

DAILY SCIENCE LOG BOOK

MISSION
NUMBER

2013-58

DATE:

From: Sept 6*/2013

To:

VESSEL:

J. P. TULLY

PROJECT(S):

LA PGROUSE - YELLAND

Book 1/2

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

WaterProperties.ca

Captain: MIKE CORFIELD First Officer: RICHT MARLOTT

Second Officer: SHANE LOVELAGH Third Officer: ROB NUGENT

Fishing Master: _____ Chief Engineer: ROGER HORTON

Mission Participants / Agencies:

DFO/Ios: vbc

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

1st Leg Scientific Personnel: Chief Scientist: DOUG YELLAND 12-18 F

Name	Watch	Cabin	Name	Watch	Cabin
MARIE ROBERT	12-24	A			
HUGH MACLEAD	00-12	B			
MELISSA HENNEKES	06-18	C			
LIZZY ASHER	00-06	C			
MARK BELTON	00-12	D			
DAVE CAPELLE	18-00	D			
CHARLES HANNAIT	06-12	E			
TAMARA FRASER	00-12	G			
DI WAN	00-06	H			
LORA PAKHOMOVA	18-00	H			

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: #3

Data acquisition program: Seasave

CTD deck unit make: SBE model: 11+ serial number: 0471

Primary CTD

Make: SBE model: 9+ serial number: 443

Primary temperature serial number: 2023

Primary conductivity serial number: 2280

Secondary temperature serial number: 2668

Secondary conductivity serial number: 2784

Transmissometer: Wetlabs Model: C-Star s/n: 1396DR

Transmissometer: Model: s/n:

Fluorometer: Model Seapoint Cable gain: 10x s/n: 2228 PS or NO pump?

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

Oxygen sensor: SBE Model: 43 s/n: 0997 PS or NO pump?

PAR sensor: BIOPTERICAL Model: QSP200-L45 s/n: 4615 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?

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: 155
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: _____ Model: _____ Kit Number: _____
Make: _____ Model: _____ Kit Number: _____

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

Thermosalinograph System (SBE21):

Program: Seawave Version: 7.22.5 SN 3363

Sampling interval (seconds): 30

Fluorometer sensor serial number: W535-713P

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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Month <u>SEPTEMBER</u>				Year <u>2013</u>		Vessel <u>TULLY</u>		Cruise ID <u>2013-58</u>							
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
1	Si03	6	21:07	BE	ROS	US	48°35.68	123°30.09	225		-			☒	PAR ON
			21:13	BO			48°35.70	123°30.08		216	1 - 24	24	MR	☐	UDC CAST, NO JCS SAMPLES
			21:38	EN			48°35.66	123°30.02			-			☐	BA cast: Pr on deck: ~0.55 →
2	Si05	6	22:52	BE	ROS	US	48°39.21	123°30.03	178		-			☒	
			22:57	BO			48°39.22	123°30.02		170	25 - 45	21	MR	☐	
			23:19	EN			48°39.26	123°30.01			-			☐	
3	PL01	7	03:34	BE	LOOP		48°19.40	123°27.18	108	5	-		MB	☐	10 MIN SIEVES 250, 125, 63
			03:44	EN			48°16.74	123°29.14			-			☐	
4	LB01	7	10:08	BE	ROS	US	48°40.38	124°59.47	38		46 - 49	4	H.M	☒	
			10:10	BO			48°40.38	124°59.46		26	-			☐	
			10:13	EN			48°40.39	124°59.43			-			☐	
5	LB02	7	10:48	BE	ROS	US	48°38.99	125°02.38	58		50 - 55	6	H.M	☒	
			10:50	BO			48°39.00	125°02.37		48	-			☐	
			10:56	EN			48°39.02	125°02.36			-			☐	
6	LB03	7	11:27	BE	ROS	US	48°37.31	125°05.69	95		56 - 57	2	H.M	☒	
			11:29	BO			48°37.30	125°05.66			-			☐	
			11:32	EN			48°37.30	125°05.66			-			☐	
			:				.	.			-			☐	
			:				.	.			-			☐	

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
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US = Up / Stop (default)
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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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Notes:

This page is for any notes or observations

0001: Stopped ~100 on way down, created "spike" in all sensors

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Month <u>SEPTEMBER</u>				Year <u>2013</u>		Vessel <u>TULLY</u>		Cruise ID <u>2013-58</u>							
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
7	LB04	7	12:02	BE	ROS	U.S.	48° 35. 65	125° 08. 75	112		58 - 65	8	H.M.	☒	
			12:04	BO			48° 35. 67	125° 08. 75		92	-			☐	
			12:12	EN			48° 35. 72	125° 08. 79			-			☐	
8	IE 1	7	13:11	BE	CTD	U.S.	48° 31. 72	125° 03. 80	115		-		H.M.	☒	CTD ONLY
			13:15	BO			48° 31. 73	125° 03. 80		106	-			☐	
			13:18	EN			48° 31. 73	125° 03. 80			-			☐	
9	E 1	7	13:35	BE	NET	-	48° 31. 71	125° 03. 77			-		H.M.	☐	BONGO
			13:38	BO			48° 31. 71	125° 03. 77			-			☐	
			13:40	EN			48° 31. 71	125° 03. 76			-			☐	
10	LB05	7	14:20	BE	ROS	U.S.	48° 34. 02	125° 12. 02	101		66 - 67	2 (+2)	H.M.	☒	+ 2 UBC BOTTLES
			14:28	BO			48° 34. 02	125° 12. 02		91	-			☐	E NO SAMPLE #3
			14:33	EN			48° 34. 01	125° 12. 02			-			☐	
11	LB06	7	15:01	BE	ROS	U.S.	48° 32. 17	125° 15. 51	114		68 - 75	8 (+2)	H.M.	☒	+ 2 UBC BOTTLES
			15:04	BO			48° 32. 16	125° 15. 47		104	-			☐	E NO SAMPLE #3
			15:14	EN			48° 32. 18	125° 15. 50			-			☐	ONLY SHEED @ SURFACE
12	C 1	7	15:49	BE	CTD	-	48° 28. 93	125° 15. 30	151		-	-	H.M.	☒	CTD ONLY
			15:52	BO			48° 28. 91	125° 15. 29		142	-			☐	
			15:56	EN			48° 28. 89	125° 15. 28			-			☐	
			:				.	.			-			☐	

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Notes:

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Month			Year		Vessel		Cruise ID								
September			2013		TULLY		2013-38								
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
13	C1	7	16:06	BE	NET	-	48°28.9071	125°15.4086	151		-		HM	☐	BONGO
			16:09	BO			48°28.9124	125°15.4108		140	-			☐	
			16:11	EN			48°28.9167	125°15.4157			-			☐	
14	C2	7	16:49	BE	CTD	-	48°26.18	125°09.34	161		-		HM	☒	CTD ONLY
			16:52	BO			48°26.21	125°09.35		152	-			☐	
			16:55	EN			48°26.21	125°09.35			-			☐	
15	C2	7	17:01	BE	NET	-	48°26.20	125°09.34	160		-		HM	☐	BONGO
			17:07	BO			48°26.20	125°09.34		150	-			☐	
			17:11	EN			48°26.19	125°09.35			-			☐	
16	C3	7	18:13	BE	CTD	-	48°23.39	125°20.65	122		-		HM	☒	CTD ONLY
			18:15	BO			48°23.39	125°20.65		113	-			☐	
			18:18	EN			48°23.39	125°20.65			-			☐	
17	C3	7	18:26	BE	NET	-	48°23.46	125°20.82			-		HM	☐	BONGO
			18:28	BO			48°23.45	125°20.82			-			☐	
			18:31	EN			48°23.46	125°20.82			-			☐	
18	LB07	7	19:14	BE	ROS	US	48°28.70	125°22.15	157		76-✓	1	MR	☒	
			19:17	BO			48°28.71	125°22.18		147	-			☐	
			19:21	EN			48°28.71	125°22.22			-			☐	
			:				.	.			-			☐	

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Month <u>SEPTEMBER</u>				Year <u>2013</u>			Vessel <u>J.P. TULLY</u>			Cruise ID <u>2013-58</u>					
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
19	L807	7	19:31	BE	NET	✓	48°28.77	125°22.25	157		-		MG	☐ ☐	Bongo
			19:36	BO			48°28.64	125°22.24		147	-			☐ ☐	
			19:41	EN			48°28.66	125°22.25			-			☐ ☐	
20	B8	7	20:56	BE	ROS	✓	48°34.57	125°30.01	113		✓ - ✓	Ø	MR	☒ ☐	
			20:59	BO			48°34.58	125°29.98		103	-			☐ ☐	
			21:01	EN			48°34.58	125°29.98			-			☐ ☐	
21	B8	7	21:11	BE	NET		48°34.56	125°30.02	115		-		MG	☐ ☐	Bongo
			21:16	BO			48°34.55	125°30.02		105	-			☐ ☐	
			21:19	EN			48°34.55	125°30.03			-			☐ ☐	
22	B7	7	21:57	BE	ROS	✓	48°31.98	125°35.46	80		✓ - ✓	Ø	MR	☒ ☐	
			21:59	BO			48°31.97	125°35.46		72	-			☐ ☐	
			22:01	EN			48°31.98	125°35.46			-			☐ ☐	
23	B7	7	22:09	BE	NET	✓	48°31.92	125°35.53	81		-		MG	☐ ☐	Bongo
			22:13	BO			48°31.94	125°35.50		71	-			☐ ☐	
			22:14	EN			48°31.94	125°35.49			-			☐ ☐	
24	L808	7	23:17	BE	NET	✓	48°25.23	125°28.63	141		-		MG	☐ ☐	Bongo
			23:22	BO			48°25.25	125°28.63		131	-			☐ ☐	
			23:25	EN			48°25.26	125°28.61			-			☐ ☐	
			:				°	°			-			☐ ☐	

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Month <u>SEPTEMBER</u>				Year <u>2013</u>		Vessel <u>J.P. TULLY</u>				Cruise ID <u>2013-58</u>					
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
25	LB08	7	23:36	BE	ROS	US	48° 25.30	125° 28.61	141		78 - 87	10	MR	☒ ☐	
			23:40	BO			48° 25.31	125° 28.61		137	-			☐ ☐	
			23:52	EN			48° 25.33	125° 28.58			-			☐ ☐	
26	LB09	8	00:35	BE	ROS	US	48° 22.03	125° 34.73	150		89 - 97	9	MR	☒ ☐	SALT SPIKE ↑ 13
			00:39	BO			48° 22.01	125° 34.72		141	-			☐ ☐	
			00:50	EN			48° 22.01	125° 34.73			-			☐ ☐	
27	LB10	8	01:35	BE	ROS	US	48° 18.56	125° 41.26	152		-	2	DY/MR	☒ ☐	Dave cleaned xmiss
			01:39	BO			48° 18.56	125° 41.26		143	99-100			☐ ☐	
			01:45	EN			48° 18.57	125° 41.25			-			☐ ☐	
28	LB11	8	02:33	BE	NET		48° 15.22	125° 47.61	204		-		MG	☐ ☐	BONGAO
			02:40	BO			48° 15.22	125° 47.60		194	-			☐ ☐	
			02:46	EN			48° 15.22	125° 47.61			-			☐ ☐	
29	LB11	8	02:55	BE	ROS	US	48° 15.23	125° 47.56	203		101 - 111	11	MR	☒ ☐	
			03:00	BO			48° 15.23	125° 47.56		197	-			☐ ☐	
			03:15	EN			48° 15.25	125° 47.57			-			☐ ☐	
30	LB12	8	03:52	BE	ROS		48° 12.89	125° 51.92	510		113 - 130	18x2	MR	☒ ☐	PAR OFF
			04:03	BO			48° 12.91	125° 51.92		501	-			☐ ☐	
			04:25	EN			48° 12.94	125° 51.90			-			☐ ☐	
			:				°	°			-			☐ ☐	

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Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
31	LB 13	8	05:24	BE	ROS	US	48° 10 . 61	125° 56 . 12	913		131 - 134		MR	☒ ☐	
			05:40	BO			48° 10 . 61	125° 56 . 17		910	-	4		☐ ☐	
			05:58	EN			48° 10 . 65	125° 56 . 17			-			☐ ☐	
32	LB 14	8	06:40	BE	ROS	US	48° 08 . 46	125° 59 . 93	1171		135 -		MR/HM	☒ ☐	
			07:02	BO			48° 08 . 53	125° 59 . 98		1181	-			☐ ☐	
			07:39	EN			48° 08 . 45	126° 00 . 09			-			☐ ☐	
33	PL 02	8	07:50	BE	LOOP		48° 07 . 81	126° 01 . 42	1271	5	-		MLG	☐ ☐	10min 3 sieves
			08:01	EN			48° 07 . 01	126° 03 . 95			-			☐ ☐	
34	LB 15	8	08:43	BE	NET	UN	48° 04 . 37	126° 08 . 43	1544		-		MLG	☐ ☐	MPS 5 NETS
			09:31	BO			48° 04 . 38	126° 08 . 42		1505	-			☐ ☐	
			09:56	EN			48° 04 . 34	126° 08 . 40			-			☐ ☐	
35	LB 15	8	10:07	BE	ROS	U.S.	48° 04 . 35	126° 08 . 44	1546		158 - 157	2	H.M.	☒ ☐	
			10:34	BO			48° 04 . 36	126° 08 . 45		1555	-			☐ ☐	
			11:02	EN			48° 04 . 37	126° 08 . 39			-			☐ ☐	
36	LB 16	8	11:53	BE	ROS	U.S.	48° 00 . 51	126° 16 . 98	1791		158 - 159	2	H.M.	☒ ☐	
			12:24	BO			48° 00 . 53	126° 16 . 98			-			☐ ☐	
			12:55	EN			48° 00 . 54	126° 16 . 91			-			☐ ☐	
			:				° .	° .			-			☐ ☐	
			:				° .	° .			-			☐ ☐	

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							Latitude	Longitude							
37	LC 12/A4	8	15:15	BE	ROS	U.S.	48° 15.01	126° 39.98	2523				H.M.	☒	
			15:50	BO			48° 14.99	126° 40.01		2005	-			☐	
			16:29	EN			48° 15.01	126° 40.00			-			☐	
38	LC 12/A4	8	16:39	BE	NET	-	48° 15.28	126° 39.26	2573		-		H.M.	☐	BOMGO
			16:50	BO			48° 15.27	126° 39.32		150	-			☐	*CAUTION! AS in File
			16:54	EN			48° 15.29	126° 39.31			-			☐	Should be LC12/A4
39	LC 11	8	18:02	BE	ROS	U.S.	48° 18.98	126° 26.74	1437		160 - 181	22	H.M./M	☒	WRONG FILE #
			18:29	BO			48° 18.96	126° 26.66		1468	-			☐	should be 39
			19:14	EN			48° 18.99	126° 26.63			-			☐	called 38
40	LC 10	8	20:07	BE	ROS	-	48° 22.40	126° 20.15	1242				MR	☒	
			20:30	BO			48° 22.41	126° 20.12		1241	-			☐	
			20:52	EN			48° 22.38	126° 20.19			-			☐	
41	LC 09/A3	8	21:36	BE	NET		48° 25.92	126° 13.68	607		-		MG	☐	BOMGO
			21:45	BO			48° 25.90	126° 13.70		250	-			☐	
			21:50	EN			48° 25.90	126° 13.70			-			☐	PAR ON
			:				.	.			-			☐	
42	LC 09	8	22:01	BE	ROS	US	48° 25.93	126° 13.66	605		182 - 203	22	MR	☒	
			22:11	BO			48° 25.93	126° 13.67		603	-			☐	
			22:43	EN			48° 25.90	126° 13.72			-			☐	

Event Type:
 BOT = Bottle cast (no CTD)
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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

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
 DE = Deployment Time
 MR = Messenger Release Time
 RE = Recover Mooring Time

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T50 PUMP OFF

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Month <u>SEPTEMBER</u>				Year <u>2013</u>			Vessel <u>TULLY</u>			Cruise ID <u>2013-58</u>					
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Latitude	Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
43	A2	8	23:34	BE	NET	✓	48° 22.72	126° 03.74	353		-		MR	☐	Bongo
			23:43	BO			48° 22.73	126° 03.74		250	-			☐	
			23:48	EN			48° 22.73	126° 03.76			-			☐	
44	A2	9	00:00	BE	ROS	✓	48° 22.72	126° 03.77	352		—	∅	MR	☒	
			00:07	BO			48° 22.71	126° 03.77		346	-			☐	
			00:14	EN			48° 22.69	126° 03.78			-			☐	
45	LC08/A1	9	01:11	BE	NET		48° 29.40	126° 07.06	200		-		MR	☐	Bongo
			01:17	BO			48° 29.42	126° 07.00		190	-			☐	
			01:21	EN			48° 29.40	126° 07.02			-			☐	
46	LC08/A1	9	01:33	BE	ROS	US	48° 29.37	126° 07.05	199		204 - 216	13	MR	☒	
			01:37	BO			48° 29.36	126° 07.01		190	-			☐	
			01:53	EN			48° 29.32	126° 06.95			-			☐	
47	LC07	9	02:39	BE	ROS	✓	48° 32.91	126° 00.48	127		—	∅	MR	☒	
			02:42	BO			48° 32.95	126° 00.51		117	-			☐	
			02:45	EN			48° 32.96	126° 00.51			-			☐	
48	LC06/B6	9	03:30	BE	NET	✓	48° 36.43	125° 54.01	92		-		MR	☐	Bongo
			03:33	BO			48° 36.45	125° 54.05		82	-			☐	
			03:37	EN			48° 36.45	125° 54.04			-			☐	
							°	°			-			☐	

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NET = Plankton Net Haul
DRF = Drifter

Bottle Firing Method:

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

Time Code:

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

DE = Deployment Time
MR = Messenger Release Time
RE = Recover Mooring Time

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

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Notes:

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0012 : during 0044: TSC back on

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Month <u>SEPTEMBER</u>				Year <u>2013</u>			Vessel <u>J.P. TULLY</u>			Cruise ID <u>2013-58</u>					
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
49	LC06/B6	9	03:47	BE	ROS	US	48° 36.47	125° 54.07	92		217-224	8	MR	☒ ☐	
			03:49	Bo			48° 36.47	125° 54.09		83	-			☐ ☐	
			03:58	EN			48° 36.47	125° 54.09			-			☐ ☐	
50	LC05/B5	9	04:46	BE	NET		48° 39.98	125° 47.41	63		-		MG	☐ ☐	Bongo
			04:49	Bo			48° 40.00	125° 47.47		53	-			☐ ☐	
			04:52	EN			48° 40.00	125° 47.51			-			☐ ☐	
51	LC05/B5	9	05:02	BE	ROS	-	48° 40.02	125° 47.59	63		-	Ø	MR	☒ ☐	
			05:04	Bo			48° 40.01	125° 47.61		54	-			☐ ☐	
			05:06	EN			48° 40.01	125° 47.63			-			☐ ☐	
52	LC04	9	05:53	BE	ROS	US	48° 43.43	125° 40.88	166		225-236		MR	☒ ☐	
			05:56	Bo			48° 43.45	125° 40.92		157	-			☐ ☐	
			06:09	EN			48° 43.53	125° 41.06			-			☐ ☐	
53	LC03	9	07:05	BE	ROS	-	48° 46.96	125° 34.19	135		-	Ø	H.M.	☒ ☐	
			07:07	Bo			48° 46.97	125° 34.18		126	-			☐ ☐	
			07:10	EN			48° 46.95	125° 34.18			-			☐ ☐	
54	LC02	9	07:39	BE	ROS	US	48° 48.69	125° 30.93	110		237-249	13	H.M.	☒ ☐	
			07:41	B6			48° 48.71	125° 30.93			-			☐ ☐	
			07:51	EN			48° 48.69	125° 30.94			-			☐ ☐	
			:				.	.			-			☐ ☐	

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Bottle Firing Method:

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Notes:

Time Code:

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

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Month <u>SEPTEMBER</u>			Year <u>2013</u>			Vessel <u>TULLY</u>			Cruise ID <u>2013-58</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information		Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
							Latitude	Longitude							
55	LC01	9	08:37	BE	ROS	U.S.	48° 50.47	125° 27.71	96		250 - 258	9	H.M.	☒	
			08:39	BO			48° 50.46	125° 27.72		88	-			☐	
			08:49	EN			48° 50.46	125° 27.69			-			☐	
56	LD01	9	10:48	BE	ROS	U.S.	49° 00.07	125° 43.80	37		259 - 263	5	H.M.	☒	
			10:49	BO			49° 00.09	125° 43.80		27	-			☐	
			10:54	EN			49° 00.13	125° 43.79			-			☐	
57	LD02	9	11:23	BE	ROS	U.S.	48° 58.40	125° 46.99	44		264 - 271	8	H.M.	☒	
			11:24	BO			48° 58.38	125° 47.00		35	-			☐	
			11:30	EN			48° 58.36	125° 47.02			-			☐	
58	LD02	9	11:53	BE	NET	—	48° 58.36	125° 46.95	44	—	—	—	H.M.	☐	BONGO
			11:53	BO			48° 58.36	125° 46.95		34	-			☐	
			11:58	EN			48° 58.36	125° 46.95			-			☐	
59	LD03	9	12:29	BE	ROS	—	48° 56.62	125° 50.39	47		—	—	H.M.	☒	CTD ONLY
			12:30	BO			48° 56.63	125° 50.37		38	-			☐	
			12:31	EN			48° 56.63	125° 50.37			-			☐	
60	LD04	9	13:20	BE	ROS	U.S.	48° 53.11	125° 56.92	63		272 - 277	6	H.M.	☒	
			13:21	BO			48° 53.15	125° 56.88		51	-			☐	
			13:26	EN			48° 53.17	125° 56.88			-			☐	
			:				°	°			-			☐	

Event Type:

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— = —

Bottle Firing Method:

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Notes:

Time Code:

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Month			Year		Vessel			Cruise ID							
September			2013		T-101			2013-56							
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
61	LD 04	9	13:40	BE	NET	—	48°53.16	125°56.99	63		—	—	H.M.	☐ ☐	BONGO
			13:42	BO			48°53.15	125°57.00		53	-			☐ ☐	
			13:43	EN			48°53.15	125°57.00			-			☐ ☐	
62	LD 05	9	14:38	BE	ROS	—	48°49.69	126°03.62	91		—	—	H.M.	☒ ☐	CTD ONLY
			14:40	BO			48°49.73	126°03.62		81	-			☐ ☐	
			14:42	EN			48°49.73	126°03.63			-			☐ ☐	
63	LD 06	9	15:36	BE	ROS	U.S.	48°46.22	126°10.15	136		278 - 285	9	H.M.	☒ ☐	
			15:33	BO			48°46.21	126°10.15		126	-			☐ ☐	
			15:43	EN			48°46.22	126°10.13			-			☐ ☐	
64	LD 07	9	16:33	BE	ROS	—	48°42.66	126°16.75	480		—	—	H.M.	☒ ☐	CTD ONLY
			16:43	BO			48°42.65	126°16.74		470	-			☐ ☐	
			16:51	EN			48°42.65	126°16.76			-			☐ ☐	
65	LD 08	9	17:38	BE	ROS	U.S.	48°39.18	126°23.34	768		287 - 304	18	H.M.	☒ ☐	
66			17:51	BO			48°39.18	126°23.33		760	-			☐ ☐	
			18:33	EN			48°39.17	126°23.36			-			☐ ☐	
67	LD 09	9	19:22	BE	NET	—	48°35.77	126°29.94	1043		-		M.G.	☐ ☐	BONGO
			19:31	BO			48°35.80	126°29.97		250	-			☐ ☐	
			19:36	EN			48°35.80	126°29.96			-			☐ ☐	
			:				°	°			-			☐ ☐	

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LOOP = Sea Water Loop
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 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
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 EN = End Time of Cast

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

DE = Deployment Time
 MR = Messenger Release Time
 RE = Recover Mooring Time

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Month <u>SEPTEMBER</u>			Year <u>2013</u>		Vessel <u>TULLY</u>		Cruise ID <u>2013-58</u>								
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
68	LD09	9	19:48	Bo	ROS	—	48°35.81	126°30.00	1040		—	Ø	MR	☒ ☐	
			20:08	Bo			48°35.77	126°29.95		1044	-			☐ ☐	
			20:26	EN			48°35.71	126°29.99			-			☐ ☐	
69	LD10	9	21:16	Bo	ROS	—	48°32.21	126°36.62	1472		—	Ø	MR	☒ ☐	PAR OFF
			21:43	Bo			48°32.23	126°36.60		1473	-			☐ ☐	
			22:10	EN			48°32.22	126°36.57			-			☐ ☐	
70	PL3	9	21:17	Bo	LOOP		48°32.22	126°36.63			-		MG	☐ ☐	
			21:37	EN			48°32.23	126°36.61			-			☐ ☐	
71	LD11	9	22:56	Bo	NET	—	48°28.79	126°42.97	1587		-		MG	☐ ☐	18.1 - 18.3 - 17.8 - 16.5 % B.C. 1.5
			23:04	Bo			48°28.80	126°42.98		250	-			☐ ☐	
			23:09	EN			48°28.81	126°42.99			-			☐ ☐	
72	LD11	9	23:19	Bo	ROS	US	48°28.76	126°42.95	1587		-		MR	☒ ☐	
			23:48	Bo			48°28.73	126°42.97		1596	305 - 328	24		☐ ☐	
		10	00:38	EN			48°28.74	126°42.96			-			☐ ☐	
73	LG09	10	05:43	Bo	NET	—	48°51.17	127°19.44	2056	250	-		MG	☐ ☐	Songo
			05:52	EN			48°51.18	127°19.44			-			☐ ☐	
74	LG09	10	06:22	Bo	NET	UN	48°51.20	127°19.41	2057		-		MG	☐ ☐	MPS
			07:25	Bo			48°51.19	127°19.39		2005	-			☐ ☐	
			01:03	EN			48°51.21	127°19.39			-			☐ ☐	

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Notes: _____

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Month				Year		Vessel				Cruise ID						
SEPTEMBER				2013		TULLY				2013-58						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments	
75	LG09	10	08:10	BC	ROS	—	48° 51. 18	127° 19. 43	2058		329 - 330	2	H.M.	☒	CTD	
			08:48	BO			48° 51. 20	127° 19. 38		2005	-			☐	2 BOTTLES FOR LOTA	
			09:26	EN			48° 51. 20	127° 19. 39			-			☐		
76	LG08	10	10:14	BC	ROS	—	48° 55. 27	127° 13. 31	2063		—	—	H.M.	☒	CTD ONLY	
			10:50	BO			48° 55. 29	127° 13. 30		2005	-			☐	(CALLED LD08 in FILE)	
			11:25	EN			48° 55. 29	127° 13. 23			-			☐		
77	LG07	10	12:10	BC	ROS		48° 59. 41	127° 07. 19			—	—	H.M.	☒	CALLED LD07 in FILE	
			12:40	BO			48° 59. 45	127° 07. 16	1758		-			☐		
			13:10	EN			48° 59. 39	127° 07. 15		1765	-			☐		
78	LG07	10	13:20	BC	NET	—	48° 59. 41	127° 07. 20	1755		—	—	H.M.	☐	BONGO	
			13:27	BO			48° 59. 40	127° 07. 23		250	-			☐		
			13:31	EN			48° 59. 41	127° 07. 23			-			☐		
79	LG06	10	14:19	BC	ROS	U.S.	49° 03. 51	127° 01. 17	957		331 - 348	19	H.M.	☒	CALLED LC06 in FILE	
			14:37	BO			49° 03. 52	127° 01. 17		964	-			☐	(BAD DAY SO FAR)	
			15:10	EN			49° 03. 50	127° 01. 16			-			☐	I BLAME THE FOG HERE	
80	LG05	10	15:55	BC	ROS	—	49° 07. 39	129° 55. 28	274		—	—		☒	CTD ONLY	
			16:00	BO			49° 07. 38	129° 55. 29		266	-			☐		
			16:06	EN			49° 07. 40	129° 55. 27			-			☐		
			:				°	°			-			☐		

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Month			Year			Vessel			Cruise ID						
SEPTEMBER			2013			TOLLY			2013-58						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
81	LG 04	10	16:47	BE	ROS	U.S.	49° 11.30	126° 49.37	145		349-358	10	H.M.	☒	
			16:49	BO			49° 11.30	126° 49.37		136	-			☐	
			17:00	EN			49° 11.28	126° 49.43			-			☐	
82	LG 04	10	17:15	BE	NET	-	49° 11.29	126° 49.41	148		-			☐	Bongo
			17:23	BO			49° 11.29	126° 49.41		135	-			☐	
			17:26	EN			49° 11.29	126° 49.42			-			☐	
83	LG 03	10	18:15	BG	ROS		49° 15.06	126° 43.67	122		-		H.M.	☒	CTD ONLY
			18:18	BO			49° 15.05	126° 43.68			-			☐	PAR ON
			18:21	EN			49° 15.02	126° 43.68			-			☐	
84	LG 02	10	19:05	BE	ROS	U.S.	49° 18.75	126° 38.09	100		359-368	10+2	MR	☒	ON ↑: back-forth 30-20-30-20
			19:08	BO			49° 18.75	126° 38.09		90	-			☐	
			19:22	EN			49° 18.77	126° 38.08			-			☐	
85	LG 02	10	19:30	BE	NET		49° 18.75	126° 38.07	99		-		MG	☐	Bongo
			19:33	BO			49° 18.74	126° 38.06		90	-			☐	
			19:35	EN			49° 18.73	126° 38.05			-			☐	
86	LG 01	10	20:08	BE	ROS	US	49° 20.53	126° 35.05	53		369-373	5	MR	☒	Pounded Bt: 0.7
			20:10	BO			49° 20.52	126° 35.07		42	-			☐	
			20:17	EN			49° 20.52	126° 35.13			-			☐	SYRINGES ON
87	PL 04	10	20:41	BE	LOOP		49° 20.44	126° 39.47	76	5	-		MG	☐	10 MIN 3 SIEVES →

Event Type:

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

LOOP = Sea Water Loop

MOR = Mooring
NET = Plankton Net Haul
DRF = Drifter

Bottle Firing Method:

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

Time Code:

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

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

DE = Deployment Time
MR = Messenger Release Time
RE = Recover Mooring Time

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Month <u>SEP</u>				Year <u>2013</u>		Vessel <u>JR TOLLY</u>				Cruise ID <u>2013-58</u>					
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
87	PLO4	10	20:51	EN	LOOP		49°21.03	126°41.82	93	5	-			☐ ☐	
88	PLO5	11	02:46	BE	LOOP		49°44.49	128°02.69	2224	5	-		MG	☐ ☐	
			02:56	EN			49°45.10	128°04.76			-			☐ ☐	
89	LBP8	11	04:06	BE	NET	UN	49°48.60	128°16.75	2073		-		MG	☐ ☐	MPS
			05:10	BO			49°48.60	128°16.77		2005	-			☐ ☐	
			05:43	EN			49°48.61	128°16.75			-			☐ ☐	
90	LBP8	11	05:58	BE	ROS	-	49°48.59	128°16.76	2073		-	Ø	MR	☒ ☐	PAR OFF
			06:29	BO			49°48.59	128°16.76		2005	-			☐ ☐	
			06:58	EN			49°48.61	128°16.83			-			☐ ☐	
91	LBP7	11	07:41	BE	ROS	U.S.	49°52.38	128°11.19	2186		374-395	22	H.M.	☒ ☐	
			08:21	BO			49°52.38	128°11.22		2214	-			☐ ☐	
			09:17	EN			49°52.42	128°11.18			-			☐ ☐	
92	LBP7	11	09:45	BE	NET		49°52.40	128°11.20	2187	250	-			☐ ☐	BoilGO
			9:53	BO			49°52.43	128°11.17		250	-			☐ ☐	
			9:57	EN			49°52.44	128°11.16			-			☐ ☐	
93	LBP6	11	10:39	BE	ROS	-	49°56.18	128°05.48	828/850		-		H.M.	☒ ☐	CTD on lif
			10:55	BO			49°56.18	128°05.46			-			☐ ☐	
			11:11	EN			49°56.16	128°05.47			-			☐ ☐	
			:				.	.			-			☐ ☐	

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

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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Month			Year		Vessel		Cruise ID								
SEPTEMBER			2013		TULLY		2013-58								
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
94	LBP 5	11	11:55	BE	ROS	U.S.	49° 59.94	128° 00.03	1283		396 - 415	20	H.M.	☒	
			12:17	BO			49° 59.97	128° 00.00		1282	-			☐	
			12:55	EN			50° 00.00	128° 00.03			-			☐	
95	LBP 5	11	13:19	BE	NET	-	49° 59.96	128° 00.03	1284		-		H.M.	☐	BONGO
			13:28	BO			49° 59.97	128° 00.01		250	-			☐	
			13:32	EN			49° 59.97	128° 00.01			-			☐	
96	LBP 4	11	14:14	BE	ROS	-	50° 01.36	127° 58.11	1035		-		H.M.	☒	CTD ONLY
			14:32	BO			50° 01.37	127° 58.13		1093	-			☐	
			14:50	EN			50° 01.35	127° 58.12			-			☐	
97	LBP 3	11	15:13	BE	ROS	U.S.	50° 03.20	127° 55.30	165		416 - 427	12	H.M.	☒	PAR ON
			15:16	BO			50° 03.20	127° 55.31		157	-			☐	
			15:26	EN			50° 03.20	127° 55.31			-			☐	
98	LBP 3	11	15:42	BE	NET	-	50° 03.22	127° 55.33	164		-			☐	BONGO
			15:47	BO			50° 03.23	127° 55.32		155	-			☐	
			15:50	EN			50° 03.23	127° 55.33			-			☐	
99	LBP 2	11	16:06	BE	ROS	-	50° 03.98	127° 54.26	99		428 - 429	-2	H.M.	☒	CTD ONLY
			16:11	BO			50° 03.96	127° 54.26			-			☐	LORA - 2 BOMBS
			16:13	EN			50° 03.96	127° 54.26			-			☐	@ CTD MAX (5m)
			:				.	.			-			☐	

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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
BO = Bottom Time of Cast
EN = End Time of Cast

DE = Deployment Time
MR = Messenger Release Time
RE = Recover Mooring Time

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

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Month <u>September</u>			Year <u>2013</u>			Vessel <u>Tallix</u>			Cruise ID <u>2013-58</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
100	LBP 2	11	16:18	BE	NET	—	50° 3.99	127° 54.24	98		—		H.M.	☐ ☐	BONGO
			16:21	BO			50° 4.00	127° 54.22		90	-			☐ ☐	
			16:23	EN			50° 4.01	127° 54.23			-			☐ ☐	
101	LBP 1	11	16:44	BE	ROS	—	50° 04.83	127° 52.85	5013		—		H.M.	☒ ☐	CTD ONLY
			16:45	BO			50° 04.83	127° 52.84		41	-			☐ ☐	
			16:47	EN			50° 04.84	127° 52.84			-		H.M.	☐ ☐	CTD ONLY
102	PC06	11	19:41	EN	LOOP		50° 24.56	128° 05.22	73	5	-		MG	☐ ☐	10MIN 3 SIEVES
103	CPE 2	12	00:49	BE	ROS	US	50° 43.00	128° 39.83	127		430-431	2	MR	☒ ☐	2 bottles for Lora
			00:52	BO			50° 42.99	128° 39.85		117	-			☐ ☐	
			00:55	EN			50° 42.98	128° 39.86			-			☐ ☐	
104	CPE 2	12	01:03	BE	NET	—	50° 42.99	128° 39.86	127		-		MG	☐ ☐	
			01:07	BO			50° 42.98	128° 39.89		117	-			☐ ☐	
			01:09	EN			50° 42.98	128° 39.90			-			☐ ☐	
105	LQ03	12	02:53	BE	NET	—	50° 39.71	129° 02.04	1257		-		MG	☐ ☐	
			03:01	BO			50° 39.71	129° 02.05		250	-			☐ ☐	
			03:05	EN			50° 39.72	129° 02.06			-			☐ ☐	
106	LQ03	12	03:14	BE	ROS	—	50° 39.71	129° 02.09	?		—	Ø	MR	☒ ☐	13.5 on sounder?
			03:42	BO			50° 39.75	129° 02.13	1353	1360	-			☐ ☐	
			04:07	EN			50° 39.77	129° 02.07			-			☐ ☐	

Event Type:

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

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Month <u>SEPTEMBER</u>			Year <u>2013</u>			Vessel <u>TULLY</u>			Cruise ID <u>2013-58</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
107	JI22	12	05:31	BC	NET	—	50°39.81	129°17.47	1528?		-		MG	☐ ☐	Bong
			05:39	BO			50°39.83	129°17.49		250	-			☐ ☐	
			05:43	EN			50°39.85	129°17.48			-			☐ ☐	
108	JI22	12	05:54	BC	ROS	—	50°39.87	129°17.44	1404?		—	Ø	MR	☒ ☐	
			06:20	BO			50°39.87	129°17.36		1414	-			☐ ☐	
			06:45	EN			50°39.94	129°17.33			-			☐ ☐	
109	CS 00	12	09:35	BC	ROS	U.S.	50°27.65	129°55.10	2174		432-454	21	H.M.	☒ ☐	
			10:10	BO			50°27.64	129°55.06		2005	-			☐ ☐	
			11:03	EN			50°27.64	129°55.04			-			☐ ☐	
110	CS 00	12	11:26	BC	NET	—	50°27.65	129°55.05	2177		—		H.M.	☐ ☐	Bong
			11:35	BO			50°27.65	129°55.07		250	-			☐ ☐	
			11:40	EN			50°27.66	129°55.06			-			☐ ☐	
111	CS 01	12	12:59	BC	ROS	—	50°34.88	129°41.51	2106		—		H.M.	☒ ☐	CTD ONLY
			13:21	BO			50°34.91	129°41.51		2005	-			☐ ☐	
			14:04	EN			50°34.91	129°41.51			-			☐ ☐	
112	CS 01	12	14:09	BC	NET	—	50°34.89	129°41.49	2106		—		H.M.	☐ ☐	Bong
			14:19	BO			50°34.89	129°41.48		250	-			☐ ☐	
			14:23	EN			50°34.87	129°41.51			-			☐ ☐	
			:				°	°			-			☐ ☐	TSG RESTARTED

Event Type:

BOT = Bottle cast (no CTD)
 CTD = Standalone CTD
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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

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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✓ - SOMEONE CLOSED THE OUTFLOW VALVE IN THE TSG - I HAD TO ADD STARTED NEW FILE (CND)

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Month <u>November</u>			Year <u>2013</u>			Vessel <u>TULLY</u>			Cruise ID <u>2013-58</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information		Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
113	CS02	12	15:40	BE	ROS	U.S.	50° 41.25	129° 27.60			455-474	20	M.B.	☒ ☐	
			16:12	BO			50° 41.28	129° 27.99		1884	-			☐ ☐	
			16:58	EN			50° 41.29	129° 28.02			-			☐ ☐	
114	CS02	12	17:21	BE	NET	-	50° 41.29	129° 28.02	1901		-		H.M.	☐ ☐	
			17:32	BO			50° 41.24	129° 28.02		300	-			☐ ☐	
			17:37	EN			50° 41.22	129° 28.03			-			☐ ☐	
115	CS03	12	18:31	BE	ROS	-	50° 45.61	129° 19.02	234		-		H.M.	☒ ☐	CTD ONLY
			18:35	BO			50° 45.66	129° 20.07		225	-			☐ ☐	
			18:39	GM			50° 45.74	129° 20.08			-			☐ ☐	
116	CS03	12	18:50	BE	NET	-	50° 45.63	129° 20.01	237		-		MG	☐ ☐	
			18:58	BO			50° 45.61	129° 20.04		227	-			☐ ☐	
			19:05	GM			50° 45.61	129° 20.03			-			☐ ☐	
117	CS04	12	19:59	BE	NET	-	50° 49.15	129° 12.95	100		-		MG	☐ ☐	
			20:03	BO			50° 49.16	129° 12.94		90	-			☐ ☐	
			20:05	EN			50° 49.16	129° 12.95			-			☐ ☐	
118	CS04	12	20:15	BE	ROS	US	50° 49.15	129° 12.95	100		475-481	7	MR	☒ ☐	
			20:18	BO			50° 49.15	129° 12.95		92	-			☐ ☐	
			20:27	EN			50° 49.19	129° 12.96			-			☐ ☐	
			:				°	°			-			☐ ☐	

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

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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Month <u>September</u>			Year <u>2013</u>			Vessel <u>Tully</u>			Cruise ID <u>2013-58</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
119	P207	12	21:43	BE	Loop		50° 50.13	129° 37.58	489		-			☐ ☐	10 min 3 sec
			21:53	EN			° .	° .		5	-			☐ ☐	9.8, 9.7 9.9 10.3
120	ODAS	12	23:35	BE	NET	-	50° 51.11	129° 57.21	2135		-		MG	☐ ☐	Bongo
			23:47	Bo			50° 51.16	129° 57.15		250	-			☐ ☐	
			23:57	EN			50° 51.19	129° 57.08			-			☐ ☐	
121	ODAS	13	00:43	BE	NET	UN	50° 51.01	129° 57.19	2136		-		MG	☐ ☐	MPS 5 nets
			01:55	Bo			50° 51.17	129° 57.22		2005	-			☐ ☐	
			02:37	EN			50° 51.32	129° 57.09			-			☐ ☐	
122	ODAS	13	02:49	BE	ROS	US	50° 51.40	129° 57.12	2138		483-484	2	MR	☒ ☐	
			03:26	Bo			50° 51.45	129° 57.23		2005	-			☐ ☐	
			04:02	EN			50° 51.55	129° 57.23			-			☐ ☐	
123	CS3B	13	06:26	BE	NET	-	51° 00.00	129° 27.05	220		-		MG	☐ ☐	
			06:33	Bo			51° 00.01	129° 27.04		210	-			☐ ☐	
			06:37	EN			51° 00.02	129° 27.08			-			☐ ☐	
124	CS3B	13	06:47	BE	ROS	-	51° 00.04	129° 27.06	220		-	Ø	MR	☒ ☐	PAR ON
			06:51	Bo			51° 00.03	129° 27.06		210	-			☐ ☐	
			06:55	EN			51° 00.03	129° 27.05			-			☐ ☐	
			:				° .	° .			-			☐ ☐	
			:				° .	° .			-			☐ ☐	

Event Type:

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— = —

Bottle Firing Method:

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Month				Year				Vessel				Cruise ID				
SEPTEMBER				2013				TULLY				2013-58				
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information		Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments	
							Latitude	Longitude								
125	CS 05	13	08:53	BE	ROS	—	50° 56.03	128° 59.96	63		—		H.M.	☒ ☐	CTD ONLY	
			08:54	BO			50° 56.03	128° 59.98		54	-			☐ ☐		
			08:55	EN			50° 56.02	128° 59.99			-			☐ ☐		
126	CS 05	13	09:05	BE	NET	—	50° 56.05	129° 00.11	63		—		H.M.	☐ ☐	BONGO	
			09:07	BO			50° 56.08	129° 00.09		55	-			☐ ☐		
			09:08	EN			50° 56.08	129° 00.08			-			☐ ☐		
127	CS 1B	13	10:33	BE	ROS	—	50° 53.03	128° 39.94	73		—		H.M.	☒ ☐	CTD ONLY	
			10:35	BO			50° 53.02	128° 39.93		64	-			☐ ☐		
			10:36	EN			50° 53.02	128° 39.93			-			☐ ☐		
128	CS 1B	13	10:43	BE	NET	—	50° 53.00	128° 39.96	73		—		H.M.	☐ ☐	BONGO	
			10:46	BO			50° 52.99	128° 39.96		65	-			☐ ☐		
			10:47	EN			50° 53.00	128° 39.90			-			☐ ☐		
129	CS 06	13	12:04	BE	ROS	U.S	50° 59.96	128° 51.75	64		485 - 491	7	H.M.	☒ ☐		
			12:05	BO			50° 59.96	128° 51.73		56	-			☐ ☐		
			12:11	EN			50° 59.98	128° 51.71			-			☐ ☐		
130	CS 06	13	12:24	BE	NET		51° 00.00	128° 51.71	65		—		H.M.	☐ ☐	BONGO	
			12:26	BO			51° 00.00	128° 51.71		55	-			☐ ☐		
			12:27	EN			51° 00.00	128° 51.72			-			☐ ☐		
			:				°	°			-			☐ ☐		

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Time Code:

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Month <u>SEPTEMBER</u>			Year <u>2013</u>			Vessel <u>TULLY</u>			Cruise ID <u>2013-58</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information		Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
131	CS 07	13	13:15	BE	ROS	—	51° 04. 46	128° 44. 00	65		—	—	H.M.	☐ ☐	CTD ONLY
			13:17	BO			51° 04. 47	128° 44. 01		56	-			☐ ☐	
			13:18	EN			51° 04. 47	128° 44. 01			-			☐ ☐	
132	CS 67	13	13:24	BE	NET	—	51° 04. 47	128° 43. 98	65		—	—	H.M.	☐ ☐	BONGO
			13:26	BO			51° 04. 47	128° 43. 98		55	-			☐ ☐	
			13:27	EN			51° 04. 47	128° 43. 98			-			☐ ☐	
133	CS 08	13	14:14	BE	ROS	—	51° 08. 52	128° 35. 88	145		—	—	H.M.	☒ ☐	CTD ONLY
			14:17	BO			51° 08. 51	128° 35. 90		137	-			☐ ☐	
			14:19	EN			51° 08. 50	128° 35. 91			-			☐ ☐	
134	CS 08	13	14:26	BE	NET	—	51° 08. 49	128° 35. 92	145		—	—	H.M.	☐ ☐	BONGO
			14:30	BO			51° 08. 49	128° 35. 90		135	-			☐ ☐	
			14:32	EN			51° 08. 46	128° 35. 88			-			☐ ☐	
135	CS 09	13	15:18	BE	ROS	US	51° 12. 49	128° 27. 91	195		492-503	12	MB	☒ ☐	
			15:22	BO			51° 12. 48	128° 27. 87		184	-			☐ ☐	
			15:33	EN			51° 12. 48	128° 22. 90			-			☐ ☐	
136	CS 09	13	15:50	BE	NET	—	51° 12. 51	128° 27. 89	195		—	—	H.M.	☐ ☐	BONGO
			15:55	BO			51° 12. 51	128° 27. 89		185	-			☐ ☐	
			16:04	EN			51° 12. 51	128° 27. 89			-			☐ ☐	
			:				°	°			-			☐ ☐	

Event Type:

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 SET = Fish Set

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 DRF = Drifter

Bottle Firing Method:

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

Notes: _____

Time Code:

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Month <u>SEPTEMBER</u>				Year <u>2013</u>		Vessel <u>TOLU</u>				Cruise ID <u>2013-58</u>					
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
137	CS 10	13	16:47	BE	POS	—	51° 16.49	128° 19.92	81		—	—	HM	☐ ☐	CTD ONLY
			16:49	BO			51° 16.49	128° 19.91		72	-			☐ ☐	
			16:50	EN			51° 16.49	128° 19.92			-			☐ ☐	
138	CS 10	13	16:56	BE	NET	—	51° 16.48	128° 19.94	81		—	—	HM	☐ ☐	Bongo
			16:58	BO			51° 16.47	128° 19.94		71	-			☐ ☐	
			16:59	EN			51° 16.47	128° 19.95			-			☐ ☐	
139	PL08	13	18:15	BE	LOOP		51° 19.63	128° 2.42	195		-		MG	☐ ☐	
			18:25	BO			51° 20.43	127° 59.74		5	-			☐ ☐	SYRANGES DW
140	UBC7	13	19:51	BE	ROS	US	51° 30.01	127° 49.04	158		504-507	4	MR	☒ ☐	
			19:55	BO			51° 30.02	127° 49.05		150	-			☐ ☐	
			20:01	EN			51° 30.01	127° 49.05			-			☐ ☐	
141	UBC7	13	20:10	BE	NET		51° 29.99	127° 49.07	153		-		MG	☐ ☐	
			20:15	BO			51° 29.98	127° 49.09		143	-			☐ ☐	
			20:20	EN			51° 29.97	127° 49.10			-			☐ ☐	
142	R01	13	21:26	BE	ROS	US	51° 26.45	127° 38.43	306		508-509	2	MR	☒ ☐	
			21:32	BO			51° 26.45	127° 38.47		295	-			☐ ☐	
			21:39	EN			51° 26.43	127° 38.50			-			☐ ☐	
143	R01	13	21:58	BO	NET		51° 26.49	127° 38.55	304	294	-			☐ ☐	
			22:04	EN			51° 26.52	127° 38.56			-			☐ ☐	

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Bottle Firing Method:

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Notes:

Time Code:

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Month <u>SEPTEMBER</u>			Year <u>2013</u>			Vessel <u>TULLY</u>			Cruise ID <u>2013-58</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
144	Ri 2	13	22:54	BE	ROS	US	51°31.28	127°33.59	332		-		MR	☒ ☐	
			23:01	BO			51°31.27	127°33.56		322	510-513	4		☐ ☐	
			23:09	EN			51°31.26	127°33.54			-			☐ ☐	
145	Ri 2	13	23:28	BO	NET		51°31.21	127°33.54	331		-		MG	☐ ☐	Bottle
			23:34	EN			51°31.20	127°33.53		321	-			☐ ☐	
146	Ri 2	14	00:43	BE	NET		51°31.26	127°33.53	332		-		MG	☐ ☐	MPS 5 nets
			00:55	BO			51°31.23	127°33.54		323	-			☐ ☐	
			01:04	EN			51°31.23	127°33.53			-			☐ ☐	
147	Ri 3	14	01:44	BE	ROS	US	51°35.89	127°32.09	328		-		MR	☒ ☐	
			01:51	BO			51°35.87	127°32.08		319	514-515	2		☐ ☐	
			01:59	EN			51°35.84	127°32.08			-			☐ ☐	
148	Ri 3	14	02:22	BO	NET		51°35.83	127°32.09	328	318	-		MG	☐ ☐	
			02:32	EN			51°35.82	127°32.07			-			☐ ☐	
149	Ri 4	14	03:17	BE	ROS	US	51°38.97	127°26.76	300		516-517	2	MR	☒ ☐	
			03:23	BO			51°38.97	127°26.77		290	-			☐ ☐	
			03:31	EN			51°38.97	127°26.77			-			☐ ☐	
150	Ri 4	14	03:39	BE	NET		51°38.98	127°26.77	299		-		MG	☐ ☐	
			03:48	BO			51°38.97	127°26.78		289	-			☐ ☐	
			03:54	EN			51°38.96	127°26.78			-			☐ ☐	

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Notes:

Cast 0151 (R:5) : Recorded data when rosette still on deck until it was
back on deck, to get "Pressure on deck before and after".
Last 30 sec on deck.

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Month <u>SEPTEMBER</u>				Year <u>2013</u>			Vessel <u>TULLY</u>			Cruise ID <u>2013-58</u>					
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information		Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
							Latitude	Longitude							
151	RiS	14	04:35	BE	ROS	US	51°40.72	127°19.93	202		518-521	4	MR	☒ ☐	SEE PREV. PAGE
			04:43	Bo			51°40.74	127°19.97		192	-			☐ ☐	
			04:53	EN			51°40.71	127°20.00			-			☐ ☐	
152	RiS	14	05:04	Bo	NET		51°40.70	127°20.03			-		MG	☐ ☐	
			05:08	EN			51°40.69	127°20.05	202	192	-			☐ ☐	
153	Ri6/uocg	14	05:41	BE	ROS	US	51°40.49	127°17.06	145		522-523	2	MR	☒ ☐	FORGOT TO CHANGE DEPTH IN HEADER
			05:45	Bo			51°40.49	127°17.06		135	-			☐ ☐	
			05:50	EN			51°40.49	127°17.06			-			☐ ☐	
154	Ri6	14	06:04	Bo	NET		51°40.51	127°17.11	145	135	-		MG	☐ ☐	
			06:08	EN			51°40.52	127°17.13			-			☐ ☐	
155	CPG1	14	11:33	BE	ROS	-	51°00.00	127°50.03	142		-		H.M.	☒ ☐	CTD ONLY
			11:35	Bo			51°00.01	127°50.02		134	-			☐ ☐	
			11:37	EN			51°00.02	127°50.00			-			☐ ☐	
156	CPG1	14	11:43	BE	NET	-	51°00.04	127°49.97	143		-		H.M.	☐ ☐	BOTGO
			11:46	Bo			51°00.03	127°49.95		130	-			☐ ☐	
			11:49	EN			51°00.02	127°49.95			-			☐ ☐	
157	PL09	14	16:37	BE	LOOP		50°48.19	127°22.75	232		-			☐ ☐	
			16:47	EN			50°47.51	127°20.05		5	-			☐ ☐	
			:				.	.			-			☐ ☐	

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MISSION
NUMBER

2013-58

DATE:

From: SEPT 6 /13 To: SEPT 16 /13

VESSEL:

J.P. TULLY

PROJECT(S):

LA PEROUSSE - YELLAND

Book 2/2

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

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Month <u>SEPTEMBER</u>			Year <u>2013</u>		Vessel <u>TULLY</u>		Cruise ID <u>2013-58</u>								
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
158	CPF 2	15	09:13	BE	ROS	—	49°27.97	124°30.08	329		—		H.M.	☒ ☐	CTD B-5
			09:18	BO			49°27.97	124°30.08		325	-			☐ ☐	
			09:24	EN			49°27.97	124°30.08			-			☐ ☐	
159	CPF 2	15	09:35	BO	NET	—	49°27.98	124°30.10	328	323	—		H.M.	☐ ☐	BONGO
			09:43	EN			49°27.98	124°30.12			-			☐ ☐	
160	CPF 1	15	11:39	BE	ROS	—	49°22.02	124°05.02	244		—		H.M.	☒ ☐	CTD B-5
			11:43	BO			49°22.00	124°05.03		239	-			☐ ☐	
			11:47	EN			49°21.98	124°05.04			-			☐ ☐	
161	CPF 1	15	12:02	BO	NET	—	49°21.97	124°05.02	244	238	—		H.M.	☐ ☐	BONGO
			12:05	EN			49°21.96	124°05.00			-			☐ ☐	
162	Geo 1	15	13:43	BE	ROS	—	49°14.96	123°45.01	400		—		H.M.	☒ ☐	CTD B-5
			13:51	BO			49°14.99	123°45.07		397	-			☐ ☐	
			13:58	EN			49°15.04	123°45.09			-			☐ ☐	
163	Geo 1	15	14:17	BO	NET	—	49°15.06	123°45.11	400	395	—		H.M.	☒ ☐	BONGO
			14:24	EN			49°15.05	123°45.14			-			☐ ☐	
			:				°	°			-			☐ ☐	
			:				°	°			-			☐ ☐	
			:				°	°			-			☐ ☐	
			:				°	°			-			☐ ☐	

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