

DAILY SCIENCE LOG BOOK

CRUISE
NUMBER

2017-08

DATE:

From: Aug 15/2017

To: 30 AUG 2017

VESSEL:

J.P. Tully

PROJECT(S):

LINE P

Water Properties Group
Fisheries and Oceans Canada
Institute of Ocean Sciences
Ocean Sciences Division

WaterProperties.ca

Captain: DONALD GIBSON

Second Officer: CHRISTOPHER SEMANOFF

Fishing Master: —

First Officer: RYAN HULL

Third Officer: KAITLIN SCURA

Chief Engineer: DAN ROBINSON

Mission Participants / Agencies:

DFo-105 ; DFo-310 ; U1C ; U3C ; 5C2

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

1st Leg Scientific Personnel: Chief Scientist: MARIE ROBERT 06-18 A

Name	Watch	Cabin	Name	Watch	Cabin
HUGH MACLEAN	00-12	B	MICHAEL ARRECHUE	00-11	
GLEN COOPER	PH	D			
TERESA VENEZLO	12-18	E			
CHEN ZENG	18-24	E			
RIK NELSON	00-06	F			
BRENT SUMMERS	18-24	G			
CONOR MORGAN-LAW	00-06	G			
ANNALEE MEYER	06-12	H			
ASHLEY ARNOLD	12-18	H			
MOIRA GABRIANA	12-24	UP			

2nd Leg Scientific Personnel: Chief Scientist: _____

[illegible]

**** 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: Tully laptop

Data acquisition program: Seasave

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

Primary CTD

Make: SBE model: 9+ serial number: 550

Primary temperature serial number: 4054

Primary conductivity serial number: 1766

Secondary temperature serial number: 4484

Secondary conductivity serial number: 3531

Transmissometer: Metlabs Model: C-STAR s/n: 1396DR

Transmissometer: _____ Model: _____ s/n: _____

Fluorometer: Model Seapoint Cable gain: 3X s/n: 3685 P, S or NO pump?

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

Oxygen sensor: SBE Model: 43 s/n: 1119 (P) S or NO pump?

PAR sensor: Biospherical Model: QSP2350 s/n: 70613 Surface PAR? Y / N

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?

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-rosette casts (e.g., W.E. Ricker)

Rosette Setup:

Number of bottles: 24
Manufacturer: 105
Volume of bottles (litres): 10 L

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):

Oxygen Kit(s):

Make: Scipps Inst. of Ocean. KIT #2 Model: _____ Kit Number: The dos 876-3, exc. 21
Make: KIO3 exc. unit #19 Model: _____ Kit Number: 10400-0274

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

Thermosalinograph System (SBE21):

Program: Seasave Version: 7.23.2
Sampling interval (seconds): 30
Fluorometer sensor serial number: N/535-953 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:

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Page 1 of 16

Month <u>AUG</u>			Year <u>2017</u>			Vessel <u>TULLY</u>			Cruise ID <u>2017-08</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
1	SI	16	:	BE	ROS	U.S.	°	°	175		-	-	HM	☐ ☐	WISC 13-18
			18:14	BO			48° 39.62	123° 30.07		165	-	24		☐ ☐	SLIGHT DRIP
			18:18	EN			48° 39.64	123° 30.05			-			☐ ☐	
2	HAROS9	16	20:37	BE	ROS	US	48° 36.88	123° 14.95	236		-			☐ ☐	
			20:41	BO			48° 36.89	123° 14.96		231	1 - 14	14	MG	☒ ☐	STARTED ARCHIVING IMMEDIATELY
			20:59	EN			48° 36.94	123° 15.09			-			☐ ☐	→
3	HAROS9	16	21:35	BE	NET	-	48° 36.92	123° 14.92	232		-			☐ ☐	Bongo
			21:43	BO			48° 36.84	123° 15.03		227	-			☐ ☐	
			21:48	EN			48° 36.78	123° 15.08			-			☐ ☐	→
4	NEWDUNGNESS	16	23:05	BE	DRIFTER	-	48° 23.98	123° 11.14	91		-			☐ ☐	3 SPONGE BOBS 3 OSKERS
5	JF1	17	00:42	BE	LOOP		48° 15.87	123° 30.21			5005-			☐ ☐	2 CHL INUT 1 SAL
6	JF2	17	02:40	BE	NET		48° 17.95	123° 59.95	187		-			☐ ☐	Bongo
			02:45	BO			48° 18.03	124° 00.04		180	-			☐ ☐	
			02:50	EN			48° 18.08	124° 00.06			-			☐ ☐	
7	JF2	17	03:06	BE	ROS		48° 18.15	123° 59.91	186		-		MG	☒ ☐	
			03:10	BO			48° 18.17	123° 59.91		180	15 - 26	12		☐ ☐	
			03:24	EN			48° 18.24	123° 59.94			-			☐ ☐	
8			:				°	°			-			☐ ☐	
			:				°	°			-			☐ ☐	

Event Type:

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

Event Type:

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

Bottle Firing Method:

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

Notes:

Time Code:

BE = Beginning Time of Cast
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

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P1.5 / 16

WIRE ABOVE HEAD - TERMINATION IS FRAYED LOOKING WILL HAVE TO PULL HEAD TO GET THAT CLEANED UP AND ASSESSED

CORRECT PAR VALUES IN CONFIG FILE AFTER CAST 3, HARD 59

DAILY SCIENCE LOG

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Page 2 of 16

Month <u>AUGUST</u>				Year <u>2017</u>		Vessel <u>TULLY</u>				Cruise ID <u>2017-08</u>					
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
8	SF3	17	06:01	BC	LOOP		48° 26.59	124° 30.19	225		5008		MG/AM	☐ ☐	
9	NEAH	17	06:31	BC	DRIFTER		48° 28.08	124° 36.52	240		-			☐ ☐	3 SPONGE BOBS 3 SHARKS
10	SF4	17	08:15	BC	LOOP		48° 32.26	124° 59.78	50		5010-		HM	☐ ☐	
11	P1	17	10:42	BC	ROS		48° 34.55	125° 30.16	120	110	27 - 30	4	HM	☒ ☐	
			10:45	BC			48° 34.55	125° 30.16			-			☐ ☐	
			10:50	EN			48° 34.56	125° 30.20			-			☐ ☐	
12	P1	17	10:42		LOOP		48° 34.54	125° 30.14	120		5012-		RM	☐ ☐	es loop 602
13	P2	17	13:53	BC	ROS	US	48° 36.81	125° 59.94	115		31 - 38	8	HM	☒ ☐	
			13:56	BO			48° 35.99	125° 59.96		105	-			☐ ☐	
			14:04	EN			48° 35.97	125° 59.98			-			☐ ☐	
14	P2	17	14:28	BC	NET		48° 36.00	125° 59.97	115	103	-		HM	☐ ☐	BONGO
			14:29	EN			48° 35.99	125° 59.96			-			☐ ☐	
15	P2	17	14:45	BC	NET		48° 35.98	125° 59.96	116		-		HM	☐ ☐	RING NET
			14:49	BO			48° 35.99	125° 59.96		106	-			☐ ☐	
			14:51	EN			48° 35.99	125° 59.96			-			☐ ☐	
16	P2	17	15:05	BC	ROS		48° 36.00	125° 59.94	114		-			☐ ☐	
			15:07	BO			48° 36.00	125° 59.94		104	39 - 53	15	HM	☐ ☐	
			15:21	EN			48° 35.98	125° 59.94			-			☐ ☐	
			:				°	°			-			☐ ☐	

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SPONGE BOBS @ SF3 #670 #634 #729

p2.5 / 16

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 3 of 16

Month			August		Year		2017		Vessel		TULLY		Cruise ID		2017-68	
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments	
17	P3	17	17:57	BE	ROS	U.S.	48° 37.47	126° 20.06	793		54-58	1	U.S.	☒		
			18:07	BO			48° 37.45	126° 19.97		814	-			☐		
			18:21	EN			48° 37.49	126° 19.91			-			☐		
18	P4	17	20:31	BE	BOT	MR	48° 38.96	126° 39.99	1320		-	4	AM/UN	☐	Go FLOS	
			21:01	EN			48° 38.93	126° 39.94		100	-		BRENT	☐		
19	P4	17	21:10	BE	ROS	US	48° 38.86	126° 39.87	1316		59-78	20	MG	☒	STOPPED @ 100 AND BACK	
			21:19	BO			48° 38.85	126° 39.83		300	-			☐	TO 300	
			21:40	EN			48° 38.80	126° 39.72			-			☐	DMS	
20	P4	17	21:57	BE	NET	/	48° 39.02	126° 39.92	1314		-		MG	☐	Bongo	
			22:06	BO			48° 39.03	126° 39.91		250	-			☐		
			22:14	EN		/	48° 39.01	126° 39.93			-			☐		
21	P4	17	22:23	BE	NET		48° 39.00	126° 39.97	1310		-		MG	☐	RING	
			22:36	BO			48° 39.02	126° 39.98		250	-			☐		
			22:42	EN			48° 39.08	126° 39.94			-			☐		
22	P4	17	23:01	BE	BOT	MR	48° 39.08	126° 39.91	1302		-		AM/B	☐	GO-FLO	
			23:31	BO			48° 39.83	126° 39.83		500	-			☐		
			23:59	EN			48° 39.10	126° 39.78			-			☐		
			:				°	°			-			☐		
			:				°	°			-			☐		

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p 3.5 / 16

STARTING ARCHIVING RIGHT AWAY

LITTLE BOX GOT UNCLICKED - THINK THIS HAPPENS WHEN ALL THE WINDOWS RESET

- ARCHIVE IS SET UP IN CONFIGURATION 3 TO START IMMEDIATELY

DAILY SCIENCE LOG

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Page 4 of 16

Month <u>Aug</u>				Year <u>2017</u>		Vessel <u>TULLY</u>				Cruise ID <u>2017-08</u>					
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information		Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
							Latitude	Longitude							
23	P4	18	00:44	BE	ROS	US	48° 39.01	126° 39.97	1313		83 - 101	19	MG	☒	DEEP CAST
			01:05	BO			48° 39.00	126° 39.99		1320	-			☐	
			01:47	EN			48° 39.06	126° 39.95			-			☐	
24	P4	18	02:21	BE	NET	/	48° 39.07	126° 40.03	1306		-		MG	☐	BONGO
			02:57	BO			48° 39.17	126° 40.10		1200	-			☐	
			03:16	EN			48° 38.98	126° 40.23			-			☐	
25	P4	18	04:11	BE	BOT	MR	48° 39.02	126° 40.56	1323		102 - 105	4	AM/B	☐	GO-FLO
			05:04	BO			48° 39.04	126° 41.03		1250	-			☐	
			06:03	EN			48° 38.85	126° 41.46			-			☐	
26	P4	18	06:14	BE	ROS	US	48° 38.81	126° 41.37	1333		122 - 145	24	MG	☒	CESIUM SHALLOW
			06:17	BO			48° 38.79	126° 41.35		150	-			☐	
			06:24	EN			48° 38.74	126° 41.31			-			☐	
27	P4	18	06:51	BE	ROS	U.S.	48° 38.91	126° 40.64	1325		146 - 169	24	AM	☒	DEEP CESIUM
			07:01	PO			48° 38.91	126° 40.72		500	-			☐	
			07:16	EN			48° 38.88	126° 40.66			-			☐	
28	P4	18	07:45	BE	Go Flo	-	48° 38.98	126° 39.98	1325	500	-	2	AM/AM	☐	GO FLOS
29	P4	18	08:20	BE	ROS	U.S.	48° 38.07	126° 39.98	1304		106 - 121	16	MG	☐	UBC CAST
			08:44	BO			48° 39.06	126° 39.79		1314	-			☐	
			09:10	EN			48° 39.03	126° 39.84			-			☐	

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p4.5/16

SLICK ALONG STARBOARD - CAN'T FIND SOURCE - MOVED 1/4 KM AWAY - SEEMS CLEAR

DAILY SCIENCE LOG

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Page 5 of 16

Month				August			Year			2017			Vessel			TULLY			Cruise ID			2017-08		
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information		Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments									
							Latitude	Longitude																
30	P5	18	11:50	BE	ROS		48°41.50	127°09.98	2097		170-	1	H.M.	☒										
			12:26	BO			48°41.37	127°09.87		2005	-			☐										
			13:01	EN			48°41.45	127°09.85			-			☐										
31	P6	18	15:46	BE	ROS		48°44.58	127°40.02	2542		171-	1	H.M.	☒										
			16:19	BO			48°44.61	127°39.99		2006	-			☐										
			16:51	EN			48°44.56	127°40.00			-			☐										
32	P7	18	19:32	BE	ROS	US	48°46.58	128°09.80	2502		172-	1	MG	☒										
			20:05	BO			48°46.52	128°09.98		2005	-			☐										
			20:41	EN			48°46.55	128°10.24			-			☐										
33	P8	18	23:25	BE	ROS	US	48°48.99	128°39.99	2516		173-196	24	MG	☒	5033A CHL @ 1950 first sample lost									
			23:59	BO			48°49.06	128°40.12		2005	-			☐										
		19	00:59	EN			48°48.91	128°40.16			-			☐										
34	P8	19	01:11	BE	NET		48°48.98	128°40.09			-		MG	☐	Bongo									
			01:19	BO			48°48.99	128°40.13		250	-			☐										
			01:26	EN			48°49.00	128°40.21			-			☐										
35	P8	19	01:33	BE	NET		48°49.03	128°40.18	2514		-		MG	☐	Bongo									
			02:09	BO			48°49.13	128°40.65		1200	-			☐										
			02:30	EN			48°49.04	128°40.74			-			☐										
			:				°	°			-			☐										

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Ocean Sciences Division, Institute of Ocean Sciences

Page 6 of 16

Month <u>August</u>			Year <u>2017</u>			Vessel <u>S.P. Tully</u>			Cruise ID <u>2017-08</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
36	P8	19	02:36	BE	NET	—	48°48.95	128°40.67	2515		-		MG	☐ ☐	
			02:46	BO			48°48.94	128°40.67		250	-			☐ ☐	Ring NET
			02:50	EN			48°48.90	128°40.71			-			☐ ☐	
37	P9	19	05:51	BE	ROS	US	48°51.33	129°09.95	2340		197-	1	MG	☒ ☐	
			06:26	BO			48°51.37	129°09.86		2005	-			☐ ☐	
			06:59	EN			48°51.37	129°09.84			-			☐ ☐	
38	P10	19	09:36	BE	ROS	U.S.	48°53.54	129°40.01	2638		198-221	24	H.M.	☒ ☐	Shallow CTD
			09:39	BO			48°53.54	129°40.01		200	-			☐ ☐	
			09:49	EN			48°53.51	129°40.07			-			☐ ☐	
39	P10	19	10:13	BE	ROS	U.S.	48°53.61	129°40.04	2637		222-245	24	H.M.	☒ ☐	Deep CTD + 5m CAST
			10:47	BO			48°53.62	129°39.97		2005	-			☐ ☐	
			11:25	EN			48°53.61	129°39.97			-			☐ ☐	
40	P11	19	13:58	BE	ROS	U.S.	48°55.99	130°09.97	2750		246-	1	H.M.	☒ ☐	
			14:34	BO			48°56.07	130°09.97		2005	-			☐ ☐	
			15:08	EN			48°55.99	130°10.03			-			☐ ☐	
41	P12	19	17:55	BE	LOOP	—	48°58.27	130°39.99	3238		5041-		TJ	☐ ☐	Go loop 60e
42	P12	19	18:03	BE	BOT	MR	48°58.28	130°39.96	3234		247-251	5	H.M./B	☐ ☐	Go FLO
			18:16	BO			48°58.24	130°39.95		150	-			☐ ☐	
			18:33	EN			48°58.19	130°39.99			-			☐ ☐	

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 NET = Plankton Net Haul
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Bottle Firing Method:
 US = Up / Stop (default)
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Notes:

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

Ocean Sciences Division, Institute of Ocean Sciences

Page 7 of 16

Month <u>AUGUST</u>			Year <u>2017</u>			Vessel <u>TULLY</u>			Cruise ID <u>2017-08</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
43	P12	19	18:41	BE	ROS	US	48° 58.18	130° 39.99	3233		252-268	17	H.A	☒ ☐	DMS CAST + UVIC
			18:45	BO			48° 58.19	130° 39.99		300	-			☐ ☐	LOOPS CMC x 2
			19:06	EN			48° 58.28	130° 40.13			-			☐ ☐	#1 NOT CLOSED @ SPIGOT
44	P12	19	19:23	BE	NET	-	48° 58.35	130° 40.27	3235		-		MG	☐ ☐	BONGO
			19:31	BO			48° 58.36	130° 40.29		250	-			☐ ☐	
			19:36	EN			48° 58.34	130° 40.40			-			☐ ☐	
45	P12	19	19:45	BE	NET	✓	48° 58.41	130° 40.31	3233		-		MG	☐ ☐	RING
			19:56	BO			48° 58.39	130° 40.37		250	-			☐ ☐	
			20:00	EN			48° 58.39	130° 40.39			-			☐ ☐	
46	P12	19	20:41	BE	BOT	MR	48° 58.20	130° 39.99	3235		269-273	5	AM/B	☐ ☐	GO FLO
			21:33	BO			48° 58.01	130° 40.16		1000	-			☐ ☐	12 MIN WAIT FOR MESSENGER
			22:18	EN			48° 57.89	130° 40.01			-			☐ ☐	
47	P12	19	22:32	BE	ROS	US	48° 58.23	130° 39.96	3236		274-296	23	MG	☒ ☐	PAR OFF DEEPCAST
			23:32	BO			48° 58.21	130° 39.95		3275	-			☐ ☐	20XV ISAL INDS
			00:54	EN			48° 58.13	130° 40.00			-			☐ ☐	
48	P12	20	01:39	BE	NET	UN	48° 58.29	130° 39.81	3234		-		MG	☐ ☐	
			01:51	BO			48° 58.22	130° 39.95		505	-			☐ ☐	MPS
			01:59	EN			48° 48.19	130° 39.99			-			☐ ☐	PROBLEMS W/ WINCH CONTROLLER - ABOVE 2000M FOR 500H
			:				.	.			-			☐ ☐	

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p 7.5/16

THE REMOTE WOULD FREE WHEEL ON OUT - EITHER NOTHING OR FULL SPEED, NOTHING IN BETWEEN
LOCAL CONTROL PRETTY MUCH THE SAME, MORE CONTROL OF RATE ON THE UP

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 8 of 16

3002-3123-3244

Month <u>AUGUST</u>			Year <u>2017</u>		Vessel <u>JP Tully</u>			Cruise ID <u>2017-08</u>							
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
49	P12	20	02:28	BE	BOT	MR	48° 58.22	130° 39.96	3234		297 - 301	5	AM/B	☐ ☐	Go Flo
			03:39	BO			48° 58.10	130° 40.00		3000	-			☐ ☐	
			05:10	EN			48° 58.03	130° 39.75			-			☐ ☐	
50	P12	20	05:28	BE	ROS	US	48° 58.12	130° 40.05	3235		302 - 317	16	MG	☒ ☐	USC CAST
			06:00	BO			48° 58.13	130° 40.03		2005	-			☐ ☐	
			06:41	EN			48° 58.22	130° 40.01			-			☐ ☐	
51	P12	20	07:02	BE	NET	~	48° 58.12	130° 39.99	3236		---	---	H.M.	☐ ☐	DEEP BONGO
			07:37	BO			48° 58.07	130° 40.02			-			☐ ☐	
			07:57	EN			48° 58.16	130° 40.03			-			☐ ☐	
52	P13	20	12:56	BE	ROS	US	49° 02.64	131° 40.00	3083		318-	1	H.M.	☒ ☐	
			13:31	BO			49° 02.65	131° 39.98		2005	-			☐ ☐	
			14:05	EN			49° 02.61	131° 39.98			-			☐ ☐	
53	P14	20	19:34	BE	ROS	US	49° 07.43	132° 39.91	3317		319 - 342	24	MG	☒ ☐	DOC CAST
			20:34	BO			49° 07.36	132° 40.01		3360	-			☐ ☐	P 3360 S 3318 D 3305 A 10.0
			22:00	EN			49° 07.39	132° 40.02			-			☐ ☐	
54	P14	20	19:37	BE	LOOP	✓	49° 07.41	132° 39.90	3318	4.5	5054	✓	RN	☐ ☐	GOL RESIDUAL LOOP
55	P15	21	03:05	BE	ROS	US	49° 12.02	133° 39.92	3405		-		MG	☒ ☐	PAR ON
			03:39	BO			49° 12.07	133° 40.08		2005	-			☐ ☐	
			04:12	EN			49° 12.00	133° 40.19			-			☐ ☐	

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DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 9 of 16

Month <u>AUGUST</u>			Year <u>2017</u>			Vessel <u>LP TUCKY</u>			Cruise ID <u>2017-08</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
56	P16	21	09:35	BC	ROS	U.S.	49° 17.07	134° 40.07	3635		344 - 367	24	H.M.	☒	PAR OFF
			09:44	BO			49° 17.05	134° 40.01		500	-			☐	DEEP CESIUM
			09:57	EN			49° 17.06	134° 40.02			-			☐	
57	P16	21	10:20	BC	ROS	U.S.	49° 17.02	134° 39.92	3635		368 - 391	24	H.M.	☒	SHALLOW CESIUM
			10:23	BO			49° 17.01	134° 39.93		150	-			☐	
			10:32	EN			49° 17.00	134° 39.96			-			☐	
58	P16	21	10:43	BC	GO FLO	MR	49° 16.97	134° 40.07	3635		392 - 396	5	AM	☐	DEEP GO FLO
			12:00	BO			49° 16.88	134° 40.08		3500	-			☐	MESS. AWAY (25m)
			13:39				49° 16.82	134° 40.00			-			☐	DOWN)
59	P16	21	14:30	BC	ROS	U.S.	49° 17.07	134° 40.09	3632		397 - 420	24	H.M.	☒	DEEP ROSETTE
			15:25	BO			49° 17.04	134° 40.07		3681	-			☐	
			16:55	EN			49° 16.98	134° 39.91			-			☐	
60	P16	21	18:05	BC	BOT	MR	49° 17.03	139° 39.92			421 - 425	5	AM	☐	1000m GO FLO
			18:20	BO			49° 17.03	134° 39.94	3635		-			☐	
			18:25	EN			49° 17.07	134° 39.94		1000	-			☐	PAR ON
61	P16	21	19:22	BE	ROS	U.S.	49° 17.04	134° 39.87	3635		426 - 442	17	MG	☒	DMS CAST + UNIC
			19:28	BO			48° 17.02	134° 39.82		300	-			☐	LOO'S 2XCAL
			19:49	EN			49° 17.06	134° 39.89			-			☐	
			:				.	.			-			☐	

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DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 10 of 16

Month <u>Aug</u>				Year <u>2017</u>		Vessel <u>TULLY</u>				Cruise ID <u>2017-08</u>					
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
62	P16	21	20:03	BE	NET	✓	49° 17.06	134° 39.97	3635		-		MG	☐ ☐	BONGO
			20:10	BO			49° 17.04	134° 39.94		250	-			☐ ☐	
			20:14	EN			49° 17.01	134° 39.96			-			☐ ☐	
63	P16	21	20:21	BE	NET	✓	49° 17.00	134° 39.97	3635		-		MG	☐ ☐	BONGO
			20:53	BO			49° 16.87	134° 40.02		1200	-			☐ ☐	
			21:13	EN			49° 16.83	134° 40.06			-			☐ ☐	
64	P16	21	21:23	BE	NET	✓	49° 16.91	134° 40.09	3641		-		MG	☐ ☐	RING
			21:37	BO			49° 16.80	134° 40.14		250	-			☐ ☐	
			21:36	EN			49° 16.77	134° 40.18			-			☐ ☐	
65	P16	21	21:55	BE	BOT	MR	49° 16.89	134° 40.19	3655	15	443-447	5	AM/B	☐ ☐	GLO FLO
			22:12	BO			49° 16.84	134° 40.09		150	-			☐ ☐	
			22:35	EN			49° 16.84	134° 39.97			-			☐ ☐	
66	P17	22	04:00	BE	ROS	US	49° 21.03	135° 40.02	3625		448-450	3	MG	☒ ☐	NH ₄ BLANK WATER
			04:36	BO			49° 21.04	135° 40.09		2005	-			☐ ☐	
			05:14	EN			49° 21.03	135° 40.08			-			☐ ☐	PAR OFF
67	P18	22	10:36	BE	ROS	V.S	49° 26.02	136° 40.01	3835		451-470	20	H.M	☒ ☐	
			11:43	BO			49° 25.99	136° 40.00		3891	-			☐ ☐	Doc CAST
			13:10	EN			49° 25.98	136° 40.09			-			☐ ☐	
68	P18	22	10:34	BE	Loop	—	49° 26.03	136° 40.00	3835	Loop	-		R.M	☐ ☐	CESION Loop

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 Version: 6 December 2016

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 11 of 16

Month <u>AUGUST</u>			Year <u>2017</u>			Vessel <u>JP TULLY</u>			Cruise ID <u>2017-08</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
69	P19	22	18:27	BE	ROS	U.S.	49° 30.09	138° 39.92	3927		471-494	24	H.M./MG	☒ ☐	CALIBRATION PA DIC
			19:01	BO			49° 30.03	138° 39.89		2005	-			☐ ☐	SAL
			:	EN			49° 30.01	138° 39.94			-			☐ ☐	
70	P19	22	18:28	BE	Loop	—	49° 36.09	138° 39.92	3927	Loop	5070	—	RN	☐ ☐	CESIUM LOOP
71	P22	23	13:55	BE	ROS	VS	49° 42.00	140° 40.00	3940		495-514	20	H.M.	☒ ☐	DOC CAST
			15:00	BO			49° 42.05	140° 39.97		3980	-			☐ ☐	PAR OFF
			16:25	EN			49° 41.99	140° 40.04			-			☐ ☐	
72	P23	23	21:32	BE	ROS	US	49° 46.06	141° 39.83	4083		515-	1	MG	☒ ☐	PAR ON
			22:06	BO			49° 45.98	141° 40.01		2005	-			☐ ☐	
			22:39	EN			49° 46.05	141° 40.03			-			☐ ☐	PAR OFF
73	P23	23	21:34	BE	Loop	—	49° 46.07	141° 39.84	4083	4.5	5073		RN	☐ ☐	CESIUM LOOP
74	P24	24	04:01	BE	ROS	US	49° 50.20	142° 39.99	4003		516-535	20	MG	☒ ☐	DOC CAST
			05:15	BO			49° 50.32	142° 40.20		4042	-			☐ ☐	P 4042 S 4028? D 3970 A 11.5
			06:47	EN			49° 50.48	142° 40.67			-			☐ ☐	
75	P24	24	:	BE	Loop	—	49° 50.22	142° 40.03	4003	4.5	5074		RN	☒ ☐	CESIUM LOOP
76	P25	24	10:56	BE	ROS	U.S.	50° 00.04	143° 36.24	3999		536-	1	H.M.	☒ ☐	PAR ON
			11:29	BO			50° 00.04	143° 36.17		2005	-			☐ ☐	
			12:04	EN			50° 00.01	143° 36.23			-			☐ ☐	
77	P25	24	10:59	BE	Loop	—	50° 00.04	143° 36.23		Loop (A5)	5077	—	RN	☐ ☐	CESIUM LOOP

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This page is for any notes or observations

P 11.5 / 16

TSG SUCINITY VERY FUZZY

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 12 of 16

Month			Year			Vessel			Cruise ID						
AUGUST			2017			TULLY			2017-08						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
78	P35	24	15:39	BE	ROS	U.S.	50° 00.06	144° 13.24	4081		537-	1	H.M	☒	
			16:13	BO			50° 00.01	144° 13.19		2005	-			☐	
			16:47	EN			50° 00.00	144° 13.22			-			☐	
79	P26	24	20:00	BE	BOT	MR	50° 00.00	144° 59.93	4250		538 - 542	5	AM/B	☐	Go Flo
			20:14	BO			49° 59.95	144° 59.90		150	-			☐	Messenger DID NOT RELEASE
			20:39	EN			49° 59.86	144° 59.85			-			☐	
80	P26	24	20:46	BE	ROS	US	49° 59.90	144° 59.90	4251		543 - 562	20	MG	☒	DMS
			20:52	BO			49° 59.93	144° 59.92		300	-			☐	
			21:15	EN			49° 59.99	144° 59.92			-			☐	
81	P26	24	21:22	BE	NET	/	50° 00.03	144° 59.89	4252		-		MG	☐	RING
			21:29	BO			50° 00.03	144° 59.94		250	-			☐	
			21:34	EN			50° 00.04	144° 59.91			-			☐	PAR OFF
82	P26	24	22:13	BE	ROS	US	50° 00.01	144° 59.99	4252		563 - 586	24	MG	☒	DEEP CAST
			23:31	BO			49° 59.99	144° 59.92		4317	-			☐	200 PS 2007 1 SAL 1 NUT
		25	01:05	EN			49° 59.98	144° 59.97			-			☐	
83	P26	25	01:48	BE	BOT	MR	50° 00.02	144° 59.92	4251		587 - 591	5	AM/B	☐	Go Flo
			02:26	BO			49° 59.88	145° 00.00		1000	-			☐	
			:	EN			°	°			-			☐	
			:				°	°			-			☐	PAR ON

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p12.5/16

✓

2029 49 59.90 144 59.88

MESSENGER DID NOT RELEASE FROM NISKIN 3, SENT 2 REMAINING DOWN TO CORRECT $\frac{1}{2}$ AND FIRED OFF ANOTHER MESSENGER

LOST DISPLAY @ 2550 Deep cast Ship for a while

COMPUTER DISPLAYS GO BLACK + VNC IS RESET - TWICE ON THIS CAST
WIRE ATTACHMENTS TO ACER LAPTOP - NEEDS TO BE REPLACED

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 13 of 16

Month <u>AUGUST</u>			Year <u>2017</u>			Vessel <u>IP TULLY</u>			Cruise ID <u>2017-08</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
84	P26	25	03:20	BE	NET	/	49°59.96	144°59.99	4251		-		MG	☐ ☐	Bongo
			03:27	BO			49°59.96	145°00.03		250	-			☐ ☐	
			03:32	EN			49°59.96	145°00.05			-			☐ ☐	
85	P26	25	03:39	BE	NET	/	49°59.97	144°59.98	4251		-		MG	☐ ☐	Bongo
			04:10	BO			49°59.92	144°59.97		1200	-			☐ ☐	
			04:29	EN			49°59.91	145°00.05			-			☐ ☐	
86	P26	25	05:17	BE	ROS	US	49°59.99	144°59.88	4251		592-615	24	MG	☒ ☐	DEEP CESIUM
			05:26	BO			49°59.99	144°59.88		500	-			☐ ☐	
			05:40	EN			49°59.99	144°59.83			-			☐ ☐	
87	P26	25	05:55	BE	BOT	MR	50°00.02	144°59.89	4251		616-620	5	MM/B	☐ ☐	GO FLO
			06:52	BO			49°59.85	144°59.68		2250	-			☐ ☐	
			08:03	EN			49°59.69	144°59.68			-			☐ ☐	
88	P26	25	08:15	BE	ROS	U.S.	50°00.06	144°59.94	4250		621-644	24	H.M	☒ ☐	SHALLOW CESIUM CAST
			08:18	BO			50°00.04	144°59.93		150	-			☐ ☐	
			08:24	EN			50°00.02	144°59.95			-			☐ ☐	
89	P26	25	08:46	BE	ROS	US	49°59.91	144°59.95	4250		645-666	16	H.M	☒ ☐	VBC CAST
			09:19	BO			49°59.91	144°59.98		2000	-			☐ ☐	
			09:59	EN			49°59.88	144°59.99			-			☐ ☐	
			:				.	.			-			☐ ☐	

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Notes:

Time Code:

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

DE = Deployment Time
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Version: 6 December 2016

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 14 of 16

Month			Year			Vessel			Cruise ID						
AUGUST			2017			TULLY			2017-08						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
90	P26	25	10:09	BE	Go Flo	MR	50° 00.04	145° 00.01	4250		661-665	5	AM/B	☐ ☐	Go Flo - 4000m
			11:28	BO			49° 59.82	145° 00.01		4000	-			☐ ☐	
			13:23	EN			50° 00.27	144° 59.31			-			☐ ☐	
91	PA 11	25	14:41	BE	ROS	U.S	50° 08.13	144° 49.89	4250	1	666-668	3	H.M	☐ ☒	OHAR CAST
			14:50	BO			50° 08.13	144° 49.85		500	-			☐ ☐	
			15:03	EN			50° 09.13	144° 49.79			-			☐ ☐	
92	LOOP92	25	22:46	BE	LOOP	-	49° 57.77	143° 03.08	4089		500-92		TV	☐ ☐	LOOP x2 CH1 Sal
93	P21	26	12:30	BE	ROS	U.S	49° 38.06	139° 39.99	3960		669-692	24	H.M	☒ ☐	SHALLOW CESIUM
			12:34	BO			49° 38.07	139° 40.04		200	-			☐ ☐	
			12:41	EN			49° 38.08	139° 40.05			-			☐ ☐	
94	P21	26	13:04	BE	ROS	U.S	49° 38.05	139° 39.94	3960		693-716	24	H.M	☒ ☐	DEEP CESIUM - 105
			13:38	BO			49° 38.13	139° 40.05		2005	-			☐ ☐	
			14:17	EN			49° 38.04	139° 39.87			-			☐ ☐	
95	P26	26	18:29	BE	Go Flo	MR	49° 33.99	138° 39.99	3964		717-721	5	AM/B	☐ ☐	150m Go Flo
			18:49	BO			49° 34.04	138° 39.99		150	-			☐ ☐	
			19:09	EN			49° 34.02	138° 40.01			-			☐ ☐	
96	P20	26	19:19	BE	BOT		49° 34.16	138° 39.95	3964		722-724	3	MA	☐ ☐	REMOTE BOAT DIC
			20:01	EN			49° 34.08	138° 39.48			-			☐ ☐	DEFECTIVE NISKIN
			:				°	°			-			☐ ☐	RETURN FOR NEXT

Event Type:

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SET = Fish Set

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MOR = Mooring
NET = Plankton Net Haul
DRF = Drifter

Bottle Firing Method:

US = Up / Stop (default)
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Time Code:

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WaterProperties.ca
Version: 6 December 2016

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 15 of 16

Month				Year		Vessel			Cruise ID						
AUGUST				2017		JPTOLLY			2017-08						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
97	P20	26	20:26	BE	ROS	US	49° 34.07	138° 39.93	3964		725 - 741	17	MG	☐ ☐	DMS + Wic
			20:32	BO			49° 34.07	138° 39.94		300	-			☐ ☐	2CHL LOOP
			20:54	EN			49° 34.05	138° 39.95			-			☐ ☐	
98	P20	26	21:03	BE	NET	✓	49° 34.05	138° 39.95	3966		-		MG	☐ ☐	RING
			21:14	BO			49° 34.05	138° 39.95		250	-			☐ ☐	
			21:19	EN			49° 34.05	138° 39.95			-			☐ ☐	
99	P20	26	22:12	BE	ROS	US	49° 34.03	138° 40.02	3965		742 - 765	24	MR/MR	☒ ☐	PAR OFF
			23:22	BO			49° 34.02	138° 40.01		4025	-			☐ ☐	
			00:53	EN			49° 34.03	138° 40.01			-			☐ ☐	PAR ON
100	P20	27	01:39	BE	BOT	MES	49° 34.05	138° 39.92	3966		766 - 770	5		☐ ☐	GO FLU
			02:12	BO			49° 34.05	138° 39.92			-			☐ ☐	
			:	EN			°	°			-			☐ ☐	
101	P20	27	03:04	BE	NET	✓	49° 34.03	138° 39.95	3966		-		MG	☐ ☐	MPS
			03:45	BO			49° 34.03	138° 39.95		1500	-			☐ ☐	
			04:10	EN			49° 34.03	138° 39.95			-			☐ ☐	
102	P20	27	04:33	BE	NET	✓	49° 34.03	138° 39.94	3966		-		MG	☐ ☐	BONGO
			04:42	BO			49° 34.03	138° 39.95		250	-			☐ ☐	
			04:47	EN			49° 34.03	138° 39.95			-			☐ ☐	
			:				°	°			-			☐ ☐	

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Version: 6 December 2016

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 16 of 16

Month <u>AUGUST</u>				Year <u>2017</u>		Vessel <u>IP TULLY</u>				Cruise ID <u>2017-08</u>					
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
103	P20	27	05:17	ISE	BOT	MR	49° 34.01	138° 39.98	3966		771-775	5	AM/B	☐ ☐	Go Flo
			06:30	BO			49° 34.01	138° 39.98		3500	-			☐ ☐	
			08:00	EN			49° 34.00	138° 39.98			-			☐ ☐	
104	Loop104	27	14:08	BC	Loop	H.M	49° 27.84	137° 01.63	2470 2552	4.5 Loop	Loop-5104		H.M	☐ ☐	1 SAL 2 CHL Loop 5104
105	P16	27	23:21	BE	BOT	MR	49° 17.02	134° 39.98	3635		776-	5	BAS/AM	☐ ☐	Go Flo
			23:32	BO			49° 16.97	134° 39.94		50	-			☐ ☐	
			23:42	EN			49° 16.96	134° 39.93			-			☐ ☐	
106	Loop106	28	03:05	BE	Loop	H.V	49° 12.69	133° 47.28	2889		Loop106	-	H.V	☐ ☐	12 CHL 1 SAL Loop 106
107	Loop107	28	18:01	BE	Loop	Loop	48° 56.14	130° 19.49			Loop-107		H.M	☐ ☐	2 x CHL 1 SAL
108	Loop108	28	22:45	BE	Loop	-	48° 52.35	129° 29.26	2258	4.5	Loop-108		MG	☐ ☐	2 CHL 1 SAL
109	P8	29	02:37	BE	Loop	-	48° 48.27	128° 39.77	2517	-	-	-	TR	☐ ☐	Csloop 602
110	P6	29	07:14	BE	Loop		48° 43.91	127° 39.79	2538		-		TR	☐ ☐	Csloop 602
111	P4	29	14:35	BE	ROS	U.S	48° 39.05	126° 40.02	1304		777-796	20	H.M	☒ ☐	RETURN P4
			14:57	BO			48° 39.01	126° 39.98		1319	-			☐ ☐	SAL MUSTANG
			15:38	EN			48° 39.03	126° 39.83			-			☐ ☐	
112	P4	29	14:59	BE	Loop	-	48° 39.05	126° 40.01	1304	Loop	-		R.M.	☐ ☐	Cesium Loop
			:				° .	° .			-			☐ ☐	
			:				° .	° .			-			☐ ☐	
			:				° .	° .			-			☐ ☐	

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P16.5 / 16

PA RETURN — SAL SAMPLES 778 / 2x 779 / 1x 780 NOT TAKEN (DON'T KNOW WHY)