

DAILY SCIENCE LOG BOOK

MISSION
NUMBER

2021-006

DATE:

From: 2 MAY To: 18 MAY 2021

VESSEL:

JOHN P TULLY

PROJECT(S):

LINE P

CHATHAM SOUND

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

WaterProperties.ca

Captain:	<u>MIKE CORFIELD</u>	First Officer:	<u>DALE UNRUH</u>
Second Officer:	<u>DAVID REPSCH</u>	Third Officer:	<u>EMILY MOUNT</u>
Fishing Master:	<u></u>	Chief Engineer:	<u>ANDREW WEAVER</u>

Mission Participants / Agencies:

$$DFO / TO / OSD - UUC$$

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

This is accessed from your WaterProperties.ca Dashboard or from here:

<https://www.waterproperties.ca/requests/cruiseplanview.php?cruiseid=YYY-NNN>

NAME	WATCH	CABIN
MARIE ROBERT	06-18	A
MOIRA GALBRAITH	12-24	B
KYLE SIMPSON	12-24	C
MARK BELTON	12-24	C
MICHAEL ARYANE	12-24	D
ROWAN FOX	00-12	E
HAYLEIGH RADOS	00-12	F
MICHAEL LIVINGSTON	00-12	H

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

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

Data logging computer: Water Properties 102. "DESKTOP 8V50CDT"

Data acquisition program: Seasave 7.26.7.127

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: WEILABS Model: CSTAR serial: 1185DR

Transmissometer: " Model: " serial: 1883DG

Fluorometer: Model Seapoint SCF Cable gain: 3x serial: 3950 P S or NO pump?

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

Oxygen sensor: SBE Model: 43 serial: 3791 P, S or NO pump?

PAR sensor: Biospherical Model: QSP2350 serial: 70613 Surface PAR? Y N

Other sensors: Valeport altimeter V1500 serial: 75321 P, S or NO pump?

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

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

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

Secondary CTD

Make: serial number: 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>2016-10-04</u>	2: <u>2016-10-05</u>	3: <u>2016-10-06</u>	4: <u>2016-10-07</u>
6: <u>2018-10-02</u>	7: <u>2000-10-29</u>	8: <u>2016-10-09</u>	9: <u>2018-10-01</u>
11: <u>2018-10-04</u>	12: <u>2016-10-10</u>	13: <u>2016-10-11</u>	14: <u>no label</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>
21: <u>2018-10-03</u>	22: <u>2016-10-16</u>	23: <u>2016-10-17</u>	24: <u>2016-10-18</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: _____ Version: _____

Sampling interval (seconds): _____

TSG serial number: 0620

Fluorometer sensor serial number: 1656

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 Multiple casts in SI for training duckhounds.

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)

This page is for any notes or observations

TSG - new plumbing - A new flowmeter. Now have a flowmeter for each of TSG & fluoro meter.

DAILY SCIENCE LOG

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Month <u>May</u>			Year <u>2021</u>		Vessel <u>Tully</u>			Cruise ID <u>2021-006</u>			Page <u>1</u> of <u>23</u>				
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information		Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
							Latitude	Longitude							
1	SI	3	15:23	BE	ROS	NA	48° 38.983	123° 30.144	192.		-	0	RF	☒	Test cast, SI
			15:26	BO			48° 39.980	123° 30.180		183	-			☐	
			15:31	EN			48° 39.970	123° 30.170			-			☐	
2	SI	3	16:23	BE	ROS	US	48° 38.951	123° 30.149	192		-	24	RF	☒	Test cast for bottle test
			16:27	BO			48° 38.946	123° 30.149		11	-			☐	
			16:30	EN			48° 38.941	123° 30.145			-			☐	
3	Haro 59	3	18:31	BE	ROS	US	48° 36.710	123° 14.700			-	2	RF	☒	
			18:35	BO							-			☐	
			18:43	EN			48° 36.570	123° 14.830			-			☐	
4	Haro 59	3	19:58	BE	NET	-	48° 36.778	123° 14.83	237		-		HR/MA	☐	BONGO
			19:06	BO			36.774	14.79		232	-			☐	
			19:10	EN			36.69	14.75			-			☐	
5	JF1	3	22:24	BE	Lead		48° 16.255	123° 29.710	146	5m	5005	1	MB	☐	Lead 5005 2.000, 1.000
6	JF2	4	00:24	BE	ROS	US	48° 18.030	124° 0.030	186		3-4	2	MB	☒	
			00:28	BO			18.040	0.020		176	-			☐	
			00:33	EN			18.030	0.040			-			☐	
7	JF2	4	00:41	BE	NET	-	48° 18.0180	124° 00.016	187		-		MB/MA	☐	BONGO
			00:47	BO			48° 18.01	124° 00.00		182	-			☐	
			00:50	EN			48° 18.00	124° 00.01			-			☐	

Event Type: LOOP = Sea Water | non Bottle Firing Method

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
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Notes:

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Month			Year		Vessel			Cruise ID			2021-006				
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
8	JF3	4	03:10	BE	LOOP	-	48°26.93	124°30.00	226	5m	5008		KS.	☐	Loop 5008 ach 1 sal 1 Nst
9	JF4	4	05:28	BE	LOOP	-	48°32.41	125°01.76	65	5	5009		HG	☐	200L 1 sal 1 Nst
10	P1	4	07:35	BE	ROS	VS	48°34.480	125°29.920	120		5-11	7	RFHRL	☒	
			07:37	BO			48°34.470	125°29.960		110	-			☐	
			07:49	EN			48°34.460	125°29.930			-			☐	
11	P2	4	10:12	BE	ROS	US	48°36.002	125°59.820	116		12-14	8	RF	☒	Deep cast
			10:15	BO			48°35.990	125°59.820		108	-			☐	
			10:27	EN			48°35.930	125°59.740			-			☐	
12	P2	4	11:13	BE	NET	-	48°35.987	125°59.977	117		-		HR/RF	☐	Discommunication w/ wind operator went too deep
			11:18	BO			48°36.065	125°59.970		135	-			☐	Doing it again
			11:23	EN			48°36.040	125°59.870			-			☐	
13	P2	4	11:36	BE	NET	-	48°35.971	125°59.918	117		-			☐	
			11:39	BO			48°35.965	125°59.858		107	-		HR/RF	☐	
			11:42	EN			48°35.979	125°59.758			-			☐	
14	P2	4	11:58	BE	ROS	VS	48°35.990	125°59.900	117		20-31	12	RF	☒	Dns cast
			12:02	BO			48°35.970	125°59.860		108	-			☐	
			12:19	EN			48°35.940	125°59.850			-			☐	
			:				°	°			-			☐	
			:				°	°			-			☐	

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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			May		Year		2021		Vessel		Tully		Cruise ID		2021-006	
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	
15	P3	4	14:17	BE	ROS	/	48° 37.480	126° 19.920	815		/	/	RF	☒	D 806 P 815 S 823 A 10	
			14:33	BO			48° 37.460	126° 19.900		815	-			☐		
			14:48	EN			48° 37.370	126° 19.910			-			☐		
16	P4	4	16:29	BE	ROS	US	48° 39.010	126° 39.950	1320		31-39	9	RF	☒	Michael Livingstone cast	
			16:32	BO			48° 39.606	126° 39.940		150	-			☐		
			16:39	EN			48° 38.980	126° 39.920			-			☐		
17	P4	4	16:47	BE	NET	/	48° 38.968	126° 39.952	1325		-		HR	☒	Bowbo	
			16:56	BO			48° 38.960	126° 39.925		250	-			☐		
			17:01	EN			48° 38.945	126° 39.914			-			☐		
18	P4	4	17:16	BE	NET		48° 38.99	126° 39.96	1325		-		HR	☐	Mini	
			17:17	BO			48° 38.99	126° 39.95		50	-			☐		
			17:18	EN			48° 38.99	126° 39.94			-			☐		
19	P4	4	17:32	BE	ROS	US	48° 38.980	126° 39.930	1320		40-55	16	RF	☒	DMS CAST	
			17:40	BO			48° 38.970	126° 39.900		400	-			☐		
			18:06	EN			48° 38.980	126° 39.950			-			☐		
20	P4	4	18:43	BE	ROS	US	48° 38.98	126° 39.98	1325		56-74	19	RF/MG	☒	DEEP CAST	
			19:06	BO			48° 38.98	126° 39.98		1322	-			☐	D1306 P 1322 S 1323 A 10	
			20:02	EN			48° 38.96	126° 40.00			-			☐		
			:				.	.			-			☐		

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EVENT 15.

Before

event 16

was noisy before

After

event 16

data looked

better.

★ Fluorometer

was swapped out.

P3.5/23

EVENT 20

STOP @ 400 FOR 415 MIN GREY WATER RELEASE

This page is for any notes or observations

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Month			Year		Vessel			Cruise ID			Page			of		23	
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Tms/FI Cleaned	Comments			
21	P4	04	20:55	BE	BOT	/	48° 38.47 126° 39.97	1322		75-80	6	KS	☐	TM 800			
			21:27	MR			48° 38.92 126° 40.02		800				☐				
			22:00	EN			48° 38.96 126° 39.94						☐				
22	P4	4	22:46	BE	NET	/	48° 39.89 126° 40.04	1323				MG	☐				
			23:24	BO			48° 39.09 126° 40.01		1200				☐				
			23:43	CU			48° 39.11 126° 40.03						☐				
23	P4	4	23:58	BE	BOT	/	48° 39.09 126° 40.01	1312		81-84	4	KS	☐	TM 75			
		5	00:09	MR			48° 39.13 126° 40.01		75				☐				
			00:17	EN			48° 39.11 126° 40.02						☐				
24	P5	5	02:41	BE	ROS	US	48° 41.500 127° 9.980	2096		85-	1	MB	☐	+ Low 5024 2096 154L			
			03:13	BO			41.477 10.258		2005				☐				
			03:44	CU			41.473 10.418						☐				
25	P6	5	05:59	BE	ROS	US	48° 44.66 127° 39.98	2552		86-	1	MG/RF	☒				
			06:33	BO			48° 44.56 127° 40.09		2005				☐				
			07:05	EN			48° 44.56 127° 40.26						☐				
26	P7	5	09:25	BE	ROS	VS	48° 46.655 128° 9.960	2512		87-89 31	RF		☒				
			10:00	BO			48° 46.610 128° 9.970		2005				☐				
			10:35	EN			48° 46.614 128° 9.923						☐				
27	Underway Loop	05	11:02	BE	LOOP	/	48° 46.923 128° 14.138			5027		HS	☐				
Event Type: BOT = Bottle cast (no CTD) LOOP = Sea Water Loop MOR = Mooring																	
Bottle Firing Method: Time Code: CTD Transmissometer and Fluorescence																	

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Notes:

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P4.5/23

EVENT 22 MPS NOT TALKING - ASSUME TERMINATION @ BULLET OR MPS TWO CONTINUITY
WAS WORKING UNTIL LIFTED OFF DECK (WENCH → MPS)
SWITCH TO BONGO, CHECKED ELECTRICAL CONTINUITY IN WENCH CABLE → NOT SUCCESSFUL
CHECKED CONTINUITY IN GREY MPS CABLE (DECK UNIT → WENCH) → SUCCESSFUL.

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Month			May		Year		2021		Vessel		Tully		Cruise ID		2021-006	
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Latitude	Positional Information	Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Tms/FI Cleaned	Comments
27	P8	5	13:28	BE	Net	/	48°48.945	128°39.886	2527			-	/	HL/ML	☒	Bongo
28			13:37	BO			48°48.977	128°39.750		250		-			☐	
			13:42	EN			48°49.000	128°39.746				-			☐	
28	P8	5	14:00	BE	Net	/	48°48.962	128°40.037	2528			-	/	HR/ML	☒	Bongo
29			14:42	BO			48°48.670	128°39.955		1200		-			☐	
			15:01	EN			48°48.537	128°39.992				-			☐	
29	P8	5	15:23	BE	ROS	US	48°49.050	128°40.070	2527			90 - 113	24	RF	☒	
30			15:58	BO			48°48.960	128°40.110		2005		-			☐	
			16:58	EN			48°48.890	128°40.250				-			☐	
31	P9	5	19:12	BE	ROS	US	48°51.420	129°9.820	2344			114 -	1	MB	☒	*Loop 5031 15AL 20HL
			19:45	BO			48°51.49	129°09.50		2005		-			☐	
			20:18	EN			48°51.46	129°09.32				-			☐	
32	P10	5	22:42	BE	ROS	US	48°53.72	129°39.91	2664			115 - 117	3	HG	☒	OUT OF ORDER
			23:14	BO			48°53.78	129°39.66		2005		-			☐	
			23:49	EN			48°53.83	129°39.40				-			☐	
33	loop33	6	01:20	BE	Loop	/	48°55.13	129°59.23	2784	4.5		5033	-	MG	☐	15AL 20HL
34	P11	6	02:19	BE	ROS	US	48°56.025	130°10.980	2761			118 - 120	3	MB	☒	Collect LWSW for NH ₄ TESTING
			02:50	BO			48°56.040	130°9.700		2005		-			☐	
			03:15	EN			48°56.050	130°9.300				-			☐	PARAFFIN CAST

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Event 28

P8 Rosette - Ship released greywater, while rosette was at 200m on the way down. Due to clogs in their tanks!

P5.5/23

Event 32 FORGOT TO PUT DEPTH IN HEADER FOR CTD PROFILE

This page is for any notes or observations

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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/FI Cleaned	Comments
							Latitude	Longitude							
35	P12	06	05:48	BE	BOT	/	48° 58.30	130° 46.01	3241		121 - 126	6	KS	☐	TM DEEP
			06:20	MR			48° 58.41	130° 39.81		800	-			☐	
			06:56	EN			48° 58.451	130° 39.761			-			☐	
36	P12	6	07:10	BE	NET	/	48° 58.246	130° 39.937	3258		/	/	HR	☐	Bongo
			07:51	BO			48° 58.303	130° 46.243		1200	-			☐	
			08:09	EN			48° 58.327	130° 40.276			-			☐	
37	P12	6	08:27	BE	BOT	/	48° 58.274	130° 40.010	3258		127 - 130		KS	☐	TM75
			08:38	MR			48° 58.303	130° 40.006		75	-			☐	
			08:52	EN			48° 58.260	130° 40.007			-			☐	
38	P12	6	08:59	BE	NET	/	48° 58.243	136° 40.057	3258		/	/	HR	☐	Bongo
			09:09	BO			48° 58.337	130° 40.086	25	250	-			☐	
			09:13	EN			48° 58.331	130° 40.066			-			☐	
39	P12	6	09:49	BE	ROS	US	48° 58.132	130° 39.860	3237		131 - 153	23	RF	☒	PAR OFF
			10:48	BO			48° 58.180	130° 40.010		3276	-			☐	33258 03025 P 3277 A10
			12:04	EN			48° 58.180	130° 39.960			-			☐	
40	P12	6	13:42	BE	ROS	US	48° 58.25	130° 39.91	3237		154 - 162	9	ML	☒	UVIC CAST PAR ON
			13:45	BO			48° 58.23	130° 39.94		150	-			☐	LONG-TIME BTW START + ARCHIVE
			13:51	EN			48° 58.26	130° 39.95			-			☐	WINDT PROBLEMS
			:				°	°			-			☐	

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 DRF = Drifter

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 US = Up / Stop (default)
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Time Code:
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DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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Month			Year		Vessel			Cruise ID					2021-006		
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information		Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Tms/FI Cleaned	Comments
							Latitude	Longitude							
41	P12	6	14:18	BE	ROS	US	48° 58.24	130° 39.92	3237		163-178	16	MR	☒	DMS CAST
			14:26	BO			48° 58.23	130° 39.92		400	-			☐	
			14:51	EN			48° 58.31	130° 39.92			-			☐	
42	P13	6	19:41	BE	ROS	US	49° 02.56	131° 39.95	3023		179-180	2	MG	☒	LOOP@5M SAL 20HL
			19:54	BD			49° 02.47	131° 40.10		2005	-			☐	FORCES PUMPS LENO
			20:16	EN			49° 02.41	131° 40.19			-			☐	@1000M
43	P13	6	20:19	BE	ROS	US	49° 02.40	130° 40.01	3023		179-180	2	MG	☒	LOOP@5M SAL 20HL
			20:54	BO			49° 02.27	130° 40.36		2005	-			☐	
			21:30	EN			49° 02.19	131° 40.37			-			☐	
44	LOOP 44	7	00:06	BE	LOOP	-	49° 05.55	131° 16.38	1942	4.5	5044	-	MG	☐	SAL 20HL
45	P14	7	01:58	BE	ROS	US	49° 07.46	132° 39.89	3321		181-200	20	MG	☒	ROC
			02:30	BO			49° 07.38	132° 39.97		2005	-			☐	
			03:31	EN			49° 07.30	132° 39.99			-			☐	
46	P15	7	08:07	BE	ROS	US	49° 11.970	133° 39.900	3393		201-202	2	RF	☒	
			08:41	BO			49° 11.898	133° 40.021		2005	-			☐	
			09:14	EN			49° 11.892	133° 40.002			-			☐	
47	LOOP 47	7	12:36	BE	LOOP	US	49° 15.686	134° 23.977	3603		5047		HS	☐	
			:				°	°			-			☐	
			:				°	°			-			☐	

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Month		May		Year		2021		Vessel		Tully		Cruise ID		2021-006		Page		0 of 23	
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				
48	P16	7	13:51	BE	Net	—	49° 16.956 134° 39.880	3617		—	—	HR/ML	☒		Bongo to 250m				
			13:59	BO			49° 16.944 134° 39.857		250	-			☐						
			14:03	EN			49° 16.927 134° 39.903			-			☐						
49	P16	7	14:12	BE	Net	—	49° 16.958 134° 39.950	3630		—	—	HR/ML	☒		Bongo to 1200m				
			14:53	BO			49° 16.930 134° 39.871		1200	-			☐						
			15:13	EN			49° 16.931 134° 39.884			-			☐						
50	P16	7	15:26	BE	ROS	VS	49° 16.991 134° 39.954	3613		203-211	9	RF	☒		UVIC Rosette				
			15:30	BO			49° 17.010 134° 39.910		150	-			☐		Nothing to remark				
			15:36	EN	1		49° 17.040 134° 39.860			-			☐						
51	P16	7	16:13	BE	BOT	MR	49° 17.005 134° 39.918	3630		212-215	4	HR	☒		TM 75				
			16:23	ME			49° 16.976 134° 39.932		130	-			☐						
			16:33	EN			49° 16.872 134° 39.872			-			☐						
52	P16	7	16:44	BE	ROS	VS	49° 16.980 134° 40.080	3630		216-239	24	RF	☒		PAR off				
			17:52	BO			49° 16.820 134° 40.020		3687	-			☐		S=3630 P=3687 D=3623 A=1				
			19:23	EN			49° 16.97 134° 40.00			-			☐						
53	P16	7	20:17	BE	BOT		49° 17.11 134° 39.94	3630		240-245	6	KS	☐		TM-800				
			20:43	MR			49° 17.20 134° 39.84		800	-			☐						
			21:13	EN			49° 17.20 134° 39.63			-			☐						
			:				° °			-			☐		PAR ON				

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Month			May		Year		2021		Vessel		Tully		Cruise ID		2021-006		Page		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	Tms/Fl Cleaned	Comments				
54	P16	7	21:26	BE	ROS	US	49° 17.42	134° 39.72	3631			246-261	16	MG	☒	DHS				
			21:34	BO			49° 17.43	134° 39.67			400	-			☐					
			22:04	EN			49° 17.40	134° 39.51				-			☐					
55	P17	8	02:54	BE	ROS	US	49° 20.990	135° 39.860	3388			262-264	3	MR	☒	+5055 LOOP 2CHL 1SAL				
			03:25	BO			49° 20.948	135° 39.827			2005	-			☐					
			03:58	EN			49° 20.916	135° 39.803				-			☐					
56	P18	8	08:29	BE	ROS	US	49° 26.070	136° 39.930	3609			265-284	20	RF	☒	TAC				
			09:05	BO			49° 26.070	136° 39.880			2005	-			☐					
			09:57	EN			49° 26.040	136° 39.880				-			☐					
57	P19	8	14:59	BE	ROS	US	49° 30.068	137° 39.947	3917			285-287	2	RF	☒	+LOOP 5057				
			15:34	BO			49° 30.037	137° 39.850	3917		2005	-			☐					
			16:10	EN			49° 30.052	137° 39.823				-			☐					
58	P20	8	21:03	BE	ROS	US	49° 33.95	138° 39.88	3953			288-296	9	MG	☒	UVic				
			21:07	BO			49° 33.94	138° 39.85			150	-			☐					
			21:15	EN			49° 33.88	138° 39.75				-			☐					
59	P20	8	21:20	BE	BOT	-	49° 33.84	138° 39.73	3453			297-300	4	KS	☐	TH-75				
			21:29	MR			49° 33.75	138° 39.65			75	-			☐					
			21:38	EN			49° 33.67	138° 39.60				-			☐					
			:				°	°				-			☐					

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Month			Year		Vessel		Cruise ID					2021-006				
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								
60	P20	08	21:47	BE	ROS	US	49° 33.66	138° 39.59	3953		301-316	16	MG	☒	DMS	
			21:52	BE			49° 33.71	138° 39.52		400	-			☐		
			22:24	EN			49° 33.78	138° 39.40			-			☐		
61	P20	08	23:01	BE	NET		49° 33.98	138° 40.04	3950		-		MG	☐	BONUD	
			23:10	BO			49° 33.90	138° 40.02		250	-			☐		
			23:14	EN			49° 33.88	138° 39.98			-			☐		
62	P20	08	23:26	BE	NET		49° 33.84	138° 39.87	3950		-		MG	☐	BONUD	
		09	00:06	BO			49° 33.53	138° 39.91		1200	-			☐		
			00:25	EN			49° 33.41	138° 39.97			-			☐		
63	P20	9	00:36	BE	BOT	MSG	49° 33.36	138° 39.95	3955		319-322	6	MG	☐	Bo-FLO 800	
			01:04	BO			49° 33.13	138° 39.94		800	-			☐		
			01:36	EN			49° 32.91	138° 39.97			-			☐		
64	P20	9	02:07	BE	ROS	US	49° 34.03	138° 40.03	4005		323-346	24	MG	☒	DEEP PAR OFF	
			03:14	BO			49° 33.810	138° 40.170	3960	4025	-			☐	A: 11 D: 3952 S: 1 P: 4025	
			04:30	EN			49° 33.790	138° 40.380			-			☐		
65	LOOP65	09	05:51	BE	LOOP	/	49° 34.96	138° 53.40	3940	4.5	5065	1	MG	☒	1 SAL 2 CHL	
			:				° .	.			-			☐		
			:				° .	.			-			☐		
			:				° .	.			-			☐		

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Notes:

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This page is for any notes or observations

P10.5/23

STOPPED @ ~ 3800m ↑ TO CHECK LUNCH, MAKING A THUNDER NOISE. ENGINEER TO CHECK WHEN ON DECK

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month		May		Year 2021		Vessel		Tully		Cruise ID 2021-006						
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
66	P21	9	09:08	BE	ROS	US	49° 38.090	49° 38.090	139° 40.100	3949		347-349	3	RF	☒	+ loop 13AL 8CWL
			09:44	BO			49° 38.040	49° 38.040	139° 39.970		2005	-			☐	PAR ON
			10:21	EN			49° 38.040	49° 38.040	139° 39.960			-			☐	
67	P22	9	14:55	BE	ROS	US	49° 42.060	49° 42.060	140° 40.040	3880		350-371	22	RF	☒	
			15:31	BO			49° 42.020	49° 42.020	140° 40.000		2005	-			☐	
			16:29	EN			49° 42.000	49° 42.000	140° 40.030			-			☐	
68	LOOP68	9	18:18	BE	Loop	/	49° 43.71	49° 43.71	141° 05.89	3972	4.5	5068-69		RF/ML	☐	
69	P23	09	20:45	BE	ROS	US	49° 46.05	49° 46.05	141° 39.93	4032		-		MG	☒	VAL MAX + 5M CHOK DEEP WATER
			21:18	BO			49° 46.06	49° 46.06	141° 39.87		2005	372-375	4		☐	
			21:53	EN			49° 46.07	49° 46.07	141° 39.84			-			☐	
70	P24	10	02:04	BE	ROS	US	49° 50.230	49° 50.230	142° 40.070	3975		376-395	20	MB	☒	
			02:20	BO			49° 50.224	49° 50.224	142° 39.988		1000	-			☐	Conductivity @ 1000m
71	P24	10	02:25	BE	ROS	US	49° 50.221	49° 50.221	142° 39.971	3975		-		MB	☐	Reimer Gent #71 @ 100m ↓
			02:40	BO			49° 50.221	49° 50.221	142° 39.950		2005	-			☐	
			03:31	EN			49° 50.231	49° 50.231	142° 39.929	4130		-			☐	
72	P25	10	08:09	BE	ROS	US	50° 0.030	50° 0.030	143° 36.220	4309		346-398		RF	☒	Loop
			08:45	BO			50° 0.000	50° 0.000	143° 36.120		2005	-			☐	
			09:18	EN			49° 59.98	49° 59.98	143° 36.16			-			☐	
73	LOOP73	10	05:12		Loop	/	50° 00.029	50° 00.029	144° 15.330	4138		5073		AS/RF	☒	loop-underway

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Event 67: Bottle 17 integrity failed. Top end cap failed to seal. Bottle 20: HPLC sampled before TOC.

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Month			Year			Vessel			Cruise ID						
May			2021			Tully			2001-006						
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	P35	10	12:33	BE	ROS	VS	50° 00.047	144° 18.221	4138		399-401	3	RF/HB	☒	
			12:09	BO			50° 00.026	144° 18.683		2005	-			☐	
			13:44	EN			50° 00.02	144° 18.05			-			☐	
75	P26	10	16:57	BE	ROS	US	50° 00.20	144° 59.944	4240		402-440	8	HS	☒	CHLMAY BO
			17:01	BO			50° 00.48	144° 59.912		150	- 409			☐	UVIC CAST
			17:07	EN			50° 00.70	144° 59.909			-			☐	
76	P26	10	17:24	BE	BOT	MSG	50° 00.84	144° 59.0419	4233		411-417	7	KS	☐	TM200
			17:44	MR			49° 59.88	144° 59.73		200	-			☐	
			18:06	EN			49° 59.78	144° 59.64			-			☐	
77	P26	10	18:23	BE	ROS	VS	50° 00.000	144° 59.930	4230		418-441	24	RF/MG	☒	PAR off
			19:38	BO			49° 59.96	145° 00.00		4316	-			☐	P 4318 D 4238 A 10
			21:21	EN			49° 59.63	144° 59.98			-			☐	DEEP CAST
78	P26	10	21:14	BE	BOT		50° 00.08	145° 00.00	4250		442-448	7	KS	☐	TH-1500
			22:54	MR			49° 59.97	145° 00.10		1500	-			☐	
			23:43	EN			49° 59.93	145° 00.20			-			☐	
79	P26	11	00:23	BE	ROS	US	49° 59.960	145° 00.010	4230		449-464	16	MR/MS/MS/MS	☒	PAR ON JMS CAST
			00:29	BO			49° 59.97	145° 00.03		400	-			☐	
			00:55	11			49° 59.96	145° 00.09			-			☐	
			:				.	.			-			☐	

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Month			Year			Vessel			Cruise ID							
MAI			2021			J P TULLY			2021-006							
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	P26	11	1:06	BE	NET	/	49°59.95	145°00.15	4231		-	-	MG	☐	MINI BONGO	
			1:08	BO			49°59.95	145°00.16		50	-			☐		
			1:10	EN			49°59.95	145°00.17			-			☐		
81	P26	11	01:22	BE	NET	-	50°00.01	145°00.29	4250		-		MG	☐	250 BONGO	
			01:32	BO			50°00.00	145°00.41		250	-			☐		
			01:37	EN			49°59.98	145°00.48			-			☐		
82	P26	11	01:49	BE	NET		50°00.03	145°00.46	4250		-			☐		
			02:29	BO			49°59.99	145°00.57		1200	-			☐		
			02:48	EN			49°59.98	145°00.70			-			☐		
83	P26	11	03:05	BE	BOT		50°00.43	144°59.29	4250		468-474	7		☐	*NUMBERS OUT OF	
			03:20	BO			50°00.39	144°59.19		155	-			☐	ORDER (PRINTED ALKALITY 84)	
			03:36	EN			50°00.34	144°59.07			-			☐	155	
84	PA-015	11	04:40	BE	ROS	US	50°6.970	144°48.980	24250		465-467	3	MB	☐		
			04:51	BO			50°6.960	144°48.979		350	-			☐		
			05:01	EN			50°6.964	144°48.926			-			☐		
85	Loop 85	11	11:10	BE	LOOP	/	51°28.881	141°13.151	3830	4.5	5085	-	RF/HS	☒	1 SAL 2CHL	
86	Loop 86	12	01:19	BE	LOOP	/	52°11.62	137°18.52	3704	4.5	5080	-	MG	☒	1 SAL 2CHL	
87	Loop 87	12	15:33	BE	LOOP	-	53°26.58	135°50.71	3499.14	4.5	5087	-	HS/ML	☐	1 SAL 2CHL	
88	Loop 88	12	22:40	BE	LOOP	/	54°10.31	133°50.97	881	4.5	5088	-	MG	☐	1 SAL 2CHL	

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~ 1330, 11 MAY 2021 UT 51:00.08 142:30.00
STOP FLOW TO FLUOROMETER TSG TO CLEAN
NEW FILE STARTED.

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Month			May		Year		2021		Vessel		LP Tully		Cruise ID		2021-006		Page 14 of 23	
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Latitude	Positional Information	Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments		
89	DIX 5	13	00:31	BE	ROS	-	54° 19.910	133° 19.960	1457			-	0	MB	21	STOP @ 20m ↓ ~ 5m		
			00:47	BO			54° 19.800	133° 20.100			447	-				LEAVE ON CRANE		
			00:55	EN			54° 19.760	133° 20.160				-						
90	DIX 5	13	01:03	BE	NET	/	54° 19.73	133° 20.26	458			-	-	MA		Bongo		
			01:12	BO			54° 19.64	133° 20.49			250	-						
			01:16	EN			54° 19.61	133° 20.57				-						
91	DIX 4	13	03:34	BE	ROS	-	54° 28.730	132° 42.870	377			-	-	MB	21			
			03:40	BO			54° 28.740	132° 42.920	572			-						
			03:47	EN			54° 28.77	132° 42.960				-						
92	DIX 3	13	05:13	BE	ROS	US	54° 28.70	132° 17.94	363			475-476	2	MB	21			
			05:19	BO			54° 28.67	132° 17.92			358	-						
			05:28	EN			54° 28.64	132° 17.92				-						
93	DIX 3	13	05:34	BE	NET	/	54° 28.64	132° 18.01	364			-	-	MA		Bongo		
			05:43	BO			58° 28.67	132° 18.05			250	-						
			05:47	EN			58° 28.69	132° 18.11				-						
94	DIX 2	13	07:03	BE	ROS	US	54° 25.601	131° 56.534	281			477-492	16	RF	21			
			07:09	BO			54° 25.608	131° 56.477				-						
			07:27	EN			54° 25.528	131° 56.362				-						
			.				.	.				-						
			.				.	.				-						

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

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FROM CAST 0089 ON: NO "DIP", AND "BEGIN ARCHIVING IMMEDIATELY" => IN AIR,
FORGOT PUMPS, CAME BACK TO SELF AFTER GOING 100M, BACK TO SELF, PUMPS ON.

P14.5/23

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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Month May			Year 2021		Vessel Tully			Cruise ID 2021-006						
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	Tms/FI Cleaned	Comments
95	DIX1	13	08:52	BE	ROS	US	54° 25.790 131° 30.800	273		493-508	16	RF	☒	
			08:58	BO			54° 25.780 131° 30.790		269	-			☐	
			09:17	EN			54° 25.740 131° 30.760			-			☐	
96	CH03	13	11:43	BE	ROS	US	54° 41.350 130° 55.570	571		509-557	20	RF	☒	Michael added 558.
			11:54	BO			54° 41.356 130° 55.620		566	-			☐	Firing out of order.
			12:20	EN			54° 41.370 130° 55.680			-			☐	
97	CH02	13	13:32	BE	ROS	US	54° 39.730 130° 38.160	345					☒	
97	CH02	13	13:32	BE	ROS	US	54° 39.730 130° 38.160	345		528-544	17	RF	☒	
			13:40	BO			54° 39.740 130° 38.140		340	-			☐	
			:	EN			54° 39.730 130° 38.110			-			☐	
98	Port 3	13	16:41	BE	ROS	US	54° 58.090 130° 4.650	275		545-557	13	RF	☒	
			16:48	BO			54° 58.068 130° 4.694		273	-			☐	
			17:05	EN			54° 58.070 130° 4.810			-			☐	
99	Port 2	13	17:39	BE	ROS	US	54° 59.260 129° 59.670	118		559-567	9	RF	☒	
			17:43	BO			54° 59.280 129° 59.660		115	-			☐	
			17:56	EN			54° 59.280 129° 59.590			-			☐	
100	Port 1	13	18:16	BE	ROS	US	54° 58.580 129° 58.020	75		568-576	9	RF	☒	
			18:19	BO			54° 58.570 129° 58.000		73	-			☐	
			18:29	EN			54° 58.570 129° 57.920			-			☐	
			:				° °			-			☐	

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DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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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	Tms/F Cleaned	Comments
							Latitude	Longitude						
101	CH1	13	21:17	BE	ROS	US	54° 41.76	130° 27.23		577-595	19	MB	☒	
			21:27	BO			54° 41.77	130° 27.20	612	-			☐	
			21:52	EN			54° 41.75	130° 27.20		-			☐	
102	CH1	13	22:04	BE	NET	UN	54° 41.74	130° 27.20		-	1	MG	☐	MPS
			22:26	BO			54° 41.71	130° 27.25	610	-			☐	
			22:37	EN			54° 41.67	130° 27.32		-			☐	
103	CH6	13	23:39	BE	ROS	US	54° 34.92	130° 32.05		596-606	11	MB	☒	
			23:43	BO			54° 34.92	130° 32.02	247	-			☐	
			23:58	EN			54° 34.95	130° 32.05		-			☐	
104	CH5	14	00:32	BE	ROS	US	54° 33.62	130° 37.68		607-619	13	MB	☒	
			00:34	BO			54° 33.68	130° 37.70	140	-			☐	
			00:49	EN			54° 33.64	130° 37.74		-			☐	
105	CH04	14	01:22	BE	ROS	US	54° 32.42	130° 43.47		620-627	8	MB	☒	
			01:24	BO			54° 32.40	130° 43.49	78	-			☐	
			01:35	EN			54° 32.40	130° 43.52		-			☐	
106	CH07	14	02:35	BE	ROS	US	54° 31.57	130° 30.95		628-635	8	MG	☒	
			02:38	BO			54° 31.59	130° 30.98	85	-			☐	
			02:53	EN			54° 32.00	130° 31.04		-			☐	
			:				54° 32.00	130° 31.04		-			☐	

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DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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Month			May		Year		2021		Vessel		JP TOUTY		Cruise ID		2021006	
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
107	CHAT 3	14	03:14	BE	ROS	US	54° 32.01	130° 32.41	168			-	14	MG	☒	
			03:19	BO			° 32.01	° 32.39			163	636-649			☐	
			03:38	EN			° 31.99	° 32.40				-			☐	
108	CH 8	14	04:06	BE	ROS	US	54° 31.1410	130° 34.930	140			650-662	13	MS	☒	
			04:08	BO			° 31.130	° 34.940			137	-			☐	
			04:23	EN			° 31.090	° 34.900				-			☐	
109	CH 9	14	04:55	BE	ROS	US	54° 30.21	130° 40.55	88			663-670	8	MG	☒	
			04:58	BO			° 30.19	° 40.58			84	-			☐	
			05:10	EN			° 30.14	° 40.66				-			☐	
110	CH 11	14	06:24	BE	ROS	US	54° 29.900	130° 33.590	126			671-684	14	MS	☒	
			06:26	BO			° 29.880	° 33.580			121	-			☐	
			06:40	EN			° 29.820	° 33.520				-			☐	
111	CH 10	14	07:17	BE	ROS	US	54° 26.750	130° 39.320	85			685-691	7	RF	☒	
			07:20	BO			54° 26.740	130° 39.320			80	-			☐	
			07:31	EN			54° 26.720	130° 39.270				-			☐	
112	CH 13	14	08:08	BE	ROS	US	54° 23.026	130° 38.953	160			692-701	10	RF/HS	☒	
			08:11	BO			54° 23.050	130° 38.938			155	-			☐	For Bott 2 Vars over shot depth + 10m went down →
			08:32	EN			54° 23.017	130° 38.988				-			☐	
			:				°	°				-			☐	

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INITIALLY ARRIVED @ WLONG COORDINATES (FROM WP WEBSITE), WENT TO THE WAYPOINT
SPECIFIED IN OZIE-EXPLORER AND CONFIRMED BY HISTORICAL EVIDENCE, CHILL VISITED IN 2019-201
CRUISE.

SN 693 ~130db thru down to 150 corrected... approx 1.5min to allow mixed water to settle.

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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Month			May		Year		2021		Vessel		Tully		Cruise ID				2021-006	
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			
113	CH12	14	09:01	BE	ROS	US	54°23.570	130°33.930	144		702-714	13	HS	☒				
			09:07	BO			54°23.570	130°33.930		140				☐				
			09:21	EN			54°23.540	130°33.960			715-722	8	RF	☒				
114	CH17	14	09:57	BE	ROS	US	54°20.411	130°33.216	92		715-722	8	RF	☒				
			10:01	BO			54°20.407	130°33.230		88				☐				
			10:12	EN			54°20.395	130°33.247						☐				
115	CH10	14	10:40	BE	ROS	US	54°19.900	130°37.350	225		723-736	14	HS	☒				
			10:46	BO			54°19.890	130°37.360		222.3				☐				
			10:06	EN			54°19.870	130°37.440						☐				
116	CH15	14	11:39	BE	ROS	US	54°18.307	130°42.634	191		737-746	10	RF	☒				
			11:44	BO			54°18.324	130°42.618		187				☐				
			12:01	EN			54°18.430	130°42.660						☐				
117	CH14	14	12:39	BE	ROS	US	54°20.490	130°49.760	136		747-759	13	HS	☒				
			12:43	BO			54°20.510	130°49.780		132				☐				
			12:59	EN			54°20.580	130°49.860						☐				
118	HECS8	14	14:04	BE	Net	/	54°23.182	131°5.508	117		/	/	HS/RF/ML	☒	Bongo			
			14:08	BO			54°23.189	131°5.526		110				☐				
			14:10	EN			54°23.195	131°5.522						☐				
			14:11											☐				

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DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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Month		May	Year	2021	Vessel		JP Tully	Cruise ID		2021-006					
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	Tms/FI Cleaned	Comments
119	HECS8	14	14:27	BE	ROS	US	54° 23.212	131° 5.485	115		760-773	14	RF	☒	
			14:30	BO			54° 23.227	131° 5.516			-			☐	
			14:40	EN			54° 23.286	131° 5.621			-			☐	
120	HECS7	14	15:56	BE	ROS	US	54° 13.800	131° 2.130	122		774-786	13	RF	☒	
			16:02	BO			54° 13.806	131° 2.090		117	-			☐	
			16:16	EN			54° 13.790	131° 2.140			-			☐	
121	CHAT2	14	17:54	BE	ROS	US	54° 15.780	130° 46.530	192		787-801	15	HS	☒	
			17:59	BO			54° 15.790	130° 46.550		187	-			☐	
			18:21	EN			54° 15.810	130° 46.450			-			☐	
122	CH20	14	18:54	BE	ROS	US	54° 13.53	130° 43.80	155		802-810	9	MG	☒	
			18:58	BO			° 13.53	° 43.81		151	-			☐	
			19:52	EN			° 13.51	° 43.87			-			☐	
123	CH21	14	19:50	BE	ROS	US	54° 11.870	130° 39.250	122		811-823	13	MS	☒	
			19:52	BO			° 11.890	° 39.240		118	-			☐	
			20:06	EN			° 11.920	° 39.220			-			☐	
124	CH19	14	20:47	BE	ROS	US	54° 15.210	130° 35.680	88		824-834	11	MS	☒	ABORT @ Com!
			20:	BO			° .	° .		20	-			☐	HYDRAKITE LGAK
			20:	EN			° .	° .			-			☐	ON LAST HEAD
			:				° .	° .			-			☐	

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This page is for any notes or observations

P19.5/23

BROUGHT BACK ON BOARD TO ASSESS.

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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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/FI Cleaned	Comments
125	CH19	14	21:02	BE	NET	-	54° 15' 17" 130° 35' 91"	91		-	-	MC	☐	BOW
			21:05	BO			° 15' 18" ° 35' 92"		85	-			☐	
			21:07	GN			° 15' 18" ° 35' 91"			-			☐	
126	CH19 OFFSHORE	14	22:37	BE	ROS	-	54° 15' 18" 130° 36' 105"	72		-	-	MB	☐	TEST CAST TO
			22:38	BO			54° 15' 18" 130° 36' 66"		10	-			☐	FLUSH ROSETTE
			22:42	GN			54° 15' 18" 130° 36' 66"			-			☐	1/2 mac from str
127	CH19	14	22:59	BE	ROS	US	54° 15' 18" 130° 35' 67"	81		-		MB	☒	
			23:01	BO			54° 15' 18" 130° 35' 66"		76	824-834	12		☐	1 sample 851 (VIVE)
			23:11	GN			54° 15' 18" 130° 35' 66"			-851			☐	
128	CH18	14	23:50	BE	ROS	US	54° 16' 41" 130° 29' 38"	42		835-840	6	MG	☒	
			23:52	BO			° 16' 41" ° 29' 37"		37	-			☐	
		15	00:01	EN			° 16' 41" ° 29' 37"			-			☐	
129	PRAR74	15	00:59	BE	ROS	US	54° 13' 52" 130° 21' 090"	41		841-850	10	MB	☒	
			01:00	BO			54° 13' 52" 130° 21' 090"		36	-			☐	
			01:08	GN			54° 13' 51" 130° 21' 100"			-			☐	
130	CH23	15	01:41	BE	ROS	US	54° 11' 44" 130° 23' 450"	102	162	852-860	9	MB	☒	
			01:43	BO			54° 11' 43" 130° 23' 500"		98	-			☐	
			01:55	GN			54° 11' 43" 130° 23' 640"			-			☐	
			:				° °			-			☐	

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UP AND DOWN TO 10m 2x PUMPS OFF, UP AND DOWN TO 10m 2x PUMPS ON TO FLOW.

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month			May		Year		2021		Vessel			JP		Cruise ID		2021-006	
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Tms/FI Cleaned	Comments		
131	CH121	15	02:23	BE	ROS	US	54° 12.01	130° 26.64	143		861-879	19	MG	☒	Small LEAK @ Room		
			02:27	BO			° 12.02	° 26.67		137	-			☐			
			02:45	EN			° 12.04	° 26.73			-			☐			
132	CH122	15	03:31	BE	ROS	US	54° 10.010	130° 35.040	130		880-888	9	MG	☒			
			03:33	BO			54° 10.020	130° 35.080		123	-			☐			
			03:46	BO			54° 10.040	130° 35.040			889-896			☒			
133	CH124	15	04:14	BE	ROS	US	54° 07.65	130° 34.13	92		889-896	8	MG	☒			
			04:18	BO			° 07.65	° 34.12		87	-			☐			
			04:30	EN			° 07.66	° 34.11			-			☐			
134	CH125	15	05:16	BE	ROS	US	54° 08.83	130° 26.42	116		897-909	13	MG	☒			
			05:26	BO			° 08.84	° 26.44		112	-			☐			
			05:36	EN			° 08.84	° 26.55			-			☐			
135	CH126	15	06:13	BE	ROS	US	54° 8.750	130° 21.360	62		910-917	8	MG	☒			
			06:14	BO			° 8.750	° 21.350		58	-			☐			
			06:24	EN			° 8.760	° 21.370			-			☐			
136	CH127	15	06:58	BE	ROS	US	54° 6.662	130° 16.420	50		918-926	9	RF	☒			
			07:00	BO			54° 6.655	130° 16.385		46	-			☐			
			07:06	EN			54° 6.599	130° 16.379			-			☐			
			:				°	°			-			☐			

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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
							Latitude	Longitude							
137	CH28	15	07:38	BE	ROS	US	54° 6.685	130° 18.578	75		927 - 940	14	RF	☒	
			07:41	BO			54° 6.688	130° 18.582		70	-			☐	
			07:51	EN			54° 6.668	130° 18.596			-			☐	
138	CH29	15	08:22	BE	ROS	US	54° 5.310	130° 19.600	112		941 - 947	7	RF	☒	
			08:25	BO			54° 5.310	130° 19.590			-			☐	
			08:35	EN			54° 5.330	130° 19.580			-			☐	
139	NP55	15	09:03	BE	ROS	US	54° 4.231	130° 16.064	111		948 - 959	12	RF	☒	
			09:06	BO			54° 4.242	130° 16.050			-			☐	
			09:19	EN			54° 4.246	130° 16.051			-			☐	
140	OGCH50	15	10:07	BE	ROS	US	53° 59.344	130° 12.652	132		960 - 968	9	RF	☒	
			10:11	BO			53° 59.346	130° 12.654		128	-			☐	
			10:24	EN			53° 59.370	130° 12.662			-			☐	
141	OGCH46	15	11:01	BE	ROS	US	53° 55.460	130° 13.010	153		969 - 977	9	RF	☒	
			11:05	BO			53° 55.470	130° 13.030			-			☐	
			11:19	EN			53° 55.460	130° 12.980			-			☐	
142	Loop 142	15	14:06	BE	Loop	-	53° 34.50	130° 03.60	81		5142		HR	☐	1 SW 2 CH
			:				° .	° .			-			☐	
			:				° .	° .			-			☐	
			:				° .	° .			-			☐	

