

# DAILY SCIENCE LOG BOOK

MISSION  
NUMBER

2010-57

DATE:

From:

SOG Moorings

to:

VESSEL:

VECTOR

PROJECT(S):

AMP/ERI

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

[WaterProperties.ca](http://WaterProperties.ca)

Captain: \_\_\_\_\_

Second Officer: \_\_\_\_\_

Fishing Master: \_\_\_\_\_

First Officer: \_\_\_\_\_

Third Officer: \_\_\_\_\_

Mission Participants / Agencies:

| Scientific Personnel: |       | Chief Scientist: |      | Sapho Johannesen |       |
|-----------------------|-------|------------------|------|------------------|-------|
| Name                  | Watch | Cabin            | Name | Watch            | Cabin |
| Cindy Wright          |       |                  |      |                  |       |
| Mary O'Brien          |       |                  |      |                  |       |
| Linda White           |       |                  |      |                  |       |
| Jane Spear            |       |                  |      |                  |       |
| Jan Bellman           |       |                  |      |                  |       |

## Second leg of Mission:

[illegible]

## Data logging computer:

**Data acquisition program:**

CTD deck unit make: 585 model: 4 serial number: 5735

## Primary CTD

Make: 5BE model: 9 serial number: \_\_\_\_\_  
 Primary temperature serial number: 4883  
 Primary conductivity serial number: 1763  
 Secondary temperature serial number: 2095  
 Secondary conductivity serial number: 2754  
 Transmissometer: \_\_\_\_\_ Model: \_\_\_\_\_

| Transmissometer:      | Model:    | s/n: |                  |
|-----------------------|-----------|------|------------------|
| Fluorometer: Model    | Seapoint  | 10   |                  |
| Oxygen sensor: SBE 47 | Model:    |      | P, S or NO pump? |
| PAR sensor:           | Model:    |      | P, S or NO pump? |
| Other sensors:        | altimeter |      | P, S or NO pump? |
| Other sensors:        | pressure  |      | P, S or NO pump? |
| Other sensors:        |           |      | P, S or NO pump? |
| Other sensors:        |           |      | 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: \_\_\_\_\_ 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?**

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):

**Rosette Setup:**

Number of bottles: 24

Manufacturer: puscollaneco

Volume of bottles (litres): 10L

**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):

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**Salinometer:**

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

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**Oxygen Kit(s):**

Make: None Model: \_\_\_\_\_ Kit Number: \_\_\_\_\_  
Make: \_\_\_\_\_ Model: \_\_\_\_\_ Kit Number: \_\_\_\_\_  
*Comments on performance during cruise* (comments should also be reflected in the post-cruise report):

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**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):

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**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):

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**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:*

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Aug 5, 2010 PDT

1445 Depart 105 - heading For SoGS

1757 On Station

Range B537 - 302 302

Move off to a safe distance

1805 B537 422 428

Release B538 - 438 received & executed

1807 - On Surface -

1837 - On Deck

*This page is for any notes or observations*



SoGN-G Mooring Recovery Aug 6, 2010 PDT

0808 - On Station  
- Send B533 323 322 322  
- Move Back to a safe distance

0814 - B533 - 393 396  
- move Further on  
- 435 436

0818 B534 - 441 Received & Executed

0819 - On Surface

## DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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| Month <u>August</u> |              |            | Year <u>2010</u> |           |               | Ship         |                        |             | Cruise ID    |           |                |              |               |                |                                                         |
|---------------------|--------------|------------|------------------|-----------|---------------|--------------|------------------------|-------------|--------------|-----------|----------------|--------------|---------------|----------------|---------------------------------------------------------|
| 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                   | FR57         | 0226       | BE               | ROS       |               | 1            | 49° 8.051              | 123° 26.182 | 280          | 275       | 1-2            | 2            |               | ✓              | 4.6 mab                                                 |
|                     |              | 0236       | BO               |           |               |              | 49° 8.046              | 123° 26.167 |              |           |                |              |               |                | O <sub>2</sub> FLASK # 2040                             |
|                     |              | 0242       | EN               |           |               |              | 49° 8.048              | 123° 26.160 |              |           |                |              |               |                |                                                         |
| 6                   | FR 1         | 0344       |                  | ROS       |               | 2            | 49° 6.779              | 123° 16.661 | 13           | Surface   | 3-4            | 2            |               |                | Do FLASK 1451 turbid water Nutre & DO                   |
| 6                   | FR 2         | 0430       |                  | ROS       |               | 3            | 49° 6.193              | 123° 18.079 | 14           | Surface   | 5-6            | 2            |               |                | Do FLASK 2059 Half pipette inconsistent 2 shots in FR 2 |
| 6                   | FR 3         | 0503       |                  | ROS       |               | 4            | 49° 6.218              | 123° 19.594 | 8.1          | Surface   | 7-8            | 2            |               |                | Do FLASK 3019                                           |
| 6                   | FR 4         | 0525       |                  | ROS       |               | 5            | 49° 6.690              | 123° 20.854 | 148          | Surface   | 9-10           | 2            |               |                |                                                         |
| 6                   | FR 5         | 0541       |                  | ROS       |               | 6            | 49° 7.051              | 123° 22.447 | 184          | Surface   | 11-12          | 2            |               |                | ★ Probably overwritten by Stn. 72                       |
| 6                   | FR 6         | 0604       |                  | ROS       |               | 7            | 49° 7.387              | 123° 23.845 | 212          | Surface   | 13-14          | 2            |               |                | ✓ Saved as event 6, overwriting previous                |
| 6                   | FR 8         | 0658       |                  | ROS       |               | 8            | 49° 8.701              | 123° 28.622 | 321          | Surface   | 15-16          | 2            |               |                | ✓ Bottle #1 didn't fire →                               |
| 6                   | FR 9         | 0720       |                  | ROS       |               | 9            | 49° 9.322              | 123° 30.924 | 348          | Surface   | 17-18          | 2            |               |                | ✓ Bottle #1 didn't fire →                               |
| 6                   | FR 10        | 0747       |                  | ROS       |               | 10           | 49° 9.900              | 123° 32.851 | 373          | Surface   | 19-20          | 2            |               |                | ✓ All 4 tripped; used #1+2 as planned.                  |
| 6                   | SOGN         | 1716       | BE               | ROS       |               | 11           | 49° 50.161             | 124° 52.016 | 334          | 330       | 21-44          | 24           |               |                | ★ Big electronic glitch. See Event 11                   |
|                     |              | 1725       | BO               |           |               |              | 49° 50.111             | 124° 52.109 |              |           |                |              |               |                |                                                         |
|                     |              | 1737       | EN               |           |               |              | No data                | No data     |              |           |                |              |               |                | ★ Note over page →                                      |
| 7                   | SOGN         | 07         | BE               |           |               | 12           |                        |             | 330          |           |                |              |               |                | Test Cast after re-soldering                            |
|                     |              | 0225       | BO               |           |               |              | 49° 49.699             | 124° 51.830 |              | 335       | 5 mab          |              |               |                | pin on slip-ring                                        |
|                     |              | 0232       |                  |           |               |              |                        |             |              |           |                |              |               |                | and re-greasing wetland                                 |
|                     |              |            |                  |           |               |              |                        |             |              |           |                |              |               |                | Seacalh                                                 |

## 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: 16 April 2010

21, 23 25 27 29 31 33 35 37 39 41 43  
45 47 49 51 53 55 57 59 61 63 65 67

This page is for any notes or observations

For all surface stations (FR1 - FR10)

Niskin #1

DO  
DIC/AIK  
Sal  
nuts

Niskin #2

PH  
DOC  
CDOM  
Si80  
POC

odd # niskins = odd # 'd samples

Event 8

cont → All samples taken from bottle 2.

Event 9

cont → Since Bottles 2, 3, 4 tripped, usual samples taken from bottle 2, but bottle 1 samples taken from bottle 3.

★ Event 11 note (Rosette cast @ SOGN).

★ Downcast line. On the way up, at 75m, all the electronic traces shot off in all directions, and the pressure/depth sensor stopped responding. We tripped the two 75m bottles & continued upwards, using the winch counter. The pressure sensor began to work again @ 50m but then stopped. The traces shot off in all directions; the screen began to flash quickly, and the deck unit began to emit piercing, high-pitched beeps periodically. The flashing & beeping continued for the rest of the cast, but we continued to collect water samples, relying on the winch counter for depth.

Dave Spear and Ian Beliveau identified the problem as a loose pin in the slipring at the winch. They soldered the pin into place as a temporary fix, but the problem was caused by a badly-designed guard around the slip-ring. This guard should be replaced as soon as possible.

Storage.

Fridge

DO  
DIC/AIK  
CDOM  
Si80  
POC

Freezer

DOC  
nuts.

room temp

Salinity.

PH (overnight if not meas.)

↓  
then heated to 25°C for analysis

SOGN Depths

Bottom - 2

250

200

150

100

75

50

25

15

10

5

0







- \* Cast #11 - CTD showed spikes on all channels. Cast was aborted & sea cable & slip ring connectors were examined. Slip ring 4-pin connector has previously been repaired and one pin appears loose - this slip ring should probably be repaired or replaced