

DAILY SCIENCE LOG BOOK

MISSION
NUMBER

2016-02

DATE:

From: March 9, 2016 to: March 14, 2016

VESSEL:

W.E. Ricker

PROJECT(S):

World Class - Douglas Channel

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

WaterProperties.ca

* my BE time = just prior to descent - does not include the 2min soak.

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Cast Type:

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USW = Sea Water Loop

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DRF = Drifter

Bottle Firing Method:

US = Up / Stop
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Notes:

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Transmissometer & Fluorometer are to be cleaned before each cast

Produced by the Water Properties Group, IOS

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Version: 7 July 2014

SI Sampling

6 bottles tripped for test - no sampling ∴ no ID assigned

183, 150, 100, 50, 35, 0

Cast 02 - weather wind - 1/2m seas

SC61 Bio grab = 409257 BIO I.D.

no sonar image w/ lab

Cast 002 7.493/29.255

- descent rate w/ top 20m about slow
- surface trips 1.00b - 1.5db

NMEA Clock vs Computer clock = computer 6min slower

x cast 004 - Bio will take surface bottle as bot 4 failed on last cast and they need more water — the failure was the bagyard got stuck on a nut so the science crew is watching out for this

cast 004 surf press = 1.80lb T 7.49 S 29.24
→ sewage release took place ~15 min before cast

12	12
NUT	018
SC61	SC61
2016-02	2016-02
Bot 6	Bot 6

Lost Samples

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Month <u>March</u>		Year <u>2016</u>		Ship <u>RICKER</u>		Cruise ID <u>2016-02</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							
6	FOC1	15:15	BE	NET	—	07	53 40.469	129 03.737	334		—				
		15:21	BO				53 40.469	129 03.737		250			B		250-0 VNH
		15:27	EN				53 43.680	129 02.715							
6	FOC1	15:54	BE	ROS	UP	08	53 43 715	129 2 554	334		13-18	6	CW		↖
		15:54	BO				53 43 768	129 2 557		20					0-20m then
		15:55	EN				53 43 776	129 2 564							up to 0 to
6	FOC1	16:06	BE	CABLE		09	53 43 78	129 2.607	351	50	—		CW		Sample
6	FOC1	16:31	BE	ROS	UP	10	53 43 76	129 2 644	350		19-24	6	CW		BIO cast
		16:33	BO				53 43 76	129 2 654		50					
		16:35	EN				53 43 76	129 2.659							
6	FOC1	17:01	BE	ROS	UP	11	53 43 75	129 2 56	352		25-30	6	CW		BIO WATER
		17:06	BO				53 43 75	129 2 60		200					CAST
		17:11	EN				53 43 74	129 2 64							
6	FOC1	17:55	BE	ROS	UP	12	53 43 75	129 2.58	352		31-33	6	CW		Bio water
		18:01	BO				53 43 74	129 2 585		345	+934,935,* 936				Cast - 3 bottles
		18:08	EN				53 43 74	129 2 60							at bottom - 5
6	FOC1	18:31	BE	ROS		013	53 43 74	129 2 59	352		34-39	6			105 cast
		18:39	BO				53 43 74	129 2 59		345					Tsurf 6.79
		18:50	EN				53 43 75	129 2 61							Bsurf 24.98

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March 6 weather - light winds, overcast, occasional rain

This page is for any notes or observations

© Cast 008 = 20m $\rightarrow$ 0 trip all six bottles at 0m.
009 = cable package deployment x 3 casts

010 cast = 0-50m cast BIO water: T 662.5 24.416
7.5m shift in most sensors

- possible waste discharge betw 0010 and 0011
- reduced soak time to 90s since the cond. cell should be wet

Cast 011 T_{surf} 6.59 S_{surf} 24.32, SBE43 seems a bit noisier in 30m-90m range

March 6 notice TSG had stopped recording - restarted.

Cast 012 - They added 3 extra bottles at last minute so appended their
ID's to 934, 935, 936 to not mess up the number sequence of the next
cast T_{surf} 6.73 S_{surf} 24.52

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							Latitude	Longitude							
6	FOCI	19:22	BO	GRAB	—	014	53 43.723	129 2.633	352	352	—		aw		
6	123	20:06	BO	GRAB		015	53 45.38	129 01.07	118		—		cw		
6	DOUG18	20:37	BE	CABLE	—	016	53 44.965	128 57.87	360	50	—		cw		
6	DOUG16	21:18	BE	CABLE		017	53 46.74	128 54.72	384	50			cw		
6	DEVIA	23 16	BE	ROS	—	018	53 35.01	129 51.19	154		—		cw		Tsurf 7.08-71
		23 19	BO				53 35.03	129 51.19		148			}		Ssurf 25.60
		23 22	EN				53 35.03	129 51.19							
7	DOUG4	0140	BO	GRAB	—	019	53 55.67	128 42.12	214		—				
		0202	BO	GRAB	—	020	53 55.71	128 42.04	214		—				
		0219	BO	GRAB	—	021	53 55.68	128 41.99	214		—				
		0234	BO	GRAB	—	022	53 55.65	128 41.98			—				
		0249	BO	GRAB		023	53 55.64	128 41.91							
7	FOCI	1510	BE	ROS	UP	024	53 43.80	129 2.59	350		40-45	6			surface cast
		15 11	BO				53 43.80	129 2.59		20					Tsurf Ssurf
		1513	EN				53 43.80	129 2.59					↓		7.15 27.37

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Evening weather; calm, rain has stopped.

* not sure how far or direction we are for the moorings because they are not showing waypoints on chart.

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							Latitude	Longitude							
7	DOUG4	1700	BE	ROS	UP	025	53 55.52	128 42.193	224		46-51	6	CW	✓	Bio cast
		1704	BO				53 55 55	128 42 182		218					
		1709	EN				53 55 54	128 42 158							
7	DOUG4	1715	BE	CABLE	—	026	53 55 64	128 42 23	223	50	—				
7	DOUG4	1736	BE	ROS	UP	027	53 55 61	128 42 22	224		52-57	6	CW	✓	105 cast
		1741	BO				53 55 61	128 42 21		217					Tsurf 6.7-6.8
		1749	EN				53 55 60	128 42 20							Ssurf 22.9
7	DOUG4	17:55	BE	NET	—	028	53 55 60	128 42 20	224						
		18:00	BO				53 55 60	128 42 21		150					
		18:05	EN				53 55 61	128 42 20							
7	118	18:34	BO	GRAB		029	53 54 042	128 41 08	87	87					Ches Bay Haller
7	119	19:00	BO	GRAB		030	53 54 90	128 41 84	222	222					Ches Bay Deep
7	120	19:55	BO	GRAB		031	53 54 07	128 45 43	117	117					
7	121	20:20	BO	GRAB		032	53 53 71	128 46 58	130	130					Easley, Car
7	DOUG6	21:00	BE	CABLE		033	53 54 10	128 47 30	263	50					
7	DOUG8	21:38	BE	CABLE		034	53 52 05	128 46 14	307	50					
7	DOUG11	22:23	BE	ROS	UP	035	53 49 76	128 49 35	332		58-63	6	CW	✓	Bio water
		22:29	BO				53 49 77	128 49 34		324					cast
		22:30	EN				53 49 74	128 49 38							Tsurf 6.7 Ssurf 23.9

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Tsurf 6.3 Ssurf 19.7

Cast 027 DO is rather noisy but SO₂ is trans

Chs Bay 118 - MT - too much bank carpet to penetrate - need a more powerful probe
- water was anoxic - thick bank debris on frame (cedar)

0035 @ >90m - the oxygen seems to swing around a bit but somewhat matching Temp
- same thing in 0037

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							Latitude	Longitude							
7	DOUG11	2241	BE	CABLE	—	036	53 48.72	128 49.404	326	50	—	—	CO	—	
7	DOUG11	2313	BE	ROS	UP	037	53 49.81	128 49.37	322		64-69	6	CO	✓	10S Cast
		2319	BO				53 49.79	128 49.40		318					Tsurf = 6.7
		2329	EN				53 49.76	128 49.38							Ssurf = 23.4
7	DOUG11	2342	BO	GRAB	—	038	53 49.72	128 49.35	330	330	—				
8	122	0012	BO	GRAB	—	039	53 49.92	128 57.32	302	302	—				Jesse Lake
8	125	0135	BO	GRAB	—	040	53 48.46	128 42.56	55	55					Eagle Bay Shallow
8	126	0148	BO	GRAB	—	041	53 48.488	128 42.72	116	116					E.B. deep
8	DOUG14	1510		CABLE	—	042	53 48.018	128 52.022	362						
8	DOUG16	1556	BE	ROS	UP	043	53 46.75	128 54.54	383		70-75	6	CO	✓	Tsurf = 6.0
		1603	BO				53 46.76	128 54.54		379					Ssurf = 23.8
		1610	EN				53 46.76	128 54.57							
8	DOUG16	16:24	BO	GRAB	—	044	53 46.77	128 54.58	383	383	—				
8	DOUG16	16:50	BE	ROS	UP	045	53 46.81	128 54.60	390		76-81	6	CO	✓	10S Cast
		1656	BO				53 46.83	128 54.59		384					Tsurf Ssurf
		1708	EN				53 46.84	128 54.59							6.4 24.7

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1600 March 8th tried to restart TEG - appended file name with a "b"
3man 206b here

0043 = BIO water cast
* 1.6 knots of current

betw casts we were forced to do a sewage dump
@ 16:42 ish - we will wait a bit for the current to
flush and proceed with 0045

0045 - bot 4 tripped by accident @ surface in discard the sample #79 = dead

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							Latitude	Longitude							
8	FOCI	1754	BE	ROS	UP	046	53 44.068	129 01.348	376		82-87	6	CD	✓	Tsurf 6.7 Ssurf 0.5.8
		1800	BO				53 44 076	129 01.327		369					
		1808	EN				53 44 122	129 01.224							
8	FOCI	1822	BO	GRAB	—	047	53 44 07	129 01.35	376		—	—			
8	DOUG26	1925	BE	CABLE	—	048	53 40.43	129 07.28	401	50	—				
8	DOUG26	2018	BE	ROS	UP	049	53 40 48	129 7 378	400		88-93	6	CD	✓	Tsurf 6.5 Ssurf 25.1
		2027	BO				53 40 486	129 7 385		394					BIO CO. 91
		2035	EN				53 40 483	129 7 396							
8	DOUG26	2047	BO	GRAB	—	050	53 40 483	129 07 404	401	401					
8	DOUG26	2113	BO	GRAB		051	53 40 489	129 07 421	400	400					
8	DOUG26	2140	BO	GRAB		052	53 40.493	129 7.353	401	401					
8	DOUG26	2201	BO	GRAB		053	53 40 465	129 7 342	401	401					
8	DOUG26	2220	BO	GRAB		054	53 40 446	129 7 331	401	401					
8	DOUG31	2318	BE	ROS	UP	055	53 36 53	129 12 83	280		94-99	6	CD	✓	BIO CAST
		2324	BO				53 36 53	129 12 82		273					Tsurf 6.7
			EN												Ssurf 0.22
9	117	00:30	BO	GRAB	—	056	53 30.732	129 13.796	312	312					

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Q: standard differential station

This page is for any notes or observations

due to current (??) Captain is keeping us away from FOCI mooring - more so than normal but for this cast it isn't critical

Just before deploying 046 - ship repositioned so a bit extra deck measurements

deck press = 0-0.02

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							Latitude	Longitude							
9	DOUG45	0141	BE	ROS	UP	057	53 22 35	129 11 75	461		100-105	6	CW	✓	Tsurf 7.05 Ssurf 28.1
		0150	BO				53 22 34	129 11 80		455					
		0159	EN				53 22 33	129 11 84							
9	DOUG45	0206	BE	CABLE		058	53 22 33	129 11 86	461	50			CW		
9	DOUG45	0228	BE	ROS	UP	059	53 22 30	129 11 96	455		106-111	6	CW		450m depth
		0236	BO				53 22 28	129 12 02		445					
		0248	EN				53 22 26	129 11 08							
9	DOUG45	0301	BO	GRAB	-	060	53 22 24	129 11 106	444						
9	KSK1	1514	BE	ROS	UP	061	53 28 26	129 12 43	382		112-117	6	CW		Tsurf 6.3 Ssurf 24.9
		1514	BO				53 28 27	129 12 44		20					
		1515	EN				53 28 28	129 12 44							
9	KSK1	1532	BE	CABLE	-	062	53 28 30	129 12 48	382	50					
9	KSK1	1559	BE	ROS	UP	063	53 28 24	129 12 55	384		118-123	6	CW		Tsurf 6.0 Ssurf 23.9
		1601	BO				53 28 25	129 12 57		50					
		1603	EN				53 28 26	129 12 58							
	KSK	1620	BE	GRAB	-	064	53 28 33	129 12 65	385	385			CW		

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2016-02

Trans. Cleaned	Comments
✓	T _{surf} 7.05 S _{surf} 28.1
	450m depth
	T _{surf} 6.3 S _{surf} 24.9
	T _{surf} 6.0 S _{surf} 23.9

meter are to be cleaned before each cast

This KSKI is well off the mooring 'C' deployment

air temp = 2.5 degrees SNOWING HEAVILY

1521 emergency sewage dump - pre cable deployment
1505 sewage discharge between 063 and 065

Wed an 1500 UTC - TSG restarted "C" amended to file

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							Latitude	Longitude							
9	KSKI	1749	BE	ROS	UP	65	53 28 30	129 12 56	385		124-129	6	CW	✓	T _{surf} = 6.4
		1753	BO				53 28 32	129 12 61		202					S _{surf} 25.2
		1800	EN				53 28 38	129 12 67							slight wire argb
9	KSKI	1821	BE	ROS	UP	066	53 28 27	129 12 48	385		130-135	6	CW	✓	
		1828	BO				53 28 32	129 12 51							
		1836	EN				53 28 40	129 12 53							
9	WC58	2018	BE	ROS	UP	067	53 13 34	129 07 31	504				CW	✓	T _{surf} = 7.06
		2027	BO				53 13 35	129 07 29		497				✓	S _{surf} = 27.97
		2035	EN				53 13 36	129 07 26							
9	WC58	20:51	BO	GRAB	-	068	53 13 34	129 07 20	504	504					
9	127	21:35	BO	GRAB		069	53 13 00	129 03 57	150	150					River Bight
9	UC52	23:15	BO	GRAB		070	53 19 09	128 51 71	516	516					MTI - hand bottom
10	128	1507	BO	GRAB		071	53 21 69	128 51 78	89	89					Goat Harb Shallow
	129	1536	BO	GRAB		072	53 21 01	128 53 54	232	232					Goat Harb Deep
	130	1651	BO	GRAB		073	53 28 35	128 51 39	198	198					Bishop Bay
MISSION COMPLETED															

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Notes:

lost roughly 1 hour due to ship teleconf. call.

Cast 065 - some wire angle due to current so @ bottle stops it slowly gets deeper.

Cast 067 Wc58 - took 5x bottles at bottom but this water is for preparing sediment traps, therefore no I.D. applied, not Che file required.

~ 00:00 UTC / 1600 local
restarted TSG "d" of 6.