

DAILY SCIENCE LOG BOOK

MISSION
NUMBER

2017-49

DATE:

From:

12 JUL 2017

To:

16 JUL 2017

VESSEL:

NEOCALIGUS

PROJECT(S):

SOG ZOOPLANKTON SURVEY

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

WaterProperties.ca

Captain: Rea First Officer: _____

Second Officer: _____ Third Officer: _____

Fishing Master: 2006 Chief Engineer: 2006

Mission Participants / Agencies:

**** Chief Scientist to complete section below OR cut and tape from cruise plan ****

1st Leg Scientific Personnel: Chief Scientist: Kelly Yan

Name	Watch	Cabin	Name	Watch	Cabin
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MAR 22 1961 7-7

2nd Leg Scientific Personnel: Chief Scientist: _____

Name	Watch	Cabin	Name	Watch	Cabin
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[illegible]

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100

1. *What is the purpose of this study?*

**** The following 3 pages are VERY IMPORTANT as they document equipment and settings used on board ****

These pages are to be completed by the CTD Technician setting up the equipment, the Watch Leader on board, and the Chief Scientist MUST verify that all relevant sections are completed prior to leaving the vessel. *Any mid-cruise changes to be noted by watch leader in the notes.*

Data logging computer: ACEL 1123

Data acquisition program: _____

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

Primary CTD

Make: SEABED model: 254 serial number: 25-1123

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 WCT LAS Cable gain: _____ s/n: 2241 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: _____ Surface PAR? Y / 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?

Secondary CTD

Make: SEABED model: 164 serial number: 1833441435

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?

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: _____ Surface PAR? Y / 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): ~ 1m

This also includes the bottle location above the CTD on non-rosette casts (e.g., W.E. Ricker)

Rosette Setup:

Number of bottles: _____
Manufacturer: _____
Volume of bottles (litres): _____

Winches:

1. Make: CHAR-LINN Model: _____ Serial #: 104-1143-006 Used for: CTD / WETS / BOTTLES
2. Make: _____ Model: _____ Serial #: _____ Used for: _____
3. Make: _____ Model: _____ Serial #: _____ Used for: _____

Comments on performance during cruise (comments should also be reflected in the post-cruise report):

Salinometer:

Make: _____ Model: _____ Serial Number: _____
Comments on performance during cruise (comments should also be reflected in the post-cruise report):

Oxygen Kit(s):

Make: _____ Model: _____ Kit Number: _____
Make: _____ Model: _____ Kit Number: _____
Comments on performance during cruise (comments should also be reflected in the post-cruise report):

Thermosalinograph System (SBE21):

Program: _____ Version: _____
Sampling interval (seconds): _____
Fluorometer sensor serial number: _____
Comments on performance during cruise (comments should also be reflected in the post-cruise report):

ADCP Setup:

Computer time zone: _____ User Exits: Name: _____ Exit points: _____
Sampling interval (sec): _____ Name: _____ Exit points: _____
Bin Length: (2^x): _____ Name: _____ Exit points: _____
Pulse Length: _____ Work File: _____
Buffer (bytes): _____
Gyro Offset: _____

Comments on performance during cruise (comments should also be reflected in the post-cruise report):

CTD Test Cast Information

Test Cast along side? Yes No

Comments

Test Cast in Saanich Inlet or other location? Yes No

Comments

CTD pressure reading on deck (db), before cast: _____ after cast: _____

Pumps working? Yes (0011) No (0010)

Secondary Temp - Primary Temp: _____
(Average from the mixed region)

Secondary Salinity - Primary Salinity: _____
(Average from the mixed region)

Additional Comments:

DAILY SCIENCE LOG

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Month	JULY	LOCAL	Year	2017	Vessel					NEOCALIGUS					Cruise ID					2017-49				
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information		Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments									
							Latitude	Longitude																
1	GE01	12	15:39	BE	CTD	MSG	49° 15.02	123° 44.92	400		1 -	1	MB	☒ ☒	DEEP SAL x2 1m above CTD									
			15:46	BO			49° 15.04	123° 44.88		390	-			☐ ☐										
			15:55	EN			49° 15.07	123° 44.83			-			☐ ☐										
2	GE01	12	15:59	BE	BOT	MSG	49° 15.08	123° 44.82	400	5	2 - 3	2	MB	☐ ☐	Om-Chl x2 + Phy #2 Sm-Chl x2 140ml									
3	GE01	12	16:07	BE	NET	-	49° 15.09	123° 44.82	400		-		MB	☐ ☐										
			16:15	BO			49° 15.14	123° 44.82		390	-			☐ ☐										
			16:23	EN			49° 15.16	123° 44.81			-			☐ ☐										
5	28	13	08:59	BO	CTD	-	49° 24.09	123° 45.39	134		-	-	MB	☐ ☒										
			09:01	BO			49° 24.08	123° 45.41		124	-			☐ ☐										
			09:03	EN			49° 24.05	123° 45.44			-			☐ ☐										
6	28	13	09:04	BE	NET	-	49° 24.03	123° 45.45	134	124	-	-	MB	☐ ☐										
			09:09	BO			49° 23.99	123° 45.51			-			☐ ☐										
			09:11	EN			49° 23.97	123° 45.53			-			☐ ☐										
4	HALIBUT Bank	13	08:25	BE	BOT	MSG	49° 20.45	123° 44.05	50	5	4 - 5	2	MB	☐ ☐	#4-Om-Chl x2 140 each ml #5-Sm-Chl x2 140 ml each									
7	24	13	10:56	BE	CTD	MSG	49° 30.32	124° 6.11	425		6 -	1	MB	☐ ☒	DEEP SAL x2 #6 1m 25m CTD									
			11:03	BO			49° 30.32	124° 6.15		415	-			☐ ☐										
			11:09	EN			49° 30.33	124° 6.23			-			☐ ☐										
							49° 30.33	124° 6.24			-			☐ ☐										
							°	°			-			☐ ☐										

Event Type:

BOT = Bottle cast (no CTD)
CTD = Standalone CTD
ROS = CTD in Rosette
SET = Fish Set

LOOP = Sea Water Loop

MOR = Mooring
NET = Plankton Net Haul
DRF = Drifter

Bottle Firing Method:

US = Up / Stop (default)
UN = Up / No stop
DN = Down / No stop

Time Code:

BE = Beginning Time of Cast
BO = Bottom Time of Cast
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CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

DE = Deployment Time

MR = Messenger Release Time

RE = Recover Mooring Time

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Notes:

DAY 1

START OF CRUISE, LOADED SHIP @ 0830. CREW WORKING ON REPLACING BATTERIES, GETTING CONSUMABLES. ALL TIMES RECORDED IN LOCAL. GOT UNDERWAY @ ~ 1430 LOCAL, MIX OF SUN AND CLOUD. SOUP + SANDWICH FOR CUNY.

FINISHED DAY @ GIBSONS @ ~ 1830, WENT TO GIBSONS TAPHOUSE, STORMREDER IPA NOT BAD.

START DAY 2 @ ~ 0700 OUT OF GIBSONS, SLIGHT OVERCAST, CALM

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Month <u>JULY</u>				Year <u>2017</u>		Vessel <u>NEOCALIGOS</u>				Cruise ID <u>2017-49</u>					
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
8	24	13	11:18	BE	NET	-	49° 30.33	124° 6.25	425		-	-	MB	☐	
			11:29	BO			49° 30.33	124° 6.31		415	-			☐	
			11:37	EW			49° 30.32	124° 6.31			-			☐	
9	IS-2	13	12:46	BE	CTD	-	49° 38.18	124° 4.99	30		-		MB	☒	
			12:47	BO			49° 38.18	124° 4.99		20	-			☐	
			12:47	EW			49° 38.18	124° 4.99			-			☐	
10	IS-2	13	12:49	BE	NET	-	49° 38.18	124° 4.99	30		-		MB	☐	
			12:50	BO			49° 38.18	124° 4.99		20	-			☐	
			12:50	EW			49° 38.18	124° 4.99			-			☐	
11	22	13	13:48	BE	CTD	-	49° 40.21	124° 16.34	353		-		MB	☒	
			13:53	BO			49° 40.22	124° 16.35		343	-			☐	
			14:00	EW			49° 40.23	124° 16.36			-			☐	
12	22	13	14:01	BE	NET	-	49° 40.23	124° 16.36	353		-		MB	☐	
			14:13	BO			49° 40.29	124° 16.39		343	-			☐	
			14:19	EW			49° 40.31	124° 16.39			-			☐	
13	11	13	16:50	BE	CTD		49° 42.43	124° 43.34	290		-		MB	☒	
			16:55	BO			49° 42.45	124° 43.29		280	-			☐	
			17:00	EW			49° 42.47	124° 43.25			-			☐	
14	11	13	17:02	BE	BOT		49° 42.48	124° 43.23	290	5	7-8	2	MB	☐	7 → On 2x41 + 14 8 → On 2x41

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Bottle Firing Method:

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Notes:

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Month <u>July</u>			Year <u>2017</u>		Vessel <u>NEOCALIGUS</u>		Cruise ID <u>2017-49</u>								
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information		Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
							Latitude	Longitude							
15	11	13	17:06	BE	NET	-	49° 42.50	124° 43.21	290		-	-	MB	☐	
			17:15	BO			49° 42.53	124° 43.12		280	-			☐	
			17:20	EN			49° 42.53	124° 43.12			-			☐	
16	BS-11	14	08:28	BE	CTD	-	49° 29.00	124° 45.96	58		-		MB	☐	☒
			08:29	BO			49° 28.99	124° 45.96		48	-			☐	
			08:30	EN			49° 28.99	124° 45.96			-			☐	
17	BS-11	14	08:31	BE	NET	-	49° 28.99	124° 45.96	58		-		MB	☐	
			08:33	BO			49° 28.99	124° 45.96		48	-			☐	
			08:34	EN			49° 28.98	124° 45.96			-			☐	
18	CPF2	14	09:50	BE	CTD	MSG	49° 28.06	124° 30.03	325		9	1	MB	☐	☒ DEEP SALTY 1m 240 CTD
			09:56	BO			49° 28.07	124° 30.00		315	-			☐	
			10:02	EN			49° 28.10	124° 29.96			-			☐	
19	CPF2	14	10:03	BE	NET	-	49° 28.12	124° 29.94	325		-			☐	
			10:15	BO			49° 28.13	124° 29.88		315	-			☐	
			10:21	EN			49° 28.14	124° 29.84			-			☐	
20	CPF1	14	12:13	BE	CTD	-	49° 21.78	124° 5.08	245		-	-	MB	☐	☒
			12:17	BO			49° 21.97	124° 5.10		235	-			☐	
			12:21	EN			49° 21.96	124° 5.12			-			☐	
			:				°	°			-			☐	

Event Type:

BOT = Bottle cast (no CTD)
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 DRF = Drifter
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Bottle Firing Method:

US = Up / Stop (default)
 UN = Up / No stop
 DN = Down / No stop

Notes:

Time Code:

BE = Beginning Time of Cast
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CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

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FINISH DAY 2 IN COMOX HARBOR.

START DAY 3 : OUT OF COMOX @ ~ 0700, CALM + S.W. WY

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Month <u>JULY</u>				Year <u>2017</u>		Vessel <u>NEOSCALOSUS</u>			Cruise ID <u>2017-49</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
21	CPE1	14	12:22	BC	NET	-	49° 21.96	124° 5.13	245		-	-	MB	☐ ☐	
			12:30	BC			49° 21.97	124° 5.19		235	-			☐ ☐	
			12:35	EN			49° 21.97	124° 5.22			-			☐ ☐	
22	40	14	15:13	BC	CTD	-	49° 8.67	123° 26.89	133		-	-	MB	☐ ☒	
			15:15	BO			49° 8.69	123° 36.91		123	-			☐ ☐	
			15:17	EN			49° 8.71	123° 36.91			-			☐ ☐	
23	40	14	15:18	BC	NET	-	49° 8.72	123° 36.92	133		-	-	MB	☐ ☐	
			15:23	BO			49° 8.75	123° 36.94		123	-			☐ ☐	
			15:25	EN			49° 8.77	123° 36.95			-			☐ ☐	
24	38	14	16:19	BC	CTD	MSG	49° 11.97	123° 26.72	300		10	1	MD	☐ ☒	DEEP SAL x2 1m above CTD
			16:24	BO			49° 12.01	123° 26.68		290	-			☐ ☐	
			16:31	EN			49° 12.08	123° 26.62			-			☐ ☐	
25	38	14	16:33	BC	NET		49° 12.10	123° 26.59	300		-		MB	☐ ☐	
			16:43	BO			49° 12.10	123° 26.52		290	-			☐ ☐	
			16:48	EN			49° 12.11	123° 26.50			-			☐ ☐	
26	41	14	17:53	BC	CTD		49° 3.36	123° 22.40	245		-			☐ ☒	
			17:57	BO			49° 3.38	123° 22.46		235	-			☐ ☐	
			18:00	EN			49° 3.40	123° 22.50			-			☐ ☐	
27	41	14	18:02	BC	BUT	MSG	49° 3.	123° 22.	245	5	11 - 12	2	MB	☐ ☐	140cc 0m - 2xCH1 + Ph4 #11 5m - 2xCH1 #12 140cc.

Event Type:

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Bottle Firing Method:

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Month <u>JULY</u>			Year <u>2017</u>			Vessel <u>NOGALIGUS</u>			Cruise ID <u>2017-49</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
28	41	14	18:05	BE	NET	-	49° 3' .42	123° 22' .58	245		-		MB	☐ ☐	
			18:13	BO			49° 3' .45	123° 22' .67		235	-			☐ ☐	
			18:17	EN			49° 3' .47	123° 22' .69			-			☐ ☐	
29	46	15	08:28	BE	CTD	-	48° 51' .39	123° 10' .77	176		-		MB	☐ ☒	
			08:30	BO			48° 51' .39	123° 10' .75		166	-			☐ ☐	
			08:33	EN			48° 51' .40	123° 10' .73			-			☐ ☐	
30	46	15	08:35	BE	NET	-	48° 51' .40	123° 10' .72	176		-		MB	☐ ☐	
			08:40	BO			48° 51' .39	123° 10' .71		166	-			☐ ☐	
			08:43	EN			48° 51' .39	123° 10' .70			-			☐ ☐	
31	59	15	11:18	BE	CTD		48° 36' .80	123° 14' .88	235		-		MB	☐ ☒	
			11:21	BO			48° 36' .80	123° 14' .88		215	-			☐ ☐	
			11:25	EN			48° 36' .74	123° 14' .84			-			☐ ☐	
32	59	15	11:27	BE	NET		48° 36' .72	123° 14' .80	235		-		MB	☐ ☐	
			11:34	BO			48° 36' .67	123° 14' .76		215	-			☐ ☐	
			11:38	EN			48° 36' .58	123° 14' .78			-			☐ ☐	
35	SC-04	15	14:31	BE	CTD		48° 43' .51	123° 25' .00	96		-		MB	☐ ☒	
			14:33	BO			48° 43' .52	123° 25' .98		80	-			☐ ☐	
			14:34	EN			48° 43' .52	123° 25' .97			-			☐ ☐	
36	SC-04	15	14:38	BE	BOT	MSC	48° 43' .52	123° 25' .97	96	5	13 - 14	2	MB	☐ ☐	40mL 9m → 2x CH1 + 14 245 140mL 5m → 2x CH1 #14

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*NOTE USE ON
 NEXT PAGE Before SC-04

ANCHORED OFF OF MAYNE ISLAND

DAY 4 START HEAD OUT ~ 0800, CLEAR, SUNNY & CALM.

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Month <u>JUL</u>			Year <u>2017</u>			Vessel <u>NEOCALICUS</u>			Cruise ID <u>2017-49</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
31	SC-04	15	14:38	BE	NET	-	48° 43.53	123° 24.94	96		-	-	MB	☐ ☐	
			14:41	BO			48° 43.53	123° 24.92		80	-			☐ ☐	
			14:43	EN			48° 43.54	123° 24.91			-			☐ ☐	
33	CBE2	15	13:36	BE	CTD	-	48° 44.20	123° 34.47	60		-	-	MB	☐ ☒	
			13:37	BO			48° 44.20	123° 34.47		55	-			☐ ☐	
			13:38	EN			48° 44.21	123° 34.50			-			☐ ☐	
34	CBE2	15	13:40	BE	NET	-	48° 44.22	123° 34.53	60		-	-	MB	☐ ☐	
			13:42	BO			48° 44.23	123° 34.54		55	-			☐ ☐	
			13:43	EN			48° 44.23	123° 34.53			-			☐ ☐	
38	GE-01	15	15:13	BE	CTD	-	48° 45.71	123° 2.57	65		-	-	MB	☐ ☒	
			15:14	BO			48° 45.70	123° 2.58		55	-			☐ ☐	
			15:15	EN			48° 45.67	123° 2.60			-			☐ ☐	
39	GE-01	15	15:16	BE	NET	-	48° 45.66	123° 2.62	65		-	-	MB	☐ ☐	
			15:18	BO			48° 45.64	123° 2.63		55	-			☐ ☐	
			15:19	EN			48° 45.64	123° 2.64			-			☐ ☐	
			:				° .	° .			-			☐ ☐	
			:				° .	° .			-			☐ ☐	
			:				° .	° .			-			☐ ☐	
			:				° .	° .			-			☐ ☐	

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This page is for any notes or observations

END OF DAY TIED UP IN CANCER HARBOUR