

DAILY SCIENCE LOG BOOK

MISSION
NUMBER

2014 -59

DATE:

From: Sept 27 2014 to: Oct 13, 2014

VESSEL:

CCGS VECTOR

PROJECT(S):

WC-DC

MEAD / IOS

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

2/2

WaterProperties.ca

Rosette Setup:

Number of bottles: _____

Manufacturer: _____

Volume of bottles (litres): _____

6
5
NOT IN USE

Winches:

1. Make: _____ Model: _____ Serial #: _____ Used for: _____
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):

~~small with bunch on small portside pad~~

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:

Captain: _____ First Officer: _____
Second Officer: _____ Third Officer: _____
Fishing Master: _____

Mission Participants / Agencies: _____

Scientific Personnel:

Name	Watch	Cabin	Name	Watch	Cabin
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

**** 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: Vector CTD

Data acquisition program: Seasave

CTD deck unit make: N/A model: _____ serial number: _____

Primary CTD

Make: SBE model: 25 serial number: 0404 + ECOSS

Primary temperature serial number: 4484

Primary conductivity serial number: 3184

Secondary temperature serial number: _____

Secondary conductivity serial number: _____

Transmissometer: Wetlabs Model: CSTAR s/n: 983DR

Transmissometer: _____ Model: _____ s/n: _____

Fluorometer: Model Wetlabs ECO Cable gain: 13 s/n: 2216 P, S or NO pump?

Fluorometer: Model _____ Cable gain: _____ s/n: _____ P, S or NO pump?

Oxygen sensor: SBE Model: 43 s/n: 0047 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?

+ Berthos Pinger

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: _____

Transmissometer: _____ Model: _____ s/n: _____

Fluorometer: Model _____ Cable gain: _____ s/n: _____ P, S or NO pump?

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month OCT				Year 2014			Ship VECTOR			Cruise ID 2014-59					
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							
08	WST 7	06:58	BE	CTD		78	53 21.516	129 18.143	434					✓✓	(16)-likely current pushing us around.
		07:07	BO				53 21.535	129 18.156		428					
		07:14	EN				53 21.553	129 18.160							
08	WST 8	07:30	BE	CTD		79	53 22.535	129 20.291	285					✓✓	(17)
		07:34	BO				53 22.559	129 20.297		230					
		07:38	EN				53 22.561	129 20.293							
08	WST 9	08:10	BE	CTD		80	53 20.148	129 19.103	494					✓✓	(18) 11.4V
		08:19	BO				53 20.148	129 19.102		470					W.L.
		08:27	EN				53 20.188	129 19.071							
08	WST 10	08:46	BE	CTD		81	53 18.514	129 19.055	316					✓✓	(19)
		08:53	BO				53 18.517	129 19.049		311					
		08:58	EN				53 18.515	129 19.059							
08	WST 11	09:15	BE	CTD		82	53 18.250	129 17.799	539						(20)
		09:24	BO				53 18.532	129 17.823		470					sorry - wire lined!
		09:31	EN				53 18.518	129 17.812							
08	WST 12	09:54	BE	CTD		83	53 20.318	129 16.270	477						(21)
		10:03	BO				53 20.292	129 16.297		470					W. L.
		10:10	EN				53 20.303	129 16.331							

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

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

Produced by the Water Properties Group, IOS

WaterProperties.ca
 Version: 06 March 2008

Continuation of Wright Sound gnd

THIS IS AN OLD LOG BOOK! Columns have been reordered

WST7 - sounder is quite jumpy by ± 6 m - wonder about bottom type - not usually this jumpy
- very close to bottom on sounder looking @ trace ✓

after WST8 - connect check if all recorded and battery voltage. 11.4V
↳ need to watch

WST8 - on on N end of sill.

Notice big depth difference betw WST 10 - 11 - big slope on this entrance
- WST 10 - bottom trace a bit jumpy so stayed conservative.

battery - down and check after WST 11 ✓ all casts are there $V = 11.0$ - one more cast

- will complete transect on next shift

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 2 of 4

Month <u>OCT</u>				Year <u>2014</u>			Ship <u>VECTOR</u>			Cruise ID <u>2014-59</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							
09	SC58	01:51	BE	CTD		84	53 16.555	129 25.551	530		9-9			✓✓	13.11 ✓ + bucket (22) ✓
		02:00	BO				53 16.556	129 25.548		470					W.L
		02:08	EN				53 16.554	129 25.543							
09	WST13	03:17	BE	CTD		85	53 19.851	129 13.952	438					✓✓	✓ (23)
		03:24	BO				53 19.860	129 13.956		433					
		03:32	EN				53 19.873	129 13.948							
09	WST14	03:51	BE	CTD		86	53 19.196	129 12.122	456					✓✓	✓ (24) Wkely some strongish current
		04:00	BO				53 19.211	129 12.126		451					
		04:07	EN				53 19.221	129 12.121							
09	WST15	04:20	BE	CTD		87	53 18.70	129 10.570	496					✓✓	✓ (25) W.L
		04:29	BO				53 18.707	129 10.559		470					W.L
		04:36	EN				53 18.735	129 10.551							
09	WST16	04:50	BE	CTD		88	53 17.811	129 09.391	512						✓ (26)
		04:59	BO				53 17.813	129 09.416		470					W.L
		05:06	EN				53 17.819	129 09.442							
09	WST17	05:42	BE	CTD		89	53 16.914	129 08.414	521						✓ (27)
		05:52	BO				53 16.936	129 08.459		470					W.L
		06:00	EN				53 16.936	129 08.470							

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

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

Produced by the Water Properties Group, IOS

WaterProperties.ca
Version: 06 March 2008

Wed

This page is for any notes or observations

Picked up SC58 before proceeding to finish Wright Sound transect
- Data from last night downloaded & batteries charged

scander for WST74 indicates we might have undershot by a couple metres

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month Oct				Year 2014			Ship VECTOR				Cruise ID 2014-59				
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							
09	WST18	06:18	BE	CTD		90	53 18.099	129 06.497	516					✓✓	(28) ✓
		06:30	BO				53 18.109	129 06.501		470					W.L.
		06:40	EN				53 18.099	129 06.486							
09	PBS23	07:43	BO	Grab		91	53 21.287	129 18 708	446	446					
09	PBS22	08:23	BO	Grab		92	53 22.158	129 16 066	102	102					
09	PBS24	09:02	BO	Grab		93	53 21.768	129 11 968	446	446					
09	PBS25	09:36	BO	Grab		94	53 24.124	129 12.296	421	421					
10	MR53	01:39	BE	CTD		95	53 18.303	129 04.247	487					✓✓	12 4V (29) ✓
		01:48	BO				53 18.292	129 04.213		432					a bit jumpy surfer
		01:55	EN				53 18 288	129 04.199							
10	MR55	02:13	BE	CTD		96	53 19.244	129 01.266	480					✓✓	lots of current (30) ✓
		02:23	BO				53 19 219	129 01 279		470					W.L.
		02:31	EN				53 19 249	129 01 283							
10	MR58	02:55	BE	CTD		97	53 18.076	128 57 083	484					✓/	(31)
		03:05	BO				53 18 084	128 57 111		470					W.L.
		03:13	EN				53 18 083	128 57 116							

Wright Sand Transect complete

Grabs in Support of PBS Habitat Classification

Thursday

McLay + Ursula - too windy on Prince
- lost night of work

wind is good
light misting

MR53 shallowing up during descent

- this location was slightly off planned original - I scooped the coordinates to the buoy.
but we'll keep it here. at this location.

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 4 of 4

Month <u>Oct</u>				Year <u>2014</u>			Ship <u>VECTOR</u>				Cruise ID <u>2014-59</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							
10	UC52	03:31	BE	CTD		98	53 19.104	128 54.673	510					✓✓	(32) ✓
		03:41	BO				53 19.089	128 54.662		470					W. L.
		03:48	EN				53 19.067	128 54.587							
10	UC50	04:08	BE	CTD		99	53 21.155	128 54.365	469					✓✓	outside Goat (33)
		04:17	BO				53 21.154	128 54.349		463					Harbour
		04:24	EN				53 21.137	128 54.360							(34) ✓
10	UC45	05:00	BE	CTD		100	53 25.969	128 55.560	387					✓✓	outside Bishop Bay
		05:08	BO				53 25.991	128 55.563		382					- sounder jumpy
		05:14	EN				53 26.007	128 55.553							✓
10	UC43	05:53	BE	CTD		101	53 29.041	128 58.657	106						(35)
		05:57	BO				53 29.026	128 58.673		100					
		05:59	EN				53 29.023	128 58.676							
10	FR53	07:32	BE	CTD		102	53 18.156	128 53.733	420					✓✓	(36) ✓ problems holding station?
		07:41	BO				53 18.137	128 53.473		406					~1.5 kt current
		07:48	EN				53 18.111	128 53.391							
10	FR56	08:04	BE	CTD		103	53 16.966	128 52.614	461						(37) ✓✓
		08:14	BO				53 16.959	128 52.592		435	See notes				again lots of current
		08:21	EN				53 16.922	128 52.684							
							DONE!!								

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

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

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

Notes:

Produced by the Water Properties Group, IOS

WaterProperties.ca
Version: 06 March 2008

312292

308418

This page is for any notes or observations

UC52 although the gain on the sonar is high - there is a significant scattering layer @ 100m

asked for 2 more stations to go into Fraser Reach, as we head back south.

UC50 - upper 50m strong scattering

UC45 - off Bishops Cove - just north of sill

- put on surface then ship had to do minor movements to avoid large debris in water

In FR⁵³ - very hard to tell hard bottom from a secondary layer - sonar scatter

- scattering layer @ 150m
 - 15 kts current pushing us off station

→ bottom really jumpy and suddenly shallowed up so got out - not sure if real or not

FR56 - scattering layer deeper ~ 200m.

- actual cast starts ~ 100m north of station ??

- lots of current, sonar bottom a bit jumpy

Mr. Sunders said 461 BUT bottom tracer suggest a quick shallowing up - ^{slow} reflectivity? and ship too jumpy