

DAILY SCIENCE LOG BOOK

MISSION
NUMBER

2014-50

DATE:

From: 26 OCT 2014

to:

VESSEL:

Vector

PROJECT(S):

STRAIT OF GEORGIA / JUAN DE FUCA
WATER PROPERTIES SURVEY

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

WaterProperties.ca

First Officer: Riton A
Third Officer: _____

Scientific Personnel:	Chief Scientist:			
Name	Watch	Cabin	Name	Watch
PETER CHANDLER	12-24	1	PETER CHANDLER	
BOB LINDSAY	24-12	1		
KOEN SCORACALA	12-24	3		
STEVE BANNICK	24-12	3		
ALIX LAMOREN	-	2		
STEPHANE CAUT	-	2		
HOLGA GALLAGHER	24-12	4		
FRANCESCA LOPO	12-24	4		

[illegible]

Primary CTD

Make: SBE model: 9+ serial number: 506

Primary temperature serial number: 2023

Primary conductivity serial number: 1763

Secondary temperature serial number: 5013

Secondary conductivity serial number: 3394

Transmissometer: Wetlabs Model: C-506r s/n: 1396 DR

Fluorometer: Model Seapoint Cable gain: 10x s/n: 3642 P, S or NO pump?

Oxygen sensor: SBE Model: 43 s/n: 071438 P, S or NO pump?

PAR sensor: BB1050A SERIAL Model: QSP200L45 s/n: 4615

Other sensors: pH s/n: 0691 P, S or NO pump?

Other sensors: surface PAR s/n: 16504 P, S or NO pump?

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

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

Make: _____ model: _____ serial number: _____

Primary temperature serial number: _____

Primary conductivity serial number: _____

Secondary temperature serial number: _____

Secondary conductivity serial number: _____

Transmissometer: _____ Model: _____ s/n: _____

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

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Month <u>Oct</u>				Year <u>2014</u>			Ship <u>VECTER</u>				Cruise ID <u>2014-50</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							
26	SI	2229	BE	ROS	US	1	48 39.58	123 29.96	175		1-9	9	PERFL	✓	
		2231	BO				39.61	29.95		100					
		2241	EN				39.63	29.95							
27	59	0053	BE	ROS	US	2	48 37.77	123 14.62	228		10-23		PERFL	✓	first cast →
		0059	BO				37.76	14.63		225					
		0115	EN				37.76	14.70							
27	60	0208	BE	ROS		3	48 33.87	123 12.79	293					✓	
		0215	BO				33.87	12.81		293					
		0221	EN				33.87	12.79							
27	61	0303	BE	ROS		4	48 29.18	123 9.27	279					✓	synthes on
		0310	BO				29.21	9.34		279					for cap on
		0316	EN				29.22	9.40							for transit ↓
27	102	1340	BE	ROS		5	48 30.052	124 44.069	253	247	24-30		SAL/MGL	✓	Dir's in top
		1353	BO				48 30.125	124 43.814					RL		yellow box
		1403	EN				48 30.361	124 43.506							
27	75	1500	BE	ROS		6	48 28.259	124 32.722	218	213	39-52			✓	oops, tripped
		1505	BO				48 28.297	124 32.653							bot 2 on way
		1520	EN				48 28.322	124 32.477							down → move all
															samples over by 1

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depart 15h00 26 Oct 2014

stopped to align wind - recover back to surface + restart - overwrite ~002.hox str

20	A	Start	End	Δ
	i	7:35		~7min
21	A			
	B			
22	A			
	B			

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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							
27	72	1736	BE	ROS		7	48 18.603	124 4.027	185	180	53-65	13	R.P. <u>KS</u>	✓	+phyto sample @ 5m →
		1740	BO				48 18.604	124 4.019							
		1753	EN				48 18.600	124 4.007							
27	69	2020	BE	ROS	US	8	48 15.29	123 43.00	172		66-77	12	R.P. <u>KS</u>	✓	integrity check okay
		2024	BO				15.26	43.00		170					
		2036	EN				15.24	43.00							
27	ADCP	2229	BE	ROS	US	9	48 14.01	123 17.95	120		78-87	10	R.P. <u>KS</u>	✓	
		2232	BO				14.02	17.88		115					
		2242	EN				14.03	17.91							
27	65	2325	BE	ROS	US	10	48 15.91	123 9.76	124		88-97	10	R.P. <u>KS</u>	✓	AIR TEMP 10.5 °C
		2327	BO				15.91	9.76		120					
		2338	EN				15.89	9.78							
28	62	0036	BE	ROS	US	11	48 22.84	123 2.59	146		98-108	11	R.P. <u>KS</u>	✓	
		0040	BO				22.87	2.62		143					
		0050	EN				22.90	2.59							
28	56	0536	BE	ROS	US	12	48 46.37	123 1.60	213		109-122	12	R.P. <u>KS</u>	✓	Truffle delay @ East Point
		0540	BO				46.34	1.66		208					
		0554	EN				46.19	1.91							

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Event 7.

This page is for any notes or observations

bottles 12 & 13 failed integrity test. Checked and replaced top O ring on 12. No damage noted on 13. Will continue to check on future casts

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Month <u>Oct</u>				Year <u>2014</u>			Ship <u>Vedder</u>			Cruise ID <u>2014-50</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							
28	46	0716	BE	ROS		13	48 51.394	123 10.820	186	178	123-134	12	SM/ALG-1	✓	☺
		0721	BO				48 51.350	123 10.820							
		0733	EN				48 51.326	123 10.733							
28	42	0915	BE	ROS		14	49 1.801	123 26.309	317	312	135-150	16	~	✓	☺
		0924	BO				49 1.823	123 26.315							
		0940	EN				49 1.888	123 26.261							
28	41	1047	BE	ROS		15	49 3.305	123 22.372	241	238	—	—	~	✓	No bottles!
		1052	BO				49 3.355	123 22.417							
		1057	EN				49 3.343	123 22.432							
28	41	1106	BO	NET		16	49 3.291	123 22.396	243	50			~		50-0
		1107	EN												
28	41	1120	BO	NET		17	49 3.474	123 22.436	243	235			~		235-0
		1124	EN												
28	39	1430	BE	ROS		18	49 9.872	123 33.065	376	370	151-167	17	~	✓	→
		1437	BO				49 9.976	123 33.055							
		1458	EN				49 10.050	123 33.044							
28	22	1925	BE	ROS		19	49 40.22	124 16.42	353		—			✓	
		1934	BO				40.19	16.47							
		1940	EN				40.23	16.46							

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Cable damaged due to much block slip $\rightarrow$ swap wires

Weather deteriorating - run for Halogina Street
gaining 50, seas from SE building

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Month <u>Oct</u>				Year <u>2014</u>				Ship <u>Vector</u>				Cruise ID <u>2014-50</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							
<u>28</u>	<u>NET 22</u>	<u>19 50</u>	<u>BO</u>	<u>NET</u>		<u>20</u>	<u>49 40.17</u>	<u>124 16.33</u>	<u>353</u>	<u>50</u>					<u>Scor 50-0</u>
		<u>19 51</u>	<u>EN</u>				<u>40.17</u>	<u>16.34</u>							
<u>28</u>		<u>20 08</u>	<u>BO</u>	<u>NET</u>		<u>21</u>	<u>49 40.15</u>	<u>124 16.33</u>	<u>353</u>	<u>345</u>					<u>Scor 345-0</u>
		<u>20 14</u>	<u>EN</u>				<u>40.09</u>	<u>16.34</u>							
<u>28</u>	<u>20</u>	<u>21 36</u>	<u>BE</u>	<u>ROS</u>		<u>22</u>	<u>49 47.19</u>	<u>124 32.34</u>	<u>315</u>				<u>RR</u>	<u>✓</u>	
		<u>21 42</u>	<u>BO</u>				<u>47.20</u>	<u>32.33</u>		<u>310</u>			<u>KS</u>		
		<u>21 47</u>	<u>EN</u>				<u>47.24</u>	<u>32.32</u>							<u>15, 16, 17</u>
<u>28</u>	<u>19</u>	<u>23 45</u>	<u>BE</u>	<u>ROS</u>		<u>23</u>	<u>50 1.10</u>	<u>124 52.81</u>	<u>267</u>						<u>top bottles @</u>
		<u>23 46</u>	<u>BO</u>				<u>1.10</u>	<u>83</u>		<u>10</u>					<u>10 m for video</u>
		<u>23 47</u>	<u>EN</u>				<u>1.10</u>	<u>83</u>							
<u>29</u>	<u>19</u>	<u>00 01</u>	<u>BE</u>	<u>ROS</u>		<u>24</u>	<u>50 1.10</u>	<u>124 52.96</u>	<u>262</u>						<u>13, 14, 15 Trip</u>
		<u>00 02</u>	<u>BO</u>				<u>1.10</u>	<u>52.97</u>		<u>5</u>					<u>5 m cast</u>
		<u>00 02</u>	<u>EN</u>				<u>1.10</u>	<u>52.97</u>							
<u>29</u>	<u>19</u>	<u>00 08</u>	<u>BE</u>	<u>ROS</u>		<u>25</u>	<u>50 1.12</u>	<u>124 52.97</u>	<u>278</u>						<u>bottom contact</u>
		<u>00 15</u>	<u>BO</u>				<u>01</u>	<u>92</u>		<u>272</u>					<u>maybe - no sign</u>
		<u>00 17</u>	<u>EN</u>				<u>.09</u>	<u>91</u>							<u>on route</u>
<u>29</u>	<u>18</u>	<u>01 09</u>	<u>BE</u>	<u>ROS</u>		<u>26</u>	<u>49 59.22</u>	<u>124 58.89</u>	<u>142</u>						
		<u>01 12</u>	<u>BO</u>				<u>59.22</u>	<u>58.87</u>		<u>130</u>					<u>weights on!</u>
			<u>EN</u>												<u>6-10</u>

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- shallow casts, 10m + 5 m, top 3 bottles each cast, videographer work

- altimeter not working during cast study at 6.7 m, - check chains when rosette recovered

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							Latitude	Longitude							
29	16	1536	BE	ROS	US	27	49 52.679	125 8.793	155	150	168-178	11	SMITH	✓	Camera crew filming with drone
		1542	BO				49 52.679	125 8.792							
		1554	EN				49 52.602	125 8.792							
29	14	1647	BE	ROS		28	49 53.033	124 59.597	316	311	179-193	15	u	✓	u u u u u
		1656	BO				49 53.017	124 59.590							
		1716	EN				49 53.020	124 59.597							
29	12	1910	BO	NET		29	49 43.62	124 40.89		50					
			EN												
29	12	1931	BO	NET		30	49 43.62	124 40.89	356	350					
		1937	EN												
29	12	1952	BE	ROS	US	31	49 43.592	124 40.859	356	351	194-208	16	SMITH	✓	Peter is on camera
		2002	BO				49 43.630	124 40.902							
		2021	EN				49 43.63	124 40.88							
29	9	2132	BE	ROS	US	32	49 35.45	124 38.33	170		210-221			✓	
		2137	BO				35 45	38 34		163		12			
		2150	EN				35.43	38.25							
29	6	2250	BE	ROS	US	33	49 30.58	124 27.82	193		222-234	13		✓	
		2255	BO				30.58	27.82		185					
		2308	EN				30.59	27.83							

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② station 16. Wind 30 kts, ebb current, seaslate from SE after blowing all day. station cast stopped, - even tide chains on side too high.

decide to anchor until 0600 tomorrow morning



- oxygen sensor reading about 1 ml/l lower than downcast from 200 m and above.

- replace bottle stops on #15, use material for bottles 24 + 23, now U/S

- oxygen sensor pump not blocked with hydroids (obelia) + Bryozoan colonies, neither Pennatulid + chunks of wood, evacuated using syringes
top bottle cap on bottle 5 triggered secured, compromised seal

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