

DAILY LOG BOOK

Per ON. 1-30 ✓
41-63 ✓
81-91 ✓
114-154 ✓

Per OFF
31-40 ✓
65-79 ✓
91-112 ✓

MISSION
NUMBER

2010-15

From: 3 SEPTEMBER to: 14 SEPTEMBER 2010

JOHN P. TULLY

LA PEROUSE / WCVI.

PROJECT:

INSTITUTE OF OCEAN SCIENCES
OCEAN SCIENCES AND PRODUCTIVITY DIVISION
SIDNEY, BC, CANADA

Rosette Setup:

Number of bottles: _____
Manufacturer: _____
Volume of Bottles (litres): _____

Winches:

1. Make: _____	Model: _____	Serial #: _____	used for: _____
2. Make: _____	Model: _____	Serial #: _____	used for: _____
3. Make: _____	Model: _____	Serial #: _____	used for: _____

Comments on performance during cruise:

Salinometer:

Make: _____ Model: _____ Serial #: _____
Comments on performance during cruise:

Oxygen Kit #

Comments on performance of kit and chemicals:

Thermosalinograph System:

Program: _____ Version: _____
Sampling interval (seconds): _____
Fluorometer sensor serial number: _____

Comments on performance during cruise:

ADCP Setup:

Computer time zone: _____
Sampling interval (seconds): _____
Bin Length (2^x): _____
Pulse Length: _____
Buffer (bytes): _____
Gyro Offset: _____

<u>User Exits:</u>	<u>Name:</u>	<u>Exit Points:</u>
_____	_____	_____
_____	<u>Name:</u>	<u>Exit Points:</u>
_____	_____	_____
_____	<u>Name:</u>	<u>Exit Points:</u>
_____	_____	_____

Work File: _____

Comments:

CTD Test Cast Information

Test Cast at IOS Jetty? (optional) yes ☐ no ☐

Comments: (i.e. how did everything work??)

Test cast in Saanich Inlet? (recommended) yes ☐ no ☐

If no, give reason: _____

Comments: (i.e. how did everything work??)

CTD pressure reading on deck (db): _____
(Should be 0.0 db ± 0.5)

Pumps working? yes ☐ no ☐
(i.e.. Was the red LED display on the deck unit 0011 and not still 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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Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

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Month <u>SEPTEMBER</u>				Year <u>2010</u>			Ship <u>TULLY</u>				Cruise ID <u>2010-15</u>				
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	#of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
3	SI	1753	BE	ROS		1	48° 39.14	123° 29.54	112		—	Ø	MR	✓	24 NISK CLOSED @ SURF for test.
		1756	BO				48° 39.14	123° 29.59		111					PAR ON.
		1759	EN				48° 39.14	123° 29.61							
4	LB01	0629	BE	ROS	U.S.	2	48° 40.32	124° 59.25	38		1-4	4	H.M.	✓	
		0631	BO				48° 40.35	124° 59.25		32					
		0636	EN				48° 40.35	124° 59.32							
4	LB02	0714	BE	ROS	US	3	48° 39.00	125° 02.38	55				MR	✓	
		0717	BO				48° 38.98	125° 02.45		50	5-9	5			
		0723	EN				48° 39.00	125° 02.44							
4	LB03	0757	BE	ROS	—	4	48° 37.34	125° 05.67	92		—	Ø	MR	✓	
		0759	BO				48° 37.32	125° 05.72		88					
		0802	EN				48° 37.30	125° 05.79							
4	LB04	0830	BE	ROS	US	5	48° 35.77	125° 08.82	~105?				MR	✓	
		0833	BO				48° 35.81	125° 08.84		105	10-16	7			
		0843	EN				48° 35.72	125° 08.98							
4	E1	0935	BE	ROS	—	6	48° 31.74	125° 03.86	117				MR	✓	
		0938	BO				48° 31.78	125° 03.89		109	—	Ø			
		0941	EN				48° 31.79	125° 03.86							

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							Latitude	Longitude							
4	E1	10:02	BE	NET		7	48°31.78	125°03.91					MG		
		10:07	BO				48°31.74	125°04.01	114	105					
		10:09	EN				48°31.75	125°04.05							
4	LB05	11:01	BE	ROS	✓	8	48°33.95	125°12.05	101		—	∅	MR	✓	
		11:03	BO				48°33.98	125°12.05		95					
		11:05	EN				48°33.99	125°12.06							
4	LB06	11:45	BE	ROS	US	9	48°32.19	125°15.50	114		17-23	7	MR	✓	
		11:48	BO				48°32.22	125°15.47		107					
		11:57	EN				48°32.24	125°15.44							
4	C1	12:48	BE	ROS	—	10	48°28.95	125°15.41	151		—	∅	MR	✓	
		12:51	BO				48°28.93	125°15.39		146					
		12:54	EN				48°28.91	125°15.36							
4	C1	13:08	BE	NET	—	11	48°28.82	125°15.45	152				MG		
		13:14	BO				48°28.93	125°15.51		145					
		13:17	EN				48°28.95	125°15.55							
4	C2	14:23	BE	ROS	—	12	48°26.24	125°09.25	159		—	∅	MR	✓	
		14:27	BO				48°26.27	125°09.24		150					
		14:30	EN				48°26.23	125°09.26							

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							Latitude	Longitude							
4	C2	1445	BE	NET		13	48°26'21	125°09'31	160				MG		
		1452	BO				48°26'18	125°09'39		155					
		1456	EN				48°26'21	125°09'43							
4	C3	1621	BE	ROS	-	14	48°23'46	125°20'74	123		-	Ø	MR	✓	
		1624	BO				48°23'48	125°20'73		110					
		1627	EN				48°23'49	125°20'69							
4	C3	1646	BE	NET		15	48°23'59	125°20'71	122				MG		
		1651	BO				48°23'65	125°20'71		117					
		1654	EN				48°23'66	125°20'73							
4	LBO7	1742	BE	ROS	-	16	48°28'67	125°22'14	157		-	Ø	MR	✓	
		1746	BO				48°28'70	125°22'10		147					
		1749	EN				48°28'70	125°22'09							
4	LBO7	1806	BE	NET	-	17	48°28'714	125°22'13	155				MG		
		1813	BO				48°28'741	125°22'12		145					
		1816	EN				48°28'755	125°22'117							
4	B8	1939	BE	ROS		18	48°34'42	125°29'91	135			Ø	MR	✓	
		1941	BO				48°34'44	125°29'86		116	-				
		1943	EN				48°34'46	125°29'85							

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							Latitude	Longitude							
4	B 8	2040	OE	NET		19	48 34.55	125 29.71	112						Bongo to B-5
		1345	BO				48 34.57	125 29.65		107					
		1347	EN				48 34.567	125 29.612							
4	B7	2150	BE	ROS		20	48 31.97	125 35.48	81				BY		
		2152	BO				48 31.98	125 35.47		68	—	∅			
		2154	EN				48 31.99	125 35.45							Tasked to SAR
5	B7	1801	BE	ROS		21	48 32.02	125 35.48	80		—	∅	MR	✓	Back from SAR.
		1803	BO				48 32.02	125 35.47		70					Re-do CTD.
		1804	EN				48 32.00	125 35.49							
5	B7	1828	BE	NET		22	48 32.04	125 35.49	80				MG		
		1832	BO				48 32.04	125 35.49		75					
		1834	EN				48 32.04	125 35.48							
5	LB 08	1939	BE	ROS	U.S.	23	48° 25.22	125° 28.42	134		24- 32	9	HM.	✓	
		1942	BO				48° 25.19	125° 28.39							
		1953	EN				48° 25.23	125° 28.41							
5	LB08	2008	BO	NET		24	48° 25.25	125° 28.47	134		—	—	HM		BONGO
		2010	EN				48° 25.25	125° 28.48		125					

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Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	#of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
5	LB09	2105	BE	ROS	U.S	25	48° 22.01	125° 34.67	151		33-41	9	H.M.	✓	
		2108	BO				48° 21.96	125° 34.72							
		2119	EM				48° 21.96	125° 34.73							
5	LB 10	2210	BE	ROS	—	26	48° 18.51	125° 41.26	153		—	—	H.M.	✓	
		2212	BO				48° 18.52	125° 41.23		142					
		2215	EM				48° 18.54	125° 41.23							
5	LB 11	2258	BE	ROS		27	48° 15.15	125° 47.69	207		42-52	11	H.M.	✓	
		2303	BO				48° 15.13	125° 47.69							
		2318	EM				48° 15.10	125° 47.71							
5	LB 11	2343	BO	NET		28	48° 15.15	125° 47.74	206	200					
		2347	EM				48° 15.14	125° 47.74							
6	LB 12	0038	BE	ROS	U.S	29	48° 12.88	125° 51.89	508		53-69	17	H.M.	✓	* NO PUMPS until 30m
		0046	BO				48° 12.88	125° 51.86		502					or DOWNCAST
		0109	EM				48° 12.86	125° 51.89							
6	LB 13	0147	BE	ROS	—	30	48° 10.55	125° 56.04	908		—	—	H.M.	✓	
		0203	BO				48° 10.58	125° 56.11		910					
		0219	EM				48° 10.63	125° 56.04							

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Month <u>SEPT</u>				Year <u>2010</u>				Ship <u>TOLLY</u>				Cruise ID <u>2010-15</u>			
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	#of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
6	LB14	0254	BE	ROS	U.S	31	48° 08.46	125° 59.91	1159		70-88	18	H.M.	✓	PAR-OFF
		0315	BO				48° 08.49	125° 59.95		1172					
		0357	EN				48° 08.46	125° 59.90							
6	LB15	0455	BE	ROS	-	32	48° 04.47	126° 08.39	1532		-	-	H.M.	✓	
		0521	BO				48° 04.38	126° 08.31		1537					
		0547	EN				48° 04.39	126° 08.36							
6	LB16	0707	BE	NET	-	33	48° 00.59	126° 17.05	1775				H.G.		
		0819	BO				48° 00.41	126° 17.08		1708					
		0857	EN				48° 00.44	126° 17.20							
6	LB16	0909	BE	ROS	-	34	48° 00.49	126° 16.97	1781		-	Ø	MR	✓	
		0946	BO				48° 00.48	126° 16.79	~1822	1835					~1807m, 13 from bot.
		1019	EN				48° 00.47	126° 16.96							
6	LC12/A4	1235	BE	ROS	-	35	48° 14.99	126° 40.03	2515		-	Ø	MR	✓	Stop @ 1605 ↓ to switch operators.
		1311	BO				48° 14.93	126° 40.07		2005					
		1348	EN				48° 14.99	126° 40.07							
6	LC12/A4	1431	BE	NET		36	48° 14.99	126° 39.96	2520				DS		BLUE SHARK
		1440	BO				48° 14.99	126° 40.01		250					
		1445	EN				48° 14.96	126° 40.06							

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SEPTEMBER			2010				TULLY			2010-15					
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	#of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
6	LC11	1558	BO	ROS	US	37	48° 18.81	126° 26.72	1448		89-107	19	MR	✓	= 1452, 11 off bot.
		1626	BO				48° 18.96	126° 26.69		1470					
		1710	EN				48° 18.92	126° 26.72							
6	LC10	1757	BO	ROS	/	38	48° 22.40	126° 20.19	1240		—	Ø	MR	✓	
		1821	BO				48° 22.39	126° 20.28		1235					
		1843	EN				48° 22.40	126° 20.25							
6	LC09	1953	BE	ROS	US	39	48° 25.96	126° 13.68	610						
		2004	BO				48° 26.09	126° 13.69		601	108-129	22	DY	✓	Bottles for Karyn
		2034	EN				48° 25.94	126° 13.68							
6	LC09/A3	2042	BE	NET		40	48° 25.93	126° 13.68	605						
		2053	BO				48° 25.87	126° 13.61		250					
		2057	EN				48° 25.83	126° 13.58							
6	A2	2155	BE	ROS	US	41	48° 22.77	126° 3.76	347				DY	✓	PAR on
		2202	BO				48° 22.74	126° 3.79			—	Ø			
		2208	EN				48° 22.71	126° 3.78							
6	LC08	2324	BE	ROS	US	42	48° 29.44	126° 7.06	197				DY	✓	+ DIC
		2328	BO				48° 29.40	126° 7.08		188	130-140	11			
		2342	EN				48° 29.43	126° 7.06							

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							Latitude	Longitude							
6	LC08/A1	2351	BE	NET		43	48 29.47	126 07.04	198				DY		
7		0001	BO				48 29.44	126 07.05		197					
		0003	EN				48 29.46	126 07.03							
7	LC07	0048	BE	ROS	✓	44	48° 32.96	126° 00.36	128		—	—	H.M.	✓	
		0051	BO				48° 32.95	126° 00.35		118					
		0053	EN				48° 32.94	126° 00.36							
7	LC06	0137	BE	ROS	U.S.	45	48° 36.44	125° 54.06	92		141-147	7	H.M.	✓	+DIC
		0140	BO				48° 36.45	125° 54.03							
		0148	EN				48° 36.45	125° 54.02							
7	LC06	0154	BE	NET		46	48° 36.46	125° 54.00	92						
		0159	BO				48° 36.47	125° 53.99		80					
		0201	EN				48° 36.48	125° 54.00							
7	LC05	0245	BE	ROS	—	47	48° 39.92	125° 47.48	65		—	—	H.M.	✓	
		0247	BO				48° 39.92	125° 47.47		60					
		0248	EN				48° 39.92	125° 47.47							
7	LC04	0337	BE	ROS		48	48° 43.40	125° 40.85			148-162	16	H.M.	✓	Bottles for kaysen
		0340	BO				48° 43.42	125° 40.87							
		0353	EN				48° 43.46	125° 40.90							

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7	LC04	0412	Bo	NET		49	48° 43.44	125° 40.95	167	160					BONGO
		0414	EN				48° 43.45	125° 40.95		1					
7	LC03	0511	BE	ROS	-	50	48° 47.00	125° 34.39	135		-	-	H.M.	✓	
		0514	Bo				48° 47.00	125° 34.36		126					
		0516	EN				48° 46.98	125° 34.37			163-169	X	H.M.	✓	
7	LC02	0550	BE	ROS	U.S.	51	48° 48.68	125° 31.04	112						
		0552	Bo				48° 48.68	125° 31.02		101	163-169	7		✓	+DIC
		0600	EN				48° 48.68	125° 30.95							
7	LC01	0634	BE	ROS	US	52	48° 50.41	125° 27.81	99		170-175	6	H.M.	✓	
		0637	Bo				48° 50.42	125° 27.79		87					
		0643	EN				48° 50.44	125° 27.73							
7	LD01	0853	BE	ROS	-	53	49° 01.14	125° 43.84	37		-	Ø	MR	✓	
		0854	Bo				49° 01.14	125° 43.84		28					
		0855	EN				49° 01.15	125° 43.86							
7	LD02	0929	BE	ROS	-	54	48° 58.36	125° 46.99	43		-	Ø	MR	✓	
		0931	Bo				48° 58.36	125° 47.01		34					
		0932	EN				48° 58.35	125° 47.02							
7	LD02	0947	Bo	NET		55	48° 58.42	125° 47.08	44	40			MG		BONGO
		0949	EN				48° 58.44	125° 47.09							

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DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month <i>SEPTEMBER</i>			Year <i>2010</i>				Ship <i>TULLY</i>				Cruise ID <i>2010-15</i>				
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	#of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
7	LD03	1020	BE	ROS	—	56	48° 56.66	125° 50.39	47		—	∅	MR	✓	
		1022	BO				48° 56.68	125° 50.39		36					
		1023	EN				48° 56.69	125° 50.39							
7	LD04	1113	BE	ROS	—	57	48° 53.19	125° 57.01	60		—	∅	MR	✓	
		1115	BO				48° 53.20	125° 57.00		50					
		1116	EN				48° 53.22	125° 57.02							
7	LD04	1129	BO	NET		58	48° 53.15	125° 57.01	62	57			MG		BONGO
		1131	EN				48° 53.15	125° 57.03							
7	LD05	1222	BE	ROS	—	59	48° 49.70	126° 03.62	89		—	∅	MR	✓	
		1225	BO				48° 49.72	126° 03.65		80					
		1227	EN				48° 49.73	126° 03.68							
7	LD06	1315	BE	ROS	US	60	48° 46.22	126° 10.24	134		176-183	8	MR	✓	
		1318	BO				48° 46.26	126° 10.25		125					
		1328	EN				48° 46.29	126° 10.32							
7	LD07	1415	BE	ROS	—	61	48° 42.69	126° 16.79	560? ~500		—	∅	MR	✓	sounders unreliable
		1428	BO				48° 42.76	126° 16.86		555					SALMON, DOGFISH
		1438	EN				48° 42.73	126° 16.79							

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Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	#of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
7	LD08	1528	BE	ROS	-	62	48° 39' 10	126° 23' 43	772		-	Ø	MR	✓	
		1545	BO				48° 39' 20	126° 23' 50		775					
		1559	EN				48° 39' 27	126° 23' 39							
7	LD09	1650	BE	ROS	-	63	48° 35' 74	126° 29' 93	1047		-	Ø	MR	✓	Stop @ 565 ↓ switch gps
		1711	BO				48° 35' 69	126° 29' 94		1055					
		1733	EN				48° 35' 71	126° 29' 96							
7	LD09	1745	DE	NET		64	48° 35' 69	126° 29' 98	1045				MG		
		1751	BO				48° 35' 69	126° 29' 99		250					
		1756	EN				48° 35' 70	126° 30' 01							
7	LD10	1844	BE	ROS	-	65	48° 32' 19	126° 36' 58	1467		-	Ø	MR/HM	✓	PAR OFF
		1911	BO				48° 32' 20	126° 36' 61		1475					
		1935	EN				48° 32' 20	126° 36' 57							
7	LD11	2017	BE	ROS	-	66	48° 28' 76	126° 42' 79	1592		-	Ø	HM	✓	SUN FISH on STARBOARD
		2035	GM				48° 28' 75	126° 42' 75							STOPPED CAST →
		2035	BE		UPCAST	67	48° 28' 75	126° 42' 75			CLOSE ALL RISINGS TO PROTECT FROM OIL (@20m)				
		2051	EN				48° 28' 64	126° 42' 82							
8	LG09	0006	DE	MULTI		68	48° 51' 17	127° 19' 25	2048						
		0110								1000m					
		0137													

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* - HEAD ON LARS SPRUNG LEAK - STOPPED CAST @ 750m - RESTART DATA FOR UPCAST (REST OF CAST ABORTED)
- Latch mechanism hydraulic ram device broke

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Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

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							Latitude	Longitude							
8	LG09	0146		ROS	V.S.	69	48° 51.16	127° 19.25	2047				<i>H.M.</i>	✓	<i>Net haul for karyu</i>
		0220					48° 51.18	127° 19.25		2005	184-205	22			
		0315					48° 51.09	127° 19.22							
8	LG09	0335	BE	NET		70	48° 50.9	127° 19.0	2050						BONGO
		0342	BO				48° 50.9	127° 18.8		260					
		0346	EN				48° 50.8	127° 18.8							
8	LG08	0439	BE	ROS	—	71	48° 55.31	127° 13.04	2059		—	Ø	H.M.	✓	
		0514	BO				48° 55.30	127° 13.14		2005					
		0547	EN				48° 55.31	127° 13.28							
8	LG07	0643	BE	ROS	—	72	48° 59.39	127° 07.16	1753		—	Ø	H.M.A.R.	✓	stop @ 618' to swap
		0715	BO				48° 59.42	127° 07.34		1760					
		0745	EN				48° 59.44	127° 07.32							
8	LG07	0801	BE	NET		73	48° 59.34	127° 07.21	1757				M.G.		BONGO
		0807	BO				48° 59.34	127° 07.27		250					
		0811	EN				48° 59.37	127° 07.29							
8	LG06	0902	BE	ROS	US	74	49° 03.48	127° 01.18	945		206-222	17	MR	✓	HUMBOLDT SQUID
		0922	BO				49° 03.48	127° 01.20		970					
		0955	EN				49° 03.43	127° 01.31							

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DAILY LOG

Ocean Sciences and Productivity Division

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OCEAN SCIENCES AND PRODUCTIVITY DIVISION															
DAILY LOG				Ship TULLY							Cruise ID 2010-15				
Month SEPTEMBER				Year 2010			Position		Bottom Depth	Max Depth	Sample Numbers	#of Bottles	Watch Keepers	Trans. Cleaned	Comments
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Latitude	Longitude							
8	LG05	1045	BE	ROS	-	75	49°07.38	126°55.26	273		-	φ	MR	✓	
		1051	BO				49°07.40	126°55.27		266					
		1056	EN				49°07.40	126°55.30							
8	LG04	1140	BE	ROS	US	76	49°11.29	126°49.49	145		223-231	9	MR	✓	
		1144	BO				49°11.31	126°49.47		135					
		1155	EN				49°11.30	126°49.47							
8	LG04	1209	BO	NET		77	49°11.29	126°49.46	143						BONGO
		1211	EN				49°11.30	126°49.45		138					
8	LG03	1253	BE	ROS	/	78	49°14.96	126°43.67	123		-	φ	MR	✓	
		1257	BO				49°14.97	126°43.66		112					
		1259	EN				49°14.99	126°43.66							
8	LG02	1342	BE	ROS	US	79	49°18.68	126°38.07	98		232-241	10	MR	✓	
		1345	BO				49°18.70	126°38.13		90					
		1353	EN				49°18.70	126°38.15							
8	LG02	1404	BE	NET		80	49°18.71	126°38.15	99				MR		BONGO
		1407	BO				49°18.73	126°38.17		94					
		1409	EN				49°18.73	126°38.18							

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DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month <i>SEPTEMBER</i>				Year <i>2010</i>			Ship <i>TULLY</i>				Cruise ID <i>2010-15</i>				
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	#of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
8	L601	1444	BE	ROS	US	81	49 20.52	126 35.03	51		242-246	5	MR	✓	PAR ON
		1446	BO				49 20.51	126 35 03		41					
		1452	EN				49 20.52	126 35.01							
8	LBP1	2038	BE	ROS	US	82	50 4.79	127 52.67	50					✓	
		2039	BO				50 4.78	127 52.70		40	-	Ø			
		2040	EN				50 4.76	127 52.71							
8	LBP2	2058	BE	ROS	US	83	50 3.96	127 54.23	100					✓	
		2100	BO				50 3.96	127 54.22			-	Ø			
		2102	EN				50 3.97	127 54.21							
8	LBP2	2110	BE	NET		84	50 3.98	127 54.28	100						Bongo to 93m
		2114	BO				50 3.92	127 54.35		93					
		2118	EN				50 3.83	127 54.51							
8	LBP3	2129	BE	ROS		85	50 3.13	127 55.36	172					✓	Karyn's ass station
		2133	BO				50 3.14	127 55.36		163	247-256	10			
		2146	EN				50 3.17	127 55.33							
8	LBP3		BE	NET		86									
		2200	BO				50 3.17	127 55.33							
			EN												

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DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month <u>Sept</u>				Year <u>2010</u>				Ship <u>Tully</u>				Cruise ID <u>2010-15</u>			
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	#of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
8	LBP4	2235	BE	ROS	US	87	50 1.37	127 58.23	1016				dy	✓	
		2254	BO				50 1.40	127 58.13		1007	—	Ø			
		2311	EN				50 1.42	127 58.09							
8	LBP5	2338	BE	ROS	US	88	49 59.94	128 0.03	1274					✓	
9		0001	BO				49 59.97	127 59.98		1278	257-274	18			
		0039	EN				49° 59.94	128° 00.03							
9	LBP5	0058	BO	NET		89	49° 59.95	128° 00.06							Bongo
		0103	EN				49° 59.95	128° 00.05		250					
9	LBP 6	0151	BE	ROS	—	90	49° 56.09	128° 05.39	897		—	Ø	H.m	✓	
		0208	BO				49° 56.10	128° 05.39		904					
		0223	EN				49° 56.13	128° 05.48							
9	LBP 7	0315	BE	ROS	U.S.	91	49° 52.31	128° 11.13	2186		275-294	20	H.m.	✓	PAR-OFF
		0350	BO				49° 52.31	128° 11.17		2005					
		0443	EN				49° 52.36	128° 11.20							
9	LBP 7	0510	BO	NET		92	49° 52.11	128° 12.69	2186	260					BONGO
		0520	EN				49° 52.11	128° 12.69							
9	LBP 8	0556	BE	ROS	—	93	49° 48.54	128° 16.79	2069		—	Ø	H.m	✓	
		0631	BO				49° 48.55	128° 16.82		2005					
		0707	EN				49° 48.56	128° 16.80					MR		

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DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month SEPT				Year 2010				Ship TULLY				Cruise ID 2010-15			
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	#of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
9	LBP 8	0728	BO	NET		94	49° 48.56	128° 17.02	2069		—	∅			BOMGO
		0734	EN				49° 48.55	128° 17.07		250					
9	CPE 2	1357	BE	ROS	—	95	50° 43.04	128° 40.06	122		—	∅	MR	✓	weird blue trace.
		1400	BO				50° 43.07	128° 40.13		110					
		1402	EN				50° 43.12	128° 40.15							
9	CPE 2	1412	DE	NET	—	96	50° 43.05	128° 40.10	121				MG		
		1417	BO				50° 43.03	128° 40.11		115					
		1419	EN				50° 43.04	128° 40.12							
9	LQ03	1558	BE	ROS	—	97	50° 39.83	129° 01.83	1150		—	∅	MR	✓	stop @ 410 f to swap operators.
		1623	BO				50° 39.84	129° 01.86		1200					Did not find the bottom checked out —
		1645	EN				50° 39.79	129° 01.85							
9	LQ03	1654	BE	Net	—	98	50° 39.83	129° 01.81	1161				DB		
		1701	BO				50° 39.81	129° 01.80		250					
		1705	EN				50° 39.79	129° 01.83							
9	J122	1829	BE	ROS	—	99	50° 39.91	129° 19.67	1600		—	∅	MR/dm	✓	Stop @ 663 f swap ops.
		1900	BO				50° 40.07	129° 19.79		1651					
		1926	EN				50° 40.14	129° 19.83							

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DAILY LOG

Ocean Sciences and Productivity Division

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INSTITUTE OF OCEAN SCIENCES

Month				Year			Ship				Cruise ID				
September				2010			TULLY				2010-15				
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	#of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
9	J 22	1947	BO	NET		100	50° 44.07	129° 19.67	1660						BONGO
		1951	EN				50° 40.13	129° 19.61		250					
9	CS 00	2302	BE	ROS	-	101	50° 27.72	129° 54.95	2172		-	Ø	H.M.	✓	
		2335	BO				50° 27.66	129° 54.99		2005					
		0007	EN				50° 27.63	129° 54.99							
10	CS 00	0018	BE	NET		102	50 27.64	129 55.03	2172						MULTI-NET
		0152	BO				50 27.70	129 54.99		2000					
		0239	EN				50 27.67	129 55.04							
	CS00	0249	BE	NET		103	50 27.67	129 55.04	2168						Bongo
		0302	BO				50 27.59	129 54.97		250					
			EN												
10	CS 01	0436	BE	ROS	us	104	50° 34.83	129° 41.54	2109		295-316	23	H.M.	✓	STOP 552 ↓ CHANGE OPERATORS
		0511	BO				50° 34.83	129° 41.60		2005					
		0604	EN				50° 34.90	129° 41.53							
10	CS01	0645	BO	NET		105	50° 34.8	129° 41.5	2109	250					Bongo
10	CS02	0751	BE	ROS	-	106	50 41.25	129.27.97	1900		-	Ø	MR	✓	
		0811	BO				50° 41.23	129° 27.97		1005					
		0830	EN				50° 41.21	129° 27.93							

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DAILY LOG

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INSTITUTE OF OCEAN SCIENCES

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Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	#of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
10	CS02	0842	BE	NET		107	50°41.32	129°28.04	1900				MG		BONGO
		0853	BO				50°41.17	129°28.10		260					
		0859	EN				50°41.16	129°28.01							
10	CS03	0953	BE	ROS	-	108	50°45.56	129°19.90	220		-	φ	MR	✓	
		0959	BO				50°45.56	129°19.90	240	230					
		1003	EN				50°45.59	129°19.87							
10	CS03	1015	BE	NET		109	50°45.60	129°19.93	236				MG		BONGO
		1019	BO				50°45.59	129°19.86		231					
		1024	EN				50°45.59	129°19.85							
10	CS04	1111	BE	ROS	US	110	50°49.02	129°12.80	110		317-323	7	MR	✓	
		1114	BO				50°48.97	129°12.82		102					
		1122	EN				50°48.98	129°12.83							
10	CS04	1136	BO	NET		111	50°48.99	129°12.90	112				MG		BONGO
		1138	EN				50°48.98	129°12.89		107					
10	ODAS	1442	BE	ROS	-	112	50°51.35	129°55.14	2110		-	φ	MR	✓	Weird layer ~ 300-350 meters
		1519	BO				50°51.36	129°55.17		2005					Sal profile # down and up cast, ~160 to 200.
		1555	EN				50°51.34	129°55.18							
10	ODAS	1614	BO	NET		113	50°51.34	129°55.19	2107						
		1618	EN				50°51.35	129°55.20							

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DAILY LOG

Ocean Sciences and Productivity Division

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Month ¹⁹ SEPTEMBER				Year 2010			Ship TULLY			Cruise ID 2010-15					
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	#of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
10	CS3B	1825	BE	ROS	—	114	51°00.01	129°27.01	219		—	Ø	MR	✓	PAR ON
		1830	BO				50°59.98	129°26.95		210					
		1834	EN				50°59.99	129°26.96							
10	CS3B	1844	BE	NET		115	51°00.04	129°27.02	219				DB		
		1854	BO				51°00.04	129°27.06		210					
		1858	EN				51°00.07	129°27.07							
10	CS05	2048	BE	ROS		116	50°55.98	128°59.86	65					✓	B+5
		2050	BO				50°55.97	128°59.85		60	—	Ø			
		2051	EN				50°55.98	128°59.85							
	CS05	2100	BE	NET		117	50°55.98	128°59.85							
		2103	BO				50°55.98	128°59.85							
		2104	EN				50°55.99	128°59.84							
10	CS1B	2247	BE	ROS		118	50°53.03	128°39.89	76		—	Ø	N.M.	✓	
		2249	BO				50°53.04	128°39.90		66					
		2250	EN				50°53.04	128°39.90							
	CS1B	2259	BO	NET		119	50°53.03	128°39.90							
		2300	GN				50°53.03	128°39.90							

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DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month <u>SEPTEMBER</u>			Year <u>2010</u>			Ship <u>TULLY</u>			Cruise ID <u>2010-15</u>						
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	#of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
11	CS 06	0027	BE	ROS	—	120	50° 59.93	128° 51.88	65		—	0	H.M.	✓	
		0029	BO				50° 59.94	128° 51.94		55					
		0030	EN				50° 59.93	128° 51.95							
11	CS 06	0039	BO	NET		121	50° 59.93	128° 51.95	65						BONGO
		0040	EN							55					
11	CS 07	0142	BE	ROS	U.S.	122	51° 04.47	128° 44.09	65		324-331	8	H.M.	✓	COMPUTER FROZE on START UP
			BO												
		0152	EN				51° 04.47	128° 44.08							
11	CS 07	0158	BO	NET		123	51° 04.47	128° 44.10	65						BONGO
		0204	EN				51° 04.47	128° 44.10		55					
11	CS 08	0255	BE	ROS	—	124	51° 08.48	128° 36.09	141		—	0	H.M.	✓	
		0258	BO				51° 08.48	128° 36.08		131					
		0300	EN				51° 08.48	128° 36.07							
11	CS 08	0312	BO	NET		125	51° 08.48	128° 35.97							BONGO
		0315	EN				51° 08.47	128° 35.94			332-342	11	H.M.	✓	
11	CS 09	0404	BE	ROS	U.S.	126	51° 12.48	128° 28.11	192						
		0407	BO				51° 12.49	128° 28.10							
		0420	EN				51° 12.51	128° 28.10							
		24					51 12 52	128 28.04							

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Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	#of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
11	CS 09	0437	BO	NET		127	51° 12.52	128° 28.04	191						BONGO
		0439	EN				51° 12.52	128° 29.04		186					
11	CS 10	0534	BE	ROS	—	128	51° 16.55	128° 20.07	79		—	Ø	H.M.	✓	
		0536	BO				51° 16.55	128° 20.08		70					
		0537	EN				51° 16.57	128° 20.07							
11	CS 10	0549	BO	NET		129	51° 16.68	128° 20.11	79	74					BONGO
		0551	EN				51° 16.71	128° 20.13							
11	M6	0845	BE	ROS	—	130	51° 42.68	128° 07.35	242		—	Ø	MR	✓	Syringes not on since CS10. Not on for all M stations. Really cool profile, so stratified!
		0850	BO				51° 42.66	128° 07.37		233					
		0854	EN				51° 42.66	128° 07.38							
11	M5	0922	BE	ROS	—	131	51° 43.38	128° 03.52	335		—	Ø	MR	✓	
		0929	BO				51° 43.39	128° 03.56		335?					
		0936	EN				51° 43.40	128° 03.60							
11	M4	1000	BE	ROS	—	132	51° 44.66	127° 59.90	431		—	Ø	MR	✓	Maneuvering @ surface @ beginning
		1015	BO				51° 44.65	127° 59.93		(=420m) 424					Long time @ surface 67min recording.
		1022	EN				51° 44.64	127° 59.95							
11	M3	1054	BE	ROS	—	133	51° 46.29	127° 54.62	328		—	Ø	MR	✓	Shp 265.0 sweep w. ops.
		1102	BO				51° 46.29	127° 54.54	317	310					
		1107	EN				51° 46.29	127° 54.59							

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Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	#of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
11	M2	1128	BE	ROS	-	134	51 46.40	127 53.26	195		-	0	MR		Little ways from station.
		1132	BO				51 46.44	127 53.25		190					
		1135	EN				51 46.43	127 53.24							
11	UBC7	1341	BE	ROS	US	135	51 29.99	127 49.01	158		343-346	4	MR	✓	Rosette for UBC
		1345	BO				51 30.03	127 48.99		150					
		1351	EN				51 30.06	127 48.96							
11	UBC7	1359	BE	NET		136	51 30.03	127 48.97	159						
		1406	BO				51 30.00	127 48.95		155					
		1409	EN				51 30.00	127 48.97							
11	UBC7	1432	BE	MPS		137	51 29.99	127 49.08	155						
		1442	BO				29.99	127 49.04							
		1446	EN												
11	Ri 1	1557	BE	ROS	US	138	51 26.36	127 38.41	315		347-362	16		✓	
		1603	BO				51 26.39	127 38.36		305					
		1622	EN				51 26.37	127 38.37							
11	Ri 1	1632	BE	NET	-	139	51 26.43	127 38.36	315				DB		
		1640	BO				51 26.43	127 38.39		300					
		1644	EN				51 26.43	127 38.39							

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Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	#of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
11	Ri 2	1729	BE	ROS	US	140	51° 31.17	127° 33.56	325				dy/MR	✓	Kang 1-4
		1736	BO				51° 31.22	127° 33.63		315	363-372	10			Kang 5-10
		1750	EN				51° 31.22	127° 33.52							
11	Ri 2	1800	BE	NET	-	141	51° 31.21	127° 33.52	328				MG		Bongo.
		1812	BO				51° 31.23	127° 33.57		300					
		1817	EN				51° 31.24	127° 33.58							
11	Ri 2	1919	BE	WPS		142	51° 31.14	127° 33.61	328						Repeated cast
		1938	BO				51° 30.85	127° 33.78		320					
		1948	EN				51° 30.76	127° 33.82			373-374	2	H.M.	✓	
11	Ri 3	2031	BE	ROS	U.S	143	51° 35.72	127° 32.07	326						
		2037	BO				51° 35.74	127° 32.10		316					
		2046	EN				51° 35.78	127° 32.09							
11	Ri 3	2104	BO	NET		144	51° 35.45	127° 32.22	326				R.S		BONGO
		2109	EN				51° 35.77	127° 32.25		300					
11	Ri 4	2148	BE			145	51° 38.95	127° 26.89	299		375-383	14			
		2154	BO				51° 38.93	127° 26.84							
		2210	EN				51° 38.78	127° 26.77							
11	Ri 4	2228	BO	NET		146	51° 38.91	127° 26.67	300						BONGO
		2233	EN				51° 38.91	127° 26.68		289					

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Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	#of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
11	R1 5	2318	BE	ROS	U.S.	147	51° 40.65	127° 20.00	203		389-392	4	H.M.	✓	
		2322	BO				51° 40.65	127° 20.00		194					
		2328	GN				51° 40.64	127° 19.99							
11	R1 5	2345	BO	NET		148	51° 40.61	127° 19.94	203	193	—	—			BONGO
		2347	EN				51° 40.61	127° 19.94							
12	R1 5	0005	BE	NET		149	51° 40.64	127° 19.92	202	192					MPS
		0015	BO				51° 40.89	127° 19.92							
		0024	EN				51° 40.65	127° 20.02							
12	R1 6	0042	BE	ROS	U.S.	150	51° 40.52	127° 17.09	146		393-394	2	H.M.	✓	
		0045	BO				51° 40.53	127° 17.08		135					
		0049	EN				51° 40.52	127° 17.08							
12	R1 6	0101	BO	NET	—	151	51° 40.49	127° 17.13	146	136	—				BONGO
		0103	EN				51° 40.48	127° 17.14							
12	CPE1	1301	BE	ROS	—	152	51° 00.06	127° 50.07	143		—	Ø	MR	✓	All NISIKINS CLOSED @ surface for long run
		1304	BO				51° 00.07	127° 50.06		130					
		1308	EN				51° 00.04	127° 50.07							
12	CPE1	1320	BE	NET		153	51° 00.05	127° 50.03	140				H.M.		Bongo
		1324	BO				51° 00.04	127° 50.02		135					
		1327	EN				51° 00.04	127° 50.01							

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							Latitude	Longitude							
13	GEDI	1012	BE	ROS	-	154	49° 14.97	123° 45.04	400		-	-	MR	✓	All NISKINS CLOSED ON UPCAST JUST TO CLOSE NISKINS, NO SAMPLES.
		1021	BO				49° 14.99	123° 45.08		390					
		1028	EN				49° 14.98	123° 45.01							
13	GEDI	1041	BE	NET		155	49° 14.96	123° 45.03	400						
		1045	BO				49° 14.94	123° 45.00		100					
		1047	EN				49° 14.93	123° 44.99							
13	GEDI	1056	BE	NET		156	49° 15.00	123° 44.94	400						
		1111	BO				49° 15.00	123° 45.14		390					
		1118	EN				49° 15.03	123° 45.23							

Additional comments

Sounder Test - Ram deployment

Start 50 29.93 (76 29.42 20:26 slow to 7 knots

20:28 to 6 knots

20:29:20 4 knots

20:29:45 3 " going astern

30:00 0.8

30:30 Stopped

31:30 loss of signal ↑ still astern

32:20 lower RAM

~ 43:00 starting up

45:40 cleaning away

48:50 some noise 12.5 knots

51:30-55 switch to hull

52:30 to RAM

21:08 still on RAM - signal strong again (steady improvement)

* Still giving a depth @ GEO on RAM but shifting ± 10 dbm
+bottom