

DAILY SCIENCE LOG BOOK

MISSION
NUMBER

2010 - 28

DATE:

VESSEL:

PROJECT(S):

From:

to:

JPTully

La Perouse / Effingham Inlet / Aquaculture
SOG

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

WaterProperties.ca

Captain:	<u>SIMON SWARTZ</u>	First Officer:	<u>STEVE KENNEDY</u>
Second Officer:	<u>RONA LATU</u>	Third Officer:	<u>BILL M'ENDOE</u>
Fishing Master:			

Mission Participants / Agencies: 1.0.5

Scientific Personnel:		Chief Scientist: DAVE SPEAR	
Name	Watch	Name	Watch
JANE EERT			
CHELSEA STANLEY			
TARA M'DONALD			
CINDY WRIGHT			
YADRA SEPIC			
LUCIUS PERREAULT			
JOSE ZOTZMAN			
STEVE ROMAINIG			
HUGH MACLEAN			

[illegible]

Data logging computer: TOLL-Y-7

CTD deck unit make: SEAVIEW model: V7 serial number: 0424

Primary CTD

Make: SBG model: 9 serial number: 443

Primary temperature serial number: 2449

Primary conductivity serial number: 2424

Secondary temperature serial number: 2038

Secondary conductivity serial number: 2120

Transmissometer: Model: SCA Tecit s/n: 10050

Fluorometer: Model SEAPOINT Cable gain: 10x 0.15 s/n: 2345 P or NO pump?

Oxygen sensor: SB6 Model: 43 s/n: 1176 P, S or NO pump? P

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

Other sensors: ALTIMETER s/n: 1024 P, S or NO pump? P

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:
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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:
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:		P, S or NO pump?
	s/n:	

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

DAILY SCIENCE LOG

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Month April				Year 2010			Ship Tully				Cruise ID 2010-28				
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	BG-1	2038	BE	ROS	/	1	49 20.06	123 31.01	161		/	/	JE/HM/SR	✓	test cast
		2052	BO				49 20.07	123 31.01		153 + 6m					tripped 2 bottles
		2054	DN				49 20.07	123 31.02							
	BG-11	2130 ± 10	BO	Grab	/	2	49 20.09	123 31.01		161			TP/CW		time not noted until later.
29	BG-4	0046	BO	GRAB	/	3	49 22.53	123 15.12		258			CW/TP		SMITH-MAC grabs.
	BG-5	0104	BO	GRAB	/	4	49 25.33	124 15.68		278			CW/TP		
29	BG-6	0235	BE	ROS		(5)	49 35.952	124 27.622	289	289	-	-	Hm/cw/ snl JE	✓	1m/s ↓ ↑ ^{BAL} CTD <u>called cast 6</u>
		0244	BO				49 35.926	124 27.585							
		0249	EN				49 35.914	124 27.594							
29	BG-6	0250	BE	ROS		(6)	49 35.909	124 27.595	282		1-19	19	JE/CW/S		rosette did not come 0.25m/s ↓ 1m/s ↑ <u>called cast 5</u>
		0312	BO				49 35.89	124 27.62		270 + 19	mm alt, but sounder skips only 7m.				(I believe sounder, very soft bottom)
		0334	EN				49 35.83	124 27.62							
29	BG-6	0352	BO	GRAB		7	49 35.82	124 27.64	266				TP/CW		
29	BG-8	0538	BO	GRAB		8	49 44.01	124 44.95	333				TP/CW		

Cast Type:

BOT = Bottle cast, no CTD
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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:

BE = Beginning Time of Cast
BO = Bottom Time of Cast
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MR = Messenger Release Time
RE = Recover Mooring Time

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

Produced by the Water Properties Group, IOS

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This page is for any notes or observations

out of the water.

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Month <u>APRIL</u>				Year <u>2010</u>			Ship <u>JP TULLY</u>				Cruise ID <u>2010-28</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	BG-10	07:41	Bo	GRAC		9	49 58.62	124 47.47	161				CW		
29	Sutchanz	0855	BE	ROS		10	50 4.350	125 7.536	253	248	20-31	12	SL/HM	—	removed BVS from CW file
		0902	Bo				50 4.414	125 7.466							bot 3 leaky on
		0918	EN				50 4.444	125 7.400							bottom o-ring nothing in 5
30	PA 1	0312	BE	ROS		11	50 31.79	125 22 05	48		—	—	JE/cs/JS	✓	CTD only
		0319	Bo				50 31.77	125 21.99		40 +4					went down to 5m & back
		0320	EN				50 31.76	125 21.99							up at start to clean bubbles in plumbing.
30	PA 2	0349	BE	ROS		12	50 29.06	125 22.06	100		32-37	6	"	✓	really well mixed.
		0355	Bo				50 29.03	125 22.09		91 +5					
		0402	EN				50 29.03	125 22.09							
30	FRARM 1	0508	BE	ROS		13	50 29.15	125 15.56	164				"	✓	CTD only.
		0512	Bo				50 29.17	125 15.51		156					Stopped briefly @ 11m
		0515	EN				50 29.16	125 15.51							to allow Cond. sensors to agree

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OPIA Mooring Recovery April 29, 2010

Local

0730

On station

Range using deck unit 13 no response 1649 (does not have 12 kHz)

0750 - Switch to Deck unit 81

Range 1639 268, 272 277

- mooring appears to be in the correct location

0752 - 294 300

0756 - 348 m -398 - Ranges intermittent

0758 Release 1649 + 1655 No Response Move closer carefully

Range - 442

Release 447 - Received and executed

0810 - On Deck

0910 - SS-37 & Wire recovered from Chatham Pt. Lighthouse

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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							
30	FLARM 2	0555	BE	ROS		14	50 21.16	125 17.06	307		38-49	12	JE/CS/JS	✓	
		0601	BO				50 21.16	125 17.05		300					
		0617	EN				50 21.16	125 17.01							
30	No Chan	0730	BE	ROS		15	50 22.234	125 21.091	211	203	50-59	10	CU/HM/SC	✓	
		0738	BO				50 22.235	125 21.102							
		0752	EN				50 22.228	125 21.042							
30	Ka Bay	0913	BE	ROS		16	50° 15.61	125° 23.05	250		60-70	11	CU/HM/SC	✓	
		0921	BO				50° 15.63	125° 23.06		234					
		0930	EN				50° 15.67	125 23.07							
2	LB01	004A	BE			17	48 40.358	124 59.422	32	25	71-73		"	✓	
		0049	BO				48 40.351	124 59.380							
		0052	EN				48 40.343	124 59.336							
2	LB02	0142	BE			18	48 39.037	125 2.110	50	40	74-78		"	✓	
		0146	BO				48 39.007	125 2.046							
		0150	EN				48 39.022	125 2.028							

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Mooring Recovery NCT-A

2010-28

April 29, 2010

This page is for any notes or observations

0939 Range 16B6 - 357 357 360 363 371 375

- small tug approaching so we will wait until he's past

0947 - 391 397

0950 - Release 16B6 + 1655 No response

No Ranges - Move Closer

0956 - 316 306 305 305

0959 - Release 16B6 + 1655 Received (no executed) - On surface

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Month <u>May</u>				Year <u>2010</u>		Ship <u>Tully</u>		Cruise ID <u>2010-28</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							
2	LB03	0238	BE	ROS		19	48 37.213	125 5.519	96	85		—	"	✓	
		0243	BO				48 37.181	125 5.486							
		0245	EN				48 37.151	125 5.470							
2	LB04	0340	BE	ROS	VS	20	48 35.64	125 08.68	111		79-85	7		✓	→
		0345	BO				48 35.60	125 08.65		101					heave comp. not effective, 3m seas
		0353	EN				48 35.56	125 08.79							
2	LB05	0429	BE	ROS		21	48 33.95	125 11.96	104			—			
		0432	BO				48 33.94	125 11.97		95					stations
		0435	EN				48 33.93	125 11.91							called off by CO
2	LB06	0530													due to lumpy seas. →
3	EFE16	0423	BE			22	48 47.60	125 15.91	108		86-92	7	30/05/05	✓	rainy, still
		0430	BO				48 47.64	125 15.91		98					2 m seas.
		0437	EN				48 47.68	125 15.93							fired bot 8 @ surface
2	LB07														as well as 7 because
															7 caught some air.

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Notes:

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DPN1-B Mooring Recovery

April 30, 2010

This page is for any notes or observations

PDT

0750 - On Station Ranges 517 468 416 approaching station
- 16B7

- no ranges closer - switch to dunking transducer 307 283 268 263 289 317

0805 - Release 16B7 + 1655 346 351 Received & Executed

0808 - On Surface

→ cast 20 @ LB04 - had to bring rosette back while just at surface - wire jumped sheave at crane head. Seizing on top of termination stripped back, but termination looks OK.

after cast 21, reterminated. With seizing gone, top of helical wires started coming loose. Bushings above rosette in LARS head showing grooves already from wire

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Month MAY				Year 2010			Ship TULLY				Cruise ID 2010-28				
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							
3	EFF15	0543	BE	ROS	US	23	48 51.37	125 14.95	97	100	93-99	7	JE/CS/JS	✓	long time to set up
		0551	BO				48 51.37	125 14.91		85 (+8)					ship getting a bit. (25mins)
		0559	EN				48 51.33	125 14.71							
3	EFF14	0703	BE	ROS	US	24	48 53.999	125 12.958	109	100	100-106	7	HM/CW/ SN	—	
		0709	BO				48 53.992	125 12.940							
		0716	EN				48 53.950	125 12.959							
3	EFF13	0743	BE	ROS		25	48 56.516	125 10.667	106	96	107-113	7	"	—	
		0747	BO				48 56.500	125 10.664							
		0755	EN				48 56.512	125 10.702							
3	EFF12	0824	BE	ROS		26	48 57.970	125 10.441	95	90	114-120	7	"	—	
		0825	BO				48 57.958	125 10.432							
		0832	EN				48 57.948	125 10.428							
3	EFF03	1730		SEO		27	49° 4.260°	125° 9.420	121	121	Sediment grab For Sardine scales. →				

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DRF = Drifter
GRB =

Bottle Firing Method:
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Notes:

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

SBI-B Mooring Recovery May 1, 2010

1523 - On Station - Wind 24 knots - lumpy

1525 - Range 1688 - 206 203 176

1527 - Lose contact switch to dunking transducer

- Range 1688 222 226

1529 - 1688 232 + 1655 238 - Receive & execute

1530 - On Surface

→ 4 jars of scoop ⇒ top 2-3cm of grab collected
- jar 3 and 4 are mostly the "2nd" layer of sediment 1:2 = top layer
- the layer of sardine scales littered top - collected off sides and doors into centrifuge tube.

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Month		Year		Ship		Cruise ID									
5		2010		Tully		2010-28									
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							
A	EFF1	0054	BE	ROS		28	49 5.579	125 11.663	35	29	121-124	4	William sr	/	*bow thruster repair
		0057	BO				49 5.578	125 11.656							
		0101	EN				49 5.583	125 11.644							
A	EFF2	0136	BE	ROS		29	49 5.010	125 10.319	72	63	125-130	6	"	/	
		0140	BO				49 5.010	125 10.318							
		0146	EN				49 5.010	125 10.325							
A	EFF3	0202	BE	ROS		30	49 4.261	125 9.403	118	112	131-133	3	"	/	
		0208	BO				49 4.261	125 9.394							
		0217	EN				49 4.248	125 9.415							
A	EFF4	0308	BE	ROS		31	49 03.12	125 08.60	73??		139-143	5	JE/cs/js	✓	down 5 at stand
		0312	BO				49 03.11	125 08.57		55 (+4)					DSL very high
		0317	EN				49 03.10	125 08.56							drifted shallower
A	EFF5	0335	BE	ROS		32	49 02.56	125 09.12	207		144-154	11	JE/cs/js	✓	S11-S12 = ISPSU on
		0343	BO				49 02.55	125 09.13		194(+4)					soak.
		0355	EN				49 02.54	125 09.14							'snot' caught on rosette

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Bottle Firing Method:
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Notes:

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E01-WW Missing Recovery

May 2, 2010

This page is for any notes or observations

0730 PDT - On Station Range = 1681

- Range 260 290 301

Deck Crew setting up for recovery

0748 - 304 307 313

0749 1681 + 1655 316 m, Received no exoceted - On Surface

0810 - On board

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Month				Year			Ship			Cruise ID					
MAY				2010			TULLY			2010-28					
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							
4	EFF06	0415	BE	Ros	US	33	49 01.77	125 09.17	150		155-163	9	SE/JS	✓	Soak @ 5m.
		0420	DO				49 01.76	125 09.16		140(+6)					
			EN												
	EFF07	0453	BE	Ros	US	34	49 01.24	125 09.39	120		164-171	8	SE/JS	✓	
		0458	BO				49 01.21	125 09.40		110(+5)					
		0506	EN				49 01.19	125 09.48							
	EFF08	0527	BE	Ros		35	49 00.66	125 10.25	87		172-177	6	SE/JS	✓	
		0530	BO				49 00.65	125 10.29		75(+8)					
		0536	EN				49 00.66	125 10.30							
	EFF09	0556	BE	Ros	US	36	49 00.11	125 10.85	60		178-182	5	SE/JS	✓	
		0600	BO				49 00.10	125 10.87		53(+6)					
		0604	EN				49 00.10	125 10.88							
	EFF10	0618	BE	Ros	US	37	48 59.85	125 11.24	93		183-189	7	SE/JS	✓	
		0623	BO				48 59.84	125 11.25		96(+8)					
		0630	EN				48 59.81	125 11.22							

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A1 - WW Mooring Recovery

May 2, 2010

This page is for any notes or observations

1630 POT - Steaming towards mooring
- Range 1685 - 970 904 688 - Wind 20-25 rough

1637 - On Station 588 601, 607 620, 638

Release

1641-1685+1655 657 663 - Received & Executed

1642 - On Surface

1715 - On Deck

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Month MAY				Year 2010			Ship TULLY				Cruise ID 2010-28				
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							Latitude	Longitude							
4	EFF11	0654	BE	ROS	US	38	48 59.11	125 11.03	85		190-195	6	JE/JS	✓	
		0700	BO				48 59.10	125 11.03		75(+6)					
		0706	EN				48 59.11	125 11.01							→*
4	LC10	0917	BE	ROS		39	48 22.38	126 20.15	1241		196	1	JE/CS/JS	✓	difficult to say if
		0945	BO				48 22.36	126 20.17		1224(+9)					pump issue changed.
		2011	EN				48 22.36	126 20.15							pressure spike @ 232m. Data error
															338m.
4	LC09	2101	BE	ROS		40	48 25.93	126 13.69	607		/	/			
		2117	BO				48 25.94	126 13.66		595(+7)					
		2129	EN				48 25.94	126 13.69							
4	LC09	2140	BE	NET		41	48 25.96	126 13.68	605		/	/			large group of Black Footed albatross
		2153	BO				48 25.96	126 13.60		250					
		2157	EN				48 25.97	126 13.58							

EFO4-F Mooring Recovery

May 3, 2010

This page is for any notes or observations

0834 POT - On station - no ranges with hull transducer switch to dunking

- Range 16B4 = 363 363

* 0837 - Release 16B4 + 16B5? 360 369 Received & executed - On surface

May 4 - Swap out pump cable. Last night it looked like one side (cond 2, pump 2128) was not pumping - on soaker at 5 m, Sal 1 ~ 29 PSU, Sal 2 ~ 14 PSU. This evened out while profiling but was still ~.02 PSU.

Tried to test pumps with bucket & tube, but difficult to prime & keep low head - didn't seem that either pump was working but hard to say if that was test setup rather than pumps.

** spikes - pressure spike @ 665 m. more spikes, but none on upcast.

- reseated newly installed pump cable - cat 40 looks much better.
- still have consistent -.02 PSU difference b/w conductivity sensors

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Month <u>MAY</u>				Year <u>2010</u>			Ship <u>TULLY</u>			Cruise ID <u>2010-28</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							
4	LC08	2245	BE	ROS		42	48 29.47	126 07.06	201		/	/	JE/cs/ss	/	
		2253	BO				48 29.45	126 07.09		189 (+7)					
		2257	EN				48 29.44	126 07.08							
4	LC08	2305	BE	NET		43	48 29.465	126 06.981	200				SR/HM/low		
		2313	BO				48 29.476	126 06.843		185					
		2314	EN				48 29.478	126 06.741							
5	LC07		BE	ROS		44	48	12	131	121					
			BO				48	Cancelled - 2 blown fuses - wire got stuck							terminated
			EN				48	A shelve							
5	LC06	0109	BE	NET		45	48 36.53	125 54.96	94				SK/HM/low		
		0113	BO				48 36.57	125 54.88		85					
		0115	EN				48 36.58	125 54.80							
5	LC05	0159	BO	NET		46	48 39.93	125 47.31	67						
		0201	BO				48 39.94	125 47.291		55					
		0202	EN				48 39.95	125 47.28							

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

Cast Type:

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

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

Bottle Firing Method:

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

Notes:

Time Code:

BE = Beginning Time of Cast
BO = Bottom Time of Cast
EN = End Time of Cast
DE = Deployment Time
MR = Messenger Release Time
RE = Recover Mooring Time

Produced by the Water Properties Group, IOS

WaterProperties.ca
Version: 06 March 2008

- ★ Note on cast no. to accompany LCOS Bongo; the labels say CTD# 1347 - that is incorrect
we did not wait on station for wire termination to complete - we went onto LC04
∴ LCOS net has no accompanying CTD cast

* After last cast, plumbing rinsed with Triton-X 1%, then flushed 5 times with Milli-Q,
lett filled w/ Milli-Q.

Mooring Deployments

This page is for any notes or observations

DPI-B	50° 18.267' N	125° 25.332' W	2140 UTC April 29, 2010	242 m depth
NCI-B	50° 24.116' N	125° 19.886' W	0240 UTC April 30, 2010	262 m
DPN-C	49° 57.766' N	125° 8.749' W	2117 UTC April 30, 2010	152 m
E01-XX	49° 17.300' N	126° 36.199' W	1833 UTC May, 2, 2010	101
EF04-	49° 3.859' N	125° 9.106' W	2021 UTC May 3, 2010	106 m
A1-XX	48° 31.800' N	126° 12.215' W	1656 UTC May 4, 2010	505 m
SB1-	48° 30.985' N	124° 56.091' W	1519 UTC May 5, 2010	73 m