# DAILY SCIENCE LOG BOOK

**MISSION NUMBER** 2014-26

**DATE:** From: 15 SEP 2014 to: 06 OCT 2014

**VESSEL:** W.E. RICKER

**PROJECT(S):** NEVILLE / Strait of Georgia Juvenile Salmon

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

WaterProperties.ca

Captain: Brian Pennell First Officer: Pete
Second Officer: Ryan Third Officer: —
Fishing Master: Brian West / Doug Murdoch

Mission Participants / Agencies: DFO

**Scientific Personnel:** Chief Scientist: Chrys Neville

| Name | Watch | Cabin | Name | Watch | Cabin |
|---|---|---|---|---|---|
| Svetlana Esenkulova | 16-20 SEP | | Dylan Conover | | |
| Julia Brodeur | | | Brian Recalma | | |
| Cassandra Storey | | | Cameron Freshwater | | |
| Taylor Nettles | | | | | |
| Carol Cooper | | | | | |
| Kelsey Flynn | | | | | |
| Claire Rycroft | | | | | |
| Mary Thiess | | | | | |
| Athesha Ogden | | | | | |
| Lindsey | | | | | |

**Second leg of Mission:** Chief Scientist: Mary Thiess 08, 11 OCT 2014

| Name | Watch | Cabin | Name | Watch | Cabin |
|---|---|---|---|---|---|
| Claire Rycroft | | | | | |
| | | | Dylan Conover | | |
| | | | John Morris | | |
| | | | Strahan Tucker | | |

**Data logging computer:** OSD Field Computer PAC02511.pac.dfo-mpo.ca
**Data acquisition program:** Seasave Version 7.22.4
CTD deck unit make: SBE model: 11plus serial number: 0424

**Primary CTD**
Make: SBE model: 9 serial number: 0550
Primary temperature serial number: 2710
Primary conductivity serial number: 2128
Secondary temperature serial number: 2374
Secondary conductivity serial number: 3396
Transmissometer: Model: s/n:
Fluorometer: Model WET Labs ECO-AFL/FL Cable gain: Dark offset 0.0185 Scale factor 1.26 s/n: 2215 **P, S** or **NO** pump?
Oxygen sensor: SBE Model: 43 s/n: 1176 **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?

**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):

*This page is for any notes or observations*

Note: Fish samples collected on this survey will be catalogued with the survey number SOG 2014-11 (Neville)

# DAILY SCIENCE LOG

## Ocean Sciences Division, Institute of Ocean Sciences



**Month** SEPTEMBER **Year** 2014 **Ship** W.E. RICKER **Cruise ID** 2014-26

| Day | Station Name | Time (UTC) | Time Code | Cast Type | Firing Method | Event Number | Positional Information Latitude | Positional Information Longitude | Bottom Depth | Max Depth | Sample Numbers | # of Bottles | Watch Keepers | Trans. Cleaned | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 17 | Set 1 | 14.14 | BE | SET | | 001 | 4855.352 | 123° 41.31 | 11 | | | | | | TRAWL - SURFACE |
| | | | | | | | | | | | | | | | |
| 17 | Set 2 | 15.06 | BE | CTD | — | 002 | 48° 57.061' | 123° 42.314' | 87.1 | | — | — | SE | ✓ | T: S: |
| | ↓ | 15.08 | BO | | | | 48° 57.035' | 123° 42.250' | | 80.0 | | | | | |
| | | 15.10 | EN | | | | 48° 57.061' | 123° 42.284' | | | | | | | |
| 17 | | 15.20 | BE | NET | | 003 | 48° 56.65 | 123° 41.31 | 90.0 | 80.0 | | | | | BONGO |
| 17 | ↓ | 15.40 | BE | SET | | 004 | 48° 57.70 | 123° 43.11 | 81 | | | | | | TRAWL |
| | | | | | | | | | | | | | | | |
| 17 | Set 3 | 19.15 | BE | SET | | 005 | 48° 43.466 | 123° 32.223 | 93.3 | | | | | | TRAWL |
| | | | | | | | | | | | | | | | |
| 17 | Set 4 | 19.43 | BE | CTD | — | 006 | 48° 42.634 | 123° 30.847 | 76.6 | | | | SE | | T: S: |
| | ↓ | 19.46 | BO | | | | 48° 42.640 | 123° 30.833 | | 70 | | | | | |
| | | 19.48 | EN | | | | 48° 42.644 | 123° 30.812 | | | | | | | freedrill at 1(PST) |
| 17 | | 20.47 | BE | NET | | 007 | 48° 43.41 | 123° 30.99 | 60 | 50 | | | | | BONGO |
| 17 | ↓ | 21.15 | BE | SET | | 008 | 48° 43.704 | 123° 31.603 | 63.1 | | | | | | TRAWL |
| | | | | | | | | | | | | | | | |
| 17 | Set 5 | 22.01 | BE | SET | | 009 | 48° 42.701 | 123° 27.681 | 62.1 | | | | | | TRAWL |
| 17 | Set 6 | 22.42 | BE | SET | | 010 | 48° 44.108 | 123° 24.433 | 65.4 | | | | | | TRAWL |
| 17 | Set 7 | 23.24 | BE | SET | | 011 | 48° 45.371 | 123° 22.032 | 54.2 | | | | | | TRAWL |

**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
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**Time Code:**
BE = Beginning Time of Cast
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**Transmissometer & Fluorometer are to be cleaned before each cast**

**Notes:** first cast at 7.57 but sustiane stopped archasing before pump was off
recast at 8.06

*Produced by the Water Properties Group, IOS*

**WaterProperties.ca**
**Version: 7 July 2014**

*This page is for any notes or observations*

→ Fire drill at 2000UTC

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Ocean Sciences Division, Institute of Ocean Sciences



**Month** SEPTEMBER **Year** 2014 **Ship** W.E. RICKER **Cruise ID** 2014-26

| Day | Station Name | Time (UTC) | Time Code | Cast Type | Firing Method | Event Number | Positional Information Latitude | Positional Information Longitude | Bottom Depth | Max Depth | Sample Numbers | # of Bottles | Watch Keepers | Trans. Cleaned | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | Set 8 | 01:13 | BE | SET | | 012 | 48°53.998 | 123° 18.901 | 132 | | | | | | TRAWL |
| | ↓ | | | | | | | | | | | | | | |
| 18 | | 01:52 | BE | CTD | | 013 | 48° 55.439 | 123° 22.214 | 163 | | | | SE | | the range on the screen 100m, cannot see below |
| | | 01:56 | BO | | | | 48° 55.440 | 123° 22.213 | | 153 | | | | | Short snap, going slowly |
| | | 01:59 | EN | | | | 48° 55.468 | 123° 22.241 | | | | | | | |
| 18 | ↓ | 02:06 | BE | NET | | 014 | 48° 55.472 | 123° 22.244 | 159 | 150 | | | | | BONGO |
| | | | | | | | | | | | | | | | end of the 17th day (PST time) |
| = END OF DAY | | | | | | | | | | | | | | | |
| 18 | Set 9 | 14:06 | BE | SET | | 015 | 50° 00.35' | 125° 06.97' | 173 | | | | | | TRAWL - SURFACE |
| | | | | | | | | | | | | | | | |
| 18 | Set 10 | 14:46 | BE | CTD | | 016 | 50° 2.424' | 125° 8.482' | 188 | | | | SE | V | (X) Started analysis at 20m depth (done ~~scanning results~~ from 100m to 200m) |
| | ↓ | 14:49 | BO | | | | 50° 2.455 | 125° 8.494' | | 181 | | | | | |
| | | 14:54 | EN | | | | 50° 2.443' | 125° 8.518 | | | | | | | |
| | | 15:02 | BE | NET | | 017 | 50° 2.441 | 125° 8.520' | 188 | 150 | | | | | BONGO |
| | ↓ | 15:27 | BE | SET | | 018 | 50° 03.41 | 125° 08.76' | 180 | | | | | | TRAWL |
| | | | | | | | | | | | | | | | |
| 18 | Set 11 | 16:18 | BE | SET | | 019 | 50° 07.33 | 125° 07.45 | 196 | | | | | | TRAWL |
| 18 | Set 12 | 17.07 | BE | SET | | 020 | 50° 09.35 | 125° 01.80 | 281 | | | | | | TRAWL |
| | ↓ | cont'd on next page | | | | | | | | | | | | | |
| | ↓ | | | | | | | | | | | | | | |

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**Notes:**

**Transmissometer & Fluorometer are to be cleaned before each cast**

*Produced by the Water Properties Group, IOS*

**WaterProperties.ca**
**Version: 7 July 2014**

This page is for any notes or observations

Set 10: Start archiving data command sent at ~20m on downcast.

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Ocean Sciences Division, Institute of Ocean Sciences



**Month** SEPTEMBER **Year** 2014 **Ship** WE RICKER **Cruise ID** 2014-26

| Day | Station Name | Time (UTC) | Time Code | Cast Type | Firing Method | Event Number | Positional Information Latitude | Positional Information Longitude | Bottom Depth | Max Depth | Sample Numbers | # of Bottles | Watch Keepers | Trans. Cleaned | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | Set 12 | 17.46 | BE | CTD | | 021 | 50°10.871' | 124° 59.821' | 571 | | | | SE | | T: S: |
| | ↓ | 17.51 | BO | | | | 50° 10.946' | 124° 59.788' | | 250 | | | | | |
| | | 17.56 | EN | | | | 50°10.984 | 124° 59.766 | | | | | | | |
| 18 | ↓ | 18.03 | BE | NET | | 022 | 50°10.992' | 124°59.67' | 588 | 150 | | | | | BONGO |
| | | | | | | | | | | | | | | | |
| 18 | Set 13 | 18.27 | BE | SET | | 023 | 50° 12.29 | 125° 00.25 | 507 | | | | | | TRAWL |
| 18 | Set 14 | 19.20 | BE | SET | | 024 | 50° 15.726 | 125° 00.640 | 505 | | | | | | TRAWL |
| 18 | Set 15 | 20.10 | BE | SET | | 025 | 50°18.751 | 125° 04.800 | 351 | | | | | | TRAWL |
| 18 | Set 16 | 21.17 | BE | SET | | 026 | 50°25.55 | 125° 04.621 | 656 | | | | | | TRAWL |
| 18 | Set 17 | 23.06 | BE | SET | | 027 | 50°29.274 | 125° 02.805 | 653 | | | | | | TRAWL |
| 18 | Set 18 | 23.02 | BE | SET | | 028 | 50°33.589 | 124°56.684 | 649 | | | | | | TRAWL |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| 18 | Set 19 | 23.45 | BE | SET | | 029 | 50°36.132 | 124°53.426 | 632 | | | | | | TRAWL |
| | | | | | | | | | | | | | | | |
| 19 | ↓ | 00.43 | BE | CTD | | 030 | 50°36.620' | 124°53.474' | 628 | | | | SE | | T: S: |
| | | 00.48 | BO | | | | 50°36.637 | 124°53.501 | | 250 | | | | | |
| | | 00.53 | EN | | | | 50°36.610 | 124°53.510 | | | | | | | |
| 19 | ↓ | 01.00 | BE | NET | | 031 | 50°36.600 | 124°53.512 | 628 | 150 | | | | | ~~sample chl~~ BONGO 2 bottles |

END OF DAY

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**Notes:** _____

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This page is for any notes or observations

Set 12: CTD consecutive number originally 0020, updated to 0021

Set 19: CTD consecutive number originally 0029, also updated to 0030.

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| Day | Station Name | Time (UTC) | Time Code | Cast Type | Firing Method | Event Number | Positional Information Latitude | Positional Information Longitude | Bottom Depth | Max Depth | Sample Numbers | # of Bottles | Watch Keepers | Trans. Cleaned | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 19 | Set 20 | 14:06 | BE | SET | | 032 | 50° 19.21 | 125°01.48 | 195 | | | | | | TRAWL |
| | | | | | | | | | | | | | | | |
| 19 | | 14:43 | BE | CTD | | 033 | 50°20.730 | 124° 59.002 | 441.9 | | | | SE | | T: 14.988 S: 24.28 |
| | | 14:47 | BO | | | | 50°20.743 | 124 59.006 | | 250 | | | | | |
| | | 14:52 | EN | | | | 50°20.761 | 124°58.991 | | | | | | | |
| 19 | | 14:58 | BE | NET | | 034 | 50°20.764 | 124 58.987 | 442 | 150 | | | | | BONGO |
| | | | | | | | | | | | | | | | |
| 19 | Set 21 | 15.27 | BE | SET | | 035 | 50°19.43 | 124°57.20 | 417 | | | | | | TRAWL |
| 19 | Set 22 | 16.11 | BE | SET | | 036 | 50° 18.39 | 124° 52.75' | 506 | | | | | | TRAWL |
| | | | | | | | | | | | | | | | |
| 19 | Set 23 | 17.40 | BE | SET | | 037 | 50°20.80 | 124° 45.08 | 505 | | | | | | TRAWL |
| | | | | | | | | | | | | | | | |
| 19 | | 18:19 | BE | CTD | | 038 | 50°21.487' | 124° 42.548' | 501 | | | | SE | | T: 14.2 S: 25.3 |
| | | 18:24 | BO | | | | 50°21.468' | 124° 42.590' | | 250 | | | | | |
| | | 18:28 | EN | | | | 50 21.458' | 124° 42.625' | | | | | | | |
| 19 | | 18:34 | BE | NET | | 039 | 50° 21.459 | 124° 42.631 | 501 | 150 | | | | | BONGO |
| | | | | | | | | | | | | | | | |
| 19 | Set 24 | 19:23 | BE | SET | | 040 | 50° 18.729' | 124° 43.308' | 387 | | | | | | TRAWL |
| 19 | Set 25 | 20.11 | BE | SET | | 041 | 50°16.850' | 124°38.854 | 717 | | | | | | TRAWL |

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**Month** SEPTEMBER **Year** 2014 **Ship** WE RICKER **Cruise ID** 2014-26

| Day | Station Name | Time (UTC) | Time Code | Cast Type | Firing Method | Event Number | Positional Information Latitude | Longitude | Bottom Depth | Max Depth | Sample Numbers | # of Bottles | Watch Keepers | Trans. Cleaned | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 19 | Set 26 | 21:03 | BE | SET | | 042 | 50°12.330' | 124°37.921' | 708 | | | | | | TRAWL |
| 19 | Set 27 | 22:06 | BE | SET | | 043 | 50°09.032' | 124°43.829' | 552 | | | | | | TRAWL |
| 19 | Set 28 | 22:50 | BE | SET | | 044 | 50°06.905' | 124°47.414 | 493 | | | | | | TRAWL |
| | | | | | | | | | | | | | | | |
| 19 | Set 29 | 23:42 | BE | SET | | 045 | 50°03.268' | 124°52.398' | 466 | | | | | | TRAWL |
| | | | | | | | | | | | | | | | |
| 20 | ↓ | 00:41 | BE | CTD | | 046 | 50°1.728' | 124°53.893 | 274 | | | | SE | | T: 16.6 S: 27.3 |
| | | 00:45 | BO | | | | 50°1.686' | 124°53.942 | | 250 | | | | | |
| | | 00:50 | EN | | | | 50°1.631 | 124°53.976 | | | | | | | |
| 20 | ↓ | 00:56 | DE | NET | | 047 | 50°1.625' | 124°53.980 | 277 | 150 | | | | | BONGO |
| END OF DAY | | | | | | | | | | | | | | | |
| SHIP MAIN ENGINE BREAK DOWN, RETURNING TO PBS | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| 28 | Set 30 | 1529 | BE | SET | | 048 | 49°29.581 | 124°03.186 | 150 | | | | | | TRAWL - SURFACE |
| | | | | | | | | | | | | | | | |
| 28 | Set 31 | 1627 | BE | CTD | | 049 | 49°33.401 | 124°05.004 | 212 | | | | MT | ✓ | T: S: |
| | ↓ | 1630 | BO | | | | 49°33.397 | 124°05.027 | | 202 | | | | | |
| | | 1634 | EN | | | | 49°33.392 | 124°05.044 | | | | | | | |
| 28 | ↓ cont'd | 1644 | BE | NET | | 050 | 49°33.409 | 124°05.174 | 209 | 150 | | | | | BONGO |

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**Notes:** _____

*Produced by the Water Properties Group, IOS*

**WaterProperties.ca**
**Version: 7 July 2014**

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Ocean Sciences Division, Institute of Ocean Sciences



**Month** SEPTEMBER **Year** 2014 **Ship** WE RICKER **Cruise ID** 2014-26

| Day | Station Name | Time (UTC) | Time Code | Cast Type | Firing Method | Event Number | Positional Information Latitude | Positional Information Longitude | Bottom Depth | Max Depth | Sample Numbers | # of Bottles | Watch Keepers | Trans. Cleaned | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 | Set 31 | 1702 | BE | SET | | 051 | 49° 34.06 | 124° 05.63 | 267 | | | | | | TRAWL-30m |
| — | AT ANCHOR FOR 6 HOURS TO REPAIR EXHAUST LEAK — | | | | | | | | | | | | | | |
| 28 | Set 32 | 2330 | BE | SET | | 052 | 49° 36.268 | 124° 06.256 | 267 | | | | | | TRAWL-SURFACE |
| | | | | | | | | | | | | | | | |
| 29 | Set 33 | 0046 | BE | SET | | 053 | 49° 39.380 | 124° 13.344 | 304 | | | | | | TRAWL-15m |
| | | | | | | | | | | | | | | | |
| 29 | | 0139 | BE | CTD | | 054 | 49° 41.929 | 124° 14.918 | 240 | | | | CR/MT | | T: 16.5 S: 26.5 |
| | | 0143 | BO | | | | 49° 41.930 | 124° 14.921 | | 230 | | | | | |
| | | 0148 | EN | | | | 49° 41.947 | 124° 14.960 | | | | | | | |
| 29 | | 0156 | BE | NET | | 055 | 49° 41.959 | 124° 15.037 | 243 | 150 | | | | | BONGO |
| = END OF DAY | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| 29 | Set 34 | 1412 | BE | SET | | 056 | 49° 45.97 | 124° 10.77 | 314 | | | | | | TRAWL-SURFACE |
| | | | | | | | | | | | | | | | |
| 29 | Set 35 | 1507 | BE | SET | | 057 | 49° 43.65 | 124° 16.796 | not recorded. | | | | | | TRAWL-SURFACE |
| | | | | | | | | | | | | | | | |
| 29 | Set 36 | 1608 | BE | SET | | 058 | 49° 45.33 | 124° 23.74 | 143 | | | | | | TRAWL-15m |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

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**WaterProperties.ca**
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→ Set 33. Fluctuating bottom depth due to position on ridge
Depth fluctuated from header information to actual CTD cast

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 29 | Set 37 | 1712 | BE | SET | | 059 | 49°45.20 | 124°29.98 | 200 | | | | | | TRAWL-30m |
| 29 | | 1808 | BE | CTD | | 060 | 49°46.661 | 124°33.389 | 295 | | | | CR | | T: 15.03 S: 27.4 |
| | | 1813 | BO | | | | 49°46.663 | 124°33.322 | | 280 | | | | | |
| | | 1818 | EN | | | | 49°46.670 | 124°33.286 | | | | | | | |
| 29 | | 1824 | BE | NET | | 061 | 49°46.691 | 124°33.247 | 311 | 150 | | | | | BONGO |
| | | | | | | | | | | | | | | | |
| 29 | Set 38 | 1847 | BE | SET | | 062 | 49°47.55 | 124°34.43 | 305 | | | | | | TRAWL-SURFACE |
| | | | | | | | | | | | | | | | |
| 29 | Set 39 | 2007 | BE | SET | | 063 | 49°52.509 | 124°41.550 | 146 | | | | | | TRAWL-SURFACE |
| | | | | | | | | | | | | | | | |
| 29 | Set 40 | 2058 | BE | SET | | 064 | 49°51.746 | 124°47.630 | 170 | | | | | | TRAWL-15m |
| | | | | | | | | | | | | | | | |
| 29 | Set 41 | 2151 | BE | SET | | 065 | 49°52.813 | 124°52.748 | 259 | | | | | | TRAWL-30m |
| 29 | | 2304 | BE | CTD | | 066 | 49°54.518 | 124°54.661 | 231 | | | | CR | | T: 15.2 S: 27.7 |
| | | 2308 | BO | | | | 49°54.542 | 124°54.608 | | 220 | | | | | |
| | | 2314 | EN | | | | 49°54.528 | 124°54.540 | | | | | | | |
| 29 | | 2321 | BE | NET | | 067 | 49°54.517 | 124°54.441 | 236 | 150 | | | | | BONGO + VIOC |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

**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:**
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**Transmissometer & Fluorometer are to be cleaned before each cast**

**Notes:** _____

*Produced by the Water Properties Group, IOS*

**WaterProperties.ca**
**Version: 7 July 2014**

→ SET 37; CTD 060 → Started archiving during calibration, missed the 250 max note, went to 280.

# DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences



**Month** SEPTEMBER **Year** 2014 **Ship** WE RICKER **Cruise ID** 2014-26

| Day | Station Name | Time (UTC) | Time Code | Cast Type | Firing Method | Event Number | Positional Information Latitude | Positional Information Longitude | Bottom Depth | Max Depth | Sample Numbers | # of Bottles | Watch Keepers | Trans. Cleaned | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 29 | SET 42 | 2343 | BE | SET | | 068 | 49°55.917 | 124°55.654 | 209 | | | | | | TRAWL-45m |
| 30 | SET 43 | 0055 | BE | SET | | 069 | 49°59.683 | 125°02.814 | 178 | | | | | | TRAWL-15m |
| == END OF DAY | | | | | | | | | | | | | | | |
| 30 | Set 44 | 1356 | BE | CTD | | 070 | 50°1.213 | 125°04.870 | 250 | | | | CR | | T: 15.1 S: 27.3 |
| | ↓ | 1401 | BO | | | | 50°1.172 | 125°04.873 | | 240 | | | | | |
| | | 1406 | EN | | | | 50°1.153 | 125°04.864 | | | | | | | |
| 30 | | 1418 | BE | NET | | 071 | 50°01.080 | 125°04.740 | 250 | 150 | | | | | BONGO |
| 30 | ↓ | 1458 | BE | SET | | 072 | 49°58.228 | 125°06.236 | 168 | | | | | | TRAWL-SURFACE |
| 30 | SET 45 | 1612 | BE | SET | | 073 | 49°56.34 | 124°58.78 | 176 | | | | | | TRAWL-30m |
| 30 | SET 46 | 1710 | BE | SET | | 074 | 49°54.46 | 125°03.14 | 248 | | | | | | TRAWL-SURFACE |
| 30 | SET 47 | 1810 | BE | SET | | 075 | 49°51.24 | 125°02.70 | 89 | | | | | | TRAWL-15m |
| | ↓ | 1900 | BE | CTD | | 076 | 49°49.669 | 125°00.078 | 94 | | | | CR | ✓ | T: 14.7 S: 27.8 |
| | | 1901 | BO | | | | 49°49.712 | 125°.00.113 | | 84 | | | | | |
| | ↓ cont'd | 1903 | EN | | | | 49°49.720 | 125°00.136 | | | | | | | |

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**Time Code:**
BE = Beginning Time of Cast
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**Notes:** _____

**Transmissometer & Fluorometer are to be cleaned before each cast**

*Produced by the Water Properties Group, IOS*

**WaterProperties.ca**
**Version: 7 July 2014**

→ Set 44: Archiving at 30m

Set 44 Bongo: Net became tangled – flowmeter side net wrapped over bongo frame. Non-flowmeter side not retained. Flowmeter side rinsed well and sampled.

# DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences



**Month** SEPT/OCT **Year** 2014 **Ship** WE RICKER **Cruise ID** 2014-26

| Day | Station Name | Time (UTC) | Time Code | Cast Type | Firing Method | Event Number | Positional Information Latitude | Positional Information Longitude | Bottom Depth | Max Depth | Sample Numbers | # of Bottles | Watch Keepers | Trans. Cleaned | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 30 | SET47 | 1911 | BE | NET | | 077 | 49°49.731 | 125°00.202 | 87 | 77 | | | CR | | Bongo - UNH |
| 30 | Set 48 | 1928 | BE | SET | | 078 | 49°48.833 | 124°59.426 | 67 | | | | | | TRAWL-SURFACE |
| 30 | Set 49 | 2120 | BE | SET | | 079 | 49°47.226 | 124°54.395 | 91 | | | | | | TRAWL-15m |
| 30 | Set 50 | 2203 | BE | SET | | 080 | 49°49.082 | 124°53.070 | 280 | | | | | | TRAWL-60m |
| 30 | Set 51 | 2323 | BE | SET | | 081 | 49°49.219 | 124°45.255 | 209 | | | | | | TRAWL-15m |
| = END OF DAY [CREW CHANGE @ COMOX] | | | | | | | | | | | | | | | |
| 01 | Set 52 | 1407 | BE | SET | | 082 | 49°07.63 | 123°36.00 | 205 | | | | | | TRAWL-SURFACE |
| | ↓ | 1458 | BE | CTD | | 083 | 49°06.1391 | 123°31.661 | 300 | | | | CR | | T: 14.2 S: 25.9 |
| | | 1503 | BO | | | | 49°06.110 | 123°31.700 | | 250 | | | | | |
| | | 1507 | EN | | | | 49°06.076 | 123°31.754 | | | | | | | |
| | | 1518 | BE | NET | | 084 | 49°06.021 | 123°31.836 | 292 | 150 | | | | | Bongo - UNH |
| 01 | SET53 | 1540 | BE | SET | | 085 | 49°05.45 | 123°31.49 | 310 | | | | | | TRAWL-30m |
| 01 | SET54 | 1653 | BE | SET | | 086 | 49°09.86 | 123°30.75 | 277 | | | | | | TRAWL-60m |

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**Notes:** _____

**Transmissometer & Fluorometer are to be cleaned before each cast**

*Produced by the Water Properties Group, IOS*

**WaterProperties.ca**
**Version: 7 July 2014**

*This page is for any notes or observations*

Set 52 (NET) - BONGO cod ends very full. Spill over into buckets was included in sample

# DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences



**Month** October **Year** 2014 **Ship** W.E. Ricker **Cruise ID** 2014-26

| Day | Station Name | Time (UTC) | Time Code | Cast Type | Firing Method | Event Number | Positional Information Latitude | Positional Information Longitude | Bottom Depth | Max Depth | Sample Numbers | # of Bottles | Watch Keepers | Trans. Cleaned | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | SET55 | 1817 | BE | SET | | 087 | 49°07.21 | 123° 19.42 | 93 | | | | | | TRAWL-SURFACE |
| | ↓ | 1905 | BE | CTD | | 088 | 49° 10.012 | 123°18.611 | 108 | | | | CR | | T: 11.6 S: 28.4 |
| | | 1907 | BO | | | | 49°9.995 | 123°18.582 | | 98 | | | | | |
| | | 1909 | EN | | | | 49°9.973 | 123°18.534 | | | | | | | |
| | ↓ | 1916 | BE | NET | | 089 | 49°09.886 | 123°18.450 | 102 | 92 | | | | | BONGO |
| | | | | | | | | | | | | | | | |
| 01 | SET56 | 1935 | BE | SET | | 090 | 49° 09.875 | 123°18.352 | 96 | | | | | | TRAWL-SURFACE |
| | | | | | | | | | | | | | | | |
| 01 | SET57 | 2029 | BE | SET | | 091 | 49°12.288 | 123°18.284 | 102 | | | | | | TRAWL-15m |
| | | | | | | | | | | | | | | | |
| 01 | SET58 | 2216 | BE | SET | | 092 | 49°22.022 | 123°26.332 | | | | | | | TRAWL-30m |
| | | | | | | | | | | | | | | | |
| 02 | SET59 | 2322 | BE | SET | | 093 | 49°25.088 | 123°25.557 | 182 | | | | | | TRAWL-SURFACE |
| | ↓ | 0005 | BE | CTD | | 094 | 49° 25.290 | 123°22.158 | 246 | | | | CR | | T: 15.4 S: 24.3 |
| | | 0009 | BO | | | | 49° 25.274 | 123° 22. 174 | | 236 | | | | | |
| | | 0014 | EN | | | | 49°25.266 | 123° 22. 188 | | | | | | | |
| | ↓ | 0022 | BE | NET | | 095 | 49°25.243 | 123°22.227 | 245 | 150 | | | | | BONGO |
| | | | | | | | | | | | | | | | |
| 02 | SET60 | — | BE | SET | | 096 | — | — | | | | | | | TRAWL-15m |

END OF DAY

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**Notes:** _____

*Produced by the Water Properties Group, IOS*

**WaterProperties.ca**
**Version: 7 July 2014**

*This page is for any notes or observations*

Set 60: Trawl aborted due to trawl eye malfunction.

# DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences



**Month** OCTOBER **Year** 2014 **Ship** WE RICKER **Cruise ID** 2014-26

| Day | Station Name | Time (UTC) | Time Code | Cast Type | Firing Method | Event Number | Positional Information Latitude | Positional Information Longitude | Bottom Depth | Max Depth | Sample Numbers | # of Bottles | Watch Keepers | Trans. Cleaned | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 02 | Set 61 | 1408 | BE | SET | | 097 | 49°24.85 | 123°17.68 | 239 | | | | | | TRAWL - 15m |
| | | | | | | | | | | | | | | | |
| 02 | Set 62 | 1508 | BE | SET | | 098 | 49°21.91 | 123°18.95 | 225 | (End depth) | | | | | TRAWL - Surface |
| | | | | | | | | | | | | | | | |
| 02 | Set 63 | 1555 | BE | SET | | 099 | 49°18.72 | 123°22.24 | 243 | | | | | | TRAWL - Surface |
| | ↓ | 1649 | BE | CTD | | 100 | 49°16.808 | 123°25.792 | 148 | | | | CR | | T: 13.9 S: 22.0 |
| | | 1652 | BO | | | | 49°16.819 | 123°25.801 | | 138 | | | | | |
| | | 1654 | EN | | | | 49°16.830 | 123°25.790 | | | | | | | |
| | ↓ | 1704 | BE | NET | | 101 | 49°16.862 | 123°25.823 | 148 | 138 | | | | | Bongo - VNH |
| | | | | | | | | | | | | | | | |
| 02 | Set 64 | 1725 | BE | SET | | 102 | 49°15.48 | 123°27.27 | 245 | | | | | | TRAWL - 30m |
| | | | | | | | | | | | | | | | |
| 02 | Set 65 | 1825 | BE | SET | | 103 | 49°13.30 | 123°31.41 | 343 | | | | | | TRAWL - 15m |
| | ↓ | 1915 | BE | CTD | | 104 | 49°11.752 | 123°34.312 | 346 | | | | CR | | T: 14.7 S: 25.0 |
| | | 1920 | BO | | | | 49°11.759 | 123°34.272 | | 250 | | | | | |
| | | 1925 | EN | | | | 49°11.765 | 123°34.214 | | | | | | | |
| | ↓ | 1933 | BE | NET | | 105 | 49°11.78 | 123°34.113 | 245 | 150 | | | | | Bongo - VNH |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

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**Notes:** _____

**Transmissometer & Fluorometer are to be cleaned before each cast**

*Produced by the Water Properties Group, IOS*

**WaterProperties.ca**
**Version: 7 July 2014**

Set 61: Complete area that was to have been covered by Set 60.

Set 63: CG Hovercraft came along side during tow to pick up fire pump parts for repair.

Set 65: Archiving started at 20m. Header states 360m, by deployment deph = 346. Large sample resulted in overflow into bucket. Contents put through 0.25mm sieve and included in preserved sample. Also contents for frozen sample processed with 0.5, 1.7, 1.0 and 0.25 mm sieve and added to sample.

# DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences



**Month** October **Year** 2014 **Ship** W.E. Ricker **Cruise ID** 2014-26

| Day | Station Name | Time (UTC) | Time Code | Cast Type | Firing Method | Event Number | Positional Information Latitude | Positional Information Longitude | Bottom Depth | Max Depth | Sample Numbers | # of Bottles | Watch Keepers | Trans. Cleaned | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 02 | SET66 | 1952 | BE | SET | | 106 | 49° 11.519 | 123° 35.590 | 383 | | | | | | TRAWL - SURFACE |
| 02 | SET67 | 2048 | BE | SET | | 107 | 49° 10.596 | 123° 40.024 | 211 | | | | | | TRAWL - 60m |
| 02 | SET68 | 2146 | BE | SET | | 108 | 49° 12.600 | 123° 45.128 | 152 | | | | | | TRAWL - 15m |
| 02 | SET69 | 2244 | BE | SET | | 109 | 49° 14.560 | 123° 47.625 | 371 | | | | | | TRAWL - 15m |
| | ↓ | 2337 | BE | CTD | | 110 | 49° 16.414 | 123° 42.966 | 348 | | | | CR | | T: 15.1 S: 26.3 |
| | | 2342 | BO | | | | 49° 16.412 | 123° 42.912 | | 250 | | | | | |
| | | 2346 | EN | | | | 49° 16.411 | 123° 42.767 | | | | | | | |
| | ↓ | 2353 | BE | NET | | 111 | 49° 16.423 | 123° 42.576 | 325 | 150 | | | | | Bongo - VNH |
| 03 | Set70 | 0038 | BE | SET | | 112 | 49° 17.018 | 123° 41.497 | 320 | | | | | | TRAWL - 45m |
| = END OF DAY | | | | | | | | | | | | | | | |
| 03 | Set71 | 1404 | BE | SET | | 113 | 48° 50.67 | 123° 10.81 | 171 | | | | | | TRAWL - surface |
| 03 | Set72 | 1504 | BE | SET | | 114 | 48° 52.018 | 123° 07.786 | 137 | | | | | | TRAWL - 30m |
| | ↓ continued | | | | | | | | | | | | | | |

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**Notes:** _____

*Produced by the Water Properties Group, IOS*

**WaterProperties.ca**
**Version: 7 July 2014**

Set 69 - lat/long recorded at 120m → (last two digits of the seconds recorded at 120)

# DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences



**Month** October **Year** 2014 **Ship** W.E. Ricker **Cruise ID** 2014-26

| Day | Station Name | Time (UTC) | Time Code | Cast Type | Firing Method | Event Number | Positional Information Latitude | Positional Information Longitude | Bottom Depth | Max Depth | Sample Numbers | # of Bottles | Watch Keepers | Trans. Cleaned | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 03 | Set 72 | 1606 | BE | CTD | | 115 | 48°49.163 | 123°03.710 | 172 | | | | CR | | T: 13.5 S: 24.0 |
| | ↓ | 1609 | BO | | | | 48°49.196 | 123°03.691 | | 162 | | | | | |
| | | 1612 | EN | | | | 48°49.207 | 123°03.702 | | | | | | | |
| | ↓ | 1621 | BE | NET | | 116 | 48°49.260 | 123°03.699 | 177 | 150 | | | | | Bongo - VNTH |
| | | | | | | | | | | | | | | | |
| 03 | Set 73 | 1644 | BE | SET | | 117 | 48°48.87 | 123°06.13 | 148 | | | | | | TRAWL - SURFACE |
| | | | | | | | | | | | | | | | |
| 03 | Set 74 | 1741 | BE | SET | | 118 | 48°50.94 | 123°12.15 | 103 | | | | | | TRAWL - 15m |
| | | | | | | | | | | | | | | | |
| 03 | Set 75 | 1856 | BE | CTD | | 119 | 48°54.232 | 123°18.330 | 149 | | | | CR | | T: 12.9 S: 28.0 |
| | ↓ | 1858 | BO | | | | 48°54.265 | 123°18.380 | | 139 | | | | | |
| | | 1901 | EN | | | | 48°54.282 | 123°18.433 | | | | | | | |
| 03 | | 1907 | BE | NET | | 120 | 48°54.361 | 123°18.514 | 149 | 139 | | | | | Bongo - VNTH |
| 03 | ↓ | 1928 | BE | SET | | 121 | 48°54.123 | 123°19.088 | 137 | | | | | | TRAWL - 60m |
| | | | | | | | | | | | | | | | |
| 03 | Set 76 | 2024 | BE | SET | | 122 | 48°55.697 | 123°23.826 | 86 | | | | | | TRAWL - 15m |
| | | | | | | | | | | | | | | | |
| 03 | Set 77 | 2118 | BE | SET | | 123 | 48°57.440 | 123°28.356 | 72 | | | | | | TRAWL - SURFACE |
| | | | | | | | | | | | | | | | |

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**Notes:** _____

*Produced by the Water Properties Group, IOS*

**WaterProperties.ca**
**Version: 7 July 2014**

Set 72: Vessel manouver resulted in depth change. Header recorded as 200m, deployment ~ 172

# DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences



**Month** October **Year** 2014 **Ship** W.E. Ricker **Cruise ID** 2014-26

| Day | Station Name | Time (UTC) | Time Code | Cast Type | Firing Method | Event Number | Positional Information Latitude | Positional Information Longitude | Bottom Depth | Max Depth | Sample Numbers | # of Bottles | Watch Keepers | Trans. Cleaned | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 03 | Set 78 | 2213 | BE | SET | | 124 | 48°59.660 | 123°31.044 | 126 | | | | | | TRAWL-45m |
| | | | | | | | | | | | | | | | |
| 03 | Set 79 | 2308 | BE | SET | | 125 | 49°02.532 | 123°34.733 | 153 | | | | | | TRAWL-SURFACE |
| 04 | | 0028 | BE | CTD | | 126 | 49°05.742 | 123°37.319 | 159 | | | | CR | | T:14.5 S:25.8 |
| | | 0031 | BO | | | | 49°05.772 | 123°37.340 | | 149 | | | | | |
| | | 0033 | EN | | | | 49°05.780 | 123°37.343 | | | | | | | |
| 04 | | 0041 | BE | NET | | 127 | 49°05.769 | 123°37.289 | 159 | 149 | | | CR | | Bongo-VNH |
| | | | | | | | | | | | | | | | |
| 04 | Set 80 | 0101 | BE | SET | | 128 | 49°06.583 | 123°37.357 | 186 | | | | | | TRAWL-30m |
| =END OF DAY | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| 04 | Set 81 | 1404 | BE | SET | | 129 | 49°43.70 | 124°40.57 | 354 | | | | | | TRAWL-SURFACE |
| | | 1453 | BE | CTD | | 130 | 49°42.103 | 124°44.411 | 189 | | | | CR | | T: 12.9 S: 28.6 |
| | | 1456 | BO | | | | 49°42.089 | 124°44.447 | | 179 | | | | | |
| | | 1459 | EN | | | | 49°42.074 | 124°44.484 | | | | | | | |
| | | 1509 | BE | NET | | 131 | 49°42.054 | 124°44.567 | 190 | 150 | | | CR | | Bongo-VNH |
| | | | | | | | | | | | | | | | |
| 04 | Set 82 | 1530 | BE | SET | | 132 | 49°42.013 | 124°44.315 | 250 | | | | | | TRAWL-30m |
| | | | | | | | | | | | | | | | |

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**Transmissometer & Fluorometer are to be cleaned before each cast**

**Notes:** _____

*Produced by the Water Properties Group, IOS*

**WaterProperties.ca**
**Version: 7 July 2014**

Set 79: Header 137 → depth at deployment:

# DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences



**Month** OCTOBER **Year** 2014 **Ship** WERICKER **Cruise ID** 2014-26

| Day | Station Name | Time (UTC) | Time Code | Cast Type | Firing Method | Event Number | Positional Information Latitude | Positional Information Longitude | Bottom Depth | Max Depth | Sample Numbers | # of Bottles | Watch Keepers | Trans. Cleaned | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 04 | Set 83 | 1636 | BE | SET | | 133 | 49°39.61 | 124°49.63 | 75 | | | | | | TRAWL - 15m |
| 04 | Set 84 | 1733 | BE | SET | | 134 | 49°36.50 | 124°46.65 | 82 | | | | | | TRAWL - SURFACE |
| 04 | Set 85 | 1835 | BE | SET | | 135 | 49°35.73 | 124°41.96 | 124 | | | | | | TRAWL - 45m |
| 04 | ↓ | 1926 | BE | CTD | | 136 | 49°38.119 | 124°40.454 | 112 | | | | CR | | T: 13.2 S: 28.3 |
| | | 1928 | BO | | | | 49°38.126 | 124°40.440 | | 102 | | | | | |
| | | 1930 | EN | | | | 49°38.136 | 124°40.400 | | | | | | | |
| 04 | ↓ | 1936 | BE | NET | | 137 | 49°38.177 | 124°40.341 | 106 | 96 | | | CR | | Bongo - VNH |
| 04 | Set 86 | 1950 | BE | SET | | 138 | 49°40.188 | 124°40.178 | 189 | | | | | | TRAWL-SURFACE |
| 04 | Set 87 | 2057 | BE | SET | | 139 | 49°42.624 | 124°38.450 | 345 | | | | | | TRAWL - 15m |
| 04 | Set 88 | 2153 | BE | SET | | 148* | 49°40.027 | 124°33.175 | 256 | | | | | | TRAWL-SURFACE |
| 04 | Set 89 | 2235 | BE | SET | | 140 | 49°37.626 | 124°28.800 | 335 | | | | | | TRAWL-SURFACE |
| 04 | Set 90 | 2336 | BE | SET | | 141 | 49°34.911 | 124°23.821 | 216 | | | | | | TRAWL - 15m |

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**Version: 7 July 2014**

Set 88: Hauled back early for humpbacks, set did not receive event # until the next day.

# DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences



**Month** October **Year** 2014 **Ship** W.E. Ricker **Cruise ID** 2014-26

| Day | Station Name | Time (UTC) | Time Code | Cast Type | Firing Method | Event Number | Positional Information Latitude | Positional Information Longitude | Bottom Depth | Max Depth | Sample Numbers | # of Bottles | Watch Keepers | Trans. Cleaned | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 05 | Set 91 | 0054 | BE | SET | | 142 | 49°33.339 | 124°24.0 | 170 | | | | | | TRAWL- |
| 05 | ↓ | 0147 | BE | CTD | | 143 | 49°31.909 | 124°28.338 | 191 | | | | CR | | T:13.9 S:27.5 |
| | | 0150 | BO | | | | 49°31.928 | 124°28.325 | | 181 | | | | | |
| | | 0153 | EN | | | | 49°31.942 | 124°28.313 | | | | | | | |
| 05 | ↓ | 0201 | BE | NET | | 144 | 49°31.925 | 124°28.293 | 192 | 150 | | | CR | | Bongo - UWH |
| END OF DAY | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| 05 | Set 92 | 1406 | BE | SET | | 145 | 49°31.20 | 124°28.54 | 184 | | | | | | TRAWL-SURFACE |
| 05 | ↓ | 1457 | BE | CTD | | 146 | 49°29.5- | 124°32.6- | 229 | | | | CR | | T:13.7 S:27.9 |
| | | 1501 | BO | | | | 49°29.528 | 124°32.675 | | 219 | | | | | |
| | | 1506 | EN | | | | 49°29.518 | 124°32.683 | | | | | | | |
| 05 | ↓ | 1515 | BE | NET | | 147 | 49°29.500 | 124°32.782 | 226 | 150 | | | | | Bongo - UWH |
| | | | | | | | | | | | | | | | |
| 05 | Set 93 | 1535 | BE | SET | | 149* | 49°29.147 | 124°34.295 | 162 | | | | | | TRAWL-SURFACE |
| | | | | | | | | | | | | | | | |
| 05 | Set 94 | 1635 | BE | SET | | 150 | 49°28.33 | 124°39.41 | 118 | | | | | | TRAWL-15m |
| | | | | | | | | | | | | | | | |
| 05 | Set 95 | 1742 | BE | SET | | 151 | 49°25.93 | 124°35.39 | 109 | | | | | | TRAWL-30m |
| | | | | | | | | | | | | | | | |

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**Transmissometer & Fluorometer are to be cleaned before each cast**

**Notes:** _____

*Produced by the Water Properties Group, IOS*

**WaterProperties.ca**
**Version: 7 July 2014**

This page is for any notes or observations

Set 92 (CTD): Did not record last two digits of lat/lon at start (BE)

Set 92 (CTD): went to 10 twice before calibration of 1mm
Set 93: event #148 given to set 88

# DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences



**Month** October **Year** 2014 **Ship** W. E. Ricker **Cruise ID** 2014-26

| Day | Station Name | Time (UTC) | Time Code | Cast Type | Firing Method | Event Number | Positional Information Latitude | Positional Information Longitude | Bottom Depth | Max Depth | Sample Numbers | # of Bottles | Watch Keepers | Trans. Cleaned | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 05 | Set 96 | 1842 | BE | SET | | 152 | 49°24.04 | 124°30.94 | 118 | | | | | | TRAWL - SURFACE |
| 05 | ↓ | 1929 | BE | CTD | | 153 | 49°22.835 | 124°26.713 | 102 | | | | CR | | T: 14.2 S: 27.1 |
| | | 1931 | BO | | | | 49° 22.840 | 124°26.698 | | 92 | | | | | |
| | | 1933 | EN | | | | 49°22.848 | 124°26.682 | | | | | | | |
| 05 | ↓ | 1939 | BE | NET | | 154 | 49°22.886 | 124°26.702 | 106 | 96 | | | CR | | Bongo - UNH |
| | | | | | | | | | | | | | | | |
| 05 | Set 97 | 2001 | BE | SET | | 155 | 49°23.450 | 124°26.447 | 173 | | | | | | TRAWL - 60m |
| | | | | | | | | | | | | | | | |
| 05 | Set 98 | 2054 | BE | SET | | 156 | 49°25.048 | 124°22.600 | 349 | | | | | | TRAWL - 15m |
| | | | | | | | | | | | | | | | |
| 05 | Set 99 | — | BE | SET | | 157 | 49°25.943 | 124°18.045 | — | | | | | | ~~TRAWL~~ |
| | | | | | | | | | | | | | | | |
| 05 | Set 100 | 2255 | BE | SET | | 158 | 49°22.300 | 124°15.978 | 292 | | | | | | TRAWL - 15m |
| | ↓ | 2343 | BE | CTD | | 159 | 49°19.922 | 124°14.267 | 137 | | | | CR | | T: 13.4 S: 28.6 |
| | | 2346 | BO | | | | 49°19.944 | 124°14.273 | | 127 | | | | | |
| | | 2348 | EN | | | | 49° 19.963 | 124°14.274 | | | | | | | |
| | ↓ | 2355 | BE | NET | | 160 | 49°19.982 | 124°14.275 | 143 | 133 | | | CR | | Bongo - UNH |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

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**Notes:** _____

*Produced by the Water Properties Group, IOS*

**WaterProperties.ca**
**Version: 7 July 2014**

This page is for any notes or observations

Set #99: Set aborted due to presence of porpoises. (Fish still sampled though?)

# DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences



**Month** October **Year** 2014 **Ship** W. E. Ricker **Cruise ID** 2014-26

| Day | Station Name | Time (UTC) | Time Code | Cast Type | Firing Method | Event Number | Positional Information Latitude | Positional Information Longitude | Bottom Depth | Max Depth | Sample Numbers | # of Bottles | Watch Keepers | Trans. Cleaned | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 06 | Set 101 | 0037 | BE | SET | | 161 | 49°22.357 | 124°10.451 | 350 | | | | | | TRAWL-30m |
| | END | OF | DAY | | | | | | | | | | | | |
| 06 | Set 102 | 1424 | BE | CTD | | 162 | 49° 23.532 | 124° 08.567 | 288 | | | | CR | | T: 14.5 S: 27.1 |
| | | 1428 | BO | | | | 49° 23.554 | 124° 08.507 | | 250 | | | | | |
| | | 1433 | EN | | | | 49° 23.563 | 124° 08.473 | | | | | | | |
| 06 | | 1443 | BE | NET | | 163 | 49° 23.578 | 124° 08.318 | 288 | 150 | | | CR | | |
| 06 | | 1852 | BE | SET | | 164 | 49° 25.084 | 124° 06.366 | 296 | | | | | | TRAWL-SURFACE |
| 06 | Set 103 | 2014 | BE | SET | | 165 | 49°28.280 | 124°01.640 | 150 | | | | | | TRAWL-15m |
| 06 | Set 104 | 2113 | BE | SET | | 166 | 49°26.218 | 123° 56.393 | 208 | | | | | | TRAWL-SURFACE |
| 06 | Set 105 | 2222 | BE | SET | | 167 | 49°23.916 | 123°52.292 | 211 | | | | | | TRAWL-30m |
| 06 | Set 106 | 2332 | BE | SET | | 168 | 49°22.312 | 123°48.137 | 190 | | | | | | TRAWL-15m |
| 07 | Set 107 | 0030 | BE | SET | | 169 | 49°23.857 | 123°43.676 | 167 | | | | | | TRAWL-SURFACE |

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**Notes:** _____

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**WaterProperties.ca**
**Version: 7 July 2014**

Set 102: Set delayed due to trawl eye malfunction.

Set 106: 1632-44 - hotation from bridge Log

# DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences



**Month** OCTOBER **Year** 2014 **Ship** WE RICKER **Cruise ID** 2014-26

| Day | Station Name | Time (UTC) | Time Code | Cast Type | Firing Method | Event Number | Positional Information Latitude | Positional Information Longitude | Bottom Depth | Max Depth | Sample Numbers | # of Bottles | Watch Keepers | Trans. Cleaned | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 07 | Set 108 | 0127 | BE | SET | | 170 | 49° 22.462 | 123° 38.048 | 164 | | | | | | TRAWL-15m |
| // | END | OF | DAY | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| 07 | Set 109 | 1410 | BE | SET | | 171 | 49°33.97 | 123°15.28 | 243 | | | | | | TRAWL-SURFACE |
| | | 1452 | BE | CTD | | 172 | 49°36.008 | 123°14.327 | 279 | | | | CR | | T: 13.6 S: 26.0 |
| | | 1456 | BO | | | | 49°36.019 | 123°14.329 | | 250 | | | | | |
| | | 1500 | EN | | | | 49°36.023 | 123°14.334 | | | | | | | |
| | | 1509 | BE | NET | | 173 | 49°36.012 | 123°14.368 | 280 | 150 | | | CR | | Bongo - VNA |
| | | | | | | | | | | | | | | | |
| 07 | Set 110 | 1544 | BE | SET | | 174 | 49°34.024 | 123°17.853 | 162 | | | | | | TRAWL-SURFACE |
| | | | | | | | | | | | | | | | |
| 07 | Set 111 | 1634 | BE | SET | | 175 | 49°31.03 | 123°16.33 | 224 | | | | | | TRAWL-15m |
| | | | | | | | | | | | | | | | |
| 07 | Set 112 | 1721 | BE | SET | | 176 | 49°28.27 | 123°16.66 | 243 | | | | | | TRAWL-SURFACE |
| | | | | | | | | | | | | | | | |
| 07 | Set 113 | 1810 | BE | SET | | 177 | 49°25.71 | 123°19.13 | 220 | | | | | | TRAWL-30m |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

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**Notes:** _____

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*Produced by the Water Properties Group, IOS*

**WaterProperties.ca**
**Version: 7 July 2014**

# DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences



**Month** October **Year** 2014 **Ship** W.E. Ricker **Cruise ID** 2014-26

| Day | Station Name | Time (UTC) | Time Code | Cast Type | Firing Method | Event Number | Positional Information Latitude | Positional Information Longitude | Bottom Depth | Max Depth | Sample Numbers | # of Bottles | Watch Keepers | Trans. Cleaned | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 07 | Set 114 | 1943 | BE | SET | | 178 | 49°22.033 | 123°32.745 | 136 | | | | | | TRAWL-SURFACE |
| | | 2034 | BE | CTD | | 179 | 49° 23.762 | 123° 37.910 | 140 | | | | CR | | T: 14.6 S: 26.3 |
| | | 2036 | BO | | | | 49°23.765 | 123° 37.960 | | 130 | | | | | |
| | | 2039 | EN | | | | 49°23.765 | 123° 38.016 | | | | | | | |
| | ↓ | 2045 | BE | NET | | 180 | 49° 23.775 | 123°38.145 | 145 | 135 | | | CR | | Bongo - VNH |
| | | | | | | | | | | | | | | | |
| | Set 115 | 2129 | BE | SET | | 181 | 49°19.412 | 123°35.670 | 134 | | | | | | TRAWL-45m |
| // | END OF DAY | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| 08 | Set 116 | 1408 | BE | SET | | 182 | 50°01.28 | 123°54.56 | 500 | | | | | | TRAWL-SURFACE |
| | | 1450 | BE | CTD | | 183 | 50°02.359 | 123°51.982 | 540 | | | | CR | | T: 14.7 S: 25.7 |
| | | 1455 | BO | | | | 50°02.353 | 123°52.024 | | 250 | | | | | |
| | | 1500 | EN | | | | 50°02.335 | 123°51.986 | | | | | | | |
| | ↓ | 1508 | BE | NET | | 184 | 50°02.296 | 123°51.965 | 541 | 150 | | | CR | | Bongo - VNH |
| | | | | | | | | | | | | | | | |
| 08 | Set 117 | 1602 | BE | SET | | 185 | 49°57.52 | 123°59.14 | 540 | | | | | | TRAWL-15m |
| | | | | | | | | | | | | | | | |
| 08 | Set 118 | 1714 | BE | SET | | 186 | 49°52.38 | 123°53.57 | 668 | | | | | | TRAWL-SURFACE |
| | | | | | | | | | | | | | | | |

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**Notes:** _____

*Produced by the Water Properties Group, IOS*

**WaterProperties.ca**
**Version: 7 July 2014**

# DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences



**Month** October **Year** 2014 **Ship** W.E. Ricker **Cruise ID** 2014-26

| Day | Station Name | Time (UTC) | Time Code | Cast Type | Firing Method | Event Number | Positional Information Latitude | Positional Information Longitude | Bottom Depth | Max Depth | Sample Numbers | # of Bottles | Watch Keepers | Trans. Cleaned | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 08 | Set 119 | 1813 | BE | SET | | 187 | 49°47.96 | 123°57.49 | 665 | | | | | | TRAWL - 30m |
| | | | | | | | | | | | | | | | |
| 08 | Set 120 | 1957 | BE | SET | | 188 | 49°50.385 | 124°01.343 | 470 | | | | | | TRAWL - SURFACE |
| | | 1923 | BE | CTD | | 189 | 49°50.866 | 124°01.535 | 486 | | | | CR | | T-14.9 S-27.0 |
| | | 1927 | BO | | | | 49°50.903 | 124°01.518 | | 250 | | | | | |
| | | 1932 | EN | | | | 49°50.935 | 124°01.495 | | | | | | | |
| | | 1939 | BE | NET | | 190 | 49°50.982 | 124°01.454 | 488 | 150 | | | CR | | Bongo - VNH |
| | | | | | | | | | | | | | | | |
| 08 | Set 121 | 2052 | BE | SET | | 191 | 49°47.399 | 124°04.140 | 457 | | | | | | TRAWL - 15m |
| | | | | | | | | | | | | | | | |
| 08 | Set 122 | 2208 | BE | SET | | 192 | 49°45.393 | 124°14.393 | 285 | | | | | | TRAWL-SURFACE |
| | | 2257 | BE | CTD | | 193 | 49°42.230 | 124°14.124 | 280 | | | | CR | | T-14.5 S-27.0 |
| | | 2301 | BO | | | | 49°42.264 | 124°14.131 | | 250 | | | | | |
| | | 2306 | EN | | | | 49°42.302 | 124°14.138 | | | | | | | |
| | | 2313 | BE | NET | | 194 | 49°42.340 | 124°14.134 | 278 | 150 | | | | | Bongo - VNH |
| END OF DAY | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| [09-11 OCT: See log for cruise # 2014-66] | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

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**Notes:** _____

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**WaterProperties.ca**
**Version: 7 July 2014**

This page is for any notes or observations

Set 120: Header depth ~633, deployment depth 488 due to transit CTD/Bongo first, then set. Consecutive numbers not changed

# DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences



**Month** OCTOBER **Year** 2014 **Ship** WE RICKER **Cruise ID** 2014-26

| Day | Station Name | Time (UTC) | Time Code | Cast Type | Firing Method | Event Number | Positional Information Latitude | Positional Information Longitude | Bottom Depth | Max Depth | Sample Numbers | # of Bottles | Watch Keepers | Trans. Cleaned | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 | Set 123 | 1426 | BE | CTD | | 195 | 50° 26.972 | 125° 18.246 | 208 | | | | CR | ✓ | T-9.8 S-29.6 |
| | | 1430 | BO | | | | 50° 26.969 | 125° 18.230 | | 198 | | | | | |
| | | 1433 | EN | | | | 50° 26.960 | 125° 18.204 | | | | | | | |
| | | 1442 | RE | NET | | 196 | 50°26.954 | 125°18.175 | 208 | 150 | | | CR | | BONGO |
| | | 1503 | BE | SET | | 197 | 50°26.25 | 125°12.556 | 323 | | | | | | TRAWL-SURFACE |
| | | | | | | | | | | | | | | | |
| 12 | Set 124 | 1550 | RE | SET | | 198 | 50°21.947 | 125°21.955 | 208 | | | | | | TRAWL 15m |
| | | | | | | | | | | | | | | | |
| 12 | Set 125 | 1717 | BE | SET | | 199 | 50° 19.682 | 125°25.421 | 229 | | | | | | TRAWL-SURFACE |
| | | | | | | | | | | | | | | | |
| 12 | Set 126 | 1843 | BE | CTD | | 200 | 50°17.672 | 125° 19.925 | 105 | | | | CR | | T-10.4 S-29.8 |
| | | 1844 | BO | | | | 50°17.669 | 125° 19.931 | | 95 | | | | | |
| | | 1846 | EN | | | | 50°17.668 | 125°19.937 | | | | | | | |
| | | 1853 | BE | NET | | 201 | 50°17.672 | 125°19.959 | 96 | 86 | | | | | Bongo - NINT |
| | | 1916 | BE | SET | | 202 | 50°17.288 | 125°21.592 | 112 | | | | | | TRAWL-SURFACE |
| | | | | | | | | | | | | | | | |
| 12 | Set 127 | 2003 | BE | SET | | 203 | 50°14.946 | 125°22.242 | 225 | | | | | | TRAWL-15m |
| | | | | | | | | | | | | | | | |
| | | | | ↓ CONTINUED | | | | | | | | | | | |

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*This page is for any notes or observations*

Set 123- Sounder depth indicated depth as 236 however during deployment we were notified by the bridge that the charted depth was 208. To ensure saftety of gear max depth of 198 was reached.

Set 126- Cast [illegible] with CTD interrupted at 5m. Restarted [illegible] at 5m and continued w/ CTD. Initial data [illegible] 0199

# DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences



**Month** October/Nov **Year** 2014 **Ship** N.E. Ricker **Cruise ID** 2014-26

| | Day | Station Name | Time (UTC) | Time Code | Cast Type | Firing Method | Event Number | Positional Information Latitude | Positional Information Longitude | Bottom Depth | Max Depth | Sample Numbers | # of Bottles | Watch Keepers | Trans. Cleaned | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Oct | 12 | Set 127 | 2043 | BE | CTD | | 204 | 50° 13.572 | 125° 23.014 | 225 | | | | CR | | T: 10.3 S: 30.0 |
| | | | 2047 | BO | | | | 50° 13.589 | 125° 23.059 | | 215 | | | | | |
| | | continued | 2051 | EN | | | | 50° 13.606 | 125° 23.099 | | | | | | | |
| | | | 2101 | BE | NET | | 205 | 50° 13.651 | 125° 23.223 | 194 | 150 | | | CR | | Bongo - VNT |
| | = END OF SURVEY | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | PUGET SOUND LEG | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| Nov | 05 | Set 2 | 1730 | BE | CTD | | 206 | 47° 59.280 N | 122° 8.274 W | 80 | 70 | | | KM | | T: S: |
| | | | 1733 | BO | | | | | | | | | | | | No data logged |
| | | | 1736 | EN | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | 06 | Set 8 | 0007 | BE | CTD | | 207 | 47° 32.113 N | 122° 25.116 W | 189 | 175 | | | CR | | |
| | | | 0009 | BO | | | | 47° 32.111 N | 122° 25.108 W | | | | | | | |
| | | | 0013 | EN | | | | 47° 32.093 N | 122° 25.082 W | | | | | | | |
| | = END OF DAY | | | | | | | | | | | | | | | |
| Nov | 06 | Set 9 | 1443 | BE | CTD | | 208 | 47° 29.662 N | 122° 29.071 W | 183 | 170 | | | Capt | | T: 12.4 S: 30 |
| | | | 1446 | BO | | | | 47° 29.580 N | 122° 29.022 W | | | | | | | |
| | | | 1450 | EN | | | | 47° 29.574 N | 122° 28.984 W | | | | | | | |

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**WaterProperties.ca**
**Version: 7 July 2014**

* Problems with consecutive numbers on last 2 CTD casts. Set 126 CTD original consecutive number was 199. Was later updated to 200. Set 127 CTD original consecutive number was 203, later updated to 204.

PUGET SOUND LEG: The Puget Sound leg of the survey was to have been completed in late Sept/early Oct, but due to ship breakdowns, was postponed to early November.
Chief Scientist: Dave Preikshot (dave.preikshot@gmail.com) ⇒ Fish samples labelled with cruise number 2014-14

Nov 5 Set 2: No CTD data logged.
[* Info from 8 fish sets not included here. *]

Nov 6
[* Info from 8 fish sets not included here. *]

# DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences



**Month** NOVEMBER **Year** 2014 **Ship** W.E. RICKER **Cruise ID** 2014-26

| | Day | Station Name | Time (UTC) | Time Code | Cast Type | Firing Method | Event Number | Positional Information Latitude | Positional Information Longitude | Bottom Depth | Max Depth | Sample Numbers | # of Bottles | Watch Keepers | Trans. Cleaned | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nov | 06 | Set 13 | 1842 | BE | CTD | | 209 | 47° 22.742N | 122° 31.771 W | 103 | 90 | | | KM | | No data logged |
| | | | 1844 | BO | | | | 47° 22.745N | 122° 31.759 W | | | | | | | |
| | | | 1846 | EN | | | | 47° 22.754N | 122° 31.754 W | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | 06 | Set 16 | 2329 | BE | CTD | | 210 | 47° 57.043 N | 122° 19.367 W | 193 | 180 | | | CR, AY | | |
| | | | 2333 | BO | | | | 47° 57.037 N | 122° 19.354 W | | | | | | | |
| | | | 2337 | EN | | | | 47° 57.035 N | 122° 19.338 W | | | | | | | |
| | END OF DAY | | | | | | | | | | | | | | | |
| Nov | 07 | Set 17 | 1441 | BE | CTD | | 211 | 47° 12.496N | 122° 34.356 W | | | | | AY | | No data logged |
| | | | 1442 | BO | | | | 47° 12.488 N | 122° 34.339 W | | | | | | | |
| | | | 1443 | EN | | | | 47° 12.485 N | 122° 34.338 W | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | 07 | Set 25 | 2147 | BE | CTD | | 212 | 47° 58.535 N | 122° 19.580 W | 160 | | | | CR | | No data logged |
| | | | 2150 | BO | | | | 47° 58.816 N | 122° 19.562 W | | | | | | | |
| | | | 2154 | EN | | | | 47° 58.792 N | 122° 19.549 W | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | END OF SURVEY | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |

**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 & Fluorometer are to be cleaned before each cast**

**Notes:** _____

*Produced by the Water Properties Group, IOS*

**WaterProperties.ca**
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This page is for any notes or observations

P. Richmond

Set 13 No CTD data logged.

[*Nov 07: Info from 9 fish sets not included here.]
Set 17: No CTD data logged.

Set 25: No CTD data logged.