

DAILY SCIENCE LOG BOOK

CRUISE
NUMBER

2017-23

DATE:

From: July 4 - 17, To 2017

VESSEL:

J P Tully

PROJECT(S):

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

WaterProperties.ca

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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Month <u>July</u>			Year <u>2017</u>			Vessel <u>Tully</u>			Cruise ID <u>2017-23</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
1	SE	05	18:13	BE	ROS		48°40.23	123°29.97	152		-	24	SR	☒ ☐	Bottle test only
			18:16	BO			°40.23	°29.96		147	-			☐ ☐	all bottles fired
			18:21	EN			°40.22	°29.95			-			☐ ☐	at 75 m
2	JS1	06	16:22	BE	ROS		50°33.06	126°45.98	461		1-13	13	SR	☒ ☐	PAR removed at
			16:30	BO			°33.04	°45.99	41	456	-			☐ ☐	Dave's request
			16:52	EN			°32.99	°45.97			-			☐ ☐	→
3	QCS1	06	17:55	BE	ROS		50°40.05	126°46.28	158		14-21	8	SR	☒ ☐	
			18:04	BO			°40.08	°46.30		153	-			☐ ☐	
			18:15	EN			°40.12	°46.33			-			☐ ☐	
4	QCS3	06	20:23	BE	ROS		50°43.73	127°15.03	214		-		SR	☒ ☐	
			20:28	BO			°43.73	°14.98		210	-			☐ ☐	
			20:31	EN			°43.74	°14.99			-			☐ ☐	
5	QCS4	06	21:25	BE	ROS	VS	50°46.590	127°24.300	406		22-34	13	SP	☒ ☐	
			21:33	BO			°46.580	°24.250		408	-			☐ ☐	
			21:54	EN			°46.700	°24.190			-			☐ ☐	
6	QCS4	06	22:23	BE	NET		50°46.697	127°24.363	396		-		R/CW	☐ ☐	
			22:34	BO			50°46.754	127°24.372		380	-			☐ ☐	
			22:44	EN			50°46.750	127°24.432			-			☐ ☐	
	SE		:				°	°			-			☐ ☐	

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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Bottle Firing Method:

US = Up / Stop (default)
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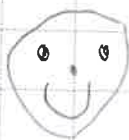
CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

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

Produced by the Water Properties Group, IOS

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Version: 6 December 2016

I moved the Transmissometer from channel 2 to 6 to see if the 9+ channel was the problem. SR
The 10 m dip was done on this cast, but the CS requested we skip it for all future cast. SR
Scott: Check see if I moved the Transmissometer to correct channel 6 July 6 7:00 PM



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7	CPE1	07	01:45	BE	NET	—	50° 59.9470	127° 50.0047	149		—	—	CW/SP	☐ ☐	
			01:50	BO			50° 59.9407	127° 49.9885		140	-			☐ ☐	
			01:52	EN			50° 59.9496	127° 49.9682			-			☐ ☐	
8	CPE1	07	02:14	BE	ROS	US	51° 0.000	127° 49.960	150		35-42	8	SP	☒ ☐	oxygen sampling cancelled
			02:17	BO			50° 59.980	127° 50.000		143	-			☐ ☐	
			02:31	EN			51° 0.000	127° 49.930			-			☐ ☐	
9	CPE1	07	02:40		DRF		51° 0.000	127° 49.930			-			☐ ☐	SCT 667-671 OSK 470 478 481
10	CS11	07	07:11	BE	ROS	US	51° 23.02	128° 12.17	148		43-54	12	SR	☒ ☐	482 491
			07:17	EW			° 23.02	° 12.13		144	-			☐ ☐	
			07:28	BO			° 23.03	° 12.15			-			☐ ☐	
11	CS10	07	08:18	BE	ROS		51° 16.49	128° 20.05	81		—	—	SR	☒ ☐	
			08:23	BO			° 16.50	° 20.06		77	-			☐ ☐	
			08:24	EN			° 16.50	° 20.06			-			☐ ☐	
12	CS09	07	09:07	BE	ROS	US	51° 12.54	128° 28.00	195		55-63		SR	☒ ☐	
			09:15	BO			° 12.56	° 27.94		191	-			☐ ☐	
			09:27	EN			° 12.52	° 27.95			-			☐ ☐	
13	CS08	07	10:09	BE	ROS	—	51° 8.56	128° 36.10	144		—	—	SR	☒ ☐	
			10:16	BO			° 8.56	° 36.10		140	-			☐ ☐	
			10:19	EN			° 8.56	° 36.10			-			☐ ☐	

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14	CS07	07	11:01	BE	ROS		51° 4.54	128° 44.17	64		-		SR	☒	
			11:03	BO			° 4.54	° 44.20		60	-			☐	
			11:05	EN			° 4.54	° 44.22			-			☐	
15	CS06	07	11:42	BE	ROS	US	51° 0.00	128° 50.17	65		64-73	10	SR	☒	
			11:46	BO			° 0.04	° 50.20		60	-			☐	
			11:53	EN			° 0.06	° 50.18			-			☐	
16	CS05	07	12:40	BE	ROS		50° 56.03	129° 0.20	63		-		SR	☒	
			12:47	BO			° 56.02	° 0.24		58	-			☐	
			12:48	EN			° 56.03	° 0.26			-			☐	
17	CS05	07	12:59	BE	DRF		50° 56.030	129° 00.341	63		-		SR/SP	☐	OSKER 431+411 SCT 682+683
			:				°	°			-			☐	
18	Scott 1	07	07:10		MOR		50° 47.650	° 48.122			-			☐	Recovery
19	Scott 1	07	15:34	BE	ROS		50° 47.63	128° 48.10	110		-		SR	☒	
			15:40	EN			° 47.63	° 48.11		106	-			☐	
			15:42	BO			° 47.64	° 48.10			-			☐	
20	Scott 1	07	17:		MOR		50° 47.497	128° 48.090	112		-			☐	Deploy
21	CS04	07	19:21	BE	ROS	VS	50° 49.180	129° 12.820	102		74-80	7	SP	☒	
			19:23	BO			° 49.180	° 12.850		98	-			☐	
			19:33	EN			° 49.180	° 12.910			-			☐	

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Scott I-A mooring recovery July 7, 2017

This page is for any notes or observations

0710 PDT - Approaching station

Send 1685 371 411

0716 - 245

0718 - 550 628

Continue setting up deck and organizing with newer crew members

0727 - 461 439

0733 - 413 374 238

-173 165

0740 - 192 198 216

0744 - Send 1685 218

1655 217

-executed on SwFes

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22	SCOTT2	7	:		MOR		°	°			-			☐	☐	Recovery
23	SCOTT2	7	22:42	BE	ROS	US	31° 7.580	129° 28.570	290		81-99	19	SP	☒	☐	
			22:47	BO			° 7.570	° 28.590		285	-			☐	☐	
			23:05	EN			° 7.560	° 28.580			-			☐	☐	
24	SCOTT2	8	01:01		MOR		51° 7.616	129° 28.485	288		-			☐	☐	deployment
25	CI08	8	07:00	BE	ROS	US	50° 53.31	129° 52.34	2100		100-121	22	SR	☒	☐	sample 104
			07:38	BO			° 53.33	° 52.38		2095	-			☐	☐	0.235 ml/L O ₂
			08:29	EN			° 53.43	° 52.53			-			☐	☐	
26	CI07	8	09:25	BE	ROS		50° 56.40	129° 48.53	1588		/	/	SR	☒	☐	
			09:52	BO			° 56.39	° 48.55		1584	-			☐	☐	
			10:18	EN			° 56.38	° 48.52			-			☐	☐	
27	CI07	8	10:34	BE	NET		50° 56.368	129° 48.450	1535		/	/	TF	☐	☐	The counter failed
			10:45	BO			° 56.350	° 48.437		250	-			☐	☐	the nets may have
			10:51	EN			° 56.356	° 48.418			-			☐	☐	gone deeper than
28	CI06	8	12:00	BE	ROS	US	51° 01.99	129° 37.99	835		122-141	20	SR	☒	☐	250 m
			12:17	BO			° 02.01	° 38.00		831	-			☐	☐	
			12:45	EN			° 02.05	° 37.97			-			☐	☐	
			:				°	°			-			☐	☐	
			:				°	°			-			☐	☐	

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Notes:

ScotH2-A Mooring Recovery July 7, 2017

This page is for any notes or observations

1453 PDT Send 16B4 475 322 321 314 322

1500 Back Away 334 342 360

Lost communication - switch to dunking

384 378

1507 Send 16B4 378

1655 378

-executed

-on surface

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July			2017			Tully			2017-23						
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29	CI05	7	14:45	BE	ROS		51°10.95	129°16.06	301				SR	☒	
			14:52	BO			°10.97	°16.04		296	-			☐	
			14:57	EN			°10.99	°16.07			-			☐	
30	CI04	7	16:22	BE	ROS	us	51°19.19	129°3.10	259		142-151		SR	☒	
			16:30	BO			°19.18	°3.04			-			☐	
			16:42	EN			°19.18	°3.07			-			☐	
31	CI03	7	18:13	BE	ROS		51°21.07	128°42.78	216				SR	☒	
			18:21	BO			°21.13	°42.79		213	-			☐	
			18:24	EN			°21.14	°42.79			-			☐	
32	CI02	8	19:44	BE	ROS		51°27.970	128°30.110	202				SP	☒	
			19:47	BO			°27.970	°30.010		196	-			☐	
			19:51	EN			°27.980	°29.960			-			☐	
33	CI02	8	20:04	BE	NET		51°28.025	128°29.798	200				CU/SP	☐	
			20:10	BO			°27.969	°29.768		190	-			☐	tear in net
			20:18	EN			°27.939	°29.731			-			☐	switched out
34	CI01	8	21:38	BE	ROS	VS	51°35.690	128°18.270	157		152-163	12	SP	☒	to spare
			21:41	BO			°35.690	°18.220		152	-			☐	after cast
			21:52	EN			°35.700	°18.230			-			☐	net
35	HAKI		:		MOR		°	°			-			☐	Recovery

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July 8, 2017 HAKI-A Mooring Recovery

1540 PDT - Send 09BF No Response

switch

1542 - 278 272

Back away?

266 274 277

Send 09BF 289

1548 0955 292

- no executed response but on the surface

1615 on deck

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Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information		Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
							Latitude	Longitude							
36	HAKE	8	23:32	BE	ROS	US	51° 42.650	128° 13.750	141		164-182	19	SP	☒	birdnest on winch
			23:36	BO			° 42.650	° 13.787		137	-			☐	launch delayed.
			23:47	EN			° 42.709	° 13.808			-			☐	
37	MS1	9	04:52	BE	ROS	US	52° 8.060	128° 50.150	214		183-195	13	SP	☒	
			05:00	BO			° 8.070	° 50.180		209	-			☐	
			05:13	EN			° 8.110	° 50.200			-			☐	
38	MT05	9	10:08	BE	ROS	/	52° 40.48	129° 59.19	267		-	/	SR	☒	
			10:15	BO			° 40.49	° 59.20		262	-			☐	
			10:20	EN			° 40.49	° 59.20			-			☐	
39	MT04	9	11:18	BE	ROS	/	52° 49.14	130° 1.40	263		-	/	SR	☒	
			11:26	BO			° 49.11	° 1.37		257	-			☐	
			11:30	EN			° 49.12	° 1.36			-			☐	
40	MT03	9	12:21	BE	ROS	/	52° 55.60	130° 7.81	245		-	/	SR	☒	
			12:29	BO			° 55.56	° 7.87		240	-			☐	
			12:33	EN			° 55.55	° 7.84			-			☐	
41	MT02	9	13:27	BE	ROS		53° 1.84	130° 14.72	217		-	/	SR	☒	Nuts from MS1
			13:33	BO			° 1.85	° 14.71		212	-			☐	Found on Deck
			13:37	EN			° 1.85	° 14.68			-			☐	@13:38
			:				° .	° .			-			☐	

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42	SRN	9	14:23	BE	ROS		53° 6.46	130° 23.05	202		-		SR	☒	
			14:32	BO			° 6.47	° 23.07		197	-			☐	
			14:37	EN			° 6.47	° 23.08			-			☐	
43	JPS7	10	07:22	BE	ROS	US	52° 34.04	131° 5.82	134		206-216	11	SR	☒	no phy to taken (214)
			07:25	BO			° 34.06	° 5.81		129	-			☐	
			07:38	EN			° 34.06	° 5.77	134		-			☐	
	event 44 JPS7	10	08:26	BE	NET	-	52° 33.95	131° 05.81		124	-		TF	☐	
44	JPS7		08:30	BO			52° 33.95	131° 05.83	134		-		KC/TF	☐	Tea spilled on
			08:32	EN			° 33.94	° 05.84		124	-			☐	log book, I
45	JPS6	10	09:00	BE	ROS		52° 32.17	131° 10.62	175		-		SR	☒	suspect Gremlins
			09:05	BO			° 32.17	° 10.60		170	-			☐	C1+C2 are not
			09:08	EN			° 32.16	° 10.56			-			☐	lining up nicely.
46	JPS5	10	09:47	BE	ROS		52° 31.38	131° 18.64	250		-		SR	☒	
			09:55	BO			° 31.39	° 18.63		245	-			☐	
			09:59	EN			° 31.41	° 18.59			-			☐	
47	JPS4	10	10:41	BE	NET		52° 30.887	131° 23.225	330		-		TF/KC	☐	
			10:48	BO			° 30.926	° 23.308		250	-			☐	
			10:52	EN			° 30.927	° 23.346			-			☐	
			:				° .	° .			-			☐	

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Event # 42.5

1738^{UTC} July 9, 2017

This page is for any notes or observations

SRN1-A Mooring deployment

200m depth

Field party sent to Bonilla Island (Stephen Page & Wade Bailey) to replace CODAR receive dome. Light keeper fell and broke her wrist as they were leaving and the Tully medic was dispatched and the patient was helicoptered to Prince Rupert. The three and a half hour delay meant that we could not deploy Juan1-A until the next morning. No CTDs until midnight

1530 July 10, 2017 - Otter Bay comes alongside for water & showers & cookies 45 minutes

JPS7 event

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48	JPS4	10	11:10	BE	ROS	us	52°30.97	131°23.26	336		207-232	16	SR	☒	Jelly fish flushed
			11:20	BO			°30.95	°23.21		331	-			☐	out of plumbing
			11:34	EN			°30.93	°23.08			-			☐	just before the
49	JB53	10	12:21	BE	ROS		52°33.15	131°29.91	321				SR	☒	cast. Conductivity
			12:30	BO			°33.13	°29.93		317	-			☐	numbers look better.
			12:36	EN			°33.13	°29.94			-			☐	
50	JPS1	10	13:51	BE	NET		52°36.255	131°40.167	140				TF/KC	☐	
			13:55	BO			°36.251	°40.155			-			☐	
			13:57	EN			°36.251	°40.152			-			☐	
51	JPS1	10	14:11	BE	ROS		52°36.28	131°40.12	139		231-242	12	SR	☒	
			14:16	BO			°36.27	°40.11		135	-			☐	
			14:26	EN			°36.26	°40.09			-			☐	
52	JPS2	10	14:51	BE	ROS		52°34.99	131°37.23	278				SR	☒	Computer time
			14:59	BO			°34.97	°37.17		274	-			☐	was adjusted
			15:03	EN			°34.96	°37.13			-			☐	to match NMEA
53	Juan/A	10	17:26	BE	MOR		52°31.068	131°23.766	363		Deployment			☐	
54	SRC1-A		:				°	°			Recover			☐	
55	A		:				°	°			-			☐	
			:				°	°			-			☐	

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Notes: _____

Produced by the Water Properties Group, IOS
 WaterProperties.ca
 Version: 6 December 2016

SRC1-A Mooring Recovery

This page is for any notes or observations

1608 - Approaching

Sand 1A2D

1447 1323 1145 872

1614 - 504 466 403 377 325 310 300

1620 - 271 265 256 251 246 242 237 235 236 240

Move off to release

1630 - Sand 1A2D 491

1A55 486

- exocuted

- on surface

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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Month <u>July</u>				Year <u>2017</u>		Vessel <u>Tully</u>				Cruise ID <u>2017-23</u>					
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
55	SRC1	10	23:58	BE	ROS	VS	52°15.120	129°40.650	212		243-243	1	SP	☒	
			00:03	BO			°15.110	°40.580		211	-			☐	
			00:08	EN			°15.090	°40.520			-			☐	
56	SRC1-B	11	01:33		MOR		52°14.997	129°41.026	213		DEPLOYMENT			☐	
57	SRC1	11	02:10		DRF		52°15.000	129°41.000			OSKERS 438, 441, 469, 474, 476			☐	SCT 671-676 DAVIS 606
58	MS2	11	04:04	BE	ROS		52°0.060	129°13.980	179		-	-	SP	☒	
			04:09	BO			52°0.080	129°13.900		175	-			☐	
			04:12	EN			52°0.070	129°13.850			-			☐	
59	MS3	11	07:13	BE	ROS	/	51°48.78	129°41.28	302		-	-	SR	☒	
			07:21	BO			°48.79	°41.25		297	-			☐	
			07:28	EN			°48.87	°41.40			-			☐	
60	MS04	11	08:51	BE	ROS		51°41.49	129°57.43			244-259	16	SR	☒	Winch issues
			09:02	BO			°41.47	°57.39			-			☐	@150m
			09:31	EN			°41.50	°57.41			-			☐	
61	MS05	11	10:40	BE	ROS		51°37.11	130°15.87	215		-	-	SR	☒	
			11:03	BO			°37.00	°15.95		710	-			☐	
			11:16	EN			°36.93	°15.93			-			☐	
			:				°	°			-			☐	
			:				°	°			-			☐	

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but of a delay ~ 80 m - wire leaning aft.

We went past the 75 m stop by accident, but went back to it to Fire bottle 9. SR

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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Month			Year			Vessel			Cruise ID						
July			2017			Tully			2017-23						
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62	MS06	11	12:24	BE	ROS	US	51°31.10	130°30.89	13		260 - 279	20	SR	☒ ☐	
			12:49	BO			°31.04	°30.86			-			☐ ☐	
			13:30	EN			°31.09	°30.92			-			☐ ☐	BT: 21 + 22 shaped - nothing taken
63	GOWGALA	11	19:47	DE	MOR		52°23.614	131°42.767	751		-		DS	☐ ☐	DEPLOYMENT
64	GOWGALA	11	19:55	BE	ROS	—	52°23.620	131°42.910	790		—	—	SP	☒ ☐	
			20:10	BO			°23.690	°42.980		820	-			☐ ☐	
			20:25	EN			°23.680	°42.950			-			☐ ☐	
65	SW Moresby	12	00:43		MOR		51°45.956	132°00.072	2417		-			☐ ☐	DEPLOYMENT
66	SW Moresby	12	00:51	BE	ROS		51°45.900	132°00.040	2417		—	3	SP	☒ ☐	bottles 1, 2, 3
			01:34	BO			°45.940	°00.140		2440	—			☐ ☐	tripped for Cindy to smell.
			02:17	EN			°45.940	°00.350			-			☐ ☐	1100m, 1000m, 900m
67	MS08	12	07:20	BE	ROS	US	51°23.89	130°55.02	2193		280-303	24	SR	☒ ☐	
			08:02	BO			°23.84	°54.98		2188	-			☐ ☐	
			08:57	EN			°23.75	°54.88			-			☐ ☐	
68	MS07	12	10:09	BE	ROS	—	51°27.67	130°40.07	1655		—	—	SR	☒ ☐	
			10:40	BO			°27.63	°40.01		1691	-			☐ ☐	
			11:06	EN			°27.61	°39.95			-			☐ ☐	
69	SCT1	12	17:49	DE	DRF		51°06.539	129°06.335	137		—	—	SP WB	☐ ☐	osker 451 SCT 666
70	SCT2	12	18:38	DE	DRF		51°00.00	129°02.62			-		DS	☐ ☐	osker 445, 447

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- Cast/eject #66 stopped on downcast at 380m for 1min to allow deck crew to add or the heave compensator due to the swell/sea state SE.
- Bottle #1 lost top valve during cast.

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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Month <u>July</u>				Year <u>2017</u>		Vessel <u>Tully</u>				Cruise ID <u>2017-23</u>					
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
71	SCT3	12	19:32	DE	DRF		50°53.4342	128°59.2280			—	—		☐ ☐	Oster 406+424
72	SCT4	12	20:21	DE	DRF		50°46.7217	128°55.5743			—	—		☐ ☐	Oster 436, 459 SCT590 DAU604
73	SCT5	12	21:05	DE	DRF		50°40.350	128°53.050			—	—		☐ ☐	Oster 454 SCT 685
74	BPI-56	13	14:10	RE	MOR		50° 3.546	127° 53.461			-			☐ ☐	RECOVERY
75	BPI	13	15:03	BE	ROS		50° 3.55	127° 53.55	114		-		SR	☒ ☐	
			15:09	BO			° 3.56	° 53.54		113	-			☐ ☐	
			15:11	EN			° 3.57	° 53.54			-			☐ ☐	
76	BPI-57	13	15:41	DE	MOR		50° 3.561	127° 53.477	106.5		-		DS	☐ ☐	DEPLOYMENT
77	ESP3-A	13	18:05	DE	MOR		49°47.414	127°27.629	81		-		DS	☐ ☐	Deployment
78	ESP3-A	13	18:11	BE	ROS		49°47.49	127°27.56	81		-		SR	☒ ☐	
			18:16	BO			°47.47	°27.58		78	-			☐ ☐	
			18:17	EN			°47.48	°27.59			-			☐ ☐	
79	ESP1-A	13	20:	RE	MOR		49°49.678	127°00.254	54		-			☐ ☐	RECOVERY
80	ESP1-A	13	20:41	BE	ROS		49°50.18	127°59.56	93		-		SR	☒ ☐	
			20:47	BO			°50.18	°59.57		90	-			☐ ☐	
			20:49	EN			°50.19	°59.57			-			☐ ☐	
81			:				°	°			-			☐ ☐	
			:				°	°			-			☐ ☐	
			:				°	°			-			☐ ☐	

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Produced by the Water Properties Group, IOS

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BPI-56 Mooring Recovery July 13, 2017

This page is for any notes or observations

POT

0655 Send 16BB 146 142 133 (132) 139

Move off for release

0705 232 280 320 306 292 278 283 267

0710 Send 16BB 266

1655 267

-executed

-On surfaces

Orcas Frolicking on location.

ESPI-A Mooring Recovery July 13, 2017

2002 UTC - On Station Send 16B1 574 637 660 689 762 603

2010 - 360 334 327 278 237

2015 - Send 16B1 261

1655 236

-executed

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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Month <u>July</u>			Year <u>2017</u>			Vessel <u>Tully</u>			Cruise ID <u>2017-23</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
82	ESP2-A	13	22:10	RE	ROS		49° 52.03	126° 50.83	237		-		SR	☒ ☐	
			22:17	BO			° 52.05	° 50.80		232	-			☐ ☐	
			22:21	EN			° 52.05	° 50.79			-			☐ ☐	
83	MUC1-A	14	15:41	RE	MOR		49° 38.64	126° 19.25	288		-			☐ ☐	
84	MUC1-A	14	15:41	RE	ROS		49° 38.64	126° 19.25	288		-		SR	☒ ☐	
			15:52	BO			° 38.65	° 19.33		285	-			☐ ☐	
			15:57	EN			° 38.65	° 19.37			-			☐ ☐	
85	COOK 1-A	14	17:55	RE	MOR		49° 37.84	126° 36.35	161		-			☐ ☐	
86	COOK 1-A	14	18:01	RE	ROS		49° 37.77	126° 36.40	161		-		SR	☒ ☐	
			18:06	BO			° 37.76	° 36.41		158	-			☐ ☐	
			18:10	EN			° 37.75	° 36.42			-			☐ ☐	
87	E01-	14	20:32	RE	MOR		49° 17.317	126° 36.212	101		-			☐ ☐	
88	E01	14	20:58	RE	ROS		49° 17.54	126° 36.41	101		-		SR	☒ ☐	
			21:03	BO			° 17.54	° 36.41		98	-			☐ ☐	
			21:05	EN			° 17.55	° 36.41			-			☐ ☐	
89	E01-S7	14	22:20	RE	MOR		49° 17.289	126° 36.216	102		-			☐ ☐	
90	HSC1-A	15	00:45	RE	MOR		49° 22.303	126° 14.771	53		-			☐ ☐	
			:				° .	° .			-			☐ ☐	
			:				° .	° .			-			☐ ☐	

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Produced by the Water Properties Group, IOS

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 Version: 6 December 2016

Notes:

Muc1-A Mooring Recovery July 14, 2017

This page is for any notes or observations

1456 UTC Send 0890 1066 1032 1014 -
1500 712 824? 512 508 495 479 lost contact
1508 - 410 396
1509 - Send 089D 389
0855 383
-executed

E01-5B Mooring recovery July 14, 2017

2020 UTC - On Station (almost) Send 16B8 810 688 644 531
Sneaking up on it.
2026 370 324 279 262 236 205 201 203

2032 Send 16B8 192
1655 194
-executed
-on saw log

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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Month <u>July</u>			Year <u>2017</u>		Vessel <u>Tully</u>			Cruise ID <u>2017-23</u>							
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
91	HSCI-A	15	00:57	BE	ROS		49° 22.32	126° 14.79	54				SR	☒	
			01:02	BO			° 22.33	° 14.79		51	-			☐	
			01:04	EN			° 22.33	° 14.78			-			☐	
92	EFF04M		:	RE			°	°			-			☐	
93	EFF05	15	15:40	BE	ROS	US	49° 2.55	125° 9.07	201		314-322	9	SR	☒	
			15:48	BO			° 2.53	° 9.13		196	-			☐	
			15:58	EN			° 2.53	° 9.13			-			☐	
94	EFF03	15	16:25	BE	ROS	US	49° 4.22	125° 9.38	118		304-313		SR	☒	
			16:32	BO			° 4.23	° 9.39		114	-			☐	
			16:44	EN			° 4.26	° 9.42			-			☐	
95	EFF04N		17:08	DE	MOR		49° 3.843	125° 9.093	98		-			☐	
96	A1-57		23:04	DE	MOR		48° 32.292	126° 11.741	507		-		DS	☐	
97	A1-57		23:09	BE	ROS	US	48° 32.29	126° 11.86	523		914-927	14	SR	☒	
			23:22	BO			° 32.32	° 11.89		520	-			☐	
			23:43	EN			° 32.35	° 11.90			-			☐	
98	A1-57	15	23:48	DE	DRIF		48° 32.55	126° 11.90			-			☐	OSK 15 417, 430, 436 444, 448, 507, 511, 515
99	LAPI	16	01:29	DE	MOR		°	°	150		-			☐	
			:				°	°			-			☐	
			:				°	°			-			☐	

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Produced by the Water Properties Group, IOS

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 Version: 6 December 2016

HSC1-A Mooring Recovery July 15, 2017

This page is for any notes or observations

0040 Sneaking upon station
Send OBBS 753 603 472 369 296 216 192

0043 Send OBBS 179
OBBS 176
- executed
- on Surface

EF04-M Mooring

1445 - Approaching Location
Send O9E4 497 451 349 323 302 260 249 251

1451 - Send O9E4 255
O9E4 255
- executed
- on Surface

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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Month <u>July</u>			Year <u>2017</u>		Vessel <u>Tully</u>		Cruise ID <u>2017-23</u>								
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
100	LAP1	16	01:35	BE	ROS		48°23.06	125°48.63	151		-	-	SR	☒	
			01:41	BO			°23.06	°48.62		148	-			☐	
			01:44	EN			°23.07	°48.63			-			☐	
101	Swiftsure	16	05:03	DE	MOR		48°30.920	124°56.130	101		-			☐	
102	Swiftsure	16	05:08	BE	ROS		48°30.97	124°56.14	72		-		SR	☒	
			05:15	BO			°30.96	°56.22		68	-			☐	
			05:18	EN			°30.94	°56.25			-			☐	
103	NEATH	16	06:19	DE	DRF		48°27.894	124°43.460			-		SP	☐	OSKER 404, 408, 421
104	DUNGENESS	16	12:56	DE	DRF		48°23.5675	123°12.8440			-		SP	☐	OSKER 439, 442, 446, 455 CTD: 582, 602, 663, 684, 88
105	SOGN2-D	16	:	RE	MOR		°	°			-			☒	bottle 1 tripped for DOC-related instrument
106	SOGN2-E	16	03:02	BE	ROS		49°50.080	124°52.100	~330		-	1	SP	☒	
			:08	BO			°50.110	°52.090		331	-			☐	
			:15	EN			°	°52.070			-			☐	
107	SOGN2-E	16	03:40	DE	MOR		49°50.124	124°52.141			-			☐	
			:				°	°			-			☐	
			:				°	°			-			☐	
			:				°	°			-			☐	
			:				°	°			-			☐	
			:				°	°			-			☐	

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Produced by the Water Properties Group, IOS

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Version: 6 December 2016

Notes:

SOGN2-D Recovery of bottom portion July 16/17 2017
(Top trawled off)

This page is for any notes or observations

Sent 169C every mile or so approaching station ^{From S} - no response

0035 - On station no

- Send 169C - no response

tried dunking transducer - no response

head @ 309° @ 5 knots

0040 2715 1735 7120 1206 on SN#10

switch to SN81 - No response

switch back to SN10 - no response

Switch out of generator mode

0049 - Stop up 0.7 NM try dunking transducer & Hello Hydrophone No response
Continue @ 309° sounding along the way. No Response

0105 - Stop up 1.5 NM to the northwest - no response nothing on hydrophone
Continue to the northwest - sounding along the way

0117 Stop up 2.25 NM

3753 3756 3762 3776

0130 - relocate 4280 - many tries, only the one response

0143 - 2870 2869 2868 2866

- move to a location to the east

0155 - 1124 1111 1105 1094 1056

0200 - 627 583 555 487 432 392 363 3495

0206 Send 169C 336

1655 333

Event #106 cast done at original mooring location. No cast done at Recovery site due to time constraints