
			:				°	°			-			☐		

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 DRF = Drifter

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

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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Notes:

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Month		August		Year		2022		Vessel		Tully		Cruise ID		2022-022	
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/Fl Cleaned	Comments
19	C1	26	23:47	BE	ROS	—	48° 29.080	125° 15.260	151		—	—	RF	□□	
			23:50	BO			48° 29.080	125° 15.240		141	-			□□	
			23:53	EN			48° 29.070	125° 15.200			-			□□	
20	C1	26	23:57	BE	NET	—	48° 29.061	125° 15.201	150		—	—	JD/KY	□□	Bongo
		27	00:03	BO			48° 29.040	125° 15.209		140	-			□□	
			00:05	EN			48° 29.026	125° 15.226			-			□□	
21	C2	27	00:47	BE	ROS	—	48° 26.228	125° 9.210	159		—	—	RF	□□	
			00:50	BO			48° 26.230	125° 9.175		150	-			□□	
			00:53	EN			48° 26.220	125° 9.144			-			□□	
22	C2	27	0:58	BE	NET	—	48° 26.217	125° 9.149	160		—	—	JD	□□	Bongo
			01:03	BO			48° 26.213	125° 9.121		150	-			□□	
			01:06	EN			48° 26.210	125° 9.112			-			□□	
23	C2	27	01:13	BE	UVP	—	48° 26.212	125° 9.155	160		—	—	KY/JO	□□	Bongo forgot to turn
			01:16	BO			48° 26.212	125° 9.157		150	-			□□	L1355 on.
			01:19	EN			48° 26.214	125° 9.182			-			□□	
24	C3	27	02:32	BE	ROS	—	48° 24.430	125° 20.700	121		—	—	RF	□□	
			02:34	BO			48° 23.430	125° 20.700		113	-			□□	
			02:37	EN			48° 23.440	125° 20.700			-			□□	
			:				°	°			-			□□	

Event Type:	LOOP = Sea Water Loop	Bottle Firing Method:	Time Code:	CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products
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BOT = Bottle cast (no CTD)	MOR = Mooring	US = Up / Stop (default)	BE = Beginning Time of Cast	DE = Deployment Time
CTD = Standalone CTD	NET = Plankton Net Haul	UN = Up / No stop	BO = Bottom Time of Cast	MR = Messenger Release Time
ROS = CTD in Rosette	DRF = Drifter	DN = Down / No stop	EN = End Time of Cast	RE = Recover Mooring Time

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Month		August		Year		2022		Vessel		Tully		Cruise ID					2022-022	
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/Fl Cleaned	Comments			
25	C3	27	02:43	BE	NET	—	48°23.441	125°20.661	122		—	—		☐ ☐	Bongo			
			02:47	BO			48°23.445	125°20.648		112	-			☐ ☐				
			02:49	EN			48°23.449	125°20.649			-			☐ ☐				
26	LB07	27	03:39	BE	ROS	US	48°28.660	125°21.940	155		57-	1	RF	☒ ☐				
			03:42	BO			48°26.680	125°21.910		146	-			☐ ☐				
			03:47	EN			48°28.680	125°21.920			-			☐ ☐				
27	LB07	27	03:53	BE	NET	—	48°28.666	125°21.945	156		-	—	KY/BD	☐ ☐	Bongo			
			03:58	BO			48°28.675	125°22.042		146	—	—		☐ ☐				
			04:01	EN			48°28.675	125°22.045			-			☐ ☐				
28	B8	27	05:20	BE	ROS	—	48°34.420	125°29.940	131		—	—	RF	☐ ☐				
			05:23	BO			48°34.430	125°29.950		127	-			☐ ☐				
			05:26	EN			48°34.440	125°29.970			-			☐ ☐				
29	B8	27	05:35	BE	NET	—	48°34.420	125°30.058	137		—	—	JD/KY	☐ ☐	Bongo			
			05:39	BO			48°34.448	125°30.115		127	-			☐ ☐				
			05:42	EN			48°34.467	125°30.160			-			☐ ☐				
30	B8	27	05:51	BE	UVP	—	48°34.448	125°30.142	137		—	—	JD/KY	☐ ☐				
			05:54	BO			48°34.440	125°30.189		127	-			☐ ☐				
			05:59	EN			48°34.554	125°30.238			-			☐ ☐				
			:				°	°			-			☐ ☐				

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Bottle Firing Method:
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Month Aug			Year 2022		Vessel Tully		Cruise ID 2022-022							
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
31	B7	27	06:43	BE	ROS	—	48° 31.954 125° 35.240	80		—	—	RR/mg	☒	
			06:45	BO			48° 31.960 125° 35.286		71	-			☐	
			06:47	EN			48° 31.940 125° 35.270			-			☐	
32	B7	27	06:58	BE	NET	-	48° 31.936 125° 35.284	80		-	-	JS/mg	☐	Bongo
			07:01	BO			48° 31.937 125° 35.315		70	-			☐	
			07:03	EN			48° 31.939 125° 35.335			-			☐	
33	LB08	27	08:51	BE	ROS	US	48° 25.290 125° 28.630	143		58-77	20	MB	☒	
			08:54	BO			48° 25.290 125° 28.630		137	-			☐	
			09:05	EN			48° 25.280 125° 28.640			-			☐	
34	LB08	27	09:18	BE	NET		48° 25.287 125° 28.651	145		-		JS	☐	Bongo
			09:23	BO			48° 25.246 125° 28.673		135	-			☐	
			09:25	EN			48° 25.300 125° 28.674			-			☐	
35	LB08	27	09:27	BE	NET		48° 25.287 125° 28.666	146		-		JS	☐	Bongo
			09:43	BO			48° 25.296 125° 28.677		135	-			☐	
			09:46	EN			48° 25.310 125° 28.683			-			☐	
36	LB08	27	10:03	BE	UVP		48° 25.307 125° 28.672	145		-		JS	☐	UVP
			10:06	BO			48° 25.300 125° 28.625		135	-			☐	
			10:08	EN			48° 25.299 125° 28.673			-			☐	
			:				°			-			☐	

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Notes:

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EVENT 33

EQUIPMENT CRASH IN LAB DELAYED LAUNCH. FAIRLY MAJOR ACCIDENT WITH USC EQUIPMENT FALLING OVER WHEN TURNING ON THE BEAM COMING ON STATION

DAILY SCIENCE LOG

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Month			Year			Vessel			Cruise ID							
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/Fl Cleaned	Comments	
37	LB09	27	11:02	BE	ROS	US	48° 21.940	125° 34.680	150		78-86	9	MB	☒		
			11:05	BO			48° 21.940	125° 34.680		141	-			☐		
			11:08	EN			48° 21.920	125° 34.720			-			☐		
38	LB10	27	12:09	BE	ROS	US	48° 18.500	125° 41.320	152		87-87	1	JS	☒		
			12:12	BO			48° 18.480	125° 41.330		143	-			☐		
			12:16	EN			48° 18.470	125° 41.330			-			☐		
39	LB11	27	13:17	BE	ROS	US	48° 15.19	125° 47.68	207		88-98	11	MB	☒		
			13:23	BO			48° 15.18	125° 47.69		196	-			☐		
			13:40	EN			48° 15.190	125° 47.740			-			☐		
40	LB11	27	13:50	BE	NET		48° 15.184	125° 47.714	204		-		JS/HA	☐	Bongo	
			13:58	BO			48° 15.185	125° 47.755		194	-			☐		
			14:01	EN			48° 15.193	125° 47.765			-			☐		
41	LB11	27	14:14	BE	UVP	-	48° 15.194	125° 47.760	204		-	-	JS	☐	FL/SST LIST NOT TURNED ON	
			14:18	BO			48° 15.200	125° 47.799		194	-			☐		
			14:21	EN			48° 15.198	125° 47.798			-			☐		
42	LB12	27	15:03	BE	ROS	US	48° 12.880	125° 51.850	510		99-114	16	MB	☒		
			15:11	BO			48° 12.890	125° 51.880		499	-			☐		
			15:39	EN			48° 12.920	125° 51.860			-			☐		
			:				:	:			-			☐		

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 US = Up / Stop (default)
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Notes:

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DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month			August			Year		2022		Vessel			LR Tully			Cruise ID			2022-022		
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/Fl Cleaned	Comments						
43	LB13	27	16:21	BE	ROS	US	48° 10.58	125° 55.97	914		115	1	MG	☒							
			16:36	BO			° 10.54	° 55.94		910	-			☐							
			16:52	EN			° 10.59	° 55.97			-			☐							
44	LB14	27	17:30	BE	ROS	US	48° 08.570	125° 59.940	1172		116-133	18	SS	☒	Bot 20 = Bot 3						
			17:50	BO			48° 08.500	125° 59.890		1170	-			☐							
			18:33	EN			48° 08.480	125° 59.960			-			☐							
45	LB15	27	19:41	BE	ROS	US	48° 4.370	126° 8.350	1538		134	1	RF	☒							
			20:08	BO			48° 4.350	126° 8.320		1544	-			☐							
			20:52	EN			48° 3.760	126° 9.740			-			☐	delayed recording at End lat/long time						
46	LB16	27	21:42	BE	ROS	US	48° 0.539	126° 16.918	1802		135	1	KY	☒							
			22:14	BO			48° 0.550	126° 16.928		1826	-			☐							
			22:43	EN			48° 0.550	126° 16.880			-		RF	☐							
47	LB16	27	22:53	BE	NET	—	48° 0.511	126° 16.885	1808		—	—	KY/AD	☐							
			23:01	BO			48° 0.526	126° 16.894		250	-			☐							
			23:05	EN			48° 0.526	126° 16.869			-			☐							
48	LB16	27	23:15	BE	NET	—	48° 0.519	126° 16.880	1805		—	—	KY/AD	☐							
			23:55	BO			48° 0.529	126° 16.916		1200	-			☐							
			00:16	EN			48° 0.529	126° 16.961			-			☐							
49	Loop 49	28	02:30	BE	Loop	—	48° 14.330	126° 38.670	7497	—	5049	—	KY	☐	underway loop						

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Notes:

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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Month Aug			Year 2022		Vessel Tully			Cruise ID 2022-022							
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/Fl Cleaned	Comments
50	LC12	28	02:47	BE	ROS	US	48° 15.000	126° 39.910	2524	/	-	-	RF/HM	☒	PAR 0.8
			03:20	BO			48° 15.000	126° 39.910	/	2006	-			☐	
			03:49	EN			48° 15.010	126° 39.980			-			☐	
51	LC12	28	04:04	BE	NET	-	48° 15.024	126° 39.942	2524		-	-	KYD	☐	Bongo
			04:11	BO			48° 15.039	126° 39.990		250	-			☐	
			04:16	EN			48° 15.030	126° 39.934			-			☐	
52	LC12	28	04:28	BE	NET	-	48° 15.039	126° 39.960	2524		-	-		☐	Deep Bongo
			05:06	BO			48° 15.073	126° 39.957		1200	-			☐	
			05:30	EN			48° 15.128	126° 39.925			-			☐	
53	LC11	28	06:36	BE	ROS	US	48° 19.910	126° 26.810	1471		136-154	19	RF/MR	☒	PAR still off (night)
			07:07	BO			48° 18.985	126° 26.932		1497	-			☐	
			07:49	EN			48° 19.162	126° 27.078			-			☐	
54	LC10	28	08:31	BE	ROS	-	48° 22.388	126° 20.200	1241		-	-	MR	☒	PAR back on
			08:53	BO			48° 22.400	126° 20.121		1240	-			☐	
			09:13	EN			48° 22.400	126° 20.230			-			☐	
55	LC09	28	09:52	BE	ROS	US	48° 25.93	126° 13.67	607		155-178	24	MG	☐	
			10:03	BO			48° 25.92	126° 13.68		607	-			☐	
			10:36	EN			48° 25.93	126° 13.66			-			☐	
			:				°	°			-			☐	

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Notes:

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DAILY SCIENCE LOG

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Month		August		Year		2022		Vessel		JP TULLY		Cruise ID				2022-022	
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		
56	LC09	28	10:46	BE	NET	/	48° 25.939	126° 13.671	605		-	/	JS	☐	bongo		
			10:56	BO			48° 25.948	126° 13.705		250	-			☐			
			10:59	EN			48° 25.727	126° 13.948			-			☐			
57	LC09	28	11:11	BE	NET	/	48° 25.93	126° 13.699	607		-	/	JS	☐	bongo		
			11:21	BO			48° 25.95	126° 13.70		250	-			☐			
			11:26	BN			48° 25.95	126° 13.72			-			☐			
58	LC09	28	11:37	BE	UVP	/	48° 25.95	126° 13.72	610		-	/	JS	☐	+L SST		
			11:41	BO			48° 25.974	126° 13.740		250	-			☐			
			11:46	EN			48° 25.970	126° 13.758			-			☐			
59	A2	28	12:39	BE	ROS	/	48° 22.71	126° 03.77	353		-	/	MIG	☐			
			12:46	BO			48° 22.71	126° 03.75		341	-			☐			
			12:52	EN			48° 22.71	126° 03.79			-			☐			
60	A2	28	12:58	BE	NET	/	48° 22.71	126° 03.78	349		-	/	JS	☐	Bongo		
			13:10	BO			48° 22.72	126° 03.80		250	-			☐			
			13:15	EN			48° 22.71	126° 03.81			-			☐			
61	LC08	28	14:05	BE	ROS	US	48° 29.470	126° 7.050	197		179-191	13	MB	☒			
			14:08	BO			48° 29.400	126° 7.070		189	-			☐			
			14:25	EN			48° 29.450	126° 7.110			-			☐			
			:				°	°			-			☐			

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month		August	Year	2022	Vessel		LP Fulvy	Cruise ID		2022-022					
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
62	LC08	28	14:33	BE	NET	—	48° 29.447	126° 07.102	198		—	—	JS	☐	Bongo
			14:40	BO			48° 29.464	126° 07.108		188	—			☐	
			14:48	EN			48° 29.479	126° 07.094			—			☐	
63	LC08	28	14:56	BE	UVP	—	48° 29.481	126° 07.102	197		—	—	JS	☐	+L&ST
			14:59	BO			48° 29.482	126° 07.131		188	—			☐	
			15:02	EN			48° 29.483	126° 07.147			—			☐	
64	LC07	28	15:55	BE	CTD	—	48° 32.482	126° 00.550	127		—		JS	☒	
			15:58	BO	ROS		48° 32.484	126° 00.559		117	—			☐	
			16:00	EN			48° 32.486	126° 00.566			—			☐	
65	LC06	28	16:47	BE	ROS	US	48° 36.500	125° 53.980	92		192-198	7	MB	☒	
			16:49	BO			48° 36.520	125° 53.980		82	—			☐	
			16:59	EN			48° 36.570	125° 54.040			—			☐	
66	LC06	28	17:07	BE	UVP	—	48° 36.538	125° 54.033	91		—			☐	
			17:09	BO			48° 36.537	125° 54.027		82	—	—	JS	☐	
			17:12	EN			48° 36.505	125° 54.059			—			☐	
67	LC06	28	17:20	BE	NET	—	48° 36.499	125° 54.063	91		—			☐	
			17:24	BO			48° 36.492	125° 54.069		82	—	—	JS	☐	Bongo
			17:26	EN			48° 36.489	125° 54.077			—			☐	
			:				°	°			—			☐	

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Notes:

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EVENT 63 SIMRAD
SOUNDER CHANGED TO PING MODE INTERVAL PING INTERVAL 1000MS

DAILY SCIENCE LOG

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Month			August			Year		2022		Vessel			SR TOLU		Cruise ID				2022-027	
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					
68	LC05	28	18:22	BE	ROS	-	48° 39.916	125° 47.424	64	54	-	-	MS	☒						
			18:23	BO			48° 39.920	125° 47.420			-			☐						
			18:24	EN			48° 39.923	125° 47.413			-			☐	-					
69	LC05	28	18:31	BE	NET	-	48° 39.886	125° 47.417	64	59	-	-	MC/JS	☐	Bongo					
			18:33	BO			48° 39.876	125° 47.440			-			☐						
			18:34	EN			48° 39.876	125° 47.441			-			☐						
70	LC04	28	19:28	BE	NET	/	48° 43.444	125° 40.789	166		-	-	KY/SD	☐	Bongo					
			19:26	BO			48° 43.418	125° 40.803		156	-			☐						
			19:29	EN			48° 43.414	125° 40.823			-			☐						
71	LC04	28	19:38	BE	NET	/	48° 43.429	125° 40.809	166		-	-	KY/SD	☐	Bongo					
			19:43	BO			48° 43.417	125° 40.830		156	-			☐						
			19:50	EN			48° 43.412	125° 40.840			-			☐						
72	LC04	28	19:56	BE	VVB	/	48° 43.429	125° 40.820	166		-	-		☐	+ L155?					
			19:59	BO			48° 43.428	125° 40.826		156	-			☐						
			20:02	EN			48° 43.421	125° 40.833			-			☐						
73	LC04	28	20:12	BE	ROS	VS	48° 43.420	125° 40.840	166		149-215	17	RF	☐	PAR on					
			20:16	BO			48° 43.410	125° 40.840		151	-			☐						
			20:32	EN			48° 43.380	125° 40.820			-			☐						
			:				°	°			-			☐						

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DAILY SCIENCE LOG

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Month August			Year 2022		Vessel JP Tully			Cruise ID 2022-022							
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Positional Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
74	LC03	28	21:22	BE	ROS	—	48° 46.900	125° 34.220	142	—	—	—	MM	☒	
			21:25	BO			48° 46.900	125° 34.230	—	132	-			☐	
			21:28	EN			48° 46.900	125° 34.240	—		-			☐	
75	LC02	28	21:58	BE	ROS	US	48° 48.640	125° 30.830	110	—	216 - 224	9	MM	☒	
			22:01	BO		US	48° 48.620	125° 30.820	—	101	-			☐	
			22:13	EN			48° 48.550	125° 30.840			-			☐	
76	LC021	28	22:48	BO	ROS	US	48° 50.490	125° 27.800	96		225-235	11	RF	☒	
	LC01		22:50	BE			48° 50.490	125° 27.800		87	-			☐	
			23:02	EN			48° 50.506	125° 27.810			-			☐	
77	LDO1	29	00:28	BE	ROS	US	48° 00.060	125° 43.870	36	—	226 - 239	4	RF	☒	
			00:30	BO			49° 00.070	125° 43.870	—	26	-			☐	
			00:35	EN			49° 00.110	125° 43.860			-			☐	
78	LDO2	29	01:03	BE	NET	—	48° 58.352	125° 47.123	43		—	—	KY/JO	☐	Bongo
			01:05	BO			48° 58.346	125° 47.134		38	-			☐	
			01:06	EN			48° 58.342	125° 47.152			-			☐	
79	LDO2	29	01:14	BE	VVP		48° 58.345	125° 47.209	43		—	—	KY/JO	☐	+ L155T
			01:15	BO			48° 58.347	125° 47.210		36	-			☐	
			01:16	EN			48° 58.349	125° 47.213			-			☐	
			:				°	°			-			☐	

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DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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Month Aug			Year 2022			Vessel Tully			Cruise ID 2022-022						
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
80	LD02	29	01:24	BE	RS	US	48°58.360	125°47.210	43		240-245	6	RF	☒	
			01:25	BO			48°58.360	125°47.210		33	-			☐	
			01:32	EN			48°58.360	125°47.230			-			☐	
81	LD03	29	02:01	BE	ROS	-	48°56.690	125°50.380	46		-	-	RF	☐	
			02:02	BO			° .690	° .380		37	-			☐	
			02:03	EN			° .680	° .380			-			☐	
82	LD03	29	02:07	BE	UVP	-	48°56.663	125°50.392	46		-	-	KY/ES	☐	
			02:08	BO			° .660	° .402		36	-			☐	
			02:09	EN			° .	° .			-			☐	Forgot to turn on LISST
			02:10	BE	UVP		48°56.651	125°50.420	46		-			☐	continued..
			02:10	BO			° .646	° .426		36	-			☐	
			02:11	EN			° .634	° .439			-			☐	
83	LD04	29	02:56	BE	UVP		48°53.205	125°56.977	61		-		KY/JO	☐	
			02:57	BO			° .219	° .956		51	-			☐	
			02:58	EN			° .232	° .941			-			☐	
84	LD04	29	03:03	BE	NET		48°53.273	125°56.961	61		-		KY/KS	☐	Bongo
			03:05	BO			° .248	° .951		51	-			☐	
			03:06	EN			° .235	° .946			-			☐	
			.	.			° .	° .			-			☐	

DAILY SCIENCE LOG

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Month			Aug			Year			Vessel			Cruise ID				
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/Fl Cleaned	Comments	
85	LD04	29	03:18	BE	ROS	US	48° 53.107	125° 56.920	61		246-250	5	RF	☒		
			03:20	BO			° .110	° .920		53	-			☐		
			03:27	EN			° .140	° .899			-			☐		
86	LD05	29	04:16	BE	ROS	-	48° 49.686	126° 3.520	89		-	-	KY	☒		
			04:18	BO			48° 49.691	126° 3.511		80	-			☐		
			04:20	EN			48° 49.699	126° 3.509			-			☐		
87	LD06	29	05:08	BE	UVP	-	48° 46.193	126° 10.079	135		-	-	KY	☐	+LSS	
			05:11	BO			48° 46.193	126° 10.060		125	-	8	RF	☐		
			05:13	EN			48° 46.192	126° 10.037			-			☐		
88	LD06	29	05:21	BE	ROS	US	48° 46.250	126° 9.990	136		251-258	8	RF	☐		
			05:24	BO			48° 46.250	126° 9.990		125	-			☐		
			05:36	EN			48° 46.240	126° 10.000			-			☐		
89	LD07	29	06:22	BE	ROS	-	48° 42.617	126° 16.801	474		-	-	KY	☒		
			06:33	BO			48° 42.611	126° 16.800		461	-			☐		
			06:41	EN			48° 42.640	126° 16.787			-	10		☐		
90	LD08	29	07:27	BE	ROS	US	48° 39.380	126° 23.390	755		259-277	19	MB	☒		
			07:41	BO			48° 39.340	126° 23.340		750	-			☐		
			08:15	EN			48° 39.340	126° 23.310			-			☐		
			.	.			° .	° .			-			☐		

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This page is for any notes or observations

EVENT 90
STOPPED UP JUST NORTH OF SN DUE TO FISHING VESSELS CLOSE TO LD08

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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Month		August		Year		2022		Vessel		SP TULY		Cruise ID		2022-022	
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Latitude	Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
91	LDO9	29	09:08	BE	ROS	-	48° 35.710	126° 29.940	1055	1068	-	-	MB	☒	
			09:26	BO			48° 35.690	126° 29.930						☐	
			09:41	EN			48° 35.700	126° 29.970						☐	
92	LDO9	29	09:51	BE	NET	-	48° 35.682	126° 29.999	1054	250	-	-	mic HS	☐	Bowd
			10:01	BO			48° 35.647	126° 30.029						☐	
			10:06	EN			48° 35.640	126° 30.030						☐	
93	LDO9	29	10:16	BE	UVP	-	48° 35.674	126° 30.036	1054		-	-	SS	☐	LIST
			10:21	BO			48° 35.661	126° 30.041		250				☐	
			10:26	EN			48° 35.648	126° 30.047						☐	
94	LDO10	29	11:16	BE	ROS	-	48° 32.220	126° 36.640	1472		-	-	JS	☒	
			11:42	BO			48° 32.200	126° 36.590		1473				☐	
			12:06	EN			48° 32.180	126° 36.580						☐	
95	LDO11	29	12:55	BE	ROS	US	48° 28.770	126° 42.910	1590		278-301	24	MB	☒	
			13:31	BO			48° 28.730	126° 42.940		1599				☐	
			14:16	EN			48° 28.71	126° 42.83						☐	
96	LDO11	29	14:28	BE	NET		48° 28.706	126° 42.833	1596		-	-	JS	☐	Bowd
			14:38	BO			48° 28.623	126° 42.846		250				☐	
			14:42	EN			48° 28.683	126° 42.852						☐	
			:				°	°						☐	

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

Time Code:
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 RE = Recover Mooring Time

Notes:

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Month			August		Year		2022		Vessel		LP TULLY		Cruise ID		2022-022	
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	
97	LD11	29	14:54	BE	NET	/	48° 28' .698	126° 42' .879	1595		/	1	JS	☐	☐	Bongo
			15:35	BO			48° 28' .614	126° 42' .910		1200	-			☐	☐	
			15:56	EN			48° 28' .868	126° 42' .877			-			☐	☐	
98	LD11	29	16:10	BE	UVP	-	48° 28' .518	126° 42' .874	1606		-		JS	☐	☐	
			16:15	BO			48° 28' .498	126° 42' .906		250	-			☐	☐	
			16:20	EN			48° 28' .482	126° 42' .884			-			☐	☐	
99	LG09	29	17:10	BE			48° 32' .948	126° 49' .654	1976	5	5099	0	MB	☐	☐	2-CHL 1-SAL NMR
100	LG09	29	20:18	BE	NET		48° 51' .207	127° 19' .383	2056		-		KY/SD	☐	☐	Bongo for Liam
			20:27	BO			° .160	° .349		260	-			☐	☐	
			20:31	EN			° .160	° .348			-			☐	☐	
101	LG09	29	20:39	BE	NET		48° 51' .162	127° 19' .345	2056		-		KY/SD	☐	☐	Bongo
			20:47	BO			° .151	° .353		250	-			☐	☐	
			20:51	EN			° .154	° .337			-			☐	☐	
102	LG09	29	20:59	BE	NET		48° 51' .172	127° 19' .313	2056		-		KY/SD	☐	☐	Bongo
			21:43	BO			° .168	° .327		1200	-			☐	☐	
			22:03	EN			° .149	° .297			-			☐	☐	
103	LG09	29	22:13	BE	UVP		48° 51' .182	127° 19' .352	2056		-		KY/SD	☐	☐	Reset config
			22:18	BO			° .172	° .293		250	-			☐	☐	for USST startup
			22:22	EN			° .159	° .242			-			☐	☐	to switch

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Time Code:
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Notes:

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Month		August		Year		2022		Vessel			JP Tully		Cruise ID				2022-022	
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		
104	LG09	29	22:33	BE	ROS	US	48° 51.101	127° 19.219	2055	/	2004	302 - 311	10	BM	☒			
			23:06	BO			48° 51.100	127° 19.230	/			-			☐			
			23:50	EM			48° 51.090	127° 19.250				-			☐			
105	LG08	30	20:42	BE	ROS	/	48° 55.272	127° 13.350	2061			/	-	RF	☒			
			21:15	BO			48° 55.276	127° 13.364		2005		-			☐			
			01:48	EN			48° 55.237	127° 13.349				-			☐			
106	LG07	30	02:35	BE	NET		48° 59.361	127° 7.242	1756			-		KY/SD	☐	Bongo		
			02:44	BO			48° 59.397	° 251		250		-			☐			
			02:49	EN			° 410	° 259				-			☐			
107	LG07	30	02:56	BE	UNP	US	48° 59.416	127° 7.195	1755			312 - 331	20	KY/SD	☒	+ LSSST		
			03:01	BO			° 414	° 205		250		-			☐			
			03:05	EN			° 407	° 201				-			☐			
108	LG07	30	03:13	BE	ROS	US	48° 59.390	127° 7.198	1755			312 - 331	20	RF	☒	fired a bottle →		
			03:43	BO			° 390	° 210				-			☐			
			04:13	EN			° 59.400	° 7.270				-			☐			
109	LG06	30	05:05	BE	ROS	US	49° 3.470	127° 1.171	963			312 - 331	20	RF	☒			
			05:20	BO			49° 3.440	127° 1.200		969		-			☐			
			05:56	EN			49° 3.500	127° 1.180				-			☐			
			:				°	°				-			☐			

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Notes:

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→ but by accident, no samples taken

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Month Aug			Year 2022			Vessel Tully			Cruise ID 2022-022						
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/Fl Cleaned	Comments
110	L605	30	06:45	BE	ROS	-	49° 7.290	126° 55.440	285		-	-	KY/MB	☒	
			06:50	BO			49° 7.290	126° 55.440		276	-			☐	
			06:55	EN			49° 7.290	126° 55.440			-			☐	
111	L604	30	07:44	BE	ROS	US	49° 11.294	126° 49.410	145		-		MB	☒	ROSENE CAME OUT
			07:47	BO			49° 11.297	126° 49.390		136	332 - 340	9		☐	OF WATER BEFORE
			08:01	EN			49° 11.293	126° 49.466			-			☐	CONJUG DOWN.
112	L604	30	08:09	BE	UNP	-	49° 11.285	126° 49.399	145		-	-	JS	☐	+ LUSST
			08:12	BO			49° 11.283	126° 49.406		135	-			☐	
			08:15	EN			49° 11.284	126° 49.407			-			☐	
113	L604	30	08:24	BE	NET	/	49° 11.271	126° 49.375	140		-	-	JS/MB	☐	Bongo
			08:30	BO			49° 11.298	126° 49.378		135	-			☐	
			08:34	EN			49° 11.280	126° 49.387			-			☐	
114	L603	30	09:21	BE	ROS	-	49° 14.960	126° 43.680	125		-	-	MB	☒	
			09:23	BO			49° 14.970	126° 43.680		115	-			☐	
			09:25	EN			49° 14.980	126° 43.700			-			☐	
115	L602	30	10:09	BE	ROS	US	49° 18.690	126° 38.070	100		341 - 357	17	MB	☒	Macro COMPLETELY
			10:11	BO			49° 18.700	126° 38.090		91	-			☐	ROSENE WROTE ON
			10:23	EN			49° 18.700	126° 38.110			-			☐	THE HPEC BOTTLE STAGE
			:				°	°			-			☐	

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OCEAN SCIENCE LOG															
Month			Year			Vessel			Cruise ID			2022-002			
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							
116	L602	30	10:33	BE	NET	-	49° 18' . 713	126° 38' . 092	100	90	-	-	JJ	☐	Bongo
			10:37	BO			49° 18' . 717	126° 38' . 105			-	-		☐	
			10:39	GO			49° 18' . 722	126° 38' . 108			-	-		☐	
117	L602	30	10:49	BE	NET	-	49° 18' . 715	126° 38' . 126	100	90	-	-	JJ	☐	Bongo
			10:53	BO			49° 18' . 718	126° 38' . 161			-	-		☐	
			10:56	EN			49° 19' . 712	126° 38' . 174			-	-	JJ	☐	4155T
118	L602	30	11:05	BE	UVI		49° 18' . 745	126° 38' . 197	106	90	-	-		☐	
			11:07	BO			49° 18' . 748	126° 38' . 200			-	-		☐	
			11:10	EN			49° 18' . 738	126° 38' . 196			-	-		☒	
119	L601	30	11:39	BE	ROS	US	49° 20' . 510	126° 35' . 090	53	45	358-363	6	JJ	☐	
			11:40	BO			49° 20' . 500	126° 35' . 100			-	-		☐	
			11:50	GO			49° 20' . 490	126° 35' . 150			-	-		☐	
120	L602	30	18:11	BE	Loop	-	49° 35' . 444	127° 27' . 985	728	5	5120	0	MS	☐	Loop time 2004-12-31 Bongo for Liam
121	LBP8	30	18:56	BE	NET	-	49° 48' . 597	128° 16' . 734	2072		-	-	KYJP	☐	
			19:05	BO			° . 569	° . 754		250	-	-		☐	
			19:09	EN			° . 584	° . 732			-	-		☐	
122	LBP8	30	19:17	BE	NET	-	49° 48' . 567	128° 16' . 755	2072		-	-	KYJP	☐	Bongo
			19:25	BO			° . 547	° . 759		250	-	-		☐	
			19:29	EN			° . 547	° . 793			-	-		☐	
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SET = Fish Set

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

Time Code:
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Notes:

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LOOP = Sea Water Loop
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Time Code:
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MR = Messenger Release Time
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Month			August		Year		2022		Vessel		JP Tully		Cruise ID		2022-022	
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
123	LBP8	30	19:35	BE	NET			49°48.562	128°16.820	2072		-	-	KY/SD	□□	Bongo
			20:14	BO				49°48.543	128°16.778		1200	-			□□	
			20:35	EN				49°48.561	128°16.819			-			□□	
124	LBP8	30	20:43	BE	UVP			49°48.572	128°16.819	2073		-	-	KY/SD	□□	
			20:48	BO				49°48.564	128°16.810		250	-			□□	
			20:52	EN				49°48.568	128°16.824			-			□□	
125	LBP8	30	21:01	BE	ROS	US		49°48.574	128°16.850	2072		364-373	10	RF	□□	
			21:33	BO				49°48.578	128°16.780		2005	-			□□	
			22:16	EN				49°48.532	128°16.751			-			□□	
126	LBP7	30	23:02	BE	UVP	-		49°52.343	128°11.148	2187		-	-		□□	
			23:07	BO				° 350	° 163		250	-			□□	
			23:12	EN				° 343	° 141			-			□□	
127	LBP7		23:18	BE	NET			49°52.317	128°11.190	2180		-			□□	Bongo
			23:26	BO				° 319	° 144		250	-			□□	
			23:30	EN				° 313	° 131			-			□□	
128	LBP7	30	23:42	BE	ROS			49°52.345	128°11.111	2191		374-394	21	RF	□□	
		31	0:16	BO				° 52.331	° 11.137		7005	-			□□	
			01:12	EN				° 310	° 174			-			□□	
			:					°	°			-			□□	

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Month Aug			Year 2022			Vessel Tully			Cruise ID 2022-022						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Positional Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
129	LBP6	31	02:04	BE	ROS	—	49° 56.130	128° 55.569	805		—	—	RF	☒	
			02:18	BO			° .130	° .630		840				☐	
			02:33	EN			° .150	° .590						☐	
130	LBP5	31	03:18	BE	NET	—	49° 59.973	128° 0.151	1285		—	—	KY/JD	☐	
			03:27	BO			° .980	° .092		250				☐	
			03:32	EN			° .985	° .0900						☐	
131	LBP5	31	03:39	BE	UVF		50° 00.000	128° 0.088	1282		—	—	KY/JD	☐	
			03:44	BO			49° 59.997	° .081		250				☐	
			03:48	EN			50° 00.021	128° 0.076				24		☐	
132	LBP5	31	03:56	BE	ROS	US	50° 0.000	128° 0.040	1282		395-413	19	RF	☒	All bottles fired
			04:19	BO			50° 0.040	127° 59.996		1280				☐	accidentally @
			04:44	EN			50° 0.020	128° 0.050						☐	depth - cast
133	LBP5	31	04:55	BE	ROS	US	49° 59.990	128° 0.000	1280		395-413	19	RF	☐	redone next event
			05:17	BO			° .990	° .000		1280				☐	
			05:59	EN			50° 0.000	127° 59.960						☐	
134	LBP4	31	06:39	BE	ROS	—	50° 1.408	127° 58.010	1054		—	—	KY/m8	☒	P=1052 A=10 D=1040 S=996
			06:57	BO			50° 1.422	127° 57.994		1050				☐	
			07:15	EN			50° 1.426	127° 58.008						☐	
			:				° .	°						☐	

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Month			August		Year		2022		Vessel			JP Tully		Cruise ID			2022-022	
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Positional Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments			
135	LBP3	31	07:44	BC	ROS	US	50° 3' 210	127° 55' 240	165		414 - 432	19	MS	☒				
			07:47	BO			50° 3' 220	127° 55' 250		155	-			☐				
			08:02	EN			50° 3' 250	127° 55' 230			-			☐				
136	LBP3	31	08:13	BC	UNP	-	50° 03' 239	127° 55' 258	163		-	-	JS	☐	+LBSST			
			08:16	BO			50° 03' 241	127° 55' 272		153	-			☐				
			08:19	EN			50° 03' 242	127° 55' 294			-			☐				
137	LBP3	31	08:28	BE	NET	-	50° 03' 232	127° 55' 304	163		-	-	JS	☐	bongo			
			08:34	BO			50° 03' 227	127° 55' 313		153	-			☐				
			08:37	EN			50° 03' 229	127° 55' 303			-			☐				
138	LBP3	31	08:47	BE	NET	-	50° 03' 216	127° 55' 294	165		-	-	JS	☐	bongo			
			08:51	BO			50° 03' 218	127° 55' 289		153	-			☐				
			08:54	EN			50° 03' 219	127° 55' 290			-			☐				
139	LBP2	31	09:13	BC	ROS	-	50° 3' 990	127° 54' 180	99		-	-	MS	☒				
			09:15	BO			50° 3' 990	127° 54' 193		90	-			☐				
			09:16	EN			50° 3' 989	127° 54' 187			-			☐				
140	LBP2	31	09:24	BC	NET	-	50° 3' 982	127° 54' 238	99		-	-	MS	☐	Bongo			
			09:28	BO			50° 3' 979	127° 54' 253		89	-			☐				
			09:30	EN			50° 3' 988	127° 54' 267			-			☐				
			:				° ° °	° ° °			-			☐				

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Month			August			Year		2022		Vessel		JP Tully		Cruise ID			2022-022	
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	1BP2	31	09:39	BE	UMP	-	50° 4' 036	127° 54' 222	97		-	-	JS	☐				
			09:41	BO			50° 4' 037	127° 54' 225		89	-			☐				
			09:43	EW			50° 4' 030	127° 54' 233			-			☐				
142	1BP1	31	10:05	BE	ROS	-	50° 4' 862	127° 52' 774	151		-	-	MB	☒				
			10:05	BO			50° 4' 867	127° 52' 777		40	-			☐				
			10:06	EW			50° 4' 873	127° 52' 781			-			☐				
143	Loop 143	31	11:35	BE	Loop	-	50° 13' 475	127° 05' 579	134	5	5473	-	MB	☐	INNOT Loop 2-CHE IN SAL			
144	CPE2	31	16:12	BE	ROS	-	50° 43' 018	128° 40' 080	122		-	-	MB	☒				
			16:15	BO			50° 43' 020	128° 40' 133		112	-			☐	STOP @ 60 TO			
			16:17	EW			50° 43' 018	128° 40' 144			-			☐	SIRABUNTEN WIRE			
145	CPE2	31	16:25	BE	NET	-	50° 43' 040	128° 40' 167	122		-	-	JS/L	☐				
			16:29				50° 43' 042	128° 40' 177		112	-			☐				
			16:31				50° 43' 046	128° 40' 177			-			☐				
146	Loop 143	31	18:24	BE	ROS	-	50° 39' 730	129° 2' 000	1320		-	-	MB	☐				
			18:45	BO			50° 39' 730	129° 2' 010		1325	-			☐				
			19:06	EW			50° 39' 740	129° 1' 970			-			☐				
147	Loop 143	31	19:13	BE	NET	-	50° 39' 762	129° 1' 996	1280		-	-	KY/JO	☐	Data logging 1000			
			19:21	BO			° 39' 791	° 1' 991		250	-			☐				
			19:25	EW			° 39' 804	° 1' 976			-			☐				

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 US = Up / Stop (default)
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Notes:

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Deleted lines at end of cast. File size decreased from 19mb to 5mb. original file remains renamed to .txt. -RF

DAILY SCIENCE LOG

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Month			Aug / Sept		Year		2022		Vessel		Tully		Cruise ID			2022-022	
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/FI Cleaned	Comments	
148	Loop 148	31	23:14	BE	100P			50° 28.132	129° 53.013	2174	5	- 5148		KS	☐	Ind. 2 chl / sel	
149	CSØØ	31	23:37	BE	NET	UN		50° 27.647	129° 54.982	2174		-		KY/KS	☐	V-MPS	
		1	0:59	BO				50° 27.679	129° 54.923		2105	-	-	SD/MM	☐	Big Jelly 1500-1800m	
			01:42	EN				50° 27.675	129° 54.938			-			☐		
150	CSØØ	1	02:01	BE	ROS	US		50° 27.670	129° 54.940	2173		433-454	22	RF	☒		
			02:35	BO				° .670	° .990		2005	-			☐		
			03:33	EN				° .650	129° 55.010			-			☐		
151	CSØØ	1	03:41	BE	NET			50° 27.664	129° 54.972	2172		-		KY/ID	☐	Bongo	
			03:50	BO				50° 27.666	129° 55.023		250	-			☐		
			03:54	EN				° .670	° .025			-			☐		
152	CSØ1	1	05:16	BE	ROS			50° 34.918	129° 41.660	2105		-		MM	☒		
			05:51	BO				50° 34.940	129° 41.650		2005	-			☐		
			06:25	EN				50° 34.930	129° 41.720			-			☐		
153	CSØ1	1	06:36	BE	NET			50° 34.929	129° 41.646	2103		-		KY	☐		
			06:44	BO		-		50° 34.956	129° 41.747		270	-			☐		
			06:49	EN				50° 34.963	129° 41.730			-			☐		
154	CSØ1	1	06:57	BE	UNP			50° 34.988	129° 41.738	2102		-		JS	☐		
			07:01	BO				50° 34.997	129° 41.743		250	-			☐		
			07:06	EN				50° 35.007	129° 41.753			-			☐		

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Month	Station Name	Day	Time (UTC)	Year	Vessel	Cruise ID	Event Type	Firing Method	Positional Information	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl	Cleaned	Comments
155	CS01	1	0:13	2022	JP TLLV	2022-022	DRF	-	50° 35' 039" N 129° 41' 728" W	2102	Ø	-	-	MS	□	□	DRF #1475-1476
156	CS02	1	08:35	2022	JP TLLV	2022-022	ROS	US	50° 41' 341" N 129° 28' 092" W	1900	1909	455-478	24	MS	□	□	DRF #1475-1476
			09:08	2022	JP TLLV	2022-022			50° 41' 440" N 129° 27' 970" W						□	□	
			10:06	2022	JP TLLV	2022-022			50° 41' 500" N 129° 27' 780" W						□	□	
157	CS02	1	10:17	2022	JP TLLV	2022-022	UVP	-	50° 41' 506" N 129° 27' 740" W	1893		-	-	JS	□	□	+USST
			10:22	2022	JP TLLV	2022-022	BO		50° 41' 507" N 129° 27' 725" W		250	-	-		□	□	
			10:25	2022	JP TLLV	2022-022	EN		50° 41' 482" N 129° 27' 746" W			-	-		□	□	
158	CS02	1	10:34	2022	JP TLLV	2022-022	NET	-	50° 41' 482" N 129° 27' 746" W	1895		-	-	JS	□	□	bongo
			10:43	2022	JP TLLV	2022-022	BO		50° 41' 476" N 129° 27' 757" W		250	-	-		□	□	
			10:49	2022	JP TLLV	2022-022	EN		50° 41' 482" N 129° 27' 749" W			-	-		□	□	
159	CS02	1	10:59	2022	JP TLLV	2022-022	NET	-	50° 41' 474" N 129° 27' 763" W	1896		-	-	JS	□	□	bongo
			11:08	2022	JP TLLV	2022-022	BO		50° 41' 468" N 129° 27' 736" W		250	-	-		□	□	
			11:12	2022	JP TLLV	2022-022	EN		50° 41' 464" N 129° 27' 724" W			-	-		□	□	
160	CS02	1	11:20	2022	JP TLLV	2022-022	DRF	-	50° 41' 462" N 129° 27' 721" W	1899	Ø	-	-	MS	□	□	DRF #1475-1476
161	CS03	1	12:10	2022	JP TLLV	2022-022	ROS	-	50° 45' 590" N 129° 19' 908" W	218		-	-	MS	□	□	DRF #1361-1471
			12:14	2022	JP TLLV	2022-022			50° 45' 583" N 129° 19' 898" W		220	-	-		□	□	
			12:18	2022	JP TLLV	2022-022	EN		50° 45' 575" N 129° 19' 912" W			-	-		□	□	
				2022	JP TLLV	2022-022			50° 45' 575" N 129° 19' 912" W			-	-		□	□	

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Notes:

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→ SOME SUCCESSFUL, OTHERS WERE UNCLEED. OK FOR LIAM.

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Month		September		Year		2022		Vessel		KP TULLY		Cruise ID		2022-082			
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information		Information		Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
162	CS03	1	12:25	BE	NET	-	50° 45' 57.9	129° 19' 9.33		721			-	-	JS	☐	
			12:34	BO			50° 45' 56.0	129° 18' 9.84				213	-			☐	
			12:38	GN			50° 45' 54.6	129° 19' 9.67					-			☐	
163	CS03	1	12:42	DE	DRF	-	50° 45' 52.1	129° 20' 0.0		221		-	-	-	MS	☐	DRF #1404 & #1306
164	CS04	1	13:38	BE	ROS	US	50° 49' 16.0	129° 13' 0.90		99			479-487	9	MS	☐	
			13:39	BO			50° 49' 16.0	129° 13' 1.00				95	-			☐	
			13:51	GN			50° 49' 17.0	129° 13' 2.20					-			☐	
165	CS04	1	13:59	BE	NET		50° 49' 19.8	129° 13' 1.50		96			-		JS	☐	long
			14:02	BO			50° 49' 20.9	129° 13' 1.46				86	-			☐	
			14:04	EN			50° 49' 22.0	129° 13' 1.48					-			☐	
166	CS04	1	14:15	BE	UVP		50° 49' 22.6	129° 13' 0.85		96			-		JS	☐	
			14:17	BO			50° 49' 22.8	129° 13' 0.90				86	-			☐	
			14:18	EN			50° 49' 22.6	129° 13' 0.89					-			☐	
167	CS04	1	14:23	DE	DRF	-	50° 49' 22.7	129° 13' 0.56		96		-	-	-	MS	☐	DRF #1257 & #1472
168	NEW00AS	1	17:50	BE	ROS	-	50° 56' 36.0	129° 58' 8.60		2107			-	-	MS	☒	
			18:23	BO			50° 56' 38.0	129° 58' 7.80				2005	-			☐	
			18:52	GN			50° 56' 42.0	129° 58' 7.40					-			☐	
			:				50° 56' 42.0	129° 58' 7.40					-			☐	
			:				50° 56' 42.0	129° 58' 7.40					-			☐	

DAILY SCIENCE LOG

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Month			September		Year		2022		Vessel			JP TUV		Cruise ID			2022-022	
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			
169	NEW OAS	1	18:58	BE	NET		50° 56' 421	129° 58' 733	2105		-	-	JDKS	☐	Bongo			
			19:07	BO			50° 56' 393	129° 58' 704		250	-	-		☐				
			19:12	EN			50° 56' 381	129° 58' 671			-	-		☐				
170	CS3B	1	21:42	BE	ROS	-	51° 0' 030	129° 26' 980	220		-	-	RF	☒	Logging lepton...			
			21:46	BO			51° 0' 032	129° 26' 980		213	-	-		☐	file needs trimming			
			21:50	EN			51° 0' 040	129° 26' 990			-	-		☐				
171	CS3B	1	21:58	BE	NET	-	51° 0' 036	129° 26' 983	220		-	-	K4/DO	☐	Bongo			
			22:06	BO			51° 0' 016	129° 26' 995		210	-	-		☐				
			22:09	EN			51° 0' 017	129° 26' 990			-	-		☐				
172	CS3B	1	22:16	BE	UVP	-	51° 0' 041	129° 26' 978	220		-	-	K4/DO	☐				
			22:20	BO			51° 0' 042	129° 26' 954		210	-	-		☐				
			22:24	EN			51° 0' 049	129° 26' 976			-	-		☐				
173	CS05	2	00:35	BE	ROS	-	50° 56' 000	128° 59' 980	65		-	-	1111	☒				
			00:36	BO			50° 55' 990	128° 59' 990		55	-	-		☐				
			00:38	EN			50° 55' 990	128° 59' 990			-	-		☐				
174	CS05	2	00:42	BE	NET	-	50° 55' 981	129° 00' 01	65		-	-		☐	Bongo			
			00:46	BO			50° 55' 981	129° 00' 01		55	-	-	K4/MM	☐	59m of wire out			
			00:47	EN			50° 55' 981	129° 00' 01			-	-		☐				
			:				50° 55' 981	129° 00' 01			-	-		☐				

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Notes:

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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Month <i>Aug</i> <i>SEPT</i>			Year <i>2022</i>		Vessel <i>Tully</i>			Cruise ID <i>2022-022</i>							
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
175	CS1B	2	02:28	BE	ROS		50°53.008	128°39.960	73	—	-		MM	☒	
			02:30	BO			50°53.000	128°39.980	—	63	-			☐	
			02:32	EN			50°52.990	128°40.010			-			☐	
176	CS1B	2	02:40	BE	NET		50°52.963	128°40.074	72		-		KY/SD	☐	Bongo
			02:43	BO			° .958	° .049		67	-			☐	
			02:46	EN			° .946	° .055			-			☐	
177	CS1B	2	02:51	BE	UVP		50°52.974	128°40.093	71		-		KY/AD	☐	41551
			02:53	BO			° .970	° .123		62	-			☐	
			02:54	EN			° .967	° .144			-			☐	
178	CS06	2	04:13	BE	ROS	US	51°0.040	128°52.040	64	—	488-500	13	MM	☒	
			04:14	BO			51°0.050	128°52.040	—	60	-			☐	
			04:26	EN			° .060	° .080			-			☐	
179	CS06	2	04:32	BE	NET		51°0.044	128°52.064	64		-		KY/AD	☐	Bongo
			04:37	BO			° .052	° .088		62	-			☐	
			04:38	EN			° .061	° .113			-			☐	
180	CS07	2	05:32	BE	ROS	—	51°4.600	128°43.900	63		—	—	RF	☐	
			05:34	BO			° .600	° .890		55	-			☐	
			05:35	EN			° .610	° .890			-			☐	
			:				° .	° .			-			☐	

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Month	Year	Vessel	Cruise ID	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/Fl Cleaned	Comments
181	2022	1807	2022072	2	CS07	2	05:42	BE	NET	—	51° 04.565' N 128° 43.949' W	63		—	—	RYSD	☐	Bongo
							05:44	BO			° 570		54	-			☐	
							05:45	EN			° 566			-			☐	
182				2	CS07	2	05:51	BE	UVP		51° 04.557' N 128° 43.940' W	63		—	—		☐	+ 1455
							05:53	BO			° 563		54	-			☐	
							05:54	EN			° 570			-			☐	
183				2	CS08	2	06:47	BE	ROS	—	51° 8.450' N 128° 36.103' W	140		—	—		☒	
							06:50	BO			51° 8.471' N 128° 36.070' W		131	-			☐	
							06:52	EN			51° 8.472' N 128° 36.050' W			-			☐	
184				2	CS08	2	07:00	BE	NET	-	51° 8.476' N 128° 36.042' W	140		—	—		☐	Bongo
							07:06	BO			51° 8.491' N 128° 36.048' W		131	-			☐	
								EN			51° 8.491' N 128° 36.048' W			-			☐	
185				2	CS09	2	08:06	BE	ROS	-	51° 12.500' N 128° 28.010' W	193		501	—		☒	
							08:09	BO			51° 12.490' N 128° 28.010' W		189	-			☐	
							08:28	EN			51° 12.480' N 128° 28.010' W			-			☐	
186				2	CS09	2	08:34	BE	NET		51° 12.472' N 128° 27.962' W	194		—	—		☐	bongo
							08:42	BO			51° 12.449' N 128° 27.973' W		184	-			☐	
							08:46	EN			51° 12.439' N 128° 27.975' W			-			☐	
								EN			°			-			☐	

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DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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Month	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Positional Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
SEP 2022	CS09	2	08:54	BE	ABT	/	51° 12.386	128° 27.975	195		-	-	JS	☐	Bongo
			09:01	BO			51° 12.364	128° 27.988		184	-			☐	
			09:05	EN			51° 12.358	128° 27.991			-			☐	
188	CS09	2	09:14	BE	UVP	/	51° 12.309	128° 27.940	194		-	-	TS	☐	+L155T
			09:17	BO			51° 12.293	128° 27.916		184	-			☐	
			09:21	EN			51° 12.284	128° 27.711			-			☐	
189	CS09	2	09:24	DE	DRF	-	51° 12.267	128° 27.902	194	02	-	-	MR	☐	DRF 1468 § 1461
190	CS10	2	10:15	BE	ROS	-	51° 16.510	128° 19.996	80		-	-	MR/MR	☒	
			10:17	BO			51° 16.51	128° 19.997		71	-			☐	
			10:19	EN			51° 16.51	128° 19.997			-			☐	
191	CS10	2	10:25	BE	UVP	-	51° 16.510	128° 19.976	80		-	-	JS/MR	☐	NO L155T - Facor to Turnover
			10:29	BO			51° 16.508	128° 19.978		70	-			☐	
			10:32	EN			51° 16.509	128° 19.984			-			☐	
192	CS10	2	10:37	BE	NET	/	51° 16.509	128° 19.993	80		-	-	JS/MR	☐	Bongo
			10:40	BO			51° 16.507	128° 20.002		70	-			☐	
			10:42	EN			51° 16.505	128° 20.003			-			☐	
193	SSS	2	12:18	BE	ROS	US	51° 27.991	128° 29.970	701		573-524	5	MR	☒	out of reach
			12:21	BO			51° 27.989	128° 29.977		172	-			☐	
			12:28	EN			51° 27.980	128° 29.940			-			☐	

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DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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Month			SEPTEMBER		Year		2022		Vessel		JP TULLY		Cruise ID		2022002	
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/Fl Cleaned	Comments	
194	SS5	2	12:34	BE	NET	/	51° 27.974	128° 29.952	201		-		JS	☐	Bongo	
			12:41	BO			° 27.961	° 29.935		191	-			☐		
			12:45	EN			° 27.955	° 29.945			-			☐		
195	SS7	2	16:06	BE	ROS	-	51° 24.623	127° 47.460	124		525	1	MS	☒	Fired 1 Bottle	
			16:08	BO			51° 24.626	127° 47.444		115	-			☐	@ 5m for Uvic	
			16:12	GN			51° 24.636	127° 47.430			-			☐		
196	SS7	2	16:18	BE	NET	-	51° 24.634	127° 47.425	124		-	-	JS	☐	Bongo	
			16:22	BO			51° 24.639	127° 47.448		114	-			☐		
			16:24	GN			51° 24.642	127° 47.449			-			☐		
197	SS6	2	17:41	BE	ROS	-	51° 20.010	128° 0.050	177		-	-	MS	☒		
			17:44	BO			51° 20.020	128° 0.060		168	-			☐		
			17:47	GN			51° 20.020	128° 0.050			-			☐		
198	SS6	2	17:53	BE	NET	-	51° 20.027	128° 0.044	177		-	-	JS	☐	Bongo	
			17:58	BO			51° 20.026	128° 0.040		167	-			☐		
			18:02	GN			51° 20.028	128° 0.033			-			☐		
199	CPE1	2	20:42	BE	ROS	/	51° 0.050	127° 50.036	190		-	-	RF	☒		
		-	20:44	BO			° 0.043	° 0.030		131	-			☐		
			20:47	EN			° 0.041	° 0.040			-			☐		
			:				°	°			-			☐		

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

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Month			Sept		Year			2022		Vessel			Tully		Cruise ID			2022-022		
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/Fl Cleaned	Comments					
200	CPE1	12	20:51	BE	NET	✓	81° 0.0410	127° 50.027	141		-		KYJD	□□	Bongo					
			20:56	BO			° .039	° .013		131	-			□□						
		14	20:58	EN			° .035	° .008			-			□□						
201	CPE1	2	21:08	BE	UVP	✓	51° 0.029	127° 49.995	144		-		KYJD	□□	+Lissy					
			21:11	BO			° .029	° .986		134	-			□□						
			21:13	EN			° .025	° .980			-			□□						
202	CPE1	2	21:19	DE	DRF	✓	50° 59.945	127° 48.824	157		-		KY/MM	□□	1368, 1363					
203	Loop 203	3	00:56	BE	Loop	✓	50° 46.5051	127° 00.5495	330		5203	1	RP/MM	□□						
204	JS01	3	03:57	BE	ROS	US	50° 30.320	126° 27.930	373	✓	526-537	12	RP/MM	□□	→					
			04:03	BO			50° 30.340	126° 27.960	✓	370	-			□□						
			04:24	EN			50° 30.380	126° 28.070			-			□□						
205	JS01	3	04:30	BE	NET	✓	50° 30.327	126° 28.101	375		-		KYJD	□□						
			04:39	BO			50° 30.319	126° 28.147		250	-			□□						
			04:43				50° 30.318	126° 28.167			-			□□						
206	Loop 206	3	11:53	BE	Loop	✓	50° 06.901	125° 19.005	107	5	5206	-	MB/MM	□□	Loop 2-500 1-500					
207	12	3	14:45	BE	ROS	US	49° 43.600	124° 40.750	354		538-551	14	MB	□□	RBR BACK ON					
			14:52	BO			49° 43.600	124° 40.750		345	-			□□						
			15:16	EN			49° 43.590	124° 40.780			-			□□						
			:				° .	° .			-			□□						

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

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RBR instrument was removed during this east-far data download & battery checkup. -RF

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Month September			Year 2022		Vessel JPTULLY		Cruise ID 2022082							
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
208	12	3	15:21	BE	NET	/	49° 43.590 124° 40.788	354		-		JS	☐	Bongo
			15:35	BO			49° 43.494 124° 40.793		344	-			☐	
			15:41	EN			49° 43.593 124° 40.807			-			☐	
209	12	3	15:49	BE	NET		49° 43.592 124° 40.820	354		-		JS	☐	Bongo
			16:02	BO			49° 43.595 124° 40.817		344	-			☐	
			16:08	EN			49° 43.583 124° 40.856			-			☐	
210	12	3	16:17	BE	UVP	-	49° 43.587 124° 40.863	354		-		JS	☐	+ LUSST
			16:23	BO			49° 43.596 124° 40.866		344	-			☐	
			16:29	EN			49° 43.556 124° 40.876			-			☐	
211	CPF2	3	18:39	BE	ROS	US	49° 28.100 124° 30.030	324		552-555	4	RF/MG	☒	
			18:44	BO			° ° .070		316	-			☐	
			18:55	EN			° ° .060			-			☐	
212	CPF2	3	19:04	BE	UVP	-	49° 28.124 124° 30.119	324		-		KY/JO	☐	+ LUSST
			19:10	BO			49° 28.123 124° 30.113		314	-			☐	
			19:14	EN			49° 28.118 124° 30.126			-			☐	
213	CPF2	3	19:21	BE	NET	-	49° 28.114 124° 30.123	325		-		KY/JO	☐	Bongo
			19:32	BO			49° 28.113 124° 30.138		314	-			☐	
			19:37	EN			49° 28.105 124° 30.128			-			☐	
			:				° ° .			-			☐	Note on log →

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Notes:

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This page is for any notes or observations

19:55 loop pumping leaking so shut down pump (pressure too high?)

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Month			Year			Vessel			Cruise ID						
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/Fl Cleaned	Comments
214	CPE1	3	21:57	BE	ROS	US	49° 22.010	124° 4.990	245	—	556-559	4	MM/RF	☒	
			21:01	BO			49° 22.000	124° 4.990	—	235	-			☐	
			22:11	EN			49° 22.000	124° 4.950			-			☐	
215	CPE1	3	22:15	BE	NET		49° 21.994	124° 4.955	245		-		KY/SD	☐	Bongo
			22:24	BO			° .994	° .959		235	-			☐	
			22:28	EN			° .989	° .953			-			☐	
216	CPE1	3	22:35	BE	UVP		49° 22.000	124° 4.981	245		-		KY/SD	☐	
			22:39	BO			49° 21.999	124° 4.980		235	-			☐	
			22:44	EN			° .999	° .970			-			☐	
217	24	3	23:47	BE	ROS	US	49° 30.420	124° 6.020	425	425	560-563	4	RF/HM	☒	
			23:54	BO			49° 30.420	124° 6.010	4	417	-			☐	
		4	00:07	EN			49° 30.470	124° 6.030			-			☐	
218	24	4	00:13	BE	UVP		49° 30.404	124° 5.977	424		-		KY/SD	☐	
			00:21	BO			49° 30.412	124° 5.975		414	-		KS	☐	
			00:30	EN			49° 30.418	124° 5.990			-			☐	
219	24	4	00:35	BE	NET		49° 30.423	124° 5.990	424		-		JD/KS	☐	Bongo
			00:48	BO			49° 30.428	124° 6.002		414	-			☐	
			00:55	EN			49° 30.431	124° 6.002			-			☐	
			:				° .	° .			-			☐	

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Notes:

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month Sept			Year 2022		Vessel Tully			Cruise ID 2022-022							
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Positional Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
220	22	4	02:21	BE	ROS	US	49° 40.320	124° 16.460	354		-		RF	☒	
			02:28	BO			° 330	° 510		350	-			☐	
			02:39	EN			° 370	° 560			-			☐	
221	22	4	02:46	BE	NET		49° 40.301	124° 16.425	356		-		KY/SD	☐	
			02:58	BO			° 283	° 427		346	-			☐	
			03:04	EN			° 283	° 426			-			☐	
222	22	4	03:11	BE	UVP		49° 40.227	124° 16.370	352		-		KS/SD	☐	
			03:17	BO			° 216	° 378		342	-			☐	
			03:22	EN			° 223	° 377			-			☐	
223	28	4	06:22	BE	ROS	US	49° 24.152	123° 45.388	135		568-5712	45	RF	☒	Added surface N ₂ for bioassay, labeled
			06:24	BO			° 149	° 385		126	-			☐	as 9572
			06:32	EN			° 139	° 378			-			☐	
224	28	4	06:38	BE	UVP		49° 24.124	123° 45.360	135		-		KY/SD	☐	
			06:41	BO			49° 24.111	123° 45.346		125	-			☐	
			06:44	EN			49° 24.093	123° 45.310			-			☐	
225	28	4	06:49	BE	NET		49° 24.090	123° 45.286	136		-		KY/SD	☐	Bongo
			06:55	BO			49° 24.088	123° 45.267		125	-			☐	
			06:57	EN			49° 24.081	123° 45.262			-			☐	
			:				°	°			-			☐	

DAILY SCIENCE LOG

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Month			September			Year		2022		Vessel		JP TULLY		Cruise ID		2022-022	
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	Trm	Chk		
226	GEO1	4	08:13	BE	ROS	US	49° 15' .000	123° 45' .030	402		572-580	9	MB	☒			
			08:20	BO			49° 14' .990	123° 45' .020		393	-			☐			
			08:40	EN			49° 15' .000	123° 45' .020			-			☐			
227	GEO1	4	08:47	BE	NET	-	49° 14' .990	123° 45' .022	401		-	-	JS/HG	☐			
			09:03	BO			49° 15' .001	123° 45' .022		396	-			☐			
			09:10	EN			49° 15' .006	123° 45' .016			-			☐			
228	GEO1	4	09:17	BE	NET	-	49° 15' .009	123° 45' .004	401		-	-	MB/JS/HG	☐			
			09:27	BO			49° 15' .007	123° 45' .005		250	-			☐			
			09:32	EN			49° 15' .011	123° 45' .014			-			☐			
229	GEO1	4	09:39	BE	UVP		49° 15' .017	123° 45' .015	401		-		TS	☐			
			09:47	BO			49° 15' .020	123° 44' .985		396	-			☐			
			09:54	EN			49° 15' .016	123° 44' .972			-			☐			
230	GEO1	4	10:07	BE	MIPS	UN	49° 15' .023	123° 44' .971	401		-		MG	☐			
			10:21	BO			49° 15' .035	123° 44' .895		390	-			☐			
			10:28	EN			49° 15' .027	123° 44' .872			-			☐			
231	42	4	12:44		ROS	US	49° 1' .090	123° 26' .100	391		581-585	5	MB	☒			
			12:50				49° 1' .090	123° 26' .150		310	-			☐			
			13:03				49° 1' .090	123° 26' .120			-			☐			
			:				°	°			-			☐			

Event Type:		Bottle Firing Method:		Time Code:		CTD Transmissometer and Fluorometer to be cleaned before each cast			
BOT = Bottle cast (no CTD)	LOOP = Sea Water Loop	US = Up / Stop (default)	BE = Beginning Time of Cast	DE = Deployment Time	MR = Messenger Release Time				
CTD = Standalone CTD	MOR = Mooring	UN = Up / No stop	BO = Bottom Time of Cast	MR = Messenger Release Time	RE = Recover Mooring Time				
ROS = CTD in Rosette	NET = Plankton Net Haul	DN = Down / No stop	EN = End Time of Cast						
SET = Fish Set	DRF = Drifter								

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