

DAILY SCIENCE LOG BOOK

MISSION
NUMBER

2015-09

DATE:

From: June 7th/2015

to: 23 JUNE 2015

VESSEL:

J.P. Tully

PROJECT(S):

LINE P

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

WaterProperties.ca

First Officer: TRHONA LETTAU
Third Officer: KEVEN NAPHTAU

DFD-103 / VIC/VBC/VNC / Bigelow Lab Reine

Chief Scientist:

MARIE

Robert

07-19

A

Name	Watch	Cabin	Name	Watch	Cabin
MICHAEL CRAIG	18-24	B	JENNIFER KEENE	12-18	H
GLENN COOPER	PH/HPIC	C	MICHAEL ARYCHUK	DMS	A
DOUG VELLAND	12-24	D	MARK BELTON	00-12	3
MIKO FINKE	00-06	E			
BENJAMIN TWINING	06-12	E			
NATALIE COHEN	12-18	F			
CÉLINE MICHELS	18-24	F			
AMANDA TIMMERMAN	06-12	G			
JADE SHILLER	00-06	G			
MARIELA WHITE	06-12	H			

Chief Scientist:

1000

[illegible]

#2

Season

18B/E

CTD

Make: SRE

Primary temperature serial number: 2023

Primary conductivity serial number: 1763

Secondary temperature serial number: 5013

Secondary conductivity, serial number: 3394

Transmissometer: Wet Labs Model: C-STAR s/n: 1396 DR

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

Oxygen sensor: SBF Model: 43 s/n: 1438 (P, S or NO pump?)

PAR sensor: B10SPED11A1 Model: s/n: 4565

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: _____

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: _____

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): _____

Rosette Setup:

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

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: Seipho STO Model: LOG2 Kit Number: 2
Make: _____ Model: _____ Kit Number: _____

Comments on performance during cruise (comments should also be reflected in the post-cruise report):
Seipho, hose while running bleeds one line

Thermosalinograph System (SBE21):

Program: Seasave Version: 7.21 # 3363
Sampling interval (seconds): 30
Fluorometer sensor serial number: 2356

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: 07 after cast: 22
0091:

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>June</u>				Year <u>2015</u>			Ship <u>Tully</u>			Cruise ID <u>2015-09</u>					
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
08	JF1	07:08	BE	UWS	-	1	48 15 97	123 29 92	154	-	JF1 Loop	-	MR	-	LOOP1 1 SAL 14 WT 2 UNFIRE CMC
08	JF2	09:15	BE	USW	-	2	48 18 00	123 59 92	186	-	JF2 Loop	-	MR	-	Loop
08	JF3	11:43	BE	USW	-	3	48 27 00	124 29 93	224	-	JF3 Loop	-	MR	-	Loop
08	JF4	14:15	BE	(XLS)	-	4	48 32 17	124 59 90	54	-	JF4 Loop	-	MR	-	Loop
08	P1	17:07	BE	ROS	US	5	48 34 48	126 30 02	121		1-3	3	MR	✓	
		17:09	BE				48 34 48	126 30 03		113					
		17:14	BE				48 34 48	126 30 03							
08	P2	20:33	BE	ROS	US	6	48 36.04	126 0.05	115				DY	✓	DEFP CAST
		20:36	BO				48 36.04	126 0.06		107	4-11	8			
		20:44	EN				48 36.08	126 0.04							
08	P2	21:05	BE	NET	UN	7	48 36.09	126 0.14	115						Bongo to 105
		21:07	BO				48 36.08	126 0.17		105					
		21:10	EN				48 36.08	126 0.17							
08	P2	21:23	BE	ROS	US	8	48 36.04	126 00.19	118		12-25	14	MR	✓	DMS CAST
		21:25	BO				48 36.03	126 00.20		100					
		21:37	EN				48 36.05	126 00.21							
08	P3	23:59	BE	ROS	US	9	48 37.44	126 19.90	812		26-37	12	DY/MR	✓	
09		00:13	BO				48 37.44	126 20.01		8.16					
		00:37	EN				48 37.42	126 20.06							

Cast Type:

BOT = Bottle cast, no CTD
CTD = CTD without Rosette
NET = Plankton Net Haul
ROS = Rosette plus CTD
SET = Fish Set

USW = Sea Water Loop

MOR = Mooring
NET = Plankton Net Haul
DRF = Drifter

Bottle Firing Method:

US = Up / Stop
UN = Up / No stop
DN = Down / No stop

Notes:

Time Code:

BE = Beginning Time of Cast
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Transmissometer & Fluorometer are to be cleaned before each cast

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Month <u>June</u>		Year <u>2015</u>		Ship <u>Tully</u>		Cruise ID <u>2015-09</u>									
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							Latitude	Longitude							
9	P4	0340	BE	ROS	US	10	48 38.94	126 39.94	1316		38-56	19	MB	✓	PAR OFF
		0402	BO				48 38.96	126 39.96		1321					
		0439	EN				48 38.93	126 39.99							
9	P4	0508	BE	NET		11	48 38.90	126 39.99	1311						Bump to 250
		0519	BO				48 38.99	126 39.99		250					
		0524	EN				48 38.99	126 39.99							
9	P4	0608	BE	ROS	US	12	48 38.99	126 39.99	1310						Nico's cast
		0613	BO				48 38.99	126 39.99		300	57-80	24	MB	✓	
		0638	EN				48 38.99	126 39.99							
9	P4	0733	BE	ROS	US	13	48 38.99	126 39.98	1330		81-96	16	MB	✓	TADE'S CAST
		0755	BO				48 38.99	126 39.99		1320					
		0821	EN				48 38.99	126 39.99							
9	P4	0905	BE	ROS	-	14	48 38.99	126 39.99	1295				NCE/MB	-	
		0918	BO				48 38.99	126 39.99		50					PUMPING @ 8m
		1126	EN				48 38.99	126 39.99							
9	P4	1135	BE	ROS	US	15	48 38.99	126 39.99	1310		98-105	8	MB	✓	AMANDA'S CAST
		1138	BO				48 38.99	126 39.99		150					
		1146	EN				48 38.99	126 39.99							

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Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
9	P4	1312	BE	Ros	US	16	48 38.99	126 39.99	1315		106-117	12	MS	✓	DELTA'S CAST
		1336	BO				48 38.99	126 39.99		1323					
		1407	EN				48 38.99	126 39.99							
9	P4	1508	BE	Ros	US	17	48 39.19	126 41.05	1310		118-134	17	MS	✓	DMS CAST
		1513	BO				48 39.19	126 41.06		300					PAR ON
		1536	EN				48 39.19	126 41.05							Slightly off star due to weather.
10	P8	0347	BE	Ros	US	18	48 48.93	128 39.90	2577				DI	✓	
		0423	BO				48 48.99	128 39.92		2015	135-156	22			
		0520	EN				48 49.01	128 39.90							
10	P9	0814	BE	Ros	US	19	48 51.37	129 9.98	2338		157-158	2	MS	✓	See next page
		0855	BO				48 51.37	129 9.98		2005					
		0942	EN				48 51.38	129 9.75							
10	P10	1212	BE	Ros	US	20	48 53.55	129 39.88	2040		159-160	2	MS	✓	
		1246	BO				48 53.54	129 39.91		2005					
		1328	EN				48 53.55	129 39.85							
10	P11	1615	BE	Ros	US	22	48 55.99	130 9.94	2750		161-162	2	MS	✓	
		1651	BO				48 56.02	130 9.93		2005					
		1731	EN				48 55.99	130 9.96							
10	Loop 21	1456	BE	USW		21	48 54.99	129 54.91	2781	-	Loop 21				2 x Ctl Filt 1 Salt 2 x Ctl UN Filt

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SET = Fish Set

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DRF = Drifter
— = —

Bottle Firing Method:

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STOPPED @ 240m ^{ON WAY UP} ^{ON SPOOLER} [✓] WENT BACK DOWN TO 255m, BACK UP

STOPPED @ ~100m & 400m on way down due to spooler issue on winch; was discovered that a spacer piece of the winch was removed and used on the large winch, replaced equipment and continued. Another gap developed @ ~195m on way up, needed to repair brake line to fix, another adjustment @ ~500m coming up. May need to payout > 3000m to complete. For 1st 200m, (next deep cast?)

STOPPED @ ~500m on way up, payout ~20m, then resumed in feed after some up & down.

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Month <u>JUN</u>				Year <u>2015</u>			Ship <u>TULLY</u>			Cruise ID <u>2015-09</u>					
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
10	P12	1959	BE	ROS	US	23	48 58.18	130 39.93	3233				DY	✓	DMS
		2004	BO				48 58.19	130 39.97		300	163-179	17			
		2027	EN				48 58.20	130 39.98							
10	P12	2059	BE	ROS	US	24	48 58.20	130 39.98	3232				DY	✓	Deep
		2153	BO				48 58.19	130 39.98			180-202	23			P 3275 S 3231 D 3222 A 10
		2313	EN				48 58.19	130 39.98							
10	P12	0039	BE	NET	UN	25	48 58.19	130 40.01	3233				DY		Bongo to 200
		0048	BO				48 58.19	130 40.03		250					
		0052	EN				48 58.20	130 40.00							
11	P12	0128	BE	ROS	US	26	48 58.15	130 39.90	3234				DY	✓	Niko's cast
		0132	BO				48 58.15	130 39.93		200	203-226	24			
		0154	EN				48 58.15	130 40.01							
11	P12	0230	BE	ROS	US	27	48 58.22	130 39.97	3234				DY		Celine's cast
		0326	BO				48 58.24	130 40.02			227-248	22			P 3276 S 3234 D 3223 A 10
		0445	EN				48 58.26	130 40.13							
11	P12	0457	BE	NET		28	48 58.21	130 40.20	3233						Bongo to 1200
		0537	BO				48 58.21	130 40.19		1200					
		0601	EN				48 58.21	130 40.17							

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DRF = Drifter
=

Bottle Firing Method:

US = Up / Stop
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Notes:

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Transmissometer & Fluorometer are to be cleaned before each cast

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Month <u>June</u>				Year <u>2015</u>			Ship <u>Tully</u>			Cruise ID <u>2015-09</u>					
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
11	P12	0625	BE	ROS	US	29	48 58.20	130 40.06	3233				DY/AB	✓	SEE OVER →
		0638	BO				48 58 19	130 39 97		2000	249-264	16			
		0811	EN				48 58 19	130 39 97							
11	P12	0845	BE	USW	-	30	48 58 19	130 39 96	3234	-	Loop 30	-	MR	-	2x chl a - 1 set fill. 2x chl unf.
11	P12	0903	BE	Amber	-	31	48 58 19	130 39 97	3232		-	-	BT/NC/MB	-	
		0914	BO				48 58 19	130 39 96		140 (WGT/WT)					Pumpout @ 25m
		1020	EN				48 58 19	130 39 96							
11	P12	1024	BE	ROS	US	32	48 58 19	130 39 96	3234		265-272	8	MR	✓	Amber cast
		1027	BO				48 58 20	130 39 97		150					
		1038	EN				48 58 19	130 39 97							
11	P13	1542	BE	ROS	US	33	49 2.63	131 39.96	3017		273-274	2	GC	✓	Several stop + growth which because of searing issues.
		1616	BO				49 2.68	131 39.92		2005					
		17:07	EN				49 2.69	131 40.00							
11	P14		BE	ROS	US	34			3333		-	0	DY	✓	PAR cast
			BO							150					
		2232	EN				49 7.41	132 39.84							
11	P14	2240	BE	ROS	US	35	49 7.41	132 39.85	3313				DY	✓	PAR off
		2313	BO				49 7.44	132 39.90		2005	275-276	2			
		2350	EN				49 7.47	132 39.87							

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More wind today, some up to 10 or 12 mph.

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Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
	P15	0432	BE	ROS	US	36	49 11.94	133 39.88	3406				24	✓	
		0504	BO				49 11.96	133 39.90		2005	277-278	2			
		0543	EN				49 11.98	133 40.04							
12	P15 → P16	0844	RE	USW	-	37	49 15 19	134 19 85	3723	-	Loop 37	-	MB	-	2 CHL FTS 1 SA1 FTS
12	P16	1021	BE	ROS	US	38	49 16 93	134 39 93	3633		279-286	8	MB	✓	4100017 GUS
		1024	BO				49 16 92	134 39 93		150					
		1037	EN				49 16 92	134 39 93							
12	P16	1046	BE	NET	-	39	49 16 92	134 39 93	3632				MB	-	BONGO 250
		1056	BO				49 16 92	134 39 93		250					
		1100	EN				49 16 92	134 39 93							
12	P16	1131	BE	NET	-	40	49 16 92	134 39 93	3632				MB	-	BONGO 1200
		1216	BO				49 16 92	134 39 93		1200					
		1236	EN				49 16 92	134 39 93							
12	P16	1314	BE	ROS	US	41	49 16 92	134 39 93	3631		287-310	24	MB	✓	P: 3685 S: 3683 D: 3622 A: 10
		1419	BO				49 16 92	134 39 93		3683					
		1542	EN				49 16 92	134 39 93							
12	P16	1644	BE	ROS	US	42	49 16 96	134 39 99	3634		311-327	17	MB	✓	DMS CAST
		1649	BO				49 16 96	134 39 99		300					PARON
		1710	EN				49 17 06	134 39 93							

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Notes:

✓
This page is for any notes or observations

stop @ 530 way down for wind

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							Latitude	Longitude							
12	Loop 43	1935	BE	USW		43	49 18.87	135 09.57	2780				MR		2X CHL FILT 1X SAL 2X CHL UNFILT
12	P17	2211	BE	ROS	US	44	49 20.96	135 39.90	3650				DY	✓	
		2244	BO				49 20.93	135 39.95		2005	328-329	2			
		2322	EN				49 20.97	135 40.00							
	P17	2341	BE	ROS	US	45	49 20.93	135 39.98	3708						PAR ON
		2344	BO				49 20.94	135 39.97		150					
		2347	EN				49 20.93	135 39.97							
13	P18	0453	BE	ROS	US	46	49 25.93	136 40.12	3833				DY	✓	PAR OFF
		0526	BO				49 25.97	136 40.14		2005	330-331	2			sparging problems
		0610	EN				49 25.99	136 40.31							~1040m ↑
13	Loop 47	0900	BE	USW	-	47	49 27.89	137 08.14	2319	-	Loop 47	-	MR	-	2X CHL FILT 1X SAL 2X CHL UNFILT
13	P19	1055	BE	ROS	US	48	49 29.98	137 39.94	3925		332-333	2	MR	✓	Computer Crashed @ 1350m RESTARTED
			BO				49	137		2005					pump turned off?
			EN				49	137							
13	P19	1111	BE	ROS	US	49	49 29.98	137 39.92	3925		332-333	2	MR	STILL IN WATER	Restart P19 cal-
		1145	BO				49 29.98	137 39.95		2005					POT IN P20 when
		1229	EN				49 29.98	137 39.98							'STARTING' incorrectly.
				Reboot	computer	before	P20.								

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0046 B: Deploy NOAA DRIFTER # 132559
06/13 06:17 GMT 49 25.99N 136 40.31W

Adjustment on spool @ 1060 on way up + 110

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Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
13	P20	1715	BE	ROS	US	50	49° 34.01	138° 39.98	3965		334-357	24	MR/p	✓	Deep Cast 1
		1828	BO				49° 33.99	138° 39.99		4025					S: 3964 D: 4023 A: 10 P: 3952
		2005	EN				49° 33.99	138° 39.99							on-deck pressure reaching
13	P20	2109	BE	ROS	US	51	49° 33.99	138° 39.98	3966				24		PAR ON
		215	BO				49° 33.99	138° 39.98		300	358-374	17			DMS Cast
		2133	EN				49° 33.99	138° 39.99							
	P20	2150	BE	PUMP		52	49° 34.00	138° 40.00	3965						Pumping chains
13	P20	2313	EN				49° 33.89	138° 40.01							ship lost power!
13	P20	2330	BE	NET		53	49° 33.92	138° 40.04							
		2340	BO				49° 33.91	138° 40.06		250					
		2344	EN				49° 33.92	138° 40.09							
14	P20	0013	BE	NET	UN	54	49° 33.98	138° 40.01	3963						WPS 3000m
		0220	BO				49° 34.00	138° 39.99		3000					
			EN				49° 34.00	138° 39.99							
14	P20	0406	BE	ROS	US	55	49° 33.98	138° 39.99	3965				24	✓	Aranda's cast
		0409	BO				49° 33.98	138° 39.97		150	375-382	8			PAR OFF
		0419	EN				49° 33.98	138° 39.98							
14	P20	0424	DE	DRF		56	49° 33.98	138° 40.07	3965						ADAA drifter 132479

Cast Type:

BOT = Bottle cast, no CTD
 CTD = CTD without Rosette
 ROS = Rosette plus CTD
 SET = Fish Set

USW = Sea Water Loop

MOR = Mooring

NET = Plankton Net Haul

DRF = Drifter

=

Bottle Firing Method:

US = Up / Stop

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

DE = Deployment Time

MR = Messenger Release Time

RE = Recover Mooring Time

Transmissometer & Fluorometer are to be cleaned before each cast

Produced by the Water Properties Group, IOS

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DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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Month June				Year 2015			Ship Tuxedo				Cruise ID 2015-05				
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
14	P21	0907	BE	ROS	US	57	49 37.98	139 39.99	3959					✓	PIC OFF
		0940	BO				49 38.00	139 39.90		2005	383-384	2	MB		
		1038	EN				49 37.98	139 39.86							
14	P21-P22	1127	BE	USW	-	58	49 38.74	139 39.22	3950		Low SP	-	MB		2x CTD 1x SBT 1x SFLT 2x CTD 3x UNFILT
14	P22	1526	BE	ROS	US	59	49 41.95	140 39.95	3999		385-386	2	MB	✓	+ 2x CTD 3x SFLT 1x SBT 2x CTD 3x UNFILT
		1601	BO				49 41.99	140 39.99		2005					
		1646	EN				49 41.99	140 39.99							
14	P22	1535	BE	ROS	-	60	49 41.99	140 39.98	3904		P22 BLACK BARREL	-	MB	-	Bulk water from hose for Andrew Ross → S2/S2.5
		1610	EN				49 41.99	140 39.99							
14	P22	1700	DE	DRF	-	61	49 42.042	140 40.058	4029						NOAA DRIFT TIDE 132.488
14	P22	1702	DE	DRF	-	62	49 42.071	140 40.096	4029						132.536
14	P23	2138	BE	ROS		63	49 45.95	141 39.97	4051				BY	✓	Calibration cast
		2211	BO				49 45.98	141 40.00		2005	387-410	24			+ 2 CTD FILL 2 CTD UNFILT LOOPS
		2217	EN				49 46.04	141 39.90							
14	P23	2258	BE	UWS		64	49 46.04	141 39.90		Sal = 32.43 ‰					Kyle's cube 5 x 2
		2312	BO				49 46.36	141 40.40							
15	P24	0012	BE	ROS	US	65	49 50.24	142 39.95	3985				BY	✓	
		0345	BO				49 50.27	142 40.02		2005	411-412	2			
		0419	EN				49 50.25	142 40.19							

Cast Type:

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DRF = Drifter

Bottle Firing Method:

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UN = Up / No stop
DN = Down / No stop

Notes:

Time Code:

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SPOOLING ADJUSTMENTS COMING UP, HAVE PAUSE @ 450

SOUNDER SET TO MAX 4000 FOR P21 + P22
DEPTHS UNDERESTIMATED

SPOOLING ADJUSTMENTS COMING UP @ 475

P22 - SOUNDER = 4029. 2nd being reset to 0 → 4500m @ 450m
on way ↑

DAILY SCIENCE LOG

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DAILY SCIENCE LOG				Ocean Sciences Division, Institute of					Cruise ID						
Month <u>June</u>				Year <u>2015</u>			Ship <u>Tully</u>		2015-09						
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
15	P24	0423	DE	DRF		66	49 50.26	142 40.24							NOAA #132467
15	P24	0424	DE	DRF		67	49 50.27	142 40.31							NOAA #132558
15	P25	0843	BE	ROS		68	49 59.98	143 36.26	4115		413-414	2	MR	✓	
		0918	BE				49 59.98	143 36.29		2015					
		1508	BE				49 59.98	143 36.32							
15	P25-P26	1125	BE	ROS		69	49 59.99	143 52.92	4117	-	415-416	2	MR	✓	2301 + 2302 500
15	P25	1321	BE	ROS		70	49 59.98	144 18.25	4118		415-416	2	MR	✓	
		1355	BE				49 59.91	144 18.27		2015					
		1430	BE				49 59.96	144 18.38							
15	P35	1436	DE	DRF		71	50 00 00	144 18 38	4148				MR		132524 NOAA
15	P35	1437	DE	DRF		72	50 00 01	144 18 42	4148				MR		132539 NOAA
15	P25-P26	1659	BE	USW		73	50 07 42	144 48 32	4141	-	415-416	2	MR		2301 + 2302 - 2303 (2304) / 2305 (2306) / 2307 (2308) / 2309 (2310) / 2311 (2312) / 2313 (2314) / 2315 (2316) / 2317 (2318) / 2319 (2320) / 2321 (2322) / 2323 (2324) / 2325 (2326) / 2327 (2328) / 2329 (2330) / 2331 (2332) / 2333 (2334) / 2335 (2336) / 2337 (2338) / 2339 (2340) / 2341 (2342) / 2343 (2344) / 2345 (2346) / 2347 (2348) / 2349 (2350) / 2351 (2352) / 2353 (2354) / 2355 (2356) / 2357 (2358) / 2359 (2360) / 2361 (2362) / 2363 (2364) / 2365 (2366) / 2367 (2368) / 2369 (2370) / 2371 (2372) / 2373 (2374) / 2375 (2376) / 2377 (2378) / 2379 (2380) / 2381 (2382) / 2383 (2384) / 2385 (2386) / 2387 (2388) / 2389 (2390) / 2391 (2392) / 2393 (2394) / 2395 (2396) / 2397 (2398) / 2399 (2400)
15	PA-009	2318	DE	MOR		74	50 07.84	144 50.39	4220						
		2318	DE				50 07.84	144 50.39	4220						
16	PA-009	0007	BE	ROS		75	50 08.09	144 50.63	4220						
		0016	BO				50 08.09	144 50.69		500	417-422	6			Planeta's cast
		0028	EN				50 08.07	144 50.68							
Transmissometer & Fluorometer are to be cleaned before each cast															

SPOOLING ADJUSTMENTS ON WAY UP @ ~500 @ ~1000 @ ~1500

CHANGES OF SPIGOTS ON NIXON*1 (base + lenty) + NIXON*2 (base + lenty)

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Ocean Sciences Division, Institute of Ocean Sciences

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Month <u>June</u>				Year <u>2015</u>			Ship <u>Tully</u>				Cruise ID <u>2015-09</u>				
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
16	P26	0157	BE	ROS	US	77	49 59.98	145 0.02	4250			Ø	DY	✓	
		0201	BO				49 59.99	145 0.00		150					
		0203	EN				49 59.99	145 0.00							
16	P26	0219	BE	ROS	US	78	49 59.99	145 0.00	4250				DY	✓	DeepCast
		0326	BO				49 59.99	145 0.00		41316	423-446	24			PAR OFF
		0521	EN				49 59.99	144 59.99							P 4316 Δ=10 D=4237 K=4250
16	P26	0552	BE	ROS	US	79	50 0 12	144 59.86	4250				MB	✓	Nika's cast
		0657	BO				49 59.99	144 59.80		200	447-470	24			
		0721	EN				49 59.99	144 59.41							
16	P26	0943	BE	ROSEN	-	80	50 00 01	144 59 98	4250				MB	-	Pumping @ 45m
		0954	BO				50 00 01	144 59 98		145 WEIGHT					
		1206	EN				50 00 01	144 59 98							
16	P26	1302	BE	USW	-	81	50 01 26	144 53 08	4250	-	Loop 81	-	MB	-	2015-09-15 13:02 2015-09-15 13:02
16	PA-008	1500	BE	ROS	US	82	50 02 26	144 53 64	4236		471-476	6	MB	✓	Maricela's Cast
		1505	BO				50 02 27	144 53 64		350					
		1516	EN				50 02 29	144 53 67							
16	PA-008	1540	MR	MOR		83	50 02 51	144 52.94	4227						Release confirmed.
		1730					50 02 73	144 52 53	4226						ROUN on DECK
		2206					50 03 98	144 54.12							ALL INSTRUMENTS, LINE ARRIVED

Cast Type:

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USW = Sea Water Loop

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 NET = Plankton Net Haul
 DRF = Drifter

Bottle Firing Method:

US = Up / Stop
 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
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 RE = Recover Mooring Time

Transmissometer & Fluorometer are to be cleaned before each cast

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1521 UR, 16 June: Stop ADCP + sounders for acoustic release of mooring.
1543 UR: Restarted ADCP + sounders after release confirmation.
Off again from ~1608 to 1618

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Month <u>June</u>				Year <u>2015</u>			Ship <u>Tully</u>			Cruise ID <u>2015-09</u>					
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
16	P26	2315	BE	ROS	US	84	50 0.00	144 59.92	4252		—	0	DY	✓	PAR ON
		2319	BO				50 0.00	144 59.94		150					
		2323	EN				50 0.00	144 59.95							
16	P26	2346	BE	ROS	US	85	49 59.99	144 59.99	4250				DY	✓	Celine's cast
17		0038	BO				49 59.99	144 59.98		3000	477-490	14			PAR OFF
		0138	EN				49 59.99	144 59.98							
17	P26	0233	BE	ROS	US	86	49 59.99	144 59.98	4250				DY	✓	Jack's cast
		0324	BO				49 59.99	144 59.98		3000	491-506	16			
		0425	EN				49 59.99	144 59.98							
17	P26	0456	BE	ROS	US	87	49 59.99	144 59.98	4250				DY	✓	Plastics cast
		0607	BO				49 59.99	144 59.98		4317			MB		D=4317 S=4250 D=4238 J=10
		0745	EN				49 59.98	144 59.99							
17	P26	0833	BE	ROS	US	88	49 59.99	145 00.00	4247		Loop SS		MB		2 cast 150m/100m 2nd cast
17	P26	1100	BE	ROS	US	89	49 59.99	145 00.00	4250				MB	✓	Annex 3 Cast
		1103	BO				49 59.99	145 00.00		150	531-539	9			CRASH ON WAY UP @ 150m
		1106	EN												
17	P26	1109	BO	ROS	US	90	49 59.99	144 59.99	4250	150					RESTART FROM BOTTOM DEPTH @ 150m
		1118	EN				50 00.00	145 00.00							

Cast 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
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

Transmissometer & Fluorometer are to be cleaned before each cast

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Notes:

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Month <u>June</u>				Year <u>2015</u>			Ship <u>WAVE</u>				Cruise ID <u>2015-09</u>				
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
17	P26	1519	BE	ROS	UN	91	49 59.99	144 59.95	4250						✓
		1522	BO				50 00.00	144 59.94		200	540-542	3	MB		PARON MARIELA CAST
		1529	EN				50 00.01	144 59.96							
17	P26	1549	BE	NET	-	92	50°00.111	144°59.6878	4250		-	-	MB		BRUGO 200
		1557	BO				50°00.1278	144°59.6885		250					
		1601	EN				50°00.1278	144°59.6814							
17	P26	1710	BE	NET	UN	93	49 59.97	144 59.92	4250				DY		WPS to 3000m
		1913	BO				49 59.92	144 59.92		3000					
		1920	EN				49 59.92	144 59.92							
17	P26	2059	BE	ROS	US	94	49 59.94	144 59.93	4250				DY	✓	DMS + Mariela
		2105	BO				49 59.93	144 59.92		300	543-562	20			PARON
		2123	EN				49 59.93	144 59.89							+2 CHL FILL 2 CHL UN-FILL } LOOPS
17	P26	2128	DE	DRE		95	49 59.94	144 59.71							132560 NOAA
		2128	DE	DRF		96	49 59.93	144 59.67							132557
18	LOOP 97	1448	BE	USW	-	97	49 41.72	140 45.74	3289	-	Loop 97	-	MB	-	2 CHL + 1 SALTS FILL 2 CHL UN-FILL
19	LOOP 98	1517	BE	USW		98	49 16.17	134 57.08	3293		Loop 98		MR		11
19	LOOP 99	2106	BE	USW		99	49 10.10	133 29.07	3200		Loop 99		MR		2 CHL + 1 SALTS TSG 2 CHL MANIFOLD

Cast Type:

BOT = Bottle cast, no CTD
 CTD = CTD without Rosette
 ROS = Rosette plus CTD
 SET = Fish Set

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

Bottle Firing Method:

US = Up / Stop
 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
 DE = Deployment Time
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 RE = Recover Mooring Time

Transmissometer & Fluorometer are to be cleaned before each cast

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Month <u>June</u>				Year <u>2015</u>			Ship <u>ROSE</u>			Cruise ID <u>2015-09</u>					
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
20	P8	1606	BE	ROS	-	100	48 49.03	128 39.35	2513		-	-	MB	✓	CID for Bowler
		1611	BO				48 48.03	128 39.93		250					
		1615	EN				48 47.02	128 39.38							
20	P8	1622	BE	ROS	-	101	48 49.01	128 40.03	2513		-	-	MB		Bowler 250
		1630	BO				48 49.01	128 40.01		250					
		1635	EN				48 49.03	128 40.00							
20	P7	1842	BE	ROS	US	102	48 46.58	128 9.93	2500		263-264	2	MB/D	✓	+2 CHL BG + (1 SAL) 2 CHL MANIF
		1915	BO				48 46.60	128 9.97		2015					LOOPS
		1950	EN				48 46.57	128 10.08							
20	P6	2159	BE	ROS	US	103	48 44.62	127 40.01	2541		265-266	2	DY	✓	+2 CHL 1 SAL TSG + 2 CHL MANIFOLD
		2233	BO				48 44.60	127 40.04		2005					LOOPS
		2311	EN				48 44.57	127 40.00							
21	P5	0121	BE	ROS	US	104	48 41.53	127 10.00	2081				DY	✓	
		0156	BO				48 41.53	127 10.12		2005	267-268	2			
		0233	EN				48 41.53	127 10.17							
21	ONC	0402	BE	ROS	US	105	48 39.71	126 50.82	1273				DY	✓	D=1267
		0423	BO				48 39.69	126 50.88		1281	-	0			
		0446	EN				48 39.71	126 50.91							

Cast Type:

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ROS = Rosette plus CTD
SET = Fish Set

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DRF = Drifter

Bottle Firing Method:

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Time Code:

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Notes:

Stopped reaching as CTD didn't work for 10 mins. & got PAR data right @ surface
PAR @ surface value = 1.2×10^3

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Month <u>June</u>				Year <u>2015</u>			Ship <u>Tully</u>			Cruise ID					
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
21	P4	0539	BE	ROS	US	106	48 38.99	126 39.97	1311				DY	✓	
		0600	BO				48 38.99	126 40.02		1321	569-584	16			
		0636	EN				48 38.94	126 40.04							
21	P4	0639	BE	NET	-	107	48 38.94	126 40.04	318				MB		Bottle 250
		0708	BO				48 38.95	126 40.09		250					
		0712	EN				48 38.95	126 40.08							
21	P2	0957	BE	ROS	US	108	48 35.59	126 00.01	118		585-592	8	MB	✓	
		0959	BO				48 35.59	126 00.01		108					
		1007	EN				48 35.59	125 59.99							
21	P2	1036	BE	NET	-	109	48 36.04	126 00.03	118				MB		Bottle 250
		1040	BO				48 36.04	126 00.03		108					
		1042	EN				48 36.04	126 00.04							
21	LC06	1129	BE	CTD	-	110	48 36.59	125 54.04	94				MB	✓	
		1130	BO				48 36.59	125 54.06		84					
		1132	EN				48 36.58	125 54.08							
21	LC04	1249	BE	CTD	-	111	48 42.42	125 40.82	1060				MB	✓	error when starting cast, restarted
		1252	BO				48 42.43	125 40.82		1560					
		1255	EN				48 43.44	125 40.84							PAR ON

Cast Type:

USW = Sea Water Loop

Bottle Firing Method:

Time Codes:

Cast Type:

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CTD = CTD without Rosette
ROS = Rosette plus CTD
SET = Fish Set

USW = Sea Water Loop
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NET = Plankton Net Haul
DRF = Drifter

Bottle Firing Method:

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UN = Up / No stop
DN = Down / No stop

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RE = Recover Mooring Time

Transmissometer & Fluorometer are to be cleaned before each cast

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Month <u>JUNE</u>				Year <u>2015</u>			Ship <u>TAG</u>				Cruise ID <u>2015-03</u>				
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
21	LC02	1353	BE	ROS	-	112	48 48.69	125 30 89	110		-	-	MB	✓	
		1354	BO				48 48 70	125 30 89		100					
		1356	EN				48 48 70	125 30 89							
21	LC01	1421	BE	ROS	US	113	48 50.92	125 27 65	95		593	1	MB/MR	✓	
		1422	BO				48 50.91	125 27 63		85					
		1425	EN				48 50.35	125 27 62							
21	PI/B8	1607	BE	ROS	US	114	48 34.44	125 30 07	135		594-601	8	MR	✓	
		1609	BO				48 34.43	125 30 08		126					
		1616	EN				48 34.43	125 30.12							
21	PI/B8	1624	BE	NET	UN	115	48 34.45	125 30.15	135				GC		BONGO 125
		1627	BO				48 34.44	125 30.16		125					
		1629	EN				48 34.44	125 30.15							
21	LB08	1730	BE	ROS	US	116	48 25.34	125 28.60	143		602	1 ⁽²⁾	MR	✓	Going to 500 bbl
		1734	BO				48 25.34	125 28.59		142					NISAP 2 closed JUST IN CASE
		1737	EN				48 25.31	125 28.60							
21	LB08	1745	BE	NET	-	117	48 25.32	125 28 59	133			-	GC		BONGO 130
		1750	BO				48 25.32	125 28.50		130					
		1752	EN				48 25 31	125 28.48							

Cast Type:

BOT = Bottle cast, no CTD
CTD = CTD without Rosette
ROS = Rosette plus CTD
SET = Fish Set

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

Bottle Firing Method:

US = Up / Stop
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
DE = Deployment Time
MR = Messenger Release Time
RE = Recover Mooring Time

Transmissometer & Fluorometer are to be cleaned before each cast

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DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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