

DAILY SCIENCE LOG BOOK

MISSION
NUMBER

2015-46

DATE:

From: July 22 to: Aug 5, 2015

VESSEL:

J.P. Tully

PROJECT(S):

WC-DC; moorings

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

WaterProperties.ca

Captain: Kent Reid First Officer: _____
Second Officer: _____ Third Officer: _____
Fishing Master: _____

Mission Participants / Agencies: IOS, DIO, NRC

Scientific Personnel:

Name	Chief Scientist:	Watch	Cabin	Name	Watch	Cabin
<u>Di Wan</u>	<u>Sophia Johansson/David Spear</u>			<u>BIO</u>		
<u>Cindy Wright</u>				<u>Gregory O'Learylin</u>		
<u>Lucius Bertels</u>				<u>Peter Thamer</u>		
<u>Ron Lindsay</u>				<u>Susan Colbary</u>		
<u>Roger Lavigne</u>				<u>Natalie Fatin</u>		
<u>Scott Rose</u>				<u>Jennifer Mason</u>		
<u>Augh Macken</u>						

Second leg of Mission:

Name	Chief Scientist:	Watch	Cabin	Name	Watch	Cabin

Data logging computer:

#2 then the 'Tally CTD' laptop

Data acquisition program: Seasave
CTD deck unit make: SBE model: 11+ serial number: 508

Primary CTD

Make: SBE model: 9+ serial number: 506

Primary temperature serial number: 2023

Primary conductivity serial number: 1763

Secondary temperature serial number: 5013

Secondary conductivity serial number: 3394

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

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

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

PAR sensor: Biopharical Model: QSP200L45 s/n: 4565

Other sensors: Attimeter s/n: 62354 P, S or NO pump? P, S or NO pump?

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

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

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

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

PAR sensor: _____ Model: _____ s/n: _____

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

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

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

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

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

Rosette Setup:

Number of bottles: 24
Manufacturer: GO
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: _____ 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: Seasave Version: 7.21g S/N 3363
Sampling interval (seconds): 30
Fluorometer sensor serial number: W535-953P

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 data sent to G. Gatten was good in the files themselves

CTD pressure reading on deck (db), before cast: ✓ after cast: ✓
Pumps working? Yes ☒ (0011) No ☐ (0010) logged while on deck.

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>July</u>				Year <u>2015</u>			Ship <u>Tully</u>		Cruise ID <u>2015-46</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									
22	SI01	0522	BE	ROS	US	1	48° 39.62	123° 30.19	175						✓	Doc k pressure 0,80d	
		0528	BO					39.61	30.19		170						all bottles fired for
		0535	EN					39.60	30.20								testing purposes
22	S06N	1523	BE	ROS	US	2	49° 49.63	124° 52.11	333		1-24	24	ZR		✓		
		1531	BO					49.63	52.11								
		1551	EN					49.62	52.12								
	S06N2	1617	BE	MOR		3										Mooring Recovery	
	DSI-A	1920	BE	MOR		4										Mooring Recovery	
	DSI-B	2154	EN	MOR		5	50° 3.640	124° 52.000	455							Mooring Deployment	
	HCII-A	0050	BE	MOR		6										Mooring Recovery	
	HCII-B	0142	EN	MOR		7	50° 12.195	125° 08.149	132							Mooring Deployment	
24	DWI	0505	BE	KDS		8	52° 48.21	129° 53.35	222						✓		
		0510	BO					48.19	53.31		217						
		0514	EN					48.20	53.33								
24	HEC-1	0550	BE	LIST		9	52° 49.70	129° 50.65									
		0557	EN					49.71	50.65								

Cast Type:

BOT = Bottle cast, no CTD
 CTD = CTD without Rosette
 ROS = Rosette plus CTD
 USW = Sea Water Loop
 MOR = Mooring
 NET = Plankton Net Haul
 DRE = 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

Produced by the Water Properties Group, IOS

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SO4N2-C Mooring Recover, July 22, 2015

This page is for any notes or observations

0908 PDT Send 16B4 370 367 366 364 364

Move off w/ cable

0916 435 436 436

0917 Send 16B4 + 1655 436 436 positive response

0918 On Surface

0945 On Deck - depart for

DS1-A Mooring Recover, July 22, 2015

1213 On Station Send 1800 683 686 689

- wait for recreational traffic

1218 - 760 761

1220 - Send 1800 + 1855 766 767

- On Surface

1245 - On Deck

Sponge Bobber #223 deployment 1245

DAILY SCIENCE LOG

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DAILY SCIENCE LOG				Ocean Sciences Division, Institute of Oceanography					Ship		Cruise ID					
Month <u>July</u>				Year <u>2015</u>			Ship <u>Tully</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								
24	HEC1	0600	BE	ROS	US	10	52° 49.70	129° 50.65	139		25-40	16	SR	✓	Split into two files →	
		0604	BO				49.69	50.64								
		0621	EN				49.68	50.65								
24	HEC 1	0728	BE	NET	-	11	52° 49.719	129° 50.704	137				H.M.		BONGO	
		0732	BO				49.704	50.661		127						
		0736	EN				49.700	50.644								
24	HEC 1	1210	BE	ROS	US	12	52° 49.55	129° 50.85	146		41-65		SR	✓	#65 is a bucket	
		1215	BO				49.57	50.80		141						
		1226	EN				49.65	50.92								
24	HEC1	1235	BE	APCTD	-	13	52 49.723	129 51.248					CW		Surface cast.	
		1237	EN				49 721	50 221								
24	HEC1	1400		MOR		14										
24	PCI	1811	BE	CTD		15	53° 15.674	129° 42.589	181				DS	✓	0.8m offset on de. 1	
		1816	BO							175					9 mab	
		1819	EN				15.698	129° 42.526								
Transmissometer & Fluorometer are to be cleaned before each cast																

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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:

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BO = Bottom Time of Cast
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HC11-A Mooring Recovery July 22, 2015

1744 PRT - On Station Send 180C
- relocate for release

175 178 182 184

1748

304 312 316

1750 - Send 180C + 1855

342 346

- positive response

- On surface

CTD Notes: Cast 10 was split into two files because the water sampler was set to 6 bottles, so another cast needed to be started to get the other 10 bottles. SR.

HEC1-B - Mooring Recovery

July 24, 2015

0606 - On station Send 1A26

866 871 874 877 - Further than expected - ship has old position will relocate to proper location

0619 - 289 292 293 304

- move again

0626 - 664 672

0627 - no response - move closer

- 674 673 666

0638 - Send 1A2B + 1A55

500 499

- positive response

- on surface

0658 - On deck

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Month <u>July</u>			Year <u>2015</u>			Ship <u>J.P. Tully</u>			Cruise ID <u>2015-16</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							
24	PCI-A	1918	BE	MOR		16	53°15.765	129°42.608							
24	OCI	2110	BE	CTD/ROS		17	53°11.974	129°30.752	269	265			SS	✓	
		2115	BO				53°11.982	129°30.715							
		2120	EN				53°11.981	129°30.710							
24	OCI-A			MOR		18									
24	ES1	2308	BE	CTD/ROS		19	53°5.416'N	129°33.664	176	174			SS	✓	white caps - surface bubbly
		2312	BO				53°5.408'N	129°33.722							
		2316	EN				53°5.410	129°33.664							
25	CS89	0150	BE	CTD/ROS		20	52°53.887	129°32.662	318				SS/SR	✓	
		0158	BO				53.889	32.75		313					
		0203	EN												
25	CS84	0243	BE	ROS		21	52°54.04	129°24.01	255		66-76	11	SR	✓	
		0250	BO				54.02	24.00		251					
		0309	EN				54.01	23.97							

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 DRF = Drifter

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

Time Code:
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PCI-A Mooring Recovery July 24, 2015

This page is for any notes or observations

1218 POT - on station - Send 1A2B 212 213 213 - move off for release
1228 - 391 392
1229 - Send 1A2B + 1A55 397 - 400
1230 - On surface

OCl-A M - Mooring Recovery July 24, 2015

1430 - on station - Send 1A2D - no response
-- check position - Sophie lets out more cable for transducer
1434 - 319 321 324 - move off for release
1440 - 368 365 364
- send 1A2D + 1A55 364 364 - positive response - on surface
1509 - On deck

ESI-A - Mooring Recovery July 24, 2015

1626 - On station Send 1A2C 215 218 223 227 -
- relocate for release
1630 - Send 1A2C + 1A55 339 343 - on surface

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Month <u>July</u>				Year <u>2015</u>			Ship <u>J.P. Tully</u>			Cruise ID <u>2015-46</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							
25	CAM2	0355	BE	CTD	NET	22	52°54.7	129°15.	241				SR	✓	
		0400	BO				54.97	15.66		238					
		0405	EN				54.97	15.75							
25	SC74	0449	BE	ROS	US	23	53°0.66	129°15.83	375		77-89	13	SR	✓	
		0456	BO				0.62	15.84		371					
		0512	EN				0.64	15.20							
25	SC74	0448	BE	Bucket		24	53°00.66	129°15.83	375	SURF			11.1		
25	SC61		BE		NET	23					90-				
			BO												
			EN												
25	SC61	0706	BE	LIZZY	NET	25	53°11.96	129°25.03	506	50			CASAT		
25	SC61	0721	BE	ROS	US	26	53°11.96	129°25.06	508		90-113	24	SR	✓	
		0733	BO				11.95	25.02							
		0757	EN				11.94	24.99							
25	SC61	0857	BE	ROS	US	27	53°11.86	129°25.20	508		114-121	8	SR	✓	Sample #122 is a bucket.
		0909	BO				11.90	25.24							
		0920					11.90	25.28							
25	SC61	0930		CTD/Bucket		28	53°11.86	129°25.16	502						

Transmissometer & Fluorometer are to be cleaned before each cast

Cast Type:

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 DRF = Drifter

Bottle Firing Method:

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

Time Code:

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 DE = Deployment Time
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Notes:

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Month <u>July</u>				Year <u>2015</u>			Ship <u>JP Tully</u>				Cruise ID <u>2015-46</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							
25	SC61	0938	BE	NET		29	53° 11.861	129° 25.145	506				AM		
		0946	BO				11.879	25.078							
		0952	EN				11.897	25.019							
25	SC58	1106	BE	CTD	/	30	53° 16.48	129° 25.67	531				GR	✓	
		1116	BO				16.52	25.67		526					
		1126	EN				16.59	25.77							
25	SC61	1337	BE	GRAB		31	53° 12.09	129° 25.06	502		Samples →	REO / NRC			SMYTH MAC
25	DOUGLAS	1534	BE	GRAB		32	53° 22.092	129° 11.811	449						
						32/			465						
25	DOUGLAS	1603	BE	ROS		33	53° 22.192	129° 11.756	447	460	130-136	15			
		1611	BO				53° 22.174	129° 11.695							
		1630	EN				53° 22.208	129° 11.596							
25	DOUGLAS	1713	BE	ROS		34	53° 22.117	129° 11.716	465	460	137-145	9			particle cast
		1722	BO				53° 22.136	129° 11.710							145 = surface
		1731	EN				53° 22.108	129° 11.681							bucket
25	KOKI		BO	GRAB		35	53° 29.227	129° 12.649	371						-not quite the mooring site

Cast Type:

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

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Bottle Firing Method:

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Notes:

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Transmissometer & Fluorometer are to be cleaned before each cast

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Month <u>July</u>			Year <u>2015</u>			Ship <u>J.P. Tully</u>			Cruise ID <u>2015-46</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							
25	KSK1a	2000	BE	CTD		36	53°28.927	129°12.922	375	373	—	—	ST	✓	To calibrate moored instruments
		2010	BO				53°28.952	129°12.886							Through pine needles
		2017	EN				53°28.992	129°12.842							
25	KSK1			MOR		37					Mooring recovery				
25	DOUG26	2355	BO	GRAB		38	53°40.386	129°07.252	393	393					Ax failure
26	DOUG35	0315	BE	ROS		39	53°32.26	129°12.28	330		—	—	SR	✓	
		0321	BO				32.24	12.29		325					
		0327	EN				32.25	12.28							
26	DOUG26	0435	BE	LISST		40	53°40.36	129°7.212							
	"	0445	BE	"		41	53°40.381	129°7.212							
	"	0450	BE	"		42	53°40.364	129°7.212							
26	DOUG26	0504	BE	ROS		43	53°40.364	129°7.209	398		146-159	14	SR	✓	
		0515	BO				40.351	7.206							
		0537	EN				40.343	7.213							

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KSR1-B Mooring Recovery July 25

1332 - On station - send 163F 394, 394, 394
- relocate for release

1341 - 507 509 510

1343 - Send 163F + 1655

517, 517 - positive response, on surface

1414 - On deck

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Month <u>July</u>				Year <u>2015</u>			Ship <u>J.P. Taylor</u>		Cruise ID <u>2015-46</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							
26	Doug 32	0700	BE	ROS	✓	44	53° 35.491	129° 12.832	252				SR	✓	
		0705	BO				35.456	12.908		2467					
		0710	EN				35.426	12.905							
26	Doug 35	0839	BE			45	53° 32.270	129° 12.326	225				SR	✓	
		0847	BO				32.264	12.367		321					
		0853	EN				32.280	12.406							
26	Doug 26	10:19	BE	310/105 Particulate		166	53° 40.362	129° 07.298	393		160-167		OW	✓	
		10:26	BO				53° 40.313	129° 07.322		288					
		10:35	EN				53° 40.297	129° 07.324							
26	Doug 26	10:20		Bucket		47	53° 40.318	129° 07.314			168				
26	Doug 26	10:20		SET 25		48	53° 40.314	129° 07.314					SR	✓	
26	Doug 29	1106	BE	ROS		49	53° 38.243	129° 11.244	388						
		1115	BO				38.290	11.276		384					
		1121	EN				38.326	11.297							
26	Doug 31	1139	BE	ROS	US	50	53° 36.700	129° 12.653	311		169-179		SR	✓	
		1147	BO				36.696	12.704							
		1201	EN				36.667	12.754							
	Doug 31	1139	BE	Bucket		51	53° 36.70	129° 12.653	311	SURF			RM		BUCKET

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Month				Year			Ship				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							
26	KSK1	1325	BE	ROS	US	52	53° 28.831	129° 12.388	370		180-192	13	SR	✓	
		1334	BO				28.798	12.403		366					
		1352	EN				28.752	12.509							
26	KSK1	1336	BE	Bucket		53	53° 28.768	129° 12.451	370	Surf			LM		
26	KSK1	1330	BE	CTD		54	53° 28.768	129° 12.451	370	Surf			HM	✓	AP
26	KSK1	1452	BE	ROS		55	53° 28.841	129° 12.407	370		193-213	21	8J		213 = bucket
		1500	BO				53° 28.822	129° 12.467		367					
		1511	EN				53° 28.870	129° 12.514							
26	KSK1	1553		MOR		56	53° 28.824	129° 12.528	373		Mooring KSK1-C Deployment.				
26	Doug 26	1753	BO	Grab		57			396		Sediment Grab.				
26	FOCI	1925		MOR		58					Mooring Recovery FOCI-B				
26	FOCI	20:46	BO	Grab		59	53° 44.087	129° 01.088	367		Small Grab for B.I.O.				
26	FOCI-B	1922		MOR		60	53° 44.138	129° 01.797	367		Mooring Recovery				
	~FOCI	2120		Drifters	X5	61	53° 44.04	129° 0.852	—	Surf	5X/minute apart yellow 286-290				
26	DOUG 16	21:55	BO	GRAB		62	53° 46.630	128° 51.760	368	380					
26	DOUG 11	22:55	BO	GRAB		63	53° 49.763	128° 49.335	327	374					
26	Doug 4	2359	BO	GRAB		64	53° 55.594	128° 42.267	218	220					

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Bottle Firing Method:

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Notes:

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F001-B Mooring recovery July 26, 2015

1215 - On station send 1A24 392 391 390
- relocate for release

1221 - 448 450 453

1222 - 1A24 + 1A55 - 456 456 - positive response, on surface

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Month				Year			Ship				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							
27	DOUG 4	0112	BE	ROS		65	53° 55.613	128° 42.286	221	218	214-222	8	SS	✓	Bio + partial 222 - bucket
		0119	BO				53° 55.621	128° 42.284							
			EN				53° 55.632	128° 42.283							
27	Doug 4	0209	BE	NET		66	53° 55.609	128° 42.279	371	250	7500-21200-67				
		0214	BO				53° 55.572	128° 42.356		250	—	—	H.M.		Bottom
		0219	EN				53° 55.601	128° 42.355							
		0226	BE	NET		67	53° 55.609	128° 42.293	221				D.W.		Bottom
		0234	BO				53° 55.621	128° 42.263		210	—				Event 66 hit
		0239	EN				53° 55.639	128° 42.246							the bottom. D<250
27	DOUG 4	0300	BE	ROS	US	68	53° 55.709	128° 42.142	218		223-242		SR	✓	
		0304	BO				55.712	42.184		213					
		0320	EN				55.768	42.176							
27	DOUG 4	0342	BE	Bucket		69	53° 55.750	128° 42.050	217				AK	✓	
			BO	CTD		70									
27	DOUG 4	0428	EN	LISST		71	53° 52.223	128° 46.071	302	50					
27	DOUG 4	0438	BE	LISST		72	53° 52.105	128° 46.145	304				D.W.		
		0446	BO				53° 52.122	128° 46.145		50					
		0438	EN				52° 52.158	128° 46.131							

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Month <u>July</u>				Year <u>2015</u>			Ship <u>J.P. Tully</u>				Cruise ID <u>2015-46</u>				Page <u>10</u> of <u> </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								
27	Doug11	0513	BE	ROS	us	73	53° 49.806	128° 49.400	318		243-255	13	SR	✓	bottle #4 was missed	
		0520	BO				49.800	49.430		314					So I went back for	
		0543	EN				49.808	49.442							it from 75 m	
27	Doug11	0618	BE			74	53° 49.819	128° 49.258	327		256-263	8	SR	✓		
		0626	BO				49.822	49.270								
			EN				49.828	49.295								
27	Doug11	0633	BE	CTD		75	53° 49.822	128° 49.295	327	surf			SR	✓		
27		0633	BE	Bucket		76	53° 49.822	128° 49.295	327	surf	264		SR			
27	Doug11	0653	BE	LISST		77	53° 49.828	128° 49.295	327							
27	Doug16	0823	BE	ROS	us	78	53° 46.714	128° 54.568	376		265-278		SR	✓		
		0831	BO				46.714	54.577								
		0850	EN				46.754	54.575								
27	Doug16	0910	BE	LISST		79	46.754	54.575	380							
27	Doug16	0941	BE		us	80	53° 46.823	128° 54.510	383		279-286	8	SR	✓		
		0949	BO				53° 46.855	128° 54.557								
		0957	EN				53° 46.920	128° 54.598								
27	Doug16	0957	BE	CTD		81	53° 46.920	128° 54.598	383	surf			SR	✓		
27	Doug16	0957	BE	Bucket		82	53° 46.920	128° 54.598	383	surf	287		SR			

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Month <u>July</u>				Year <u>2015</u>			Ship <u>J.P. Tully</u>				Cruise ID <u>2015-46</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							
27	DEV24	1054	BE	CTD	✓	83	53° 42.730	128° 48.750	315				SR	✓	
		1101	BO				42.739	48.761		311					
		1107	EN				42.725	48.712							
27	DEV32	1145	BE	CTD	✓	84	53° 39.331	128° 52.346	264				SR	✓	
		1151	BO				39.320	52.361							
		1157	EN				39.314	52.376							
27	BC112	1256	BE	CTD	✓	85	53° 32.314	128° 46.228	194				SR	✓	
		1301	BO				32.317	46.230		189					
		1304	EN				32.321	46.222							
27	VP46	1351	BE	CTD	✓	86	53° 32.780	128° 53.266	210				SR	✓	
		1356	BO				32.788	53.291		205					
		1400	EN				32.779	53.292							
27	UC31	1520	BE	CTD		87	53° 32.177	128° 39.886	37	20			SP	✓	stopped at 14m - alt. in manual
27	UC31b	1535	BE	CTD		87b	53° 32.140	128° 39.707	37				SP		2nd try. Didn't overwrite 1st because
		1537	BO				53° 32.141	128° 39.717		35.5					Surface profile from clear. Page 11 of 12
		1538	EN				53° 32.146	128° 39.722							
27	VP39	1610	BE	CTD		88	53° 30.450	129° 3.810	136				SP	✓	kept logging
		1614	BO				53° 30.468	129° 3.838							in 10m station
		1617	EN				53° 30.475	129° 3.848							only 5m

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Month <u>July</u>				Year <u>2015</u>			Ship <u>CCGC J. P. Taylor</u>				Cruise ID <u>2015-46</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							
27	VP43	1107	BE	CTD		89	53°24.844	129°01.858	333				EP	✓	
		1715	BO				53°24.833	129°01.919		322.5					
		1721	EN				53°24.838	129°01.926							
27	DEV1	1940	BO	MOR		90	53°34.634	128°51.246	163		Mooring deployment				DEV1-A
27	DEV1	1950	BE	CTD		91	53°34.784	128°51.314	163		CTD for mooring calibration				
		1954	BO				53°34.756	128°51.355		160			EP	✓	
		1957	EN				53°34.738	128°51.394							Left logging after cast
	CG38	2204	BE	CTD		92	53°27.032	128°35.848	230						
		2214	BO				53°27.030	128°35.957		230					7 mab
28	FOC1	0222	BE	ROS	US	93	53°44.195	129°01.812	369		288-311		SR	✓	SUPERSONIC
		0230	BO				44.197	129°01.811		365					
		0252	EN				44.184	129°01.798							
28	FOC1	0303	BE	LISST		94	53°44.184	129°01.798		50m					
28	FOC1	0343	BE	NET		95	53°44.128	129°01.739	388						Bottle 9 might have double Vial
		0354	BO				53°44.132	129°01.7162		250m					
		0400	EN				53°44.134	129°01.7133							
28	FOC1	0405	BE	CTD		96	53°44.142	129°01.726	368	surf			SR	✓	
28	FOC1	0405	BE	Bucket		97	53°44.142	129°01.726	368	surf					

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Month				Year			Ship					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										
28	FOC1	4:13	BE	LISST		98	53°44.2047	129°01.5008		50m								
28	Doug14	5:13	BE	LISST		99	53°48.0164	128°52.0563		50m								
28	Doug4	6:43	BE	LISST		100	53°55.6724	128°42.1830		50m								
28	Doug6	7:15	BE	LISST		101	53°54.0981	128°44.0925		50m								
28	Doug6	7:22	BE	LISST		102	53°54.0981	128°44.0925		50m								
28	Doug18	8:51	BE	LISST		103	53°45.0250	128°57.7950		50m								
28	Doug18	8:57	BE	LISST		104	53°45.0250	128°57.7950		50m								
28	Doug21	9:27	BE	LISST		105	53°43.9700	129°01.9305		50m								
28	Doug21	9:33	BE	LISST		106	53°43.9700	129°01.9305		50m								
28	FOC1P	1311	BE	ROS		107	53°44.042	129°2.239	359									
		1319	BO				53°44.028	129°2.242		358					Altimeter cut out ~10m above bottom			
		1328	EN				53°44.024	129°2.225										
28	FOC1	1737	BO	MOR		108	53°44.136	129°01.809	367		Deployment & mooring FOC1-C.							
		2146		DRF		109	~53°21.3' N	129°11.7' W		SRF	Drifter deployment #261-265 Green							
29		0133		DRF		110	53°55' N	129°20.75		SRF	Drifter #266-270							
29	CMPI-A	0229		MOR		111	53°0.492	129°15.502	365		Mooring deployment							
29	CAH2-A	1630		MOR		112	52°54.991	129°15.508	237		Mooring deployment							

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Month <u>July</u>				Year <u>2015</u>			Ship <u>Tully</u>			Cruise ID <u>2015-46</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							
29	CAM2	1552	BE	CTD		113	52°54.880	129°15.207	248				SJ+LP	✓	cast for mooring calibration
		1559	BO				52°54.932	129°15.646		245					
		1604	EN				52°54.976	129°15.665							
29	CAM2 - CAM1	1648		DRIFT		114	~52°53.406	129°26.074			Drifter deployment			281-285	
29	CAM1			MOR		115	52°46.847	129°30.02	427		Mooring deployment			CAM1-A	
29	CAM1	1941	BE	CTD		116	52°46.776	129°30.314	430				SJ+RL	✓	cast for mooring calibration
			BO				52°46.826	129°30.284		427					Extreme spikes in O ₂ + S at bottom
		2001	EN				52°46.793	129°30.314							in 90 Tr on the way up. Hit bottom? →
29	HEC1	2337		MOR		117	52°49.256	129°50.738	132						
29	HEC1	2347	BE	ROS		118	52°49.408	129°50.642	129		312-320	9	SJ+CW	✓	Bottles only at 40m (ic/Alb) and surface
		2354	BO				52°49.418	129°50.591		126					(B30). Long beginning of course
		2358	EN				52°49.423	129°50.546							of stack in line. Corrected + continued
30	mHEC1	0016		MOR		119	52°49.437	129°50.550	128						
30	HEC1 (ish)	0110	PO	SKAB		120	52°49.417	129°50.901	150	150					
30	HEC1	0130		DRF		121	52°49.408	129°50.941			surf drifter deployment			271-275 (blks)	
											deployed as				
											streaming away				
30	RA1	1328	EN	MOR		122	51°40.27	130°16.993	250		Mooring Recovery			RA1-B	
30	RA1	1342	BO	MOR		123	51°40.259	130°17.079	250		Mooring Deployment			RA1-C	

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Notes:

CAM 1 CTD cont. Altimeter still read 2.7m at bottom, so didn't seem to have hit the sand yet. did stir up some sediment, so it is possible. Rosette returned with a large (~40-50cm diam) pinky-red decomposing jellyfish.

R Al Mooring Recovery - July 30, 2015

0605 on Station Send 6981 1927 Random ranges all over the map

0614 1162 266 271 273 275

- move for release

0618 -343 340 345

0619 - Send 6982 - 360 - positive response

0620 - On Surface

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Month <i>July</i>				Year <i>2015</i>			Ship <i>J.P. Tully</i>			Cruise ID <i>2015-46</i>					
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							
30	DK1	1950	EN	MOR		124	50°44.916	130°53.678	540		Mooring recovery				DK1 (Dellwood AMOR)
31	BPI-54	1300	EN	MOR		125	50°03.541	127°53.448	112		Mooring recovery				BPI-55
31	BPI-55	1523	BE	MOR		126	50°3.559	127°53.487	107		Mooring deployment				
31	ZUCI-A	2225		MOR		127	49°38.007	126°29.901	194		Mooring deployment				
31	ZUCI	2240	BE	CTD		128	49°37.885	126°29.947	191				ST ⁺ RL	✓	O ₂ min ~ 1m L/L at 70m
		2244	BO				49°37.859	126°29.938		188					
		2248	EN				49°37.844	126°29.953							
Aug 01	E01	0135		MOR		129	49°17.304	126°36.283	102		Mooring recovery				E01-54
01	E01			MOR		130			100		Mooring deployment				E01-55
01	E01	1548	BE	CTD		131	49°17.420	126°36.254	98				ST	✓	For mooring calibration
		1552	BO				49°17.416	126°36.245		93					1-2m heave
		1554	EN				49°17.416	126°36.263							
01	TOFI	1910	EN	MOR		132	49°11.044	125°55.687	37		Mooring deployment				TOFI-A
01	A1	2310	EN	MOR		133	48°31.668	126°12.244	514		Mooring recovery				A1-54
02	EFO4	1600		MOR		134	49°03.625	125°08.965	62		Mooring recovery				EFO4-K
02	EFO1	1703	BE	ROS		135	49°5.504	125°11.680	35		321-324	4			
		1707	BO				49°5.506	125°11.664		32					
		1709	EN				49°5.502	125°11.651							

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Notes:

Dellwood Knolls Mooring Recovery July 30, 2015

This page is for any notes or observations

^{PDT}
1233 On station B533 281 285 284

1239 Send B534 - No response transducer leading well off
-reorient the ship

B533 296 297

1243 - Send B534 - 301

1246 - On surface Depart

Acoustic Release Test AR861 1998
1430 = OB15 93, 110, 124, 131, 158

50° 28.55 131 2.28 2400m depth Arm OB15
Rel OB55

205
254
287
352
402
477
523

Sent OB15 + OB55 523, 523 Positive Response
- Hook Open on recovery

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Month August				Year 2015			Ship Tully				Cruise ID 2015-46				
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							
02	EFO2	1728	BE	ROS		136	49°4.993	125°10.302	68		325-330	6	ST+CW	✓	O ₂ < 1.5 mL below 40m
		1731	BO				49°4.994	125°10.295		66					
		1737	EN				49°4.992	125°10.291							
02	EFO3	1759	BE	ROS		137	49°4.227	125°9.412	118		331-338	8	ST+CW	✓	O ₂ < 1.5 mL below 40m
		1804	BO				49°4.229	125°9.412		115					
		1813	EN				49°4.226	125°9.412							
02	EFO4-L	1830		MOR		138	49°3.876	125°9.105	105		Mooring deployment EFO4-L				
02	EFO4	1907	BE	ROS		139	49°3.148	125°8.581	63		339-343	5	ST+CW	✓	H ₂ S smell in bottom 2 bottles (>50m)
		1911	BO				49°3.136	125°8.590		60					
			EN				49°3.132	125°8.596							
02	EFO5	1939	BE	ROS		140	49°2.569	125°9.160	203		344-354	11	ST+CW	✓	O ₂ < 1.5 mL/L below 60m
		1945	BO				49°2.567	125°9.167		199					Jellyfish, tentacles
		1958	EN				49°2.566	125°9.186							
02	EFO6	2026	BE	ROS		141	49°1.774	125°9.161	152		356-364	9	ST+CW	✓	O ₂ < 1.5 mL/L below ~50m
		2032	BO				49°1.774	125°9.160		149					
		2042	EN				49°1.786	125°9.187							
02	EFO7	2100	BE	ROS		142	49°1.254	125°9.372	120		365-372	8	ST+CW	✓	O ₂ < 1.5 mL/L below 83m
		2105	BO				49°1.247	125°9.374		117					
		2113	EN				49°1.242	125°9.371							

Cast Type:

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 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:

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Produced by the Water Properties Group, IOS

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BPI-54 Mooring Recovery July 31, 2015

Wind 23 knots - blue moon *This page is for any notes or observations*

0608 - On Station ^{PDT} Send 16B6 157, 157, 156 157 158 159 160 161
- move off to release

0618 - 214 217 219

0619 - Send 16B6 + 1655 - 226 228 - positive response

0620 - On surface

E01-54 Mooring Recovery July 31, 2015

1822 ^{PDT} - On Station ^{Send 169D} 143 140 138
- relocate for release

1830 207 203 204 204

1831 Send 1690 + 1655 206 207 - No positive response
- on surface

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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Month August				Year 2015			Ship Talys				Cruise ID 2015-46				
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							
02	EF08	2135	BE	ROS		143	49°0.680	125°10.199	89		373-379	7	SJ+CW	✓	T, O ₂ + % Tr
		2139	BO				49°0.672	125°10.201		86					Spiking during
		2146	EN				49°0.66	125°10.213							upcast when stopped.
02	EF09	2208	BE	ROS		144	49°0.077	125°10.870	65		381-385	5	SJ+CW	✓	There is no
		2213	BO				49°0.072	125°10.876							Sample #380.
		2217	EN				49°0.073	125°10.891							Jellyfish tentacles.
02	EF10	2229	BE	ROS		145	48°59.857	125°11.210	101		386-392	7	SJ+CW		P on deck 0.115 d/s
		2232	BO				48°59.851	125°11.210		98					
		2241	EN				48°59.853	125°11.198							
02	EF11	2258	BE	ROS		146	48°59.141	125°11.052	90		393-398	6	SJ+CW	✓	oil + rust coming off wire
		2301	BO				48°59.140	125°11.038		87					
		2308	EN				48°59.156	125°11.008							
02	EF12	2335	BE	ROS		147	48°58.019	125°10.478	94		399-405	7	SJ+CW	✓	
		2339	BO				48°58.016	125°10.477							
		2346	EN				48°58.012	125°10.498							
03	EF13	0006	BE	ROS		148	48°56.483	125°10.559	104		406-412	7	SJ+CW	✓	
		0011	BO				48°56.500	125°10.609		101					
		0017	EN				48°56.490	125°10.630							

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A1-54 Mooring Recovery Aug 1, 2015

This page is for any notes or observations

1557 - On Station Send 16B3 537 537 536

- relocate Send 16B3 600 604 605 611

1608 - send 16B3+1655 - 613 614 - on surface almost immediately

EF04-K Mooring Recovery Aug 2, 2015

0858 - On station Send 16B2 - 605 585 585

0901 - 16B2+1655 580 578 - positive response
- on surface near prawn gear

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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