

DAILY SCIENCE LOG BOOK

MISSION
NUMBER

2020-008

DATE:

From:

12 AUG 2020

To:

24 AUG 2020

VESSEL:

JP TULLY

PROJECT(S):

LEVE P

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

WaterProperties.ca

Mission Participants / Agencies:

**** Chief Scientist to complete section below OR-cut and tape from cruise plan ****

**** 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: #102 Mini Lenvo

Data acquisition program: Seave

CTD deck unit make: SBE model: 11+ serial number: 0425

Primary CTD

Make: SBE model: 9+ serial number: 0443

Primary temperature serial number: 4700

Primary conductivity serial number: 3531

Secondary temperature serial number: 4888

Secondary conductivity serial number: 4513

Transmissometer: Wetlabs Model: C-STAR s/n: 1185DR

Transmissometer: Wetlabs Model: C-STAR s/n: 1885DC

Fluorometer: Model: Seapoint Cable gain: 3X s/n: 3640 P, S or NO pump?

Fluorometer: Model: Cable gain: s/n: P, S or NO pump?

Oxygen sensor: SBE Model: 43 s/n: 3791 P, S or NO pump?

PAR sensor: Biospherical Model: BP2350 s/n: 70613 Surface PAR? Y/N

Other sensors: SPAR s/n: 20518 P, S or NO pump?

Other sensors: Altimeter s/n: 62355 P, S or NO pump?

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

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

Secondary CTD

Make: model: serial number:

Primary temperature serial number:

Primary conductivity serial number:

Secondary temperature serial number:

Secondary conductivity serial number:

Transmissometer: Model: s/n:

Transmissometer: Model: s/n:

Fluorometer: Model: Cable gain: s/n: P, S or NO pump?

Fluorometer: Model: Cable gain: s/n: P, S or NO pump?

Oxygen sensor: Model: s/n: P, S or NO pump?

PAR sensor: Model: s/n: Surface PAR? Y/N

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

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

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

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

CTD calibration bottle location (height above CTD in metres):

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

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

Winches:
1. Make: HAWBOLDT Model: HAWBOLDT Serial #: 17022 Used for: CTD
2. Make: HAWBOLDT Model: HAWBOLDT Serial #: 7027 Used for: MPS
3. Make: HAWBOLDT Model: HAWBOLDT Serial #: 1070-1 Used for: TRAC HEATC
Comments on performance during cruise (comments should also be reflected in the post-cruise report):
4. SWANN 329 1482 BOND

Salinometer:
Make: Model: Serial Number:
Comments on performance during cruise (comments should also be reflected in the post-cruise report):

Oxygen Kits:
Make: Model: Kit Number: 2
Make: Model: Kit Number:
Comments on performance during cruise (comments should also be reflected in the post-cruise report):

Thermosalinograph System (SBE21):
Program: 525
Sampling interval (seconds): 5
Fluorometer sensor serial number: W535-953 P
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)

Additional Comments:

Scientific Equipment Used During Cruise
This sheet allows you to enter all of the equipment used while on board. Please use the separate CTD sheet for entry for
SBE 9/16/19/25.

Other CTD units:

RBR Serial Number:

Sensors:

Others:

Plankton Nets:

Bongo #1	Frame Size: _____ cm	Mesh: <u>236</u> μ m	Flowmeter: <u>7132</u>
Bongo #2	Frame Size: _____ cm	Mesh: _____ μ m	Flowmeter: _____
	Frame Size: _____ cm	Mesh: _____ μ m	Flowmeter: _____

☒ Multinet

☐ BIONESS

☐ Neuston

Others: MID

Trawl Gear:

Midwater Trawls:

SOG ☐

Highseas ☐

Pelagic ☐

Other: _____

Bottom Trawls: Atlantic Western IIA ☐ Yankee 36 Hard & Soft Bottom ☐

Other: _____

American Shrimp Trawl ☐

Notes:

Trawl Doors: USA Jet ☐ Tyburon ☐

Sounders : Wesmar 380 ☐ Others: _____

Acoustics:

Echosounder #1

Frequencies (KHz):

12 ☐ 18 ☐ 38 ☐ 70 ☐ 120 ☐ 200 ☐

Others: _____

Echosounder #2

Frequencies (KHz):

12 ☐ 18 ☐ 38 ☐ 70 ☐ 120 ☐ 200 ☐

Others: _____

Software & Notes:

Other Gear in Operation:

1.

2.

3.

4.

5.

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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Month			August		Year		2020		Vessel		JP TULLY		Cruise ID		2020-008	
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Tms/FI Cleaned	Comments	
1	SI	13	02:20	BE	ROS	US	48° 39' 03.0	123° 30' 00.0	184		-	24	MB	☒		
			02:24	BO			48° 39' 01.0	123° 30' 08.0		176	-			☐	CLOSE ALL BOTTLES	
			02:28	CN			48° 38' 99.0	123° 30' 10.0			-			☐	© BOT-10 CHECK SPREADS	
2	SI	13	04:56	BE	NET		48° 36' 27.1	123° 14' 27.5	234		-	-	MB/KS/AL	☐	Bongo	
			05:05	BO			48° 36' 27.9	123° 14' 24.9		229	-			☐		
			05:10	CN			48° 36' 27.9	123° 14' 22.7			-			☐		
3	S-9	13	05:25	BE	ROS	US	48° 36' 27.0	123° 14' 28.0	233		1 - 13	13	MB	☒		
			05:26	BO			48° 36' 28.0	123° 14' 28.0		228	-			☐		
			05:45	CN			48° 36' 22.0	123° 14' 20.0			-			☐		
4	JF2	13	10:41	BE	NET	-	48° 18' 01	124° 00' 17	186		-		MG	☐	Bongo	
			10:45	BO			° 18' 01	° 00' 17		180	-			☐		
			10:49	EN			° 18' 01	° 00' 17			-			☐		
5	JF2	13	11:07	BE	ROS	US	48° 18' 01	124° 00' 17	186		14 - 26		MG	☒		
			11:12	BO			° 18' 02	° 00' 20		177	-			☐		
			11:29	EN			° 18' 09	° 00' 44			-			☐		
6	JF3	13	13:44	BE	LOOP	-	48° 27' 20	124° 30' 00	213		5006-		MR	☐	LOOP 2x44 1x21 1x21	
7	JF4	13	15:51	BE	LOOP	-	48° 30' 52	125° 00' 67	83		5007		JS	☐	NOT 2x44 1x21	
			:				°	°			-			☐		
			:				°	°			-			☐		

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

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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 EN = End Time of Cast

CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products
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 RE = Recover Mooring Time

Notes:

Produced by the Water Properties Group, IOS

WaterProperties.ca
 Version: 20 April 2016

134062000

EVENT 01

UTC 0045 → STARTED TSC, NEED ADJUST FLOW RATE ONCE WATER ON.
UTC 0115 → STARTED ADSP

DEPART FOR DOCK @ ~ 0140 134062000 UTC
START RECORDING CR60 SANDER @ 0150

ALL STARTS LOOK GOOD

EVENT 02 BONGO UP @ 070 M/S MAX, WINCH IN LOW GEAR

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DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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8	P1	13	18:00	BE	Net	/	48° 34.410	125° 30.091	136		-		MG	☐	Mini bongo	
			18:02	BD			48° 34.372	125° 30.055		50	-			☐		
			18:05	BN			48° 34.301	125° 29.992			-			☐		
9	P1	13	18:16	BE	ROS	US	48° 34.29	125° 29.87	135		27-29	3	MG	☒		
			18:19	BO			48° 34.29	125° 29.86		125	-			☐		
			18:25	EN			48° 34.32	125° 29.81			-			☐		
10	P2	13	21:32	BE	ROS	US	48° 35.960	125° 59.900	116		30-40	11	MS	☒	Dns cast	
			21:35	BO			48° 35.980	125° 59.890		100	-			☐		
			21:45	EN			48° 35.960	125° 59.870			-			☐		
11	P2	13	21:50	BE	NET	-	48° 35.93	125° 59.88	115		-		MS	☐	Bufo	
			21:55	BO			48° 35.96	125° 59.88		110	-			☐		
			21:58	EN			48° 35.97	125° 59.88			-			☐		
12	P2	13	22:27	BE	ROS	US	48° 35.98	126° 00.00	116		41-48	8	MR	☒	Rec cast	
			22:29	BO			48° 35.99	126° 00.00		107	-			☐		
			22:38	EN			48° 35.97	125° 59.98			-			☐		
13	P3	14	00:10	BE	ROS	US	48° 37.430	126° 19.920	817		49	1	MS	☒		
			00:33	BO			48° 37.402	126° 19.913		812	-			☐		
			00:46	EN			48° 37.390	126° 19.990			-			☐		
			:				.	.			-			☐		

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Event 10
STOP @ 75m DOWN TO CORRECT WRECK

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 Latitude	Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trms/Fl Cleaned	Comments
14	P4	14	02:29	BE	ROS	US	48° 39.090	126° 40.690	1311		50-65	16	MS	☒	DNS CAST
			02:37	BO			48° 39.040	126° 39.087		400	-			☐	
			02:55	EN			48° 39.050	126° 39.920			-			☐	DUMPS LEFT ON
15	P4	14	03:39	BE	ROS	US	48° 39.07	126° 39.099	1349		66-84	19	MS/MP	☒	DEL CAST
			04:03	BO			48° 39.100	126° 39.870		1310	-			☐	A=10 P=1310 S=13018=1255
			04:43	EN			48° 39.100	126° 39.870			-			☐	
16	P4	14	07:15	BE	NET	—	48° 38.97	126° 39.94	1319		-			☐	BONGO
			07:24	BO			48° 38.96	126° 39.94		250	-			☐	
			07:29	EN			48° 38.96	126° 39.94			-			☐	
17	P4	14	08:06	BE	NET	UN	48° 38.96	126° 39.94	1319		-			☐	MPS
			08:52	BO			48° 38.96	126° 39.95		1300	-			☐	
			09:01	EN			48° 38.96	126° 39.95			-			☐	
18	Loop 18	14	09:56	BE	LOOP	—	48° 39.41	126° 45.98	1395	4.5	508-	5	RC	☐	LOOP 1st 2 CHT
19	P5	14	11:51	BE	ROS	US	48° 41.44	127° 10.02	2088		85-	1	MG	☒	STOP @ 800M ~ 1 MIN
			12:27	BO			48° 41.45	127° 10.00		2005	-			☐	
			13:00	EN			48° 41.46	127° 10.07			-			☐	
20	P6	14	15:23	BE	ROS	US	48° 44.50	127° 39.97	2537		86-	1	MG	☒	
			15:58	BO			48° 44.53	127° 39.92		2005	-			☐	
			16:31	EN			48° 44.48	127° 39.94			-			☐	

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EVENT 15
ALTIMETER DID NOT REGISTER UNTIL ~ 25M

EVENT 20 CHANGING UBC TRACE METAL FILTER 10 MINUTES BEFORE P6 APPROX 15 MIN TO DO
P5 P6 14 AUG

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Month			August			Year		2020		Vessel		Tully		Cruise ID			2020-008			Page 7 of 13	
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	Trms/FI Cleaned	Comments						
21	P6	14	16:45	DE	ARGO	/	46° 44.40	127° 39.99	2536		97-	1	MG	☐	A126200-20CA023						
22	P7	14	19:16	BE	ROS	US	48° 46.567	128° 9.924	2497		87-	1	MG	☒							
			19:47	BO			48° 46.567	128° 9.924		2005	-			☐							
			20:18	CU			48° 46.567	128° 9.924			-			☐							
23	P8	14	22:58	BE	NET	-	48° 49.112	128° 39.952	2509		-	1	MA/MB	☐	Bongo						
			23:07	BO			48° 49.113	128° 39.952		250	-			☐							
			23:11	CU			48° 49.113	128° 39.953			-			☐							
24	P8	14	23:21	BE	NET	/	48° 49.089	128° 39.961	2510		-			☐							
			00:01	BO			48° 49.081	128° 39.962		1200	-	1	MA/MB	☐	Bongo						
		15	00:21	EN			48° 49.08	128° 39.96			-			☐							
25	P8	15	00:29	BE	ROS	US	48° 49.06	128° 39.97	2510		98-111	24	MA/MB	☒	Something wrong with flow						
			01:04	BO			48° 49.066	128° 39.976		2005	-			☐							
			01:57	EN			48° 49.066	128° 39.976			-			☐							
26	P9	15	05:34	BE	ROS	US	48° 51.636	129° 9.726	2385		112-	1	MB	☒	+LOP 5026 2xCH + 1xSAL						
			06:11	BO			48° 51.601	129° 9.691		2005	-			☐							
			06:45	CU			48° 51.550	129° 9.810			-			☐							
27	P10	15	09:07	BE	ROS	US	48° 53.67	129° 40.04	2631		113-	1	MG	☒							
			09:42	BO			48° 53.48	129° 40.33		2005	-			☐							
			10:13	EN			48° 53.35	129° 40.60			-			☐							

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EVENT 22

CTD COMPUTER WANTS TO UPDATE; CHANGED DATE FOR 18 SEP 2020

SHIP STOPPED

TRANSMISSION LEAK @ 2045, UNDERWAY 1950, BACK UNDERWAY @ 2000

SHIP STOPPED UP @ 2045, UNDERWAY 2130; CONTINUING ENGINE ISSUE

EVENT 26

FLUOROMETER OFFSET APPEARS TO BE TRENDING UP FROM CNT TO CNT-7 ~ 0.525 @ 800m

→ CONTINUE TO MONITOR

→ NO BIG SPIKES ON FL FOR PG CAST

- NO SPIKES ON F10

- SAME P11, ~0.525 2 SMALL SPIKES EVENT 29

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Month			August			Year		2020		Vessel		NP Tully		Cruise ID		2020-008	
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28	LOOP 28	15	11:52	BE	LOOP	/	48° 55.58	130° 02.12	2762	4.5	5028	-	JS	☐	INUT 15AL 2CHL		
29	R11	15	12:36	BE	ROS	US	48° 55.95	130° 10.09	2742		114	1	DC	☒			
			13:11	BO			48° 55.85	130° 10.20		2005				☐			
			13:44	EN			48° 55.82	130° 10.10						☐			
30	P11	15	13:57	DE	ARGO	/	48° 55.87	130° 10.28	2741	0	-		DC	☐	AI 2100-20CAO52		
31	P12	15	17:02	BE	NET	/	48° 58.19	130° 39.93	3217	250	-		MG	☐	BONGO		
			17:10	BO			48° 58.19	130° 39.93		250	-			☐			
			17:15	EN			48° 58.19	130° 39.93						☐			
32	P12	15	17:31	BE	BOT	MSG	48° 58.19	130° 39.94	3218		115-120		DC	☐	GO-FLD		
			18:04	MR			° 58.21	° 39.99		850	-			☐			
			18:30	EN			° 58.21	° 39.99			-			☐	WEIGHT ABOARD		
33	P12	15	18:57	DE	NET	UN	48° 58.21	130° 39.99	3218		-		MG	☐	MPS		
			20:02	BO			° 58.21	° 39.99		2000	-			☐	UNIT STOPPED TALKING		
			20:39	EN			° 58.21	° 39.99			-			☐			
34	P12	15	20:48	BE	BOT	MSG	48° 58.21	130° 39.99	3218		121-124	4	MG	☐	SHALLER GF		
			21:03	BO			° 58.21	° 39.99		130	-			☐			
			21:13	EN			° 58.21	° 39.99			-			☐			
			:				°	°			-			☐			
			:				°	°			-			☐			

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Loop Firing Method:
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Notes:
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AFTER EVENT 30 BEFORE EVENT 31

STOP UP ENGINE TROUBLES 1405 → 1455

DAILY SCIENCE LOG

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Month			August		Year		2020		Vessel		SP JULY		Cruise ID		2020-008	
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments	
35	P12	15	22:25	BE	ROS	US	48° 58.330	130° 39.990	3268		148-163	16	MS	☒	DNS CAR	
			22:32	BO			° 58.330	° 39.990		400	-			☐	PAR ON	
			22:53	EN			° 58.330	° 39.990			-			☐		
36	P12	15	23:34	BE	ROS	US	48° 58.330	130° 39.990	3268		125-147	23	MS	☒	DEEP CAR	
		16	00:30	BO			° 58.330	° 39.990		3275	-			☐	PAR OFF	
			01:46	EN			° 58.330	° 39.990			-			☐	A: 10 D: 3222 S: 3216 P: 3275	
37	P13	16	06:49	BE	ROS	US	49° 02.77	131° 39.85	3011		164-	1	MS/MG	☒	5m LOOP 15AL 2CHL	
			07:25	BO			° 02.77	° 39.84		2005	-			☐		
			07:58	EN			° 02.76	° 39.84			-			☐		
38	P13	16	08:09	BE	NET	/	49° 02.76	131° 39.84	3010		-	/	MG	☐	Bongo	
			08:34	BO			° 02.60	° 39.99		2005	-			☐		
			09:12	EN			° 02.51	° 40.07			-			☐		
39	P14	16	14:09	BE	ROS	US	49° 07.36	132° 39.97	3300?		165-188	24	MG	☒	A10 D 3304 S 3298 P 3359	
			15:18	BO			° 07.20	° 39.73			-			☐		
			16:40	EN			° 07.22	° 39.70			-			☐		
40	P14	16	17:11	DE	ARCO	/	49° 07.14	132° 40.33	3308	0	-	/	MG	☐	A12600-	
41	LOOP41	16	17:31	BE	LOOP	/	49° 07.3865	132° 44.4902	3312	4.5	5041	/	SS	☐	15AL 2CHL	
			:				° .	° .			-			☐		
			:				° .	° .			-			☐		

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 SET = Fish Set

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

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

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
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 RE = Recover Mooring Time

Notes:

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EVENT 35 FL. OFFSET : UPTO 0.7 , SPIKE @ ~150m

p6.5/13

EVENT 36 SM. FL. SPIKE @ 600m

AFTER EVENT 38 BEFORE LEAVING STATION
SIT AT P13 FOR 1/2 HOUR ENGINE TROUBLE?

EVENT 39 FL. OFFSET 0.66 SPIKE @ 849 SHOULD SWAP CABLE FIRST THEN SENSOR IF IT DOES NOT CORRECT
1 SCAN LENGTH ERROR @ 2400.
PROBLEM WITH WIRE ON RECOVERY

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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Month			Year			Vessel			Cruise ID			Page		
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
42	P15	16	21:25	BE	ROS	US	49° 12' 072" 133° 40' 015"	3390		-			☐	PNR ON
			22:00	BO			49° 12' 050" 133° 39' 970"		2005	189-	1	MB	☒	+200P 5042 2xG1 + 1xSL
			22:34	EN			49° 12' 010" 133° 39' 960"			-			☐	
43	P16	17	03:07	BE	ROS	US	49° 16' 940" 134° 40' 020"	3685		190-205	16	MB	☒	DMS CR-
			03:14	BO			49° 16' 940" 134° 40' 010"		400	-			☐	
			03:	EN			49° 16' 134° 40' 010"			-			☐	PAL OFF
44	P16	17	04:05	BE	ROS	US	49° 16' 990" 134° 40' 000"	3695		206-229	24	KS/MB	☒	Inaccurate sounder
			05:09	BO			49° 16' 990" 134° 40' 010"		3685	-			☐	reading →
			06:39	EN			49° 16' 990" 134° 40' 010"			-			☐	
45	P16	17	07:41	BE	NET	/	49° 16' 97" 134° 39' 99"	3609		-		JS	☐	BONGO
			07:50	BO			49° 16' 97" 134° 39' 99"		250	-			☐	
			07:55	EN			49° 16' 97" 134° 39' 99"			-			☐	
46	P16	17	08:05	BE	BOT	MSG	49° 16' 97" 134° 39' 98"	3609		230-235	6	DC	☐	TM DEEP CAST
			08:36	BO			° 16' 96" ° 39' 98"		800	-			☐	HUMBOLDT SQUID
			09:02	EN			° 16' 96" ° 39' 98"			-			☐	
47	P16	17	09:29	BE	NET	UN	49° 16' 98" 134° 39' 98"	3609		-		MG	☐	MPS
			10:42	BO			° 16' 98" ° 39' 97"		2000	-			☐	
			11:17	EN			° 16' 98" ° 39' 97"			-			☐	
			:				° °			-			☐	
Event Type: LOOP = Sea Water 1000 Bottle Firing Method														

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

Time Code:
 BE = Beginning Time of Cast
 BO = Bottom Time of Cast
 EN = End Time of Cast

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

CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products
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EVENT 43

CHANGED OUT FL. 3x CABLE WITH CABLE FROM BACKUP. CTD 9/1

FL. OFFSET @ 075 @ 400m

Event 44

- salinity difference consistently @ 0.009 PSU - 0.010 PSU
- PAR removed prior to this cast.
- Sounder stuck @ ~3609 After attempting to refine signal. Reduced winch speed to 0.5 m/s @ ~3600 m and relied on the dilimeter to achieve foot-10 (3685 m).

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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Month			August		Year		2020		Vessel		NP Tully		Cruise ID		202008		Page 8 of 13	
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			
48	P16	17	11:37	BE	BOT	MSG	49° 16.98	134° 39.97	3608		236-239	4	DC	☐	TM SHALLOW			
			11:48	BO			° 16.97	° 39.96		75	-			☐				
			12:59	EN			° 16.97	° 39.97			-			☐				
49	P16	17	12:12	DE	ARGO	—	49° 16.98	134° 40.10	3607	0	-		MG	☐	A12632-20CA034			
50	P17	17	16:52	BE	ROS	US	49° 20.480	135° 39.93	3642		240-	1	JS	☒	5050-200P-20CA020			
			17:26	BO			49° 20.85	135° 39.91		2005	-			☐	PAR ON			
			17:58	EN			49° 20.64	135° 39.90			-			☐				
51	P17	17	18:09	OE	ARGO	—	49° 20.52	135° 40.19	3709	0	-		JS	☐	A12600-20CA020			
52	P18	17	22:21	BE	ROS	US	49° 26.045	136° 40.025	3800		241-264	24	MB	☒	PAR OFF			
			22:28	EN			° 26.030	° 40.010		500	-			☐				
			:				°	°			-			☐				
53	P18	17	22:39	BE	ROS	US	49° 26.030	136° 40.010	3803		-		MB	☐	CONTINUE FROM			
			23:45	BO			° 26.030	° 40.010		3890	-			☐	SOON ↓			
		18	01:05	EN			° 26.000	° 39.990			-			☐				
54	P19	18	05:37	BE	ROS	US	49° 29.960	137° 39.940	3885		265-268	5	MB	☒	Loop 5054 1x Sal			
			06:18	BO			49° 30.053	137° 40.085			-			☐	2x Chl →			
			06:52	EN			49° 30.00	137° 39.96			-			☐				
55	Loop 55	18	9:47	BE	Loop	—	49° 37.74	138° 20.06	3949	4.5	5055		MG	☐	1 Sal 2x Chl 1 Nut			
			:				°	°			-			☐				

Event Type: LOOP = Sea Water Loop Bottle Firing Method: Time Code

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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meat cast-5

p85/13

BEFORE CAST 0052:

CHANGED OUT FLUORIMETER FROM SPARE CTD SERIAL # 5950
 PUT #3640 ON THE SPARE CTD

NEW FLUORIMETER OFFSET LOOKING BETTER ~ 0.07-0.09

{ COMPUTER DISPLAY ISSUE @ 500m, EVENT S2. STOPPED CAST, REBOOT, COMPUTER FROZE,
 LOOKS LIKE DATA FULLY ACQUIRED DOWN TO 500m FOR EVENT S2. CONTINUE WITH
 EVENT S3, 500m TO BOT-10.

- NOISY SIGNAL O2 & FL @ 3600 → B-10, CHECK ALL CONNECTIONS ON DECK, Y-CABLE CTD
 → CHG. OUT FL TO ORIGINAL TIGHTENED CLEANED & LUBED WET PLUGS
 3X CABLE

Event S4

{ Collected deep water for salinity reference. Trip bottles 1,2,3 @ 2005 m for 20 L carboy.
 ↳ sample IDs 265, 266, 267

STOP @ ~ 1400 ↓ TO COLLECT WIRE

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month August			Year 2020		Vessel I.R. Tully		Cruise ID 2020-008							
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
56	P20	18	11:24	BE	NET	-	49° 34.15 138° 39.93	3929		-	-		☐	BONGO
			11:34	BO					250	-			☐	
			11:39	EN							-		☐	
	P2	18	11:50	BE		MSG	49° 34.11 138° 39.95	39		269-274	6	DC	☐	TH D
			12:17	BO					800	-			☐	
			12:46	EN							-		☐	
58	P20	18	13:57	BE	NET	UN	49° 34.01 138° 39.99	3930		-		MG	☐	MPS
			15:06	BO					2000	-			☐	
			15:43	EN							-		☐	
59	P20	18	15:53	BE	BOT	MSG	49° 34.01 138° 39.99	3930		275-278	4	DC	☐	TH SHALLOW
			16:03	BO					75	-			☐	
			:	EN							-		☐	
60	P20	18	17:35	BE	ROS	US	49° 34.01 138° 39.86	3930		279-302	24	MT/MG	☒	DEEP CAST
			18:44	BO					4025	-			☐	
			20:09	EN							-		☐	
61	P20	18	21:09	BE	ROS	US	49° 33.380 138° 39.930	3934		303-318	6	MB	☒	BMS CAST
			21:16	BO					400	-			☐	PAIR ON
			21:36	EN							-		☐	
62	P20	18	21:49	DE	DRF	-	49° 33.200 138° 39.987	3934	-	-	-	MBKS	☐	ARGO # 2020-204036

Event Type:

LOOP = Sea Water Loop

BOT = Bottle cast (no CTD)

CTD = Standalone CTD

ROS = CTD in Rosette

SET = Fish Set

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

Time Code:

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

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DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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Month			August			Year		2010		Vessel		SP Tally		Cruise ID		2010-008	
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trms/Fl Cleaned	Comments		
63	P21	19	01:58	BE	ROS	US	49° 37' 98.4	139° 40' 02.7	3975		319	1	MS	☒	+ Loop 5063 2x Chl + 1 Sal		
			02:36	BO			49° 37' 85.8	139° 40' 08.2		2005	-			☐			
			03:10	EN			49° 37' 89.8	139° 39' 85.8			-			☐			
64	P22	19	07:28	BE	ROS	US	49° 42' 01	140° 40' 07	3915		320 - 343	24	MG	☒	PAR OFF D 3984 A 9 S 3998 P 3953		
			08:32	BO			° 42' 16	° 39' 70		3953	-			☐			
			10:05	EN			° 42' 38	° 39' 46			-			☐			
65	Loop 65	19	12:21	BE	LOOP	-	49° 43' 86	141° 09' 96	3946	4.5	5065		MG	☐	1 Sal Loop 2 Chl		
66	P23	19	14:25	BE	ROS	US	49° 46' 05	141° 40' 00	4003		344	1	DL	☒	+ Loop 5060 2 Chl + 1 Sal		
			15:03	BO			° 46' 20	° 40' 21		2005	-			☐			
			15:37	EN			° 46' 19	° 40' 17			-			☐			
67	P23	19	15:49	DE	ARGO	-	49° 46' 36	141° 40' 05	4005	0	-		JS	☐	A12600-20CA021		
68	P24	19	19:48	BE	ROS	US	49° 50' 19.0	142° 40' 00.0	3950		345 - 368	24	MB	☒			
			21:09	BO			49° 50' 17.8	142° 40' 00.3		4046	-			☐			
			22:38	EN			49° 50' 19.5	142° 40' 00.3			-			☐	Sounder all over the		
69	P25	20	01:43	BE	ROS	US	49° 59' 99.0	143° 36' 24.0	3650		-			☒	PAR ON Loop 5069		
			03:21	BO			50° 0' 00.0	143° 36' 29.0		2005	369	1	KS	☒	1x Sal 2x Chl		
			03:52	EN			50° 0' 02.0	143° 36' 31.0			-			☐			
			:				° : :	° : :			-			☐			
			:				° : :	° : :			-			☐			

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

Loop = Sea Water Loop
 MOR = Mooring
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Bottle Firing Method:
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EVENT 63

STOP @ 350m ↓ TO COLLECT WIRE.

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EVENT 64

SPIKES IN GREEN TRANS BUT NOT RED TRANS

Event 69

' Stopped @ ~97 metres. to correct significant outboard lead. → During downcast.

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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Month			August		Year		2020		Vessel		Tully		Cruise ID		2020-008		Line P	
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			
70	P35	20	06:51	BE	ROS	US	50° 0.038	144° 18.116	4110		370-	1	KS/JS	☒				
			07:27	BO			50° 0.10	144° 18.13		2005				☐				
			08:00	EN			50° 0.10	144° 18.13						☐				
71	P26	20	11:25	BE	NET	/	49° 59.96	144° 59.91	4209				MG	☐	1101			
			11:27	BO			59.96	59.92		50				☐				
			11:29	EN			59.96	59.92						☐				
72	P26	20	11:38	BE	BOT	MSG	49° 59.97	144° 59.95	4209				DC	☐	100m GO FLOW			
			11:50	MR			59.98	59.98		100	371-375	5		☐	TM CAST → 100M			
			12:03	EN			59.99	59.99						☐				
73	P26	20	12:17	BE	NET		49° 59.99	144° 59.99	4208				JS	☐	BONGO			
			12:27	BO			59.99	59.99		250				☐				
			12:31	EN			50° 00.01	145° 00.01						☐				
74	P26	20	13:46	BE	BOT	PS4	50° 00.00	145° 00.00	4253		376-380	5	DC	☐	TM CAST → 1500M			
			14:16	MR			50° 00.00	145° 00.01		1500				☐				
			14:54	EN			50° 00.00	145° 00.01						☐				
75	P26	20	15:14	BE	NET		49° 00.00	145° 00.01	4250				MG	☐	11PS			
			16:58	BO			00.00	00.01		3000				☐				
			:	EN			.	.						☐				
			:				.	.						☐				

Event Type:
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Bottle Firing Method:
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This page is for any notes or observations

P11.5 / 13

ADJUST SOUNDING BEFORE CAST 0074 APPLY TO EVENTS 71, 72, 73

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month			August		Year		2020		Vessel		JPTOLY		Cruise ID		2020-008		Page 12 of 13	
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			
76	P26	20	18:00	BE	BOT	MSG	50° 00.00	145° 00.01	4250		381 - 384	4	DC	☐	TMCAST - MID			
			18:11	MR			50° 00.00	145° 00.01		400				☐				
			18:26	BO			50° 00.00	145° 00.01						☐				
77	P76	20	19:33	BE	ROS	US	49° 59.970	144° 59.970	4250		385-400	16	MB	☒	DMS CAST			
			19:46	BO			50° 59.970	59° 950		400				☐				
			20:01	EN			50° 59.970	145° 0.000						☐				
78	P76	20	21:53	BE	ROS	US	50° 0.000	145° 0.010	4253		401 - 424	24	MB	☒	PAR OFF DEEP			
			23:11	BO			49° 59.994	144° 59.989		4317				☐	P=4317 A=11			
			00:47	EN			49° 59.993	144° 59.990						☐	D=4236 S=4253			
79	P26	21	-	DE	DRF	-	-	-	4250				MB/KS	☐	ARGO 035			
80	LOOP5080	21	02:48	BE	LOOP	-	49° 59.84	144° 47.34	4208	4.5	5080	-	MB	☐	LOOP 5081			
81	LOOP5081	21	14:01	BE	LOOP	-	49° 58.84	142° 03.85	40	4.5	5081	-	MG	☐	2CHL 15AL			
82	LOOP5082	22	03:25	BE	LOOP	-	49° 52.11	138° 38.11	3938	-	5082	-	MB	☐	2CHL 15AL			
83	LOOP5083	22	14:16	BE	LOOP	-	49° 41.77	135° 50.33	3521	4.5	5083	-	MG	☐	2CHL 15AL			
84	LOOP5084	22	00:01	BE	LOOP	-	49° 28.21	133° 07.46	3326	-	5084	-	MB	☐	2CHL 15AL			
85	LOOP5085	23	12:55	BE	LOOP	-	49° 07.33	130° 00.78	2458	4.5	5084	-	MG	☐	2CHL 15AL			
86	P4	24	05:21	BE	ROS	US	48° 38.970	126° 39.860	1328		425 - 443	19	MB	☒	ARGO			
			05:44	BO			48° 38.990	126° 39.970		1317				☐	P=1317 A=10			
			06:24	EN			48° 39.000	126° 40.000						☐	D=1317 S=1329			
Event Type: LOOP = Sea Water Loop Bottle Firing Method: Time Code:																		

Event Type:
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EVENT 19

DREIFER DID NOT ACTIVATE AFTER 2 ATTEMPTS, DID NOT DEPLOY.

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 Latitude	Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Tms/FI Cleaned	Comments			
87	P4	24	07:24	BE	BOT	MSG	48° 38.99	126° 40.00	1330	800	444-449	6	DC	☐	TH DEEP			
			07:49	BO			° 38.99	° 40.00			-			☐				
			08:15	EN			° 38.99	° 40.00			-			☐				
88	P4	24	08:27	BE	NET	/	48° 38.99	126° 40.00	1331		-		JS	☐	BONGO			
			08:36	BO			° 38.99	° 40.00		250	-			☐				
			08:41	EN			° 38.99	° 40.00			-			☐				
89	P4	24	08:55	BE	BOT	MSG	48° 38.99	° 40.00	1332	75	450-453	4	DC	☐	TH SHALLOW			
			09:01	BO			° 38.99	° 40.00			-			☐				
			09:13	EN			° 38.99	° 40.00			-			☐				
90	LOOP	24	14:04	BE	LOOP	-	48° 51.08	125° 34.44	50		5090		JS	☐	LOOP			
			:				° .	° .			-			☐				
			:				° .	° .			-			☐				
			:				° .	° .			-			☐				
			:				° .	° .			-			☐				
			:				° .	° .			-			☐				
			:				° .	° .			-			☐				
			:				° .	° .			-			☐				
			:				° .	° .			-			☐				
			:				° .	° .			-			☐				
			:				° .	° .			-			☐				
			:				° .	° .			-			☐				

Event Type:
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 NET = Plankton Net Haul
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