DAILY SCIENCE LOG BOOK

MISSION NUMBER 2024-020

DATE:

VESSEL: J.P. Tully

PROJECT(S): La Perouse

From: 03 Sep 2024 To: 14 Sep 2024

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

35 Page Logbook

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35 Page Logbook

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DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month September **Year** 2024 **Vessel** JP TULLY **Cruise ID** 2024-020

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
1	SI05	4	20:50	BE	NET	/	48°39.208	123°30.002	176		/	/	MG	☐☐	BONGO TEST
			20:56	BO			48°39.219	123°29.986		166	-			☐☐	NO CTD CAST
			20:59	EN			48°39.219	123°29.987		166	-			☐☐	LABS RETERMINATE
2	LB01	5	09:41	BE	ROS	US	48°40.371	124°59.475	37	32	1 - 5		SK	☑☑	FIRST CTD CAST
			09:45	BO			48°40.359	124°59.484		32	-			☐☐	SNAPPED ALL BOTTLES FOR TEST
			09:55	EN			48°40.390	124°59.511			-			☐☐	
3	LB02	5	10:41	BE	ROS	US	48°39.021	125°2.428	56		6 - 12		SK	☑☑	
			10:43	BO			48°39.025	125°2.427		48	-			☐☐	
			10:56	EN			48°39.041	125°2.426			-			☐☐	
4	LB03	5	11:30	BE	ROS	US	48°37.313	125°5.611	94		13 - 13		SK	☑☑	
			11:32	BO			48°37.312	125°5.609	94	86	-			☐☐	
			11:36	EN			48°37.306	125°5.605			-			☐☐	
5	LB04	5	12:07	BE	ROS	US	48°35.638	125°8.738	112		14 - 20		SK	☑☑	
			12:09	BO			48°35.652	125°8.755		103	-			☐☐	
			12:23	EN			48°35.647	125°8.705			-			☐☐	
6	E1		13:11	BE	ROS	/	48°31.701	125°3.815	115		-		SK	☑☑	
			13:14	BO			48°31.692	125°3.836		108	/			☐☐	
			13:16	EN			48°31.689	125°3.851			-			☐☐	
			:				° .	° .			-			☐☐	

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

Notes: _____

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Version: 17 Feb 2020

e-log ✓

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month Sep **Year** 2024 **Vessel** TULU **Cruise ID** 2024-020

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
7	E1	5	13:27	BE	NET		48°31.691	125°3.784	115		-		SK	☐☐	BONGO
	E1	5	13:30	BO	NET		48°31.714	125°3.774		105	-		GC	☐☐	
	E1	5	13:32	EN	NET		48°31.711	125°3.756		105	-		GC	☐☐	
8	LOOP8	5	13:58	BE	LOOP		48°32.965	125°8.309	133		5008		ER	☐☐	ICHL, INUT, SAL underway E1→LB05
9	LB05	5	14:23	BE	ROS	US	48°33.975	125°12.021	103		21-21	1	ER	☑☑	
	LB05	5	14:26	BO	ROS	US	48°33.970	125°12.023		99	-		ER	☐☐	
	LB05	5	14:30	EN	ROS	US	48°33.991	125°12.044		99	-		ER	☐☐	
10	LB06	5	15:11	BE	ROS	US	48°32.197	125°15.499	117	107	22-29	8	SK	☑☑	
	LB06	5	15:14	BO			48°32.119	125°15.472		107	-		SK	☐☐	
	LB06	5	15:29	EN			48°32.203	125°15.511		107	-		SK	☐☐	
11	C1	5	16:08	BE	ROS	/	48°28.919	125°15.33	150		-		SK	☑☑	
	C1	5	16:11	BO			48°28.894	125°15.328		142	-		SK	☐☐	
	C1	5	16:14	EN			48°28.879	125°15.312			-		SK	☐☐	data acquisition left on until 16:52
12	C1	5	16:25	BE	NET	/	48°28.941	125°15.281	150		-		SK	☐☐	BONGO
	C1	5	16:31	BO			48°28.906	125°15.268		140	-		SK	☐☐	
	C1	5	16:34	EN			48°28.914	125°15.266			-		SK	☐☐	
13	C2*	5	17:19	BE	ROS	/	48°26.21	125°9.298	158		-		ER	☑☑	
	C2*	5	17:22	BO			48°26.20	125°9.298		151	-		ER	☐☐	
	C2*	5	17:25	EN			48°26.195	125°9.306		151	-		ER	☐☐	

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14	C2*	5	17:35	BE	NET	/	48° 26.189	125° 9.288	160	150	-	1	SK	☐☐	BONGO
		5	17:41	BO	NET		48° 26.185	125° 9.281		150	-			☐☐	
		5	17:44	EN	NET		48° 26.195	125° 9.269		150	-			☐☐	
15	C3	5	18:58	BE	ROS	/	48° 23.474	125° 20.748	123		/	/	SR	☑☑	
			19:00	BO			48° 23.485	125° 20.742		118	-			☐☐	
			19:04	EN			48° 23.502	125° 20.729			-			☐☐	
16	C3	5	19:17	BE	NET	/	48° 23.564	125° 20.667	122		/	/	SR	☐☐	BONGO
		5	19:22	BO			48° 23.536	125° 20.674		112	/	/	CR	☐☐	
		5	19:24	EN			48° 23.591	125° 20.639		112	-		CR	☐☐	
17	LOOP 17	5	20:16	BE	LOOP	/	48° 23.654	125° 31.234	137	4.5	5017	-	MG	☐☐	1 CNL 1 NUT 1 SAL
18	AMAR	5	22:21	RE	MOR		48° 23.065	125° 48.041	151	0	-			☐☐	RE took ≈ 45min
19	AMAR	5	22:32	DE	MOR		48° 23.041	125° 48.242	152	152	-			☐☐	
20	AMAR	5	22:44	BE	ROS		48° 23.036	125° 48.084	152		/	/	SR	☐☐	
			22:48	BO			48° 23.030	125° 48.062		148	-			☐☐	
			22:51	EN			48° 23.021	125° 48.070		148	-			☐☐	
21	B7	6	00:36	BE	ROS	/	48° 31.938	125° 35.538	81		/	/	SR	☑☑	
			00:38	BO			48° 31.927	125° 35.536		76	-			☐☐	
			00:40	EN			48° 31.919	125° 39.535		76	-			☐☐	
			:				° .	° .			-			☐☐	

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22	B7	6	00:49	BE	NET	—	48° 31.955	125° 35.562	79		-	/	CK	☐☐	BONGO
			00:53	BO	NET		48° 31.937	125° 35.564		69	-		CK	☐☐	
			00:54	EN	NET		48° 31.942	125° 35.562			-		CK	☐☐	
23	B8	6	01:38	BE	ROS	/	48° 34.479	125° 29.938	118		-	/	SR	☑☑	
			01:41	BO			48° 34.471	125° 29.938		114	-			☐☐	
			01:42	EN			48° 34.445	125° 29.936		114	-			☐☐	
24	B8	6	01:55	BE	NET	—	48° 34.480	125° 30.005	124		-	—	CK	☐☐	BONGO
			01:59	BO	NET		48° 34.494	125° 30.043		114	-		CK	☐☐	
			02:01	EN	NET		48° 34.479	125° 30.095		114	-		CK	☐☐	
25	LB07	6	03:04	BE	ROS		48° 28.681	125° 22.167	156		30 - 30	/	SR	☑☐	
			03:07	BO			48° 28.692	125° 22.206		152	-			☐☐	
			03:13	EN			48° 28.676	125° 22.205		152	-			☐☐	
26	LB07	6	03:24	BE	NET	—	48° 28.689	125° 22.156	154		-	—	CK	☐☐	BONGO
			03:30	BO	NET		48° 28.703	125° 22.153		144	-		CK	☐☐	
			03:32	EN	NET		48° 28.713	125° 22.146		144	-		CK	☐☐	
27	LB08	6	04:24	BE	ROS	US	48° 25.353	125° 28.58	147		31 - 46		SR	☑☑	
			04:27	BO			48° 25.337	125° 28.58		141	-			☐☐	
			04:47	EN			48° 25.264	125° 28.656			-			☐☐	
			:				° .	° .			-			☐☐	

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28	LB08	6	05:11	BE	NET	–	48°25.284	125°28.588	137	130	-	–	CK	☐☐	BONGO
			05:16	BO	NET		48°25.299	125°28.622		130	-		CK	☐☐	
			05:18	EN	NET		48°25.298	125°28.651		130	-		CK	☐☐	
29	LB08	6	05:27	BE	NET	–	48°25.276	125°28.683	144		-	—	CK	☐☐	BONGO
			05:31	BO	NET		48°25.283	125°28.685		134	-		CK	☐☐	
			05:34	EN	NET		48°25.293	125°28.688		134	-		CK	☐☐	
30	LB09	6	06:20	BE	ROS	US	48°21.970	125°34.745	151		47-57	11	SR	☑☐	
			06:23	BO			48°21.967	125°34.758		146	-			☐☐	
			06:45	EN			48°21.964	125°34.798			-			☐☐	
31	LB10	6	07:34	BE	ROS	US	48°18.563	125°41.252	152		58-58	1	SK	☑☑	
			07:37	BO			48°18.566	125°41.251		144	-			☐☐	
			07:44	EN			48°18.558	125°41.267			-			☐☐	
32	LB11	6	08:33	BE	ROS	US	48°15.182	125°47.681	206		59-69	11	SK	☑☑	
			08:37	BO			48°15.193	125°47.690	206	197	-			☐☐	
			08:58	EN			48°15.198	125°47.678		197	-			☐☐	
33	LB11	6	09:10	BE	NET	/	48°15.198	125°47.672	206		-		SK	☐☐	BONGO
			09:16	BO			48°15.201	125°47.657		196	-			☐☐	
			09:21	EN			48°15.194	125°47.657		196	-			☐☐	
			:				° .	° .			-			☐☐	

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continue checking log from here...

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month Sept **Year** 2024 **Vessel** J.P. Tully **Cruise ID** 2024-020 **Page** 6 **of** ____

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
34	LB12	6	10:00	BE	ROS	US	48 ° 12 . 938	125 ° 51 . 774	503		70 - 84	15	SK	☑☑	
			10:08	BO			48 ° 12 . 914	125 ° 51 . 813		499	-			☐☐	
			10:41	EN			48 ° 12 . 93	125 ° 51 . 886			-			☐☐	
35	LB13	6	11:32	BE	ROS	US	48 ° 10 . 584	125 ° 56 . 046	915		85 - 85	1	SK	☑☑	
			11:49	BO			48 ° 10 . 599	125 ° 56 . 049		911	-			☐☐	
			12:06	EN			48 ° 10 . 595	125 ° 25 . 06			-			☐☐	
36	LB14	6	12:42	BE	ROS	US	48 ° 8 . 443	125 ° 59 . 931	1165		-		SK	☑☑	
			13:03	BO			48 ° 8 . 439	125 ° 59 . 969		1176	86 - 106	21		☐☐	
			13:55	EN			48 ° 8 . 469	125 ° 59 . 978			-			☐☐	
37	LB15	6	14:54	BE	ROS	US	48 ° 4 . 331	126 ° 8 . 39	1539		107 - 107	1	SK	☑☑	
			15:16	BO			48 ° 4 . 317	126 ° 8 . 378		1546	-			☐☐	
			15:49	EN			48 ° 4 . 33	126 ° 8 . 375			-			☐☐	
39	LB16	6	16:53	BE	ROS	US	48 ° 0 . 505	126 ° 16 . 956	1782		108	1	SK/GC.	☐☑	
			17:14	BO			48 ° 0 . 516	126 ° 16 . 976		1200	-			☐☐	
			17:58	EN			48 ° 0 . 514	126 ° 16 . 979			-			☐☐	
38	LOOP38	6	16:18	BE	LOOP		48 ° 2 . 194	126 ° 12 . 884	1582		-		ER	☐☐	1 CHL 1 SAL 1 NUT transit LB15 → 16
40	LB16	6	17:47	BE	NET		48 ° 0 . 517	126 ° 16 . 977	1793		-			☐☐	
			17:56	BO			48 ° 0 . 518	126 ° 16 . 979		250	-		SK	☐☐	
			18:01	EN			48 ° 0 . 514	126 ° 16 . 980			-			☐☐	

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41	LB16	6	18:13	BE	NET		48° 0.514	126° 16.978	1783		-		KS	☐☐	DEEP BONGO
			19:00	BO	NET		48° 0.517	126° 16.980		1200	-		CK	☐☐	codend not secured on non-flowmeter side
			19:21	EN	NET		48° 0.521	126° 16.997			-		CK	☐☐	no formalin sample preserved
42	LC12	6	21:56	BE	ROS	/	48° 14.991	126° 40.012	2515		/	/	SR	☑☐	
			22:17	BO			48° 14.997	126° 40.011		1200	-			☐☐	
			22:38	EN			48° 14.997	126° 40.014			-			☐☐	
43	LC12	6	22:50	BE	NET	—	48° 14.998	126° 40.013	2515		-		CK	☐☐	BONGO
			23:00	BO			48° 15.068	126° 40.062		250	-		CK	☐☐	
			23:05	EN			49° 15.149	126° 40.115		250	-		CK	☐☐	
44	LC12	6	23:14	DE	NET	—	49° 15.165	126° 40.074	2517		-	—	CK	☐☐	DEEP BONGO
		6	23:58	BO			49° 15.606	126° 40.351		1200	-		CK	☐☐	
		7	00:17	EN			48° 15.870	126° 40.628		1200	-		CK	☐☐	
45	LC11	7	01:41	BE	ROS	US	48° 18.925	126° 26.694	1450		109-128	20	SR	☑☐	COOL NETS FROZEN
			02:03	BO			°18.888	°26.667			-			☐☐	THAWED IN COLD ROOM
			02:58	EN			°18.787	°26.611			-			☐☐	
46	LC10	7	03:00	BE	ROS	/	48° 22.319	126° 20.319	1239		/	/	SR	☑☐	
			04:22	BO			°22.284	°20.080		1220	-			☐☐	
			04:42	EN			°22.289	°20.116			-			☐☐	
			:				° .	° .			-			☐☐	

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47	LC09	7	05:36	BE	NET	—	48°25.888	126°13.648	605		—	—	CK	☐☐	BONGO
			05:45	BO			48°25.893	126°13.668		250	-		CK	☐☐	
			05:49	EN			48°25.907	126°13.702			-		CK	☐☐	
48	LC09	7	06:05	BE	ROS	US	48°25.914	126°13.700	605		129-151	23	SR	☐☐	
			06:17	BO			°25.891	°13.669		611	-			☐☐	
			06:56	EN			°25.866	°13.657			-			☐☐	
49	A2	7	07:56	BE	ROS	—	48°22.67	126°3.743	357		-		SK	☑☑	
			08:02	BO			°22.675	°3.747		350	—			☐☐	
			08:08	EN			°22.686	°3.761			-			☐☐	
50	A2	7	08:18	BE	NET	—	48°22.693	126°03.746	352		-	—	SK	☐☐	Bongo
			08:28	BO			°22.686	°03.738		250	—			☐☐	
			08:32	EN			°22.692	°03.720			-			☐☐	
51	LC08		09:45	BE	ROS	US	48°29.404	126°7.124	199		152 - 167		SK	☑☑	
			09:49	BO			48°29.411	126°7.101		193	-			☐☐	
			:	EN			48°29.441	126°7.096			-			☐☐	
52	LC08		10:18	BE	NET	—	48°29.459	126°7.08	199		—		SK	☐☐	BONGO
			10:26	BO			48°29.446	126°7.069		189	-			☐☐	
			10:29	EN			48°29.448	126°7.069			-			☐☐	
			:				° .	° .			-			☐☐	

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

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

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

Notes: _____

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

Produced by the Water Properties Group, IOS

WaterProperties.ca
Version: 17 Feb 2020

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month Sept **Year** 2024 **Vessel** JP Tully **Cruise ID** 2024-020

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
53	LC07	7	11 :15	BE	ROS	/	48 °32 . 972	126 ° 0 . 466	129		/	Ø	SK	☑☑	
			11 :18	BO			° 32 . 986	° 0 . 449		122	-			☐☐	
			11 :20	EN			° 32 . 996	° 0 : 431			-			☐☐	
54	LC06	7	12 :07	BE	ROS	US	48 ° 36 . 433	125 ° 53 . 947	92		168 - 174	7	SK	☐☐	
			12 :09	BO			48 ° 36 . 434	125 ° 53 . 939		84	-			☐☐	
			12 :20	EN			48 ° 36 . 432	125 ° 53 976			-			☐☐	
55	LC06	7	12 :45	BE	NET	/	48 ° 36 . 45	125 ° 54 . 000	92		-			☐☐	BONGO
			12 :49	BO			48 ° 36 . 457	125 ° 54 . 014		82	-		SK	☐☐	
			12 :51	EN			48 ° 36 . 449	125 ° 54 . 032	92	82	-			☐☐	
56	LC05	7	13 :38	BE	ROS	/	48 ° 39 . 937	125 ° 47 . 361	63		/	Ø	SK	☑☑	
			13 :40	BO			48 ° 39 . 938	125 ° 47 . 354		55	-			☐☐	
			13 :41	EN			48 ° 39 . 942	125 ° 47 . 352			-			☐☐	
57	LC05	7	13 :50	BE	NET		48 ° 39 . 947	125 ° 42 . 372	62		-		SK	☐☐	BONGO
			13 :52	BO			° 39 . 952	° 47 . 357		52	-			☐☐	
			13 :52	EN			° 39 . 954	° 47 . 353			-			☐☐	
58	LC04	7	14 :39	BE	NET	/	48 ° 43 . 412	125 ° 40 . 769	165		-		SK	☐☐	BONGO
			14 :	BO			° 43 .	° 40 .		155	-			☐☐	
			14 :	EN			° 43 .	° 40 .			-			☐☐	
			:				° .	° .			-			☐☐	

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

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

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

Notes: _____

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

Produced by the Water Properties Group, IOS

WaterProperties.ca
Version: 17 Feb 2020

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month Sept **Year** 2024 **Vessel** Tully **Cruise ID** 2024-020

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
59	LC04	7	15:10	BE	ROS	US	48 °43.426	125° 40.783	165		175 - 192	18	GC	☑☐	
			15:14	BO			48° 43.430	125° 40.771		157	-			☐☐	
			15:36	EN			48° 43.438	125° 40.764			-			☐☐	
60	LC03	7	16:22	BE	ROS	/	48 °46.943	125 °34.188	135		/	/	SK	☑☑	
			16:24	BO			48 °46.939	125 °34.196			-			☐☐	
			16:27	EN			48 °46.939	125 °34.201			-			☐☐	
61	LC02	7	16:58	BE	ROS		48 °48.704	125 °30.849	108		193 - 201	9	SK	☑☑	
			17:01	BO			48 °48.718	125 °30.844		100	-			☐☐	
			17:13	EN			48 °48.754	125 °30.85	95		-			☐☐	
62	LC01	7	17:43	BE	ROS		48 °50.471	125 °27.79		86	202 - 210	9	SK	☑☑	
			17:45	BO			48 °50.476	125 °27.792			-			☐☐	
			17:48	EN			48 °50.442	125 °27.741			-			☐☐	
63	LD09	7	22:30	RE	GLI		48 °35.817	126 °29.318	1170	0	-		SR	☐☐	
64	LD09	7	22:32	DE	GLI		48 °35.817	126 °29.318	1170	0	-		SR	☐☐	
65	LD09	8	00:42	BE	ROS	/	48 °35.659	126° 29.970	1051		-	/	SR	☐☐	ON BOARD 2328 UTC
			01:01	BO			48 °35.656	126° 29.950		1067	-			☐☐	
			01:21	EN			48 °35.663	126° 29.933			-			☐☐	
			:				° .	° .			-			☐☐	
			:				° .	° .			-			☐☐	

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
GLI = Glider

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

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

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

Notes:

Produced by the Water Properties Group, IOS

WaterProperties.ca
Version: 17 Feb 2020

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month Sept **Year** 2024 **Vessel** Tully **Cruise ID** 2024-020

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
66	LD09	8	01:35	BE	NET	/	48° 35.678	126° 30.000	1051		-		MG	☐☐	
			01:46	BO			°35.710	126° 30.076		250	-			☐☐	
			01:51	EN			°35.720	°30.060			-			☐☐	
67	LD08	8	02:45	BE	ROS	US	48° 39.164	126° 23.336	767		-			☐☐	
			02:59	BO			°39.173	°23.352		765	211-229	19	SR	☑☑	
			03:40	EN			°39.159	°23.352			-			☐☐	
68	LD07	8	04:35	BE	ROS	/	48° 42.644	126° 16.778	463		-		SR	☑☐	
			04:44	BO			°42.645	°16.774		488	-			☐☐	
			04:53	EN			°42.642	°16.776			-			☐☐	
69	LD06	8	05:45	BE	ROS	US	48° 46.186	126° 10.170	135		230-237	8	SR	☐☑	
			05:47	BO			°46.191	°10.174		127	-			☐☐	
			06:02	EN			°46.197	°10.175			-			☐☐	
70	LD05	8	07:11	BE	ROS	/	48° 49.665	126° 3.577	90		-		SK	☑☑	
			07:13	BO			48° 49.665	126° 3.573		80	-			☐☐	
			07:15	EN			48° 49.672	126° 3.585			-			☐☐	
71	LD04	8	08:05	BE	NET		48° 53.205	125° 56.951	62		-		SK	☐☐	
			08:07	BO			°53.217	°56.953		52	-			☐☐	
			08:09	EN			°53.224	°56.957			-			☐☐	
			:				° .	° .			-			☐☐	

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

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

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

Notes: _____

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

Produced by the Water Properties Group, IOS

WaterProperties.ca
Version: 17 Feb 2020

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month Sept **Year** 2024 **Vessel** J.P. Tully **Cruise ID** 2024-020

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
72	LD04	8	08:21	BE	ROS	US	48° 53.214	125° 56.950	62		238-242	5	GC	☑☑	Scan length
			08:24	BO			° 53.202	° 56.945		54	-			☐☐	error noted on
			08:33	EN			° 53.180	° 56.955			-			☐☐	SeaSave ~125
73	LD03	8	09:19	BE	ROS	~~US~~	48° 56.658	125° 50.39	47		-	/	SK	☑☑	
			09:20	BO			48° 56.66	125° 50.389		43	-			☐☐	
			09:21	EN			48° 56.659	125° 50.388			-			☐☐	
74	LD02	8	09:50	BE	NET		48° 58.391	125° 47.044	43		-		SK	☐☐	
			09:51	BO			° 58.392	° 47.040		33	-			☐☐	
			09:52	EN			° 58.390	° 47.044			-			☐☐	
75	LD02	8	10:03	BE	ROS	US	48° 58.395	125° 47.042	43		-	6	GC	☑☐	
			10:04	BO			° 58.387	° 47.049		35	243-248	6		☐☐	
			10:13	EN			° 58.388	° 47.064			-			☐☐	
76	LD01	8	10:45	BE	ROS	US	~~48~~° 00.134	125° 43.940	36		249-252	4	GC	☑☑	
			10:46	BO			49° 00.130	125° 43.936		28	-			☑☐	
			10:53	EN			49° 00.134	125° 43.918			-			☐☐	
77	LG01	18	15:19	BE	ROS	US	48° 20.479	125° 35.049	53		266-272	7	SK	☑☑	Samples not in
			15:20	BO			48° 20.476	125° 35.05		47	-			☐☐	sequence for
			15:29	EN			48° 20.51	125° 35.012			-			☐☐	LG01 + LG02
			:				° .	° .			-			☐☐	

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

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

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

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

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

Notes: _____

Produced by the Water Properties Group, IOS

WaterProperties.ca
Version: 17 Feb 2020

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month SEPTEMBER | **Year** 2024 | **Vessel** TULLY | **Cruise ID** 2024-020

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
78	LG02	8	16:00	BE	ROS	US	49 ° 18.727	126 ° 38.205	99	91	253 - 265	13	ER	☑ ☑	Sample# not in
			16:02	BO			° 18.721	° 38.221			-			☐ ☐	sequence for LG01+
			16:15	EN			° 18.692	° 38.183			-			☐ ☐	LG02
79	LG02	8	16:25	BE	NET		49 ° 18.698	126 ° 38.114	99	90	—	/	KS	☐ ☐	
			16:29	BO			° 18.715	° 38.113			-			☐ ☐	
			16:30	EN			° 18.720	° 38.115			-			☐ ☐	
80	LG02	8	16:43	BE	NET		49 ° 18.676	126 ° 38.107	99	90	-	/	KS	☐ ☐	
			16:47	BO			° 18.682	° 38.110			-			☐ ☐	
			16:49	EN			° 18.675	° 38.123			-			☐ ☐	
81	LG03	8	17:37	BE	ROS		49 ° 15.085	126 ° 43.618	122		—		SK	☑ ☑	
			17:39	BO			49 ° 15.115	126 ° 43.645		110	-			☐ ☐	
			17:42	EN			49 ° 15.117	126 ° 43.65			-			☐ ☐	
82	LG04	8	18:34	BE	ROS	US	49 ° 11.301	126 ° 49.373	144		273 - 282		SK	☑ ☑	Cruise ship passed
			18:37	BO			49 ° 11.303	126 ° 49.364		136	-			☐ ☐	over station soon
			18:53	EN			49° 11.317	126° 49.360			-			☐ ☐	before sampling
83	LG04	8	19:00	BE	NET		49 ° 11.319	126° 49.373	144		-		CK	☐ ☐	BONGO
			:				49 ° 11.318	126 ° 49.408		138	-		CK	☐ ☐	
			:				49 ° 11.303	126 ° 49.425			-		CK	☐ ☐	
			:				° .	° .			-			☐ ☐	

Event Type:
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ROS = CTD in Rosette
SET = Fish Set
LOOP = Sea Water Loop
MOR = Mooring
NET = Plankton Net Haul
DRF = Drifter
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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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DE = Deployment Time
MR = Messenger Release Time
RE = Recover Mooring Time

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

Notes: _____

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month SEPTEMBER | **Year** 2024 | **Vessel** TULLY | **Cruise ID** 2024-020

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
84	LG05	8	19:56	BE	ROS	/	49° 7.392	126° 55.213	275		/	/	SR	☑☑	
			20:01	BO			49° 7.380	126° 55.196		268	-			☐☐	
			20:06	EN			49° 7.394	126° 55.197			-			☐☐	
85	LG06	8	20:59	BE	ROS	US	49° 3.498	127° 01.136	950		283-303	21	SR	☑☑	
			21:17	BO			49° 3.481	127° 01.095		956	-			☐☐	
			22:02	EN			49° 3.474	127° 01.094			-			☐☐	
86	LG07	8	23:23	BE	NET		48° 59.431	127° 7.188	1750		-		CK	☐☐	BONGO
			23:32	BO			48° 59.503	127° 7.232		250	-			☐☐	
			23:37	EN			48° 59.514	127° 7.254		250	-			☐☐	
87	LG07	9	03:33	BE	ROS	/	48° 59.380	127° 7.149	1755		/	/	SR	☑☑	see over →
			04:03	BO			°59.384	°7.152		1768	-			☐☐	
			04:32	EN			°59.342	°7.130			-			☐☐	
88	LG08	9	05:25	BE	ROS	/	48° 55.258	127° 13.298	2055		/	/	SR	☑☑	
			06:04	BO			°55.228	°13.318		2006	-			☐☐	
			06:37	EN			°55.236	°13.251			-			☐☐	
89	LG09	9	07:31	BE	ROS	US	48° 51.200	127° 19.365	2051		304-310	7	GC	☑☑	
			08:05	BO			°51.198	°19.346		2005	-			☐☐	
			08:46	EN			°57.193	°19.376			-			☐☐	
			:				° .	° .			-			☐☐	

Event Type:
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DRF = Drifter
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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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RE = Recover Mooring Time

Notes: _____

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

Produced by the Water Properties Group, IOS

WaterProperties.ca
Version: 17 Feb 2020

LG07 (event 87) - LARS down from 2024-09-08 ~23:00 to 2024-09-09 ~3:30 (UTC) -ck

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month September **Year** 2024 **Vessel** JP Tully **Cruise ID** 2024-020

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
90	LG09	9	09:02	BE	NET		45° 57.208	127° 19.376	2050		-		SK/GC	☐☐	25-30 kt wind
			09:12	BO			° 51.207	° 19.360		250	-			☐☐	
			09:16	EN			° 57.210	° 19.373			-			☐☐	
91	LG09	9	09:27	BE	NET		48° 51.163	127° 19.341	2050		-		SK/GC	☐☐	
			10:11	BO			° 51.235	° 19.400		1200	-			☐☐	
			10:34	EN			° 57.227	° 19.409			-			☐☐	
92	LOOP92	9	14:24	BE	LOOP		49° 14.029	127° 45.101	2484	4.5	5092-5092		ER	☐☐	
93	LJ09	9	14:56	BE	ROS	/	49° 16.002	127° 47.326	2482		-		ER	☑☑	
			15:11	BO			° 15.931	° 47.313		1000	-			☐☐	
			15:28	EN			° 15.930	° 47.303			-			☐☐	
94	LJ09	9	15:37	BE	NET		49° 15.93	127° 47.322	2480		-		SK	☐☐	30kn wind
			15:47	BO			° 15.901	° 47.346		250	-			☐☐	
			15:51	EN			° 15.892	° 47.365			-			☐☐	
95	LJ06	9	17:59	BE	ROS	/	49° 27.906	127° 28.514	1019		/	/	GC	☑☐	
			18:13	BO			° 27.923	° 28.558		1000	-			☐☐	
			18:30	EN			° 27.999	° 28.637			-			☐☐	
96	LJ06	9	18:40	BE	NET		49° 27.928	127° 28.554	1019		-		SK	☐☐	
			:	BO			° 28.053	° 28.643		250	-			☐☐	
			:	EN			° 28.051	° 28.642			-			☐☐	

Event Type:
BOT = Bottle cast (no CTD)
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ROS = CTD in Rosette
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LOOP = Sea Water Loop
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DRF = Drifter
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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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RE = Recover Mooring Time

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

Notes: _____

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month Sept **Year** 2024 **Vessel** Tully **Cruise ID** 2024-020

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
97	LJ04	9	20:18	BE	ROS	/	49°35.514	127°16.884	160		/	/	SR	☑☐	
			20:21	BO			°35.519	°16.896			-			☐☐	
			20:25	EN			°35.519	°16.902			-			☐☐	
98	LJ04	9	20:36	BE	NET		49°35.518	127°16.861	160		-		CK	☐☐	BONGO
			20:42	BO			49°35.558	127°16.901		150	-			☐☐	
			20:45	EN			49°35.580	127°16.945		150	-			☐☐	
99	LJ02	9	22:02	BE	ROS	/	49°42.673	127°5.156			/	/	SR	☑☐	
			22:04	BO			°42.692	°5.165	83		-			☐☐	
			22:05	EN			°42.696	°5.161		73	-			☐☐	
100	LJ02	9	22:14	BE	NET		49°42.708	127°5.196	82		-		CK	☐☐	BONGO
			22:18	BO			49°42.716	127°5.253		74	-			☐☐	
			22:19	EN			49°42.734	127°5.266		74	-			☐☐	
101	LOOP 101	10	01:27	BE	LOOP	/	49°59.033	127°40.405	88	4.5	5107	/	MG	☐☐	1SAL 1NUT 2CHL
102	LBP1	10	02:38	BE	ROS	/	50°4.773	127°52.784	53		/	/	SR	☑☐	
			02:40	BO			°4.768	°52.780		50	-			☐☐	
			02:41	EN			°4.773	°52.779			-			☐☐	
103	LBP2		03:01	BE	ROS	/	50°4.010	127°54.314	95		/	/	SR	☑☐	
			03:03	BO			°4.027	°54.369		94	-			☐☐	
			03:05	EN			°4.023	°54.406			-			☐☐	

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Notes: _____

Produced by the Water Properties Group, IOS

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Version: 17 Feb 2020

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month September **Year** 2024 **Vessel** Tully **Cruise ID** 2024-020

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
104	LBP2	10	03:14	BE	NET	-	50° 4.014	127° 54.568	100		-		CK	☐☐	BONGO
			03:18	BO			50° 4.108	127° 54.667		90	-			☐☐	
			03:19	EN			50° 4.123	127° 54.705		90	-			☐☐	
105	LBP3	10	03:39	BE	NET		50° 3.069	127° 55.24	167		-		CK	☐☐	BONGO
			03:46	BO			50° 3.155	127° 55.25		160	-			☐☐	
			03:48	EN			50° 3.165	127° 55.257		160	-			☐☐	
106	LBP3	10	04:05	BE	ROS	US	50° 3.171	127° 55.280	164		/	/	SR	☑☐	
			04:08	BO			° 3.170	° 55.279		159	-			☐☐	
			04:27	EN			° 3.170	° 55.279			-			☐☐	
107	LBP4	10	05:07	BE	ROS	/	50° 1.440	127° 58.127	989		/	/	SR	☐☐	
			05:26	BO			° 1.440	° 58.244		1067	-			☐☐	
			05:44	EN			° 1.473	° 58.478			-			☐☐	
108	LBP5	10	06:16	BE	NET		49° 59.904	127° 59.791	1268		-		CK	☐☐	BONGO
			06:25	BO			49° 59.976	127° 59.976		250	-			☐☐	
			06:29	EN			49° 59.986	127° 59.992		250	-			☐☐	
109	LBP5	10	06:42	BE	ROS	US	49° 59.991	128° 0.084	1280		326-342	17	SR	☑☑	
			07:06	BO			° 00.109	° 0.357		1288	-			☐☐	
			07:54	EN			° 00.239	° 0.88			-			☐☐	
			:				° .	° .			-			☐☐	

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DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month September **Year** 2024 **Vessel** J.P. Tully **Cruise ID** 2024-020

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
110	LBP 6	10	08:49	BE	ROS	/	49 ° 56.042	128 ° 05.117	687		-	/	GC	☑☑	On asleep 80
			09:04	BO			° 56.022	° 05.262		767	-			☐☐	changing bottom
			09:17	EN			° 56.030	° 05.341			-			☐☐	depth
111	LBP 7	10	10:01	BE	NET		49 ° 52.383	128 ° 11.166	1414		-	/	KS	☐☐	
			10:10	BO			° 52.340	° 11.164		230	-			☐☐	
			10:14	EN			° 52.320	° 11.161			-			☐☐	
112	LBP 7	10	10:27	BE	ROS	US	49 ° 52.452	128 ° 11.273	2174		343 - 360	18	GC	☑☑	
			11:02	BO			° 52.386	° 11.307		2005	-			☐☐	
			12:01	EN			° 52.371	° 11.372			-			☐☐	
113	LBP 8	10	12:48	BE	NET		49 ° 48.585	128 ° 16.714	2069		-		KS	☐☐	
			12:57	BO			° 48.526	° 16.690		250	-			☐☐	
			13:02	EN			° 48.522	° 16.697			-			☐☐	
114	LBP 8	10	13:58	BE	NET		49 ° 48.588	128 ° 16.784			-			☐☐	
			14:21	BO			° 48.347	° 16.618		1200	-		KS	☐☐	
			14:44	EN			° 48.294	° 16.520			-			☐☐	
115	LBP 8	10	15:01	BE	ROS	US	49 ° 48.605	128 ° 16.704	2068		361 - 377		GC	☑☑	
			15:38	BO			° 48.580	° 16.751		2006	-			☐☐	
			16:32	EN			° 48.574	° 16.776			-			☐☐	
116	LOOP 116	10	17:43	BE	LOOP	/	49 ° 57.939	128 ° 20.724	1831	4.5	5116 - 5116	/	KS	☐☐	2 CTD, 1 Sal, 1 Nut

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Ocean Sciences Division, Institute of Ocean Sciences

Month September **Year** 2024 **Vessel** TULLY **Cruise ID** 2024-020

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
117	LOC117	10	22:00	BE	LOOP	/	50° 39.769	123° 38.435	172	45	5117	/	MG	☐☐	1 SAL IFCB CHL INST
118	CPE2	10	22:35	BE	ROS	/	50° 42.978	128° 39.868	126		/	/	SR	☑☑	
			22:38	BO			° 42.981	° 39.892		123	-			☐☐	
			22:40	EN			° 42.984	° 39.881			-			☐☐	
119	CPE2	10	22:48	BE	NET		50° 43.003	128° 39.881	126		-		CK	☐☐	BONGO
			22:53	BO			50° 43.023	128° 39.895		120	-			☐☐	
			22:55	EN			50° 43.037	128° 39.89		120	-			☐☐	
120	LQ03	11	00:40	BE	ROS	/	50° 39.723	129° 1.875	1210		/	/	SR	☑☑	
			01:01	BO			° 39.696	° 1.837		1232	-			☐☐	
			01:20	EN			° 39.720	° 1.850			-			☐☐	
121	LQ03	11	01:36	BE	NET		50° 39.71	129° 2.02	1226		-		CK	☐☐	BONGO
			01:45	BO			50° 39.646	129° 1.982		250	-			☐☐	
			01:50	EN			50° 39.625	129° 1.983		250	-			☐☐	
122	JI22	11	03:05	BE	ROS	/	50° 39.855	129° 17.391	1385		/	/	SR	☑☑	
			03:31	BO			° 39.817	° 17.370		1429	-			☐☐	
			03:55	EN			° 39.700	° 17.404			-			☐☐	
123	JI22	11	04:07	BE	NET		50° 39.745	129° 17.391	1490		-		CK	☐☐	BONGO
			04:16	BO			50° 39.765	129° 17.301		250	-			☐☐	
			04:21	EN			50° 39.726	129° 17.289		250	-			☐☐	

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Notes: _____

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DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month September **Year** 2024 **Vessel** Tully **Cruise ID** 2024-020

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
124	CS00	11	07:19	BE	NET		50° 27.645	129° 55.049	2168		-		KS	☐☐	BONGO
			07:25	BO			° 27.726	° 55.053		250	-			☐☐	
			07:32	EN			° 27.726	° 55.060			-			☐☐	
125	CS00	11	07:43	BE	NET		50° 27.658	129° 54.597	2169		-		KS.	☐☐	BONGO
			08:29	BO			° 27.587	° 55.246		1200	-			☐☐	
			08:52	EN			° 27.550	° 55.181			-			☐☐	
126	CS00	11	09:10	BE	ROS	US	50° 27.716	129° 55.052	2168		378-396		GC	☑☑	
			09:31	BO			° 27.686	° 54.964		1201	-			☐☐	
			10:15	EN			° 27.672	° 54.78			-			☐☐	
127	CS01	11	11:43	BE	ROS	/	50° 34.967	129° 41.576	2091		-			☐☐	
			12:06	BO			° 35.055	° 41.535		1200	-		GC	☑☑	
			12:25	EN			° 35.154	° 41.582			-			☐☐	
128	CS01	11	12:35	BE	NET	/	50° 35.068	129° 41.420	2090		-		KS	☐☐	BONGO
			12:44	BO			° 35.125	° 41.399		250	-			☐☐	
			12:48	EN			° 35.155	° 41.396			-			☐☐	
129	CS02	11	14:08	BE	NET	/	50° 41.234	129° 27.954	1898		-		SK	☐☐	First bongo
			14:19	BO			° 41.339	° 27.973		250	-			☐☐	
			14:21	EN			° 41.383	° 27.938			-			☐☐	
			:				° .	° .			-			☐☐	

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Notes: _____

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DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month September **Year** 2024 **Vessel** TULLY **Cruise ID** 2024-020

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
130	CS02	11	14:35	BE	NET	/	50 °41.348	129 °28.014	1898		-		SK	☐☐	second bongo
			14:44	BO			°41.441	°28.614		250	-			☐☐	
			14:49	EN			°41.476	°28.038			-			☐☐	
131	CS02	11	15:06	BE	ROS	US	50° 41.498	129° 27.976	1891		397-417	21	GC	☑☑	
			15:27	BO			°41.618	°27.960		1200	-			☐☐	
			16:14	EN			°41.914	°28.025			-			☐☐	
132	CS03	11	17:07	BE	ROS	/	50° 45.533	129° 19.782	240		/	/	GC	☑☑	
			17:13	BO			°45.544	°19.955		234	-			☐☐	
			17:17	EN			°45.544	°20.004			-			☐☐	
133	CS03	11	17:27	BE	NET	/	50° 45.582	129° 19.99	225		-		SK	☐☐	BONGO depth variable
			17:35	BO			°45.614	°19.971			-			☐☐	from 220 → 240
			17:39	EN			°45.620	°19.988			-			☐☐	
134	CS04	11	18:32	BE	ROS	US	50° 49.144	129° 13.047	97		418-425	8	GC	☑☑	
			18:35	BO			°49.130	°13.052		92.8	-			☐☐	
			18:48	EN			°49.135	°13.108			-			☐☐	
135	CS04	11	18:59	BE	NET		50°49.146	129° 13.149	97		-		CK	☐☐	
			19:03	BO			°49.169	°13.242		90	-			☐☐	
			19:05	EN			°49.164	°13.288		90	-			☐☐	
			:				° .	° .			-			☐☐	

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DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month September **Year** 2024 **Vessel** Tully **Cruise ID** 2024-020

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
136	LOOP136	11	21:09	BE	LOOP	/	50°59.762	129°26.698	215	45	5136	/	MG	☐☐	ISAL 2 CNL 2 NUT 1 FLB
137	CS3B	11	21:21	BE	ROS	/	50°59.960	129°27.066	220		-			☐☐	The crew stopped
			21:25	BO			°59.965	°27.124		218	-	/	SR	☐☐	us @ 10m off
			21:33	EN			°59.973	°27.163			-			☐☐	bottom for 2 min
138	CS3B	11	21:41	BE	NET		50°59.984	129°27.201	220		-		CK	☐☐	BONGO
			21:51	BO			51°0.066	129°27.192		215	-			☐☐	
			21:54	EN			51°0.066	129°27.226		215	-			☐☐	
139	CS05	11	23:51	BE	ROS	/	50°56.000	128°59.681	65		-	/	SR	☐☐	
			23:52	BO			°55.993	°59.875		61	-			☐☐	
			23:54	EN			°55.992	°59.872			-			☐☐	
140	CS05	12	00:02	BE	NET		50°55.99	128°59.847	64		-		CK	☐☐	BONGO
			00:04	BO			50°55.988	128°59.829		58	-			☐☐	
			00:05	EN			50°55.992	128°59.816		58	-			☐☐	
141	CS06	12	01:02	BE	ROS	US	50°59.936	128°51.77	65		426-434	9	SR	☐☐	
			01:04	BO			°59.928	°51.783		62	-			☐☐	
			01:17	EN			°59.859	°51.932			-			☐☐	
142	CS06	12	01:31	BE	NET		50°59.936	128°51.821	65		-		CK	☐☐	BONGO
			01:33	BO			50°59.913	128°51.858		58	-			☐☐	
			01:34	EN			50°59.916	128°51.877		58	-			☐☐	

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Notes: _____

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Ocean Sciences Division, Institute of Ocean Sciences

Month September **Year** 2024 **Vessel** Tully **Cruise ID** 2024-020

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
143	CS07	12	02:37	BE	ROS	/	51° 4.472	128° 44.122	65		/	/	SR	☑☑	
			02:39	BO			° 4.468	° 44.143		62	-			☐☐	
			02:40	EN			° 4.467	° 44.149			-			☐☐	
144	CS07	12	02:47	BE	NET		51° 4.473	128° 44.188	65		-		CK	☐☐	BONGO
			02:50	BO			51° 4.475	128° 44.23		58	-			☐☐	
			02:51	EN			51° 4.474	128° 44.25		58	-			☐☐	
145	CS08	12	03:48	BE	ROS	/	51° 8.43	128° 35.98	142		/	/	SR	☑☑	Paused @ 134m
			03:54	BO			° 8.448	° 35.948		141	-			☐☐	due to the wire
			03:55	EN			° 8.445	° 36.026			-			☐☐	angle.
146	CS08	12	04:05	BE	NET		51° 8.47	128° 35.985	143		-		CK	☐☐	BONGO
			04:10	BO			51° 8.492	128° 36.013		135	-			☐☐	released Sebastes
			04:12	EN			51° 8.497	128° 36.011		135	-			☐☐	
147	CS09	12	05:03	BE	NET		51° 12.493	128° 27.951	195		-		CK	☐☐	BONGO
			05:10	BO			51° 12.493	128° 28.03		185	-			☐☐	
			05:13	EN			51° 12.498	128° 28.037		135	-			☐☐	
148	CS09	12	05:23	BE	ROS	US	51° 12.473	128° 27.982	195		435-453	19	SR	☑☑	NO WATER @ 175
			05:27	BO			° 12.484	° 27.994		192	-			☐☐	
			05:57	EN			° 12.437	° 27.943			-			☐☐	
			:				° .	° .			-			☐☐	

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Version: 17 Feb 2020

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month September **Year** 2024 **Vessel** TULLY **Cruise ID** 2024-020

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
149	CS10	12	06:51	BE	ROS	/	51° 16.520	128° 20.00	79		/	/	GC	☒☒	
			06:53	BO			° 16.529	° 19.984		76	-			☐☐	
			06:55	EN			° 16.553	° 19.980			-			☐☐	
150	CS10	12	07:04	BE	NET	/	51° 16.65	128° 20.014	80		-	/	KS	☐☐	
			07:07	BO			° 16.623	° 20.027		69	-			☐☐	
			07:08	EN			° 16.620	° 20.036			-			☐☐	
151	LOOP151	12	13:52	BE	LOOP	/	50° 35.687	126° 43.315	131	4.5	5151-5151		ER	☐☐	2 CHL, 2 SAL, 1 NUT, 1 IFCB
152	LOOP152	12	21:57	BE	LOOP	/	50° 0.358	125° 12.701	74	4.5	5152		MG	☐☐	2CHL / SAL / NUT / IFCB
153	12	13	01:21	BE	NET		49° 43.614	124° 40.766	354		-		MG	☐☐	MPS multinet
			01:32	BO			° 43.608	° 40.788		344	-			☐☐	winch wire out.
			01:34				° 43.607	° 40.793		250	-			☐☐	344→250, Flow=9
			01:36				° 43.607	° 40.794		150	-			☐☐	250→150, Flow=11
			01:37				° 43.608	° 40.799		100	-			☐☐	150→100, Flow=4
			01:38				° 43.609	° 40.801		50	-			☐☐	100→50, Flow=6
			01:39	EN			° 43.609	° 40.802		0	-			☐☐	50→0, Flow=4
154	12	13	01:58	BE	NET		49° 43.596	124° 40.801	354		-		MG	☐☐	BONGO
			02:11	BO			49° 43.597	124° 40.83		348	-			☐☐	
			02:17	EN			49° 43.594	124° 40.834		348	-			☐☐	
			:				° .	° .			-			☐☐	

Event Type:
BOT = Bottle cast (no CTD)
CTD = Standalone CTD
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US = Up / Stop (default)
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Time Code:
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CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

Notes: _____

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month Sept **Year** 2024 **Vessel** TULLY **Cruise ID** 2024-020

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
155	12	13	02:37	BE	ROS	US	49°43.606	124°40.837	353		454-469	16	SR	☑☑	
			02:45	BO			°43.614	°40.834		347	-			☐☐	
			03:04	EN			°43.594	°40.854			-			☐☐	
156	9	13	04:09	BE	ROS	US	49°35.468	124°38.313	168		470-471	2	SR	☑☑	
			04:12	BO			°35.488	°38.325		162	-			☐☐	
			04:18	EN			°35.519	°38.35			-			☐☐	
157	CPF2	13	05:30	BE	ROS	US	49°27.995	124°29.985	325		472-473	2	SR	☑☑	
			05:36	BO			°27.983	°29.975		320	-			☐☐	
			05:44	EN			°27.965	°29.962			-			☐☐	
158	CPF2	13	05:54	BO			49°27.954	124°29.964			-		SR	☐☐	some spigots open sent rosette back down to re-fire @ 0 & 10m
			05:54	EN			49°27.954	124°29.964			-			☐☐	
159	CPF2	13	06:02	BE	NET		49°27.95	124°29.948	325		-		CK	☐☐	BONGO
			06:14	BO			49°27.979	124°29.937		320	-			☐☐	
			06:19	EN			49°27.991	124°29.938		320	-			☐☐	
160	3	13	07:31	BE	ROS		49°26.577	124°20.230	322		474-475	2	GC	☑☑	
			07:37	BO			°26.586	°20.227		315	-			☐☐	
			07:44	EN			°26.582	°20.234			-			☐☐	
			:				° .	° .			-			☐☐	
			:				° .	° .			-			☐☐	

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Ocean Sciences Division, Institute of Ocean Sciences

Month September **Year** 2024 **Vessel** J.P. Tully **Cruise ID** 2024-020

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
161	24	13	09:21	BE	ROS	US	49° 30.249	124° 06.011	423		476 - 478	3	GC	☑ ☑	
			09:29	BO			° 30.248	° 06.028		418	-			☐ ☐	
			09:40	EN			° 30.241	° 06.018			-			☐ ☐	
162	24	13	09:47	BE	NET		49° 30.251	124° 06.005	423		-		KS	☐ ☐	BONGO.
			10:02	BO			° 30.242	° 06.028		410	-			☐ ☐	
			10:09	EN			° 30.23	° 06.058		410	-			☐ ☐	
163	CPF1	13	11:09	BE	ROS	US	49° 21.952	124° 04.931	243		479 - 481	3	GC	☑ ☑	
			11:14	BO			° 21.994	° 04.932		236	-			☐ ☐	
			11:22	EN			° 21.998	° 04.936			-			☐ ☐	
164	CPF2	13	11:27	BE	NET		49° 22.000	124° 04.940	242		-		KS	☐ ☐	
			11:35	BO			° 21.997	° 04.934		230	-			☐ ☐	
			11:39	EN			° 21.991	° 04.930			-			☐ ☐	
165	GEO1	13	13:36	BE	ROS	US	49° 15.001	123° 44.937	398		482 - 497	16	GC	☑ ☑	
			13:44	BO			° 15.016	° 44.928		391	-			☐ ☐	
			14:04	EN			° 15.031	° 44.907			-			☐ ☐	
166	GEO1	13	14:13	BE	NET		49° 15.00	123° 44.979	397	390	-		CC/SK	☐ ☐	Bongo
			14:28	BO			49° 15.021	123° 44.978			-			☐ ☐	
			14:35	EN			49° 15.039	123° 44.97			-			☐ ☐	
			:				° .	° .			-			☐ ☐	

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DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month SEPT **Year** 2024 **Vessel** J P TULLY **Cruise ID** 2024020

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
167	GEO1	13	14:44	BE	NET		49° 15.064	123° 44.994	397.5		-	/	KS	☐☐	bongo
			14:47	BO			° 15.047	° 44.004		100	-			☐☐	
			14:49	EN			° 15.045	° 44.009			-			☐☐	
168	GEO1	13	15:24	BE	NET		49° 14.997	123° 45.080	398		/	/	KS	☐☐	Multi net
			15:38	BO			° 15.055	° 44.977		390	-			☐☐	
			15:40				° 15.084	° 44.964		350	-			☐☐	390→350 Flow=0
			15:42				° 15.085	° 44.963		250	-			☐☐	350→250 Flow=0
			15:43				° 15.088	° 44.948		150	-			☐☐	250→150 Flow=0
			15:44				° 15.100	° 44.930		50	-			☐☐	150→50 Flow=0
			15:45	EN			° 15.108	° 44.919		0	-			☐☐	50→0 Flow=0 for entire cast
169	LOOP169	13	16:59	BE	LOOP		49° 08.062	123° 33.193		45	5169 - 5169			☐☐	
170	42	13	17:56	BE	ROS	US	49° 02.009	123° 26.504	317		498 - 512	15	GC	☐☐	For chl max
			18:03	BO			° 02.007	° 26.508		31	-			☐☐	Fired risks out
			18:25	EN			° 02.009	° 26.527			-			☐☐	of order for chl-max
171	42	13	18:33	BE	NET		49° 02.008	123° 26.526	318		-		CK	☐☐	BONGO 100m
			18:36	BO			° 02.001	° 26.526		100	-			☐☐	
			18:38	EN			° 01.997	° 26.535		100	-			☐☐	
			:				° .	° .			-			☐☐	
			:				° .	° .			-			☐☐	

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DAILY SCIENCE LOG

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Month	SEPT	Year	2024	Vessel	J P TULLY	Cruise ID	2024020

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
172	42	13	18:47	BE	NET	/	49°01.991	123°26.54	318		✓	–	CK	☐☐	BONGO Bottom-10
			18:58	BO			°01.991	°26.555		308	-			☐☐	
			19:03	EN			°01.962	°26.537		308	-			☐☐	
			:				° .	° .			-			☐☐	
			:				° .	° .			-			☐☐	
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This page is for any notes or observations