

DAILY SCIENCE LOG BOOK

MISSION
NUMBER

2016-09

DATE:

From: 23 Feb 2016

to:

VESSEL:

Salacia

PROJECT(S):

Strait of Georgia Zooplankton

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

WaterProperties.ca

CTD S/N 0456 Date Feb 17/16

Mission ID 2616-09 Con file 25-0456 Feb 2016-09

Logging Computer #13

Primary Temp S/N 5130 Cable TC 18

Primary Cond S/N 3508 Cable TC 17

Pressure S/N 0668 Cable PRESS01

DO Sensor S/N 1592 Cable DOET01

Fluorometer ECO Cable gain 13

Fluorometer S/N 2214 Cable DOET01

Trans S/N _____ Cable _____

pH Sensor S/N _____ Cable _____

PAR S/N _____ Cable _____

_____ S/N _____ Cable _____

Comments:

Captain: John Planch

Second Officer: _____

Fishing Master: _____

First Officer: _____

Third Officer: _____

Mission Participants / Agencies:

[illegible][illegible]

Data logging computer: #13

Data acquisition program: _____

CTD deck unit make: _____ model: _____ serial number: _____

Primary CTD

Make:	SBE	model:	25	serial number:	0456
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Primary temperature serial number: 5130

Primary conductivity serial number: 3500

Secondary temperature serial number:

Secondary conductivity serial number:

Transmissometer:	Model:

Fluorometer: Model Wet Labs FLO Cable gain: 13 s/n: 2214 P, S or NO pump?

Oxygen sensor: SBE Model: 43 s/n: 1592 P, S or NO pump? 2

PAR sensor:	Model:
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Other sensors: Pressure s/n: 0668 P, S or NO pump? NO

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: _____

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):

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Month <u>February</u>				Year <u>2016</u>			Ship <u>Salacia</u>			Cruise ID <u>2016-09</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	CPF1	2014	BE	CTD		1	49° 22.00	124° 05.00	245			/	GC	✓	Calm, sunny, no wind
		2021	BO				49° 22.00	124° 05.01		235					Cast #0
		2026	EN				49° 21.99	124° 05.04							
		2028	BE	NET		2	49° 21.99	124° 05.06	245			/	GC	✓	
		2040	BO				49° 21.98	124° 05.01		235					
		2046	EN				49° 21.98	124° 05.14							
23	CPF2	2213	BE	CTD		3	49° 28.01	124° 30.09	325		1a+b	1	GC	✓	Salinity @ 314m.
		2221	BO				49° 28.01	124° 30.21		315					Cast #1
		2230	EN				49° 28.01	124° 30.31							
		2236	BE			4	49° 27.98	124° 30.00	325				GC		Calm, overcast
		2250	BO				49° 27.95	124° 30.16		315					no wind flood
		2259	EN				49° 27.95	124° 30.26							tide
23	BS-11	2353	BE	CTD		5	49° 29.07	124° 46.11	58				GC	✓	Cast #2
		2355	BO				49° 29.07	124° 46.12		48					
		2356	EN				49° 29.08	124° 46.12							
	BS11	2358	BE	NET		6	49° 29.10	124° 46.12	58				GC		Calm overcast
24		00:00	BO				49° 29.12	124° 46.19		48					
		00:01	EN				49° 29.12	124° 46.19							

Cast Type:
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 SET = Fish Set

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

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

Notes:

Time Code:
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Transmissometer & Fluorometer are to be cleaned before each cast

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Month <u>February</u>		Year <u>2016</u>		Ship <u>Salvador</u>		Cruise ID <u>2016-09</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	11	1544	BE	CTD		7	49° 42.40'	124° 43.42'	290				GC	✓	Sunny Calm
		1550	BO				49° 42.40'	124° 43.47'		280					
		1555	EN				49° 42.40'	124° 45.50'							
24	11	1601	MR	BOT		8	49° 42.38'	124° 43.58'	290	5	2-3	2	GC		#2=0m, #3=5m.
24	11	1606	BE	NET		9	49° 42.36'	124° 43.67'	290						
		1616	BO				49° 42.35'	124° 43.72'		280					
		1622	EN				49° 42.35'	124° 43.76'							
24	22	1917	BE	CTD		10	49° 40.15'	124° 16.26'	353		4		GC	✓	Sunny calm.
		1923	BO		MR		49° 40.14'	124° 16.24'		343		1			Salinity @ 343m
		1932	EN				49° 40.11'	124° 16.19'							
24	22	1934	BE	NET		11	49° 40.10'	124° 16.78'	353				GC		Noticed large pressure
		1946	BO				49° 40.07'	124° 16.11'		343					
		1953	EN				49° 40.05'	124° 16.05'							
24	24	2058	BE	CTD		12	49° 30.30'	124° 05.96'	425				GC	✓	Sunny calm
		2107	BO				49° 30.32'	124° 05.98'		415					
		2115	EN				49° 30.34'	124° 05.98'							
24	24	2118	BE	NET		13	49° 30.35'	124° 05.99'	425				GC		Pid not notice a
		2133	BO				49° 30.39'	124° 05.99'		415					
		2142	EN				49° 30.40'	124° 05.96'							

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Sm Niskin vent leak. Niskin has label 300. Do not use. Filter 280mls for chl samples.

wave in front of net when returned to surface. The 2 ropes which hold the weights + thus coil and down from rising, were twisted. Tried to undo twist in ropes but they have memory. So replaced net with spare which have ropes that are not nearly ^{as} twisted. Transferred over TSK flow meter, RBR + coil end so all things remained the same as previous casts.

pressure wing to the same extent as the previous cast + net. Seems to be an improvement. Not sure how much this altered the sampling.

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Month <u>February</u>				Year <u>2016</u>			Ship <u>Salacia</u>			Cruise ID <u>2016-09</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	28	23:00	BE	CTD		14	49° 24.11	123° 45.28	134				GC	✓	
		23:03	BO				49° 24.11	123° 45.29		124					
		23:05	EN				49° 24.12	123° 45.30							
24	28	23:08	BE	NET		15	49° 24.12	123° 45.31	134				GC		
		23:13	BO				49° 24.12	123° 45.32		124					
		23:16	EN				49° 24.12	123° 45.33							
24	Halbut Bay	23:42	EN	Bot	MR.	16	49° 20.42	123° 43.76	734	5	5-6 (a+b)	2	GC		#5 = 0m #6 = 5m Filter 140mL For chl.
25	GEO1	00:19	BE	CTD		17	49° 14.99	123° 45.00	400				GC	✓	
		00:26	BO				49° 15.02	123° 45.01		390					
		00:34	EN				49° 15.04	123° 45.01							
25	GEO1	00:38	EN	Bot	MR	18	49° 15.06	123° 45.00	400	5	7-8 (a+b)	2	GC		7 = 0m 8 = 5m Filter 140mL for chl
25	GEO1	00:41	BE	NET		19	49° 15.07	123° 44.99	400				GC		
		00:54	BO				49° 15.12	123° 44.98		390					
		01:03	EN				49° 15.13	123° 44.98							
25	GEO1	15:46	BE	CTD		20	49° 15.00	123° 44.91	400						Made an error in
		15:49	BO				49° 15.00	123° 44.86		136					location not valid
		15:52	EN				49° 14.98	123° 44.84							

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leaky spigot on surface bottle. Replaced spigot + O-rings

Smeter chl samples in scintillation vials, 0 meter chl samples wrap in foil, out of vials.

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Month <u>February</u>				Year <u>2016</u>			Ship <u>Salween</u>				Cruise ID <u>2016-09</u>				
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
25	GEO1	1554	BE	NET		21	49° 14.96	123° 44.80	146				GC		Error in location
		1559	BO				49° 14.92	123° 44.74		136.					supposed to be a
		1603	EN				49° 14.90	123° 44.68							Sk=40. Not Valid
25	40	1658	BE	CTD		22	49° 8.55	123° 36.80	146				GC	✓	Oceanot, calm, light
		1701	BO				49° 8.57	123° 36.79							wind
		1704	EN				49° 8.55	123° 36.77							
25	40	1706	BE	NET		23	49° 8.54	123° 36.75	146				GC		
		1711	BO				49° 8.54	123° 36.74		136					
		1714	EN				49° 8.52	123° 36.73							
25	38	1807	BE	CTD		24	49° 11.95	123° 26.32	300				GC	✓	
		1813	BO				49° 11.91	123° 26.21		290.					
		1819	EN				49° 11.85	123° 26.13							
25	38	1824	BE	NET		25	49° 12.00	123° 26.42	300				GC		
		1833	BO				49° 11.92	123° 26.27		290.					Problems with winch, stopping
		1845	EN				49° 11.86	123° 26.17							during netting & by race.
26	59	00:04	BE	CTD		26	48° 37.94	123° 14.59	225				GC	✓	Not a good sample
		00:09	BO				48° 38.03	123° 14.58		215					Replaced electric motor
		00:13	EN				48° 38.11	123° 14.58							on winch

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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							
26	59	00:16	BE	NET		27	48° 38.17	123° 14.59	225				GC		
		00:24	BO				48° 38.27	123° 14.61		215					
		00:28	EN				48° 38.31	123° 14.62							
26	46	18:08	BE	CTD		28	48° 51.32	123° 10.81	176				GC	✓	Flat calm, overcast
		18:11	BO				48° 51.26	123° 10.76		166					
		18:15	EN				48° 51.19	123° 10.71							
26	46	18:20	BE	NET		29	48° 51.41	123° 10.83	176				GC		
		18:26	BO				48° 51.52	123° 10.73		166					
		18:30	EN				48° 51.29	123° 10.67							
26	41	20:28	BE	CTD		30	49° 3.27	123° 22.29	245				GC	✓	Deep water salinity sample
		20:33	BO		MR		49° 3.22	123° 22.27		245	9(arb)	1			Haul to go near bottom
		20:41	EN				49° 3.14	123° 22.24							
26	41	20:54	EN	Bot	MR	31	49° 3.26	123° 22.37	245	5	10-11	2	GC		10 = 0m 11 = 5m.
26	41	21:00	BE	NET		32	49° 3.19	123° 22.36	245				GC		Flat calm, overcast
		21:08	BO				49° 3.11	123° 22.37		235					Final flow meter reading should be 5914.8
		21:12	EN				49° 3.07	123° 22.38							
27	G1-01	16:34	BE	CTD		33	48° 45.80	123° 20.50	65				GC	✓	
		16:35	BO				48° 45.80	123° 20.50		55					
		16:36	EN				48° 45.79	123° 20.50							

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This page is for any notes or observations

to fix loose wraps on drum.

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Month <i>February</i>				Year <i>2016</i>			Ship <i>Salacia</i>			Cruise ID <i>2016-09</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>27</i>	<i>G1-01</i>	<i>1639</i>	<i>BE</i>	<i>NET</i>		<i>34</i>	<i>48° 45.77</i>	<i>123° 20.49</i>	<i>65</i>				<i>GC</i>		
		<i>1641</i>	<i>BO</i>				<i>48° 45.75</i>	<i>123° 20.48</i>		<i>55</i>					
		<i>1642</i>	<i>EN</i>				<i>48° 45.74</i>	<i>123° 20.48</i>							
<i>27</i>	<i>SC-04</i>	<i>1718</i>	<i>BE</i>	<i>CTD</i>		<i>35</i>	<i>48° 43.46</i>	<i>123° 25.02</i>	<i>90</i>				<i>GC</i>		<i>Forgot to remove cap on</i>
		<i>1720</i>	<i>BO</i>				<i>48° 43.47</i>	<i>123° 24.98</i>		<i>80</i>					<i>transducer, Redo</i>
		<i>1722</i>	<i>EN</i>				<i>48° 43.48</i>	<i>123° 24.95</i>							<i>Event # 35</i>
<i>27</i>	<i>SC-04</i>	<i>1727</i>	<i>EN</i>	<i>Bot</i>	<i>MR</i>	<i>36</i>	<i>48° 43.51</i>	<i>123° 24.87</i>	<i>90</i>	<i>5</i>	<i>12-13</i>	<i>2</i>	<i>GC</i>		<i>D=0m 140m & read for</i> <i>13=5m Chlson = 6.2</i>
<i>27</i>	<i>SC-04</i>	<i>1733</i>	<i>BE</i>	<i>NET</i>		<i>37</i>	<i>48° 43.51</i>	<i>123° 24.97</i>	<i>90</i>						
		<i>1736</i>	<i>BO</i>				<i>48° 43.52</i>	<i>123° 24.93</i>		<i>80</i>					
		<i>1738</i>	<i>EN</i>				<i>48° 43.52</i>	<i>123° 24.91</i>							
<i>27</i>	<i>SC-04</i>	<i>1742</i>	<i>BE</i>	<i>CTD</i>		<i>38</i>	<i>48° 43.52</i>	<i>123° 24.82</i>	<i>90</i>				<i>GC</i>	☒	<i>Redo to make up</i>
		<i>1744</i>	<i>BO</i>				<i>48° 43.54</i>	<i>123° 24.80</i>		<i>80</i>					<i>for error on Event # 35</i>
		<i>1746</i>	<i>EN</i>				<i>48° 43.54</i>	<i>123° 24.78</i>							
<i>27</i>	<i>CBE7</i>	<i>1856</i>	<i>BE</i>	<i>CTD</i>		<i>39</i>	<i>48° 44.23</i>	<i>123° 34.48</i>	<i>65</i>				<i>GC</i>	☒	
		<i>1857</i>	<i>BO</i>				<i>48° 44.23</i>	<i>123° 34.42</i>		<i>55</i>					
		<i>1858</i>	<i>EN</i>				<i>48° 44.23</i>	<i>123° 34.40</i>							
<i>27</i>	<i>CBE2</i>	<i>1900</i>	<i>BE</i>	<i>NET</i>		<i>40</i>	<i>48° 44.23</i>	<i>123° 34.43</i>	<i>65</i>	<i>55</i>			<i>GC</i>		
		<i>1902</i>	<i>BO</i>				<i>48° 44.23</i>	<i>123° 34.43</i>							
		<i>1903</i>	<i>EN</i>				<i>48° 44.23</i>	<i>123° 34.43</i>							

Transducer & Fluorometer are to be cleaned before each cast

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