

DAILY SCIENCE LOG BOOK

MISSION
NUMBER

2008-63

2008-61

DATE:

From: November 19, 2008

to: NOV 26 2008

VESSEL:

PROJECT(S):

Georgia Basin Ecosystem Initiative

STRAIT OF GEORGIA
JUAN DE FUCA STRAIT
WATER PROPERTIES SURVEY

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

WaterProperties.ca

Captain: Mike McCulloch
 Second Officer: RHIAN MCGEE
 Fishing Master: _____
 First Officer: NICOLA HANCOCK
 Third Officer: _____

Mission Participants / Agencies:

Scientific Personnel:

Name	Watch	Cabin
Chief Scientist:	Sophie Johansen	

Watch **Cabin**

[illegible]

Second leg of Mission:

Name	Watch	Cabin	Name	Watch	Cabin
			PETER		CHA-5DLR

[illegible]

Data logging computer: PAC02588

Data acquisition program: Seasave

CTD deck unit make: Seabird model: 11

serial number: 0424

Primary CTD
Make: Seabird
model: 911
serial number: 0443

Primary temperature serial number: 2038
Primary conductivity serial number: 1729
Secondary temperature serial number: 2449
Secondary conductivity serial number: 2424

Transmissometer:	Model:	s/n:	P, S or NO pump?
Fluorometer: Model	Cable gain:	s/n:	P, S or NO pump?
Oxygen sensor:	Model:	s/n:	P, S or NO pump?
PAR sensor:	Model:	s/n:	P, S or NO pump?
Other sensors:		s/n:	P, S or NO pump?
Other sensors:		s/n:	P, S or NO pump?
Other sensors:		s/n:	P, S or NO pump?
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?
Other sensors:		s/n:	P, S or NO pump?

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

FOUNTER Bongo 4798

PST

This page is for any notes or observations

Nov 19 2008 - 0800 depart IOS For SOGS-B

1151 - On Station SOGS-B

- 6442 - FRI+2 on
Ranges 360 361 362

- Back off
Range 312 315 527

1152 Sent 6441 6484 - 538m

1158 On Surface

1247 On Deck

Turn Around mooring and re-deploy SOGS-C

1546 PST at $49^{\circ} 1.646'N$
 $123^{\circ} 25.487'W$
in 308m

SOGN-B Recover

20/11/2008

0755 - Sent 6432 - 321, 320, 320

- Back off ~ 1 cable

0801 - Sent 6431 - 430 - 434

Sent 6434 - 438m

0803 - On Surface -

0845 - On Deck

Note: The bottom sediment trap broke the surface before/during attempts to invert it.

Re deploy SOGN-C

49° 50.139

124° 52.125

335m depth

1416 PST 20/11/2008

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[illegible]**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 DE = Deployment Time
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Transmissometer to be cleaned before each cast, do not use Ammonia products

Produced by the Water Properties Group, IOS

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Month				Year			Ship			Cruise ID					
NOVEMBER				2008			Vector			2008-61					
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	SI	18:00	BE	ROS		1	48 39.402	123 29.978	176	100	1-9	9	all	✓	
		18:09	BO				48 39.406	123 29.975							
		18:15	EN				48 39.396	123 29.988							
22	58	1952	BE	CTD		2	48 43.007	123 14.279	337				APT	✓	
		2001	BO				48 43.002	123 14.285		330					
		2009	EN				48 43.002	123 14.287							
22	59	2052	BE	ROS		3	48 37.805	123 14.618	232		10-22	13	RLKY	✓	
		2058	BO				48 37.814	123 14.581							
		2114	EN				48 37.822	123 14.602							
22	60		BE	CTD		4	48 33.898	123 12.778	295	290				✓	
		21:59	BO				48 33.898	123 12.778							
		22:06	EN				48 33.94	123 12.757							
22	61	22:48	BE	CTD		5	48 29.206	123 9.203	258	282				✓	
		22:55	BO				48 29.181	123 9.305							
		23:02	EN				48 29.146	123 9.394							
23	10.1	05:49	BE	CTD		6	48 25.36	124 45.186	222	233				✓	
		05:58	BO				48 25.44	124 45.192							
		06:04	EN				48 25.49	124 45.13							

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This page is for any notes or observations

- leather clean, coolish

depart

10S

0935

PST

sat 22 NW 2008

DAILY SCIENCE LOG

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Month <u>November</u>		Year <u>2008</u>				Ship <u>Vector</u>				Cruise ID <u>2008-21</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							
23	102	0657	BE	ROS	US	7	48 29 96	124 43 99	257	250	23-37	15	RHKY	✓	
		07:05	BO												
		07:21	EN				48 30 02	124 43 94							
23	103	801	BE	CTD		8	48 32 95	124 43 00	120				MDT	✓	
		805	BO				48 32 96	124 43 00		115					
		808	EN				48 32 95	124 43 00							
23	76	913	BE	CTD		9	48 31 32	124 30 05	92				MDT	✓	
		916	BO				48 31 30	124 30 09		92					
		918	EN				48 31 30	124 30 10							
23	75	952	BE	ROS		10	48 28 14	124 32 79	230		38-51	14	MDT	✓	
		958	BO				48 28 10	124 32 81		222					
		1012	EN				48 28 02	124 32 94			220				
23	74	1053	BE	CTD		11	48 25 12	124 35 59	185				MDT	✓	
		1058	BO				48 25 14	124 35 62		183					
		1102	EN				48 25 14	124 35 64							
23	73	1328	BE	CTD		12	48 14 94	124 6 62	160				MDT	✓	
		1332	BO				48 14 93	124 6 62		155					
		1336	EN				48 14 92	124 6 61							

Cast Type:

USW = Sea Water Loop

Bottle Firing Method:

Time Code:

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Month		Year		Ship		Cruise ID									
November		2008		Vector		2008-61									
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							
23	72	14:18	BE	ROS		13	48 18 584	124 4 096	187		52-64	13	TH	✓	
		14:22	BO				48 18 596	124 4 098		182					
		14:35	EN				48 18 593	124 4 123							
23	71	15:25	BE	CTD		14	48 22 183	123 59 410	108				TH	✓	wrong day in file is 23
		15:27	BO				48 22 184	123 59 429		106					
		15:38	EN				48 22 187	123 59 458							
23	70	16:46	BE	CTD		15	48 19 213	123 43 222	150				TH	✓	day wrong in file should be 23
		16:49	BO				48 19 219	123 43 238		145					
		16:53	EN				48 19 212	123 43 243							
23	69	17:23	BE	ROS		16	48 15 598	123 43 141	178		65-76	12	TH	✓	11
		17:27	BO				48 15 588	123 43 132		174					
		17:38	EN				48 15 570	123 43 058							
23	68	18:09	BE	CTD		17	48 12 214	123 42 839	138				TH	✓	
		18:12	BO				48 12 235	123 42 834							
		18:15	EN				48 12 254	123 42 824							
23	105	19:45	BE	CTD		18	48 11 045	123 19 049	28				TH	✓	
		19:48	BO				48 11 064	123 19 028		26					
		19:50	EN				48 11 072	123 19 019							

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Month				Year			Ship			Cruise ID						
November				2008			Vector			2008-61						
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								
23	ADCP	20:16	BE	RDS	US	19	48 13.98	123 17.982	120	118	77-86	10	Ron L Kelly	✓		
		20:20	BO				48 13.99	123 17.96								
		20:30	EN				48 14.04	123 17.95								
23	104	21:16	BE	CTD		20	48 19.973	123 17.995	85	83			R+K	✓		
		21:18	BO				48 19.96	123 18.05								
		21:20	EN				48 19.982	123 18.053								
23	67	21:41	BE	CTD		21	48 22.597	123 18.052	112	107			R+K	✓		
		21:43	BO				48 22.58	123 18.02								
		21:46	EN				48 22.582	123 17.963								
23	66	22:17	BE	CTD		22	48 19.276	123 14.179	100	97			R+K	✓		
		22:20	BO				48 19.276	123 14.156								
		22:22	EN				48 19.268	123 14.154								
23	65	22:55	BE	RDS		23	48 15.886	123 9.854	125	123	87-96	10	R+K	✓		
		22:58	BO				48 15.882	123 9.888								
		23:08	EN				48 15.851	123 10.038								
23	64	23:46	BE	CTD		24	48 12.788	123 5.826	108	106.7			R+K	✓		
		23:49	BO				48 12.799	123 5.809								
		23:52	EN				48 12.798	123 5.819								

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Month <u>November</u>		Year <u>2008</u>		Ship <u>Vector</u>		Cruise ID <u>2008-61</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	63	00:34	BE	CTD	—	25	48 14.615	122 58.559	152	149.9			RL+KY		
		00:38	BO				48 14.612	122 58.557							
		00:42	EN				48 14.616	122 58.543							
24	62	01:40	BE	ROS	US	26	48 22.774	123 2.647	147	144.3		12	RL+KY		
		01:45	BO				48 22.759	123 2.65							
		01:55	EN				48 22.708	123 2.516							
24	54	03:46	BE	CTD	—	27	48 26.534	122 44.279	76	71			RL+KY	✓	
		03:49	BO				48 26.516	122 44.299							
		03:51	EN				48 26.501	122 44.323							
24	53	04:45	BE	CTD	—	28	48 33.185	122 44.966	56	53.3			RL+KY	✓	
		04:47	BO				48 33.174	122 44.936							
		04:49	EN				48 33.166	122 44.909							
24	52	05:37	BE	CTD	—	29	48 38.885	122 43.315	83	78			RL+KY	✓	
		05:39	BO				48 38.885	122 43.307							
		05:41	EN				48 38.887	122 43.301							
24	51	06:52	BE	CTD	—	30	48 46.729	122 51.619	163	160			RL+KY		
		06:58	BO				48 46.757	122 51.637							
		07:02	EN				48 46.784	122 51.685							

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Transmissometer to be cleaned before each cast, do not use Ammonia products

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Month November				Year 2008			Ship Vector				Cruise ID 2008-61				
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	56	8:00	BE	ROS	US	31	48 46 430	123 01 570	209		109-122	14	MOT	✓	
		8:06	BO				48 46 397	123 01 574		205					
		8:20	EN				48 46 330	123 01 585							
24	57	9:01	BE	CTD		32	48 44 018	123 08 041	154				TS/DT	✓	
		9:05	BO				48 44 030	123 08 045		148					
		9:09	EN				48 44 036	123 08 026							
24	47	10:21	BE	CTD		33	48 49 291	123 06 246	184				TS/DT	✓	
		10:25	BO				48 49 297	123 06 271		178					
		10:29	EN				48 49 304	123 06 294							
24	48	10:56	BE	CTD		34	48 51 694	123 03 248	229				TS/DT	✓	
		11:02	BO				48 51 672	123 03 276		220					
		11:07	EN				48 51 665	123 03 287							
24	49	11:42	BE	CTD		35	48 55 030	122 59 612	131				TS/DT	✓	
		11:46	BO				48 55 028	122 59 604		127					altimeter spiky
		11:49	EN				48 55 022	122 59 594							
24	50	12:33	BE	CTD		36	48 57 722	122 56 156	26				TS/DT	✓	
		12:34	BO				48 57 726	122 56 174		24					
		12:35	EN				48 57 730	122 56 182							

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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							
24	44	1335	BE	CTD		37	48 56 782	123 06 036	116				BOT	✓	wrong day again
		1338	BO				48 56 710	123 06 047		115					
		1341	EN				48 56 765	123 06 050							
24	45	1409	BE	CTD		38	48 53 906	123 08 414	128				MOR	✓	
		1413	BO				48 53 897	123 08 423		124					
		1416	EN				48 53 888	123 08 426							
24	46	1445	BE	MOS		39	48 51 338	123 10 865	184		123-135	13	MOR	✓	
		1450	BO				48 51 340	123 10 886		183					
		1502	EN				48 51 425	123 10 913							
24	43	1645	BE	CTD		40	49 00 230	123 30 100	199				MOR	✓	
		1651	BO				49 00 247	123 30 104		199					
		1656	EN				49 00 250	123 30 114							
24	42	1724	BE	ROS		41	49 01 781	123 26 245	320		136-151	16	MOR	✓	
		1732	BO				49 01 796	123 26 246		315					
		1752	EN				49 01 820	123 26 192							
24	41	1820	BE	CTD		42	49 03 313	123 22 325	242				MOR		
		1826	BO				49 03 302	123 22 346		240					
		1832	EN				49 03 294	123 22 343							

Transmissometer to be cleaned before each cast. do not use Ammonia products

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Month <u>November</u>				Year <u>2008</u>			Ship <u>Vector</u>				Cruise ID <u>2008-61</u>				
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							Latitude	Longitude							
24	37	19:41	BE	CTD		43	49 13.615	123 20.676	214	209			NO PC	✓	
		19:47	BO				49 13.636	123 20.646					KY-RL		
		19:52	EN				49 13.654	123 20.636							
24	38	20:23	BE	CTD		44	49 12.005	123 26.395	309	304			RLKY	✓	
		20:30	BO				49 12.029	123 26.379							
		20:37	EN				49 12.013	123 26.371							
24	39	21:14	BE	ROS	US	45	49 09.852	123 33.038	378	373	152-168	17	RLKY	✓	
		21:23	BO				49 09.835	123 32.934							
		21:44	EN				49 09.890	123 32.978							
24	40	22:17	BE	CTD		46	49 08.622	123 36.805	146	135			RLKY	✓	on bottom? gup.
		22:23	BO				49 08.638	123 36.906							
		22:27	EN				49 08.654	123 36.961							
	26	23:35	BE	CTD		47	49 14.317	123 50.843	252	252			RLKY	✓	
		23:42	BO				49 14.338	123 50.806							
		23:48	EN				49 14.318	123 50.794							
25	NET1	00:04	BE	NET		48	49° 15.283	123° 50.202	406						by GPO-1
		00:13	BO				49° 15.309	123° 50.071		407					390-4
		00:23	EN				15 415	49 969							20' wire angle

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 SET = Fish Set

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— = —

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							Latitude	Longitude							
25	27	00:56	BE	ROS	US	49	49° 19.120	123° 48.012	346	341	169-184	16	RL+KY	✓	
		01:04	BO				49 19.017	123° 48.098							
		01:23	EN				49 19 088	123 48 028							
25	28	02:06	BE	CTD	✓	50	49 24 10	123 45 44	132	129.9			RL+KY		
		02:10	BO				49 24.10	123 45 44							
		02:13	EN				49 24 104	123 45 443							
25	24	03:45	BE	CTD		51	49 30.331	124° 6.006	426	419			RL+KY		
		03:55	BO				49 30.300	124° 5.98							
		04:04	EN				49 30.296	124 5.942							
25	25	04:28	BE	CTD		52	49 27.704	124 7.529	288	290			RL+KY		RL+ Came on @ 250m
		04:34	BO				49 27 700	124 7.492							
		04:41	EN				49 27.804	124 7.428							
25	2	05:13	BE	ROS		53	49 24.112	124 9.322	275				RL+KY		240
		05:20	BO				49 24.128	124 9.330							
		5:37	EN												
25	NET2	05:55	BE	NET		54	49° 22.862	124° 10.225	351				RD		
		06:06	BO				49 22.799	124 10.158		353					
		06:13	EN				49 22.791	124 10.133							

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Month		Year		Ship		Cruise ID									
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							Latitude	Longitude							
25	1	06:38	BE	CTD	-	55	49°20.318	124°12.156	244	241	-	-	RISKY	✓	STARTED 217.2 35m from BOT
		06:44	BO				49 20.316	124 12.115							
		06:50	EN				49 20.291	124 12.115							
25	4	07:41	BE	CTD	-	56	49°24.473	124°22.144	339	338					AIT. started @ 319
		07:50	BO				49°24.510	124°22.068							
		08:00	EN				49 24.515	124°22.064							
25	3	8 32	BE	ROS		57	49 26.1621	124 20. 239	322		200-215	16	16/10	✓	
		8 41	BO				49 26 615	124 20 230		315					
		8 58	EN				49 26 603	124 20 250							
25	5	9 56	BE	CTD		58	49 27 440	124 30 857	318				16/10	✓	
		10 03	BO				49 27 450	124 30 859		310					
		10 11	EN				49 27 434	124 30 871							
25	NET3	10:22	BE	NET		59	49 27.448	124 30.855	316				16/10		longo no file
		10:31	BO				49 27.468	124 30.863		317					300 m payed out
		10:37	EN				49 27.467	124 30.798							
25	6	11 17	BE	ROS		60	49 30 614	124 27 817	192		216-228	13	16/10	✓	
		11 22	BO				49 30 625	124 27 827		188					
		11 37	EN				49 30 655	124 27 792							

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Notes:

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DAILY SCIENCE LOG

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Month <i>November</i>				Year <i>2008</i>			Ship <i>Vector</i>			Cruise ID <i>2008-61</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							
<i>25</i>	<i>7</i>	<i>12 13</i>	<i>BE</i>	<i>CTD</i>		<i>61</i>	<i>49 34 397</i>	<i>124 24 220</i>	<i>352</i>				<i>TM</i>	☒	
		<i>12 21</i>	<i>BO</i>				<i>49 34 369</i>	<i>124 24 242</i>		<i>349</i>					
		<i>12 30</i>	<i>EN</i>				<i>49 34 389</i>	<i>124 24 229</i>							
<i>25</i>	<i>8</i>	<i>13 21</i>	<i>BE</i>	<i>CTD</i>		<i>62</i>	<i>49 29 325</i>	<i>124 33 011</i>	<i>340</i>				<i>TM</i>	☒	
		<i>13 28</i>	<i>BO</i>				<i>49 29 330</i>	<i>124 32 968</i>		<i>335</i>					
		<i>13 36</i>	<i>EN</i>				<i>49 39 342</i>	<i>124 32 948</i>							
<i>25</i>	<i>9</i>	<i>14 15</i>	<i>BE</i>	<i>ROS</i>		<i>63</i>	<i>49 35 522</i>	<i>124 38 346</i>	<i>168</i>		<i>229-240</i>	<i>12</i>	<i>TM</i>	☒	
		<i>14 20</i>	<i>BO</i>				<i>49 35 497</i>	<i>124 38 338</i>		<i>165</i>					
		<i>14 31</i>	<i>EN</i>				<i>49 35 514</i>	<i>124 38 345</i>							
<i>25</i>	<i>10</i>	<i>15 24</i>	<i>BE</i>	<i>CTD</i>		<i>64</i>	<i>49 40 644</i>	<i>124 47 318</i>	<i>90</i>				<i>TM</i>	☒	
		<i>15 27</i>	<i>BO</i>				<i>49 40 650</i>	<i>124 47 320</i>		<i>87</i>					
		<i>15 29</i>	<i>EN</i>				<i>49 40 650</i>	<i>124 47 317</i>							
<i>25</i>	<i>11</i>	<i>15 56</i>	<i>BE</i>	<i>CTD</i>		<i>65</i>	<i>49 42 415</i>	<i>124 43 427</i>	<i>300</i>				<i>TM</i>	☒	<i>rough</i>
		<i>16 03</i>	<i>BO</i>				<i>49 42 420</i>	<i>124 43 374</i>		<i>295</i>					
		<i>16 09</i>	<i>EN</i>				<i>49 42 449</i>	<i>124 43 337</i>							
<i>25</i>	<i>12</i>	<i>16 32</i>	<i>BE</i>	<i>ROS</i>		<i>66</i>	<i>49 43 612</i>	<i>124 40 877</i>	<i>356</i>		<i>241-257</i>	<i>17</i>	<i>TM</i>	☒	<i>wrong day in file</i>
		<i>16 40</i>	<i>BO</i>				<i>49 43 567</i>	<i>124 40 826</i>		<i>351</i>					
		<i>16 58</i>	<i>EN</i>				<i>49 43 573</i>	<i>124 40 826</i>							

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Notes:

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Month		November		Year			2008			Ship			Vector			Cruise ID			2008-61		
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	13	18 33	BE	CTD		67	49 55.289	124 55 330	232												
		18 39	BO				49 55.279	124 55 291		230											
		18 44	EN				49 55.307	124 55.279													
25	14	19 16	BE	ROS		68	49 53.008	124 59 617	316		258-273	16									
		19 23	BO				49 53.020	124 59 602													
		19 43	EN				49 53.018	124 59.634													
25	15	20:04	BE	CTD		69	49 51.608	125 01.603	126					RL+KY	✓						
		20:07	BO				49 51.599	125 01.610		122											
		20:09	EN				49 51.590	125 01.615													
25	16	21.05	BE	ROS	VS	70	49 57.728	125 08.795	155		274-284	11		RL+KY	✓						
		21:09	BO				49 57.674	125 08.734		152											
		21:20	EN				49 57.626	125 08.648													
25	21	22:10	BE	CTD		71	50 01.996	125 13.588	78					RL+KY	✓						
		22:12	BO				50 01.961	125 13.564		73											
		22:14	EN				50 01.910	125 13.525													
25	17	23:06	BE	CTD		72	49° 58.775	125° 4.297	267					RL+KY	✓						
		23:13	BO				49° 58.722	125° 4.318		262.9											
		23:19	EN				49° 58.711	125° 4.386													

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SET = Fish Set	=						
		Notes:					

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