# DAILY LOG

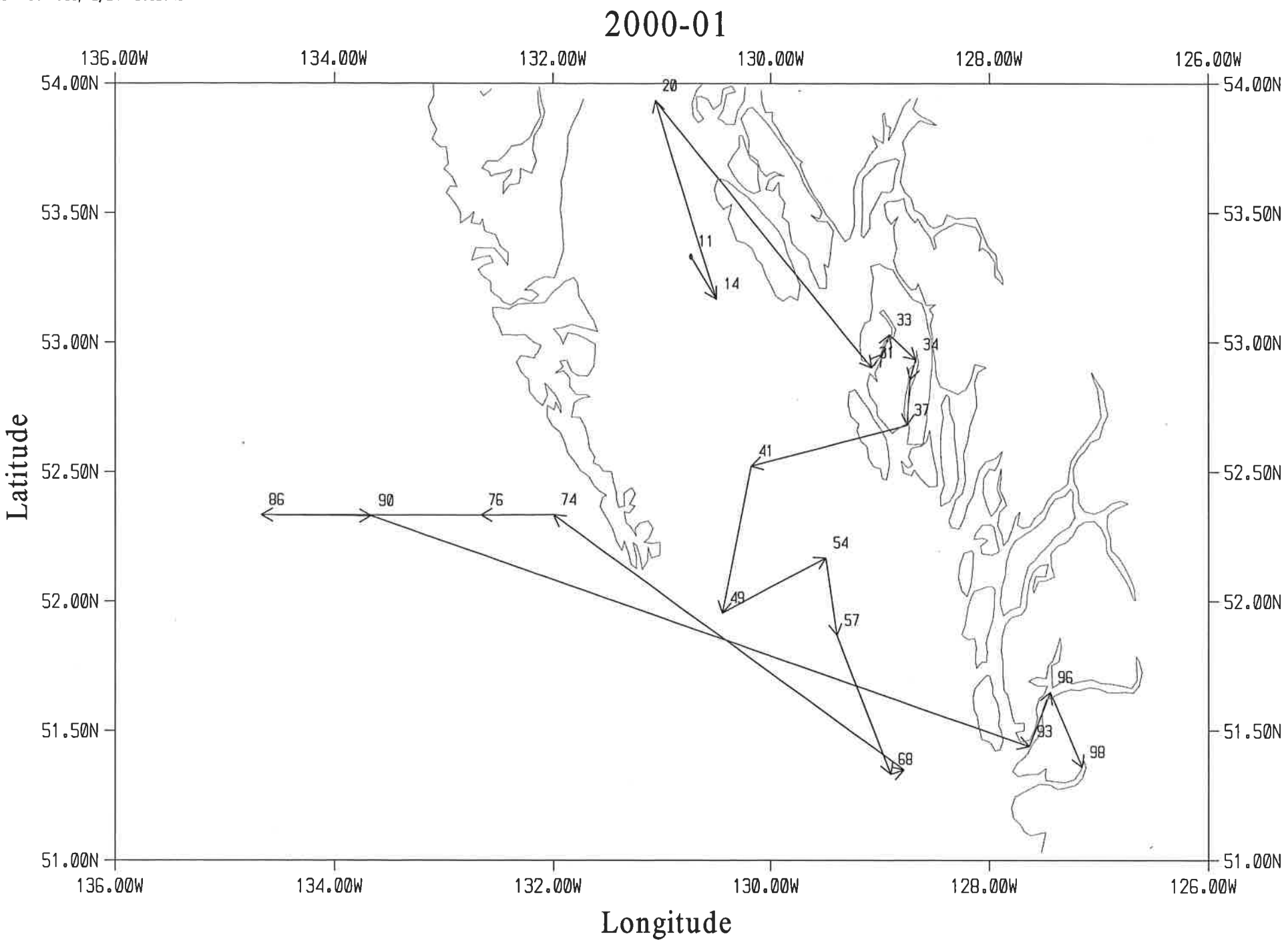
| CRUISE NUMBER | 2000-01 |
|---|---|

INSTITUTE OF OCEAN SCIENCES

OCEAN SCIENCES AND PRODUCTIVITY DIVISION

| | |
|---|---|
| **DATE** | FEBRUARY 7 - 18 |
| **VESSEL** | JOHN P TULLY |
| **PROJECT** | HAIDA EDDY - 1 |

PLOTTED: 2000/02/24 10:52:48



**Captain:** PAUL FROST **First Officer:** GLEN ORMISTON

**Second Officer:** VICTOR GRONMYR **Third Officer:** MIKE CORFIELD

**Mission Participants / Agencies:** IOS

**Scientific Personnel:** **Party Chief:** MARIE ROBERT 0800-1200/1600-2000

| Name | Watch | Cabin | Name | Watch | Cabin |
|---|---|---|---|---|---|
| DOUG ANDERSON | 1200-1600/2000-0000 | 6 | | | |
| MIKE ARYCHUK | 1200-1600/2000-0000 | F | | | |
| WENDY RICHARDSON | 0800-1600 | D | | | |
| MIKE BENTLEY | | C | | | |
| HUGH MACLEAN | 0800-1200/1600-2000 | 17 | | | |
| | | | | | |
| PATRICK BROWN | | G | | | |
| CHRIS JOHNSON | | E | | | |

**Second leg of Mission: Party Chief:**

| Name | Watch | Cabin | Name | Watch | Cabin |
|---|---|---|---|---|---|
| | | | | | |

**Data logging computer:** FS02

**Data acquisition program:**

CTD deck unit make: SEABIRD model: II plus serial number: II P14262-0424

**Primary CTD**

Make: Seabird model: 911 plus serial number: 0443

Primary temperature sensor serial number: 2104 Calibration date: 05-May-99

Primary conductivity sensor serial number: 2128 Calibration date: 24-Jun-99

Secondary temperature sensor serial number: 2449 Calibration date: 27-Jul-99

Secondary conductivity sensor serial number: 1763 Calibration date: 28-Jul-99

Other sensors: Transmissometer 192D s/n: 192D - Jul 8, 98 *

Other sensors: Fluorometer s/n: 2229 ?

Other sensors: Par Sensor s/n: 4565 Sept 7, 99

Other sensors: s/n:

**Secondary CTD**

Make: model: serial number: 0550

Primary temperature sensor serial number: Calibration date:

Primary conductivity sensor serial number: Calibration date:

Secondary temperature sensor serial number: Calibration date:

Secondary conductivity sensor serial number: Calibration date:

Other sensors: s/n:

Other sensors: s/n:

Other sensors: s/n:

Comments:

* New cal exists

14 October 1999

# Guide to cable terminations:

Please read and complete this form before reterminating cable. We have two standard CTD cables in use, nominal .316" and .322". This form specifically addresses these two cables, however the same considerations apply to using other cables. The specifications for non standard cables and associated terminations are available at Tom Juhasz's office (room 1221).

**Please identify cable diameter:** 0.316 **Winch:** 1482

Actual diameter measurements, two locations in triplicate at termination and approximately 5 metres back from termination.

| At cable end: | at 5 metres: |
|---|---|
| 1. 0.306 | 1. 0.302 AT TERMINATION 0.316 |
| 2. | 2. |
| 3. | 3. |

For comparison, the outer armour measurements of new cable:
Nominal .316" should be .3155 to .3165"
Nominal .322" should be .318 to .326"

Record specifications for other cables: _____ within: _____

The tolerance of the PMI Evergrip termination is tighter and only cables within these limits should be used.

For nominal .316" cable the lowest possible diameter is .309".
For nominal .322" cable the lowest possible diameter is .321"

**Describe cable:**

| | | |
|---|---|---|
| Kinks: | ✓ | |
| Birdcage | x | |
| Rust flaking off cable | x | (flaking, not just looks rusty) |
| Cable round or oval | x | |
| Does cable have loose outer armour? | x | |
| (Raised wires or space between wires.) | | |
| Are outer armour wires flattened? | x | |

**Remove cable that exhibits these signs of deterioration. To be authorised by Chief Scientist of the cruise, or the winch shop (Tom Juhasz at 250-363-6598).**

**Megger results by conductor (should be greater than 10,000. meg ohms)**

Inner armour to conductor 1 _____
Inner armour to conductor 2 _____
Inner armour to conductor 3 _____

**Please identify PMI sleeve used by checking the appropriate blank:**

For .316" cable, diameter of inner dimension of sleeve should be .3265" ✓
part number 9004897–13, cable diameter range .309" to .320".
For .322" cable, diameter of inner dimension of sleeve should be .3400" ✓
part number 9004897–14, cable range .321" to .333".
Sliding the sleeve onto the cable should be ~~difficult~~ → NOT TOO

**Evergrip helical Rods:**

The part number is 9005-9002 and covers left hand lay cables of diameter range .309" to .333".

| | |
|---|---|
| Presence of grit on inner surface (yes / no) | YES |
| Condition of wires (damaged ends?) | GOOD |
| Are the wires rusted? | NO |

**Comments:**

Inner armour quite rusty, flaky

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**Year** 2000 | **Month** FEBRUARY | **Ship** JOHN P TULLY | **Cruise I.D.** 2000-01

| Day | Station I.D. | Cast Type | Time (UTC) | Time Code | Consec. Number | Latitude | Longitude | Position Code | Bottom Depth | Max Depth | Consec Sample # | # of Bottles | initials | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 08 | | | 08:15 | | | Turned on Thermosalinograph - | | Flow weak - | | mussels in pipe? | | | DA | date on thermosalinograph set to 1999. DA |
| 08 | HN16 | CTD | 2049 | BE | 001 | 53 07.06 | 131 33.56 | | 25 | | — | | | Loops taken |
| 08 | HN16 | CTD | | BO | 001 | 53 07.07 | 131 33.57 | | | 19 | | | | Sounder problems |
| 08 | HN16 | CTD | | EN | 001 | 53 07.08 | 131 33.57 | | | | | | | GPS problems |
| 08 | HN15 | CTD | 2146 | BE | 002 | 53 08.30 | 131 26.62 | | 26 | | | | | 21:45:58 |
| 08 | HN15 | CTD | | BO | 002 | 53 08.30 | 131 26.62 | | | 20 | | | | |
| 08 | HN15 | CTD | | EN | 002 | 53 08.30 | 131 26.62 | | | | | | | |
| 08 | HN14 | CTD | 2226 | BE | 003 | 53 08.98 | 131 21.57 | | 38 | | | | | Change file name to 20001003.dat |
| 08 | HN14 | CTD | 22 26 | BO | 003 | 53 08.99 | 131 21.56 | | | 34 | — | | | GPS* → |
| 08 | HN14 | CTD | 22 29 | EN | 003 | 53 08.99 | 131 21.56 | | | | | | | |
| 08 | HN13 | CTD | 23 11 | BE | 004 | 53 10.42 | 131 15.21 | | 40 | | | | | |
| 08 | HN13 | CTD | 23 14 | BO | 004 | 53 10.41 | 131 15.22 | | | 35 | | | | |
| 08 | HN13 | CTD | 23 16 | EN | 004 | 53 10.40 | 131 15.21 | | | | | | | |
| 8 | HN12 | CTD | 2358 | BE | 5 | 53 11.018 | 131 09.312 | | 40 | | | | | |
| 9 | HN12 | CTD | 0000 | BO | 5 | 53 11 03 | 131 09.32 | | | 35 | | | | |
| 9 | HN12 | CTD | 0004 | EN | 5 | 53 11.04 | 131 09.32 | | | | | | | |
| 9 | HN11 | CTD | 0042 | BE | 6 | 53 12.15 | 131 02.78 | | 51 | | | | | |
| 9 | HN11 | CTD | 0043 | BO | 6 | 53 12.15 | 131 02.78 | | | 45 | | | | |
| 9 | HN11 | CTD | 0045 | EN | 6 | 53 12.16 | 131 02.78 | | | | | | | |

Cast type: BOT = ottle cast; CTD = CTD; MOR = mooring; ROS = Rosette; NET = net haul; DRF = drifter; USW = sea water loop

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* GPS has been reconfigured on bridge. GPS used to feed only lab, not many other instruments
We now have same problem on Tully as on the Ricker.
Do we need differential GPS for CTD data when we drift a cable or 2 anyway?
Ded dicated GPS in Lab?

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| Day | Station I.D. | Cast Type | Time (UTC) | Time Code | Consec. Number | Latitude | Longitude | Position Code | Bottom Depth | Max Depth | Consec Sample # | # of Bottles | initials | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | HN10 | CTD | 0122 | BE | 7 | 53 12.96 | 130 56.74 | | 97 | | | | | |
| 9 | HN10 | CTD | 0125 | BO | 7 | 53 12.94 | 130 56.79 | | | 90 | | | | |
| 9 | HN10 | CTD | 0128 | EN | 7 | 53 12.95 | 130 56.823 | | | | | | | |
| 9 | HN09 | CTD | 0201 | BE | 8 | 53 13.82 | 130 51.18 | | 122 | | | | | 1 spike |
| 9 | HN09 | CTD | 0203 | BO | 8 | 53 13.83 | 130 51.18 | | | 116 | | | | |
| 9 | HN09 | CTD | 0207 | EN | 8 | 53 1385 | 130 51.22 | | | | | | | |
| 9 | HN08 | CTD | 0300 | BE | 9 | 53 14.83 | 130 45.27 | | 162 | | | | | spikes |
| 9 | HN08 | CTD | 0305 | BO | 9 | 53 14.88 | 130 45.29 | | | 155? | | | | |
| 9 | HN08 | CTD | 0310 | EN | 9 | 53 14.89 | 130 45.31 | | | | | | | |
| 9 | SP1 | ROS | 0400 | BE | 10 | 53 19.93 | 130 44.03 | | 183 | | | | | Cast down only |
| 9 | SP1 | ROS | 0409 | BO | 11 | 53 19.94 | 130 44.02 | | | 174 | 1-8 | 8 | | Restart cast |
| 9 | SP1 | ROS | 0420 | EN | 11 | 53 19.93 | 130 44.00 | | | | | | | |
| 9 | SP1 | NET | 0444 | BE | 12 | 53° 19.93 | 130 44 04 | | 185 | 180 | | | | HIT BOTTOM- REDO |
| 9 | SP1 | NET | 0500 | BE | 12 | 53° 19 92 | 130 40 01 | | 177 | 160 | | | | GOOD |
| 9 | SP1 | NET | 0522 | BE | 13 | 53 19 939 | 130 40 020 | | 177 | | | | | NEUSTON TOW |
| 9 | SP1 | NET | 0537 | EN | 13 | 53 19 | 130 44 | | | SURFACE | | | | 15m TOW - |
| 9 | SP2 | ROS | 0710 | BE | 14 | 53 10.06 | 130 30.29 | | 198 | | 9-16 | 8 | | |
| 9 | SP2 | ROS | 0716 | BO | 14 | 53 10 07 | 130 30.25 | | | 190 | | | | |
| 9 | SP2 | ROS | 0729 | EH | 14 | 53 10 12 | 130 30.27 | | | | | | | |

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| Day | Station I.D. | Cast Type | Time (UTC) | Time Code | Consec. Number | Latitude | Longitude | Position Code | Bottom Depth | Max Depth | Consec Sample # | # of Bottles | initials | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | SP2 | NEWSTON | 0805 | BE | 15 | 53 10.54 | 130 31.16 | | | | | | | |
| 9 | SP2 | NEWSTON | 0820 | EN | 15 | 53 10.17 | 130 31.73 | | | | | | | |
| 9 | SP2 | BONGO | 0850 | BE | 16 | 53 10.03 | 130 30.15 | | | | | | | Flowmeter 1122 - 2330 |
| 9 | SP2 | BONGO | | | 16 | | | | | | | | | |
| 9 | HR00 | CTD | 1541 | BE | 17 | 53 55.98 | 130 50.42 | | 21 | | | | | |
| 9 | HR00 | CTD | 1543 | BO | 17 | 53 55.99 | 130 50.40 | | | 17 | | | | |
| 9 | HR00 | CTD | 1544 | EN | 17 | 53 55.99 | 130 50.38 | | | | | | | |
| 9 | HR01 | CTD | 1612 | BE | 18 | 53 55.91 | 130 53.27 | | 37 | | | | | |
| 9 | HR01 | CTD | 1614 | BO | 18 | 53 55.90 | 130 53.31 | | | 32 | | | | |
| 9 | HR01 | CTD | 1616 | EN | 18 | 53 55.79 | 130 53.29 | | | | | | | |
| 9 | HR02 | CTD | 1650 | BE | 19 | 53 55.79 | 130 57.97 | | 74 | | | | | |
| 9 | HR02 | CTD | 1653 | BO | 19 | 53 55.76 | 130 57.95 | | | 69 | | | | |
| 9 | HR02 | CTD | 1656 | EN | 19 | 53 55.74 | 130 57.92 | | | | | | | |
| 9 | HR03 | ROS | 1739 | BE | 20 | 53 55.99 | 131 03.89 | | 74 | | | | | |
| 9 | HR03 | ROS | 1742 | BO | 20 | 53 55.98 | 131 03.85 | | | 69 | 17-21 | 5 | | |
| 9 | HR03 | ROS | 1749 | EN | 20 | 53 55.93 | 131 03.78 | | | | | | | |
| 9 | HR04 | CTD | 1827 | BE | 21 | 53 55 97 | 131 08.44 | | 43 | | | | | |
| 9 | HR04 | CTD | 1828 | BO | 21 | 53 55 96 | 131 08.42 | | | 38 | | | | |
| 9 | HR04 | CTD | 1830 | EN | 21 | 53 55.95 | 131 08.40 | | | | | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | HR05 | CTD | 1911 | BE | 22 | 53° 55.98 | 131° 15.07 | | 33 | | | | | |
| 9 | HR05 | CTD | 1912 | BO | 22 | 53° 55.96 | 131° 15.09 | | | 27 | | | | |
| 9 | HR05 | CTD | 1914 | EN | 22 | 53° 55.95 | 131° 15.10 | | | | | | | |
| 9 | HR06 | CTD | 1957 | BE | 23 | 53° 55.96 | 131° 22.96 | | 26 | | | | | |
| 9 | HR06 | CTD | 1958 | BO | 23 | 53° 55.93 | 131° 22.95 | | | 20 | | | | |
| 9 | HR06 | CTD | 2000 | EN | 23 | 53° 55.92 | 131° 22.94 | | | | | | | |
| 10 | HN07 | CTD | 0047 | BE | 24 | 53° 15.56 | 130° 41.01 | | 195 | | | | | BACK TO HN LINE |
| 10 | HN07 | CTD | 0052 | BO | 24 | 53° 15.56 | 130° 40.98 | | | 191 | | | | |
| 10 | HN07 | CTD | 0057 | EN | 24 | 53° 15.57 | 130° 40.92 | | | | | | | |
| 10 | HN06 | CTD | 0132 | BE | 25 | 53° 16.26 | 130° 37.31 | | 157 | | | | | Seasave got jammed because 2 seasave open |
| 10 | HN06 | CTD | 0136 | BO | 25 | 53° 16 24 | 130° 37. 34 | | | 155 | | | | |
| 10 | HN06 | CTD | 0150 | EN | 25 | 53° 16. 22 | 130° 37. 32 | | | | | | | |
| 10 | HN05 | CTD | 0210 | BE | 26 | 53° 16. 47 | 130° 33. 94 | | 150 | | | | | Spike |
| 10 | HN05 | CTD | 0214 | BO | 26 | 53° 16.47 | 130° 33. 90 | | | 150 | | | | |
| 10 | HN05 | CTD | 0217 | EN | 26 | 53° 16, 47 | 130° 33, 92 | | | | | | | |
| 10 | HN04 | CTD | 0251 | BE | 27 | 53° 17. 26 | 130° 29 59 | | 49 | | | | | Spike |
| 10 | HN04 | CTD | 0252 | BO | 27 | 53° 17. 26 | 130° 29 59 | | | 41 | | | | |
| 10 | HN04 | CTD | 0254 | EN | 27 | 53° 17. 26 | 130° 29 59 | | | | | | | |
| | | | | | | | | | | | | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | HN03 | CTD | 0332 | BE | 28 | 53 18.25 | 130 23.86 | | 91 | | | | | Spike almost at beginning |
| 10 | HN03 | CTD | 0334 | BO | 28 | 53 18.25 | 130 23.89 | | | 90 | | | | |
| 10 | HN03 | CTD | 0336 | EN | 28 | 53 18.25 | 130 23.90 | | | | | | | |
| 10 | HN02 | CTD | 0411 | BE | 29 | 53 19.23 | 130 18.01 | | 105 | | | | | |
| 10 | HN02 | CTD | 0414 | BO | 29 | 53 19.23 | 130 18.02 | | | 97 | | | | Spike |
| 10 | HN02 | CTD | 0418 | EN | 29 | 53 19.23 | 130 18.02 | | | | | | | |
| 10 | HN01 | CTD | 0451 | BE | 30 | 53 19.82 | 130 13.64 | | 95 | | | | | |
| 10 | HN01 | CTD | 0453 | BO | 30 | 53 19.82 | 130 13.64 | | | 90 | | | | |
| 10 | HN01 | CTD | 0455 | EN | 30 | 53 19.82 | 130 13.64 | | | | | | | |
| | | | | | | | | | | | | | | |
| 10 | SU1 | ROS | 1638 | BE | 31 | 52 54.10 | 129 04.71 | | 270 | | | | | Inlet for Dana |
| 10 | SU1 | ROS | 1645 | BO | 31 | 52 54.12 | 129 04.66 | | | 266 | 22-33 | 12 | | Spike |
| 10 | SU1 | ROS | 1703 | EN | 31 | 52 54.12 | 129 04.65 | | | | | | | |
| 10 | SU2 | ROS | 1757 | BE | 32 | 52 57.27 | 128 59.08 | | 130 | | | | | Spikes |
| 10 | SU2 | ROS | 1801 | BO | 32 | 52 57.28 | 128 59.08 | | | 129 | 34-43 | 10 | | |
| 10 | SU2 | ROS | 1811 | EN | 32 | 52 57.27 | 128 59.06 | | | | | | | |
| 10 | SU3 | ROS | 1905 | BE | 33 | 53 01.75 | 128 55.04 | | 126 | | | | | Spikes |
| 10 | SU3 | ROS | 1911 | BO | 33 | 53 01.73 | 128 55.14 | | | 117 | 44-52 | 9 | | |
| 10 | SU3 | ROS | 121 | EN | 33 | 53 01.72 | 128 55.13 | | | | | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11 | LA4 | ROS | 0115 | BE | 34 | 52 55.99 | 128 40.26 | | 170 | | | | | LARGO INLET |
| 11 | LA4 | ROS | 0120 | BO | 34 | 52 55.96 | 128 40.30 | | | 163 | 53-62 | 10 | | spikes |
| 11 | LA4 | ROS | 0133 | EN | 34 | 52 55.98 | 128 40.22 | | | | | | | |
| 11 | LA3 | ROS | 0223 | BE | 35 | 52 51.32 | 128 43.41 | | 371 | | | | | spikes |
| 11 | LA3 | ROS | 0233 | BO | 35 | 52 51.31 | 128 43 41 | | | 367 | 63-76 | 14 | | |
| 11 | LA3 | ROS | 0256 | EN | 35 | 52 51.29 | 128 43.47 | | | | | | | |
| 11 | LA2 | CTD | 0345 | BE | 36 | 52 46.08 | 128 46.05 | | | | | | | surface sal = 28.5<br>TS sal = 23.3 |
| 11 | LA2 | CTD | 0354 | BO | 36 | 52 46.08 | 128 46.08 | | 303? | ? | — | — | | spikes |
| 11 | LA2 | CTD | 0401 | EN | 36 | 52 46.03 | 128 46.11 | | | 331 | | | | (let's use Guildline!) |
| 11 | LA1 | ROS | 0449 | BE | 37 | 52 40.78 | 128 45.05 | | 303? | | | | | |
| 11 | LA1 | ROS | 0501 | BO | 37 | 52 40.76 | 128 45.14 | | | 400 | 77-91 | 15 | | few spikes (clay) |
| 11 | LA1 | ROS | 0515 | EN | 37 | 52 40.79 | 128 45.11 | | | | | | | |
| | | | | | | | | | | | | | | |
| 11 | HM00 | CTD | 1621 | BE | 38 | 52 39.12 | 129 20.83 | | 129 | | | | | start of HM line |
| 11 | HM00 | CTD | 1625 | BO | 38 | 52 39.07 | 129 20.74 | | | 124 | | | | |
| 11 | HM00 | CTD | 1628 | EN | 38 | 52 39.04 | 129 20.68 | | | | | | | |
| | | | | | | | | | | | | | | |
| 11 | "HM01" | LOOP | 1730 | BE | | 52 34.987 | 129 33.105 | | 83 | | | | | South of HM01 |
| | | | | | | | | | | | | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11 | HM02 | CTD | 1803 | BE | 39 | 52 36.97 | 129 37.69 | | 170 | | | | | spike |
| 11 | HM02 | CTD | 1808 | BO | 39 | 52 36.95 | 129 37.76 | | | 164 | | | | |
| 11 | HM02 | CTD | 1811 | EN | 39 | 52 36.93 | 129 37.83 | | | | | | | |
| 11 | HM03 | LOOP | 1850 | BE | — | 52 35.39 | 129 47.43 | | 181 | | | | | |
| 11 | HM04 | CTD | 1931 | BE | 40 | 52 33.87 | 129 56.57 | | 257 | | | | | spikes |
| 11 | HM04 | CTD | 1938 | BO | 40 | 52 33.84 | 129 56.56 | | | 255 | | | | |
| 11 | HM04 | CTD | 1943 | EN | 40 | 52 33.83 | 129 56.57 | | | | | | | |
| 11 | HM05 | LOOP | | BE | / | 52 32.70 | 130 04.00 | | | | | | | Loops |
| 11 | HM06 | ROS | 2045 | BE | H1 | 52 31.36 | 130 10.96 | | 298 | | | | | |
| 11 | HM06 | ROS | 2055 | BO | H1 | 52 31.22 | 130 10.85 | | | 290 | 92-100 | 9 | | |
| 11 | HM06 | ROS | 2110 | EN | H1 | 52 30.10 | 130 10.89 | | | | | | | |
| 11 | HM07 | LOOP | 2149 | BE | / | 52 29.91 | 130 20.68 | | | | | | | |
| 11 | HM08 | CTD | 2300 | BE | H2 | 52 28.94 | 130 29.06 | | 173 | | | | | |
| 11 | HM08 | CTD | 2307 | BO | H2 | 52 28.24 | 130 28.85 | | | 168 | | | | wire jumped sheave → |
| 11 | HM08 | CTD | 2312 | EN | H2 | 52 28.01 | 130 28.47 | | | | | | | |
| 11 | HM09 | LOOP | 2354 | BE | / | 52 26.85 | 130 38.06 | | 131 | | | | | |
| 12 | HM10 | CTD | 0034 | BE | 43 | 52 25.51 | 130 47.08 | | 110 | | | | | |
| 12 | HM10 | CTD | 0037 | BO | 43 | 52 25.53 | 130 47.08 | | | 101 | | | | |
| 12 | HM10 | CTD | 0040 | EN | 43 | 52 25.54 | 130 47.04 | | | | | | | |

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CTD wire jumped shive on deployment. Marked spot on cable, will observe for signs of deterioration.

Problems with A-Frame Have to operate it from box control

The winch is not holding, in both low + high gears. It won't stay at one depth

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## Ocean Sciences and Productivity Division

## INSTITUTE OF OCEAN SCIENCES

**Year** 2000 **Month** FEBRUARY **Ship** JOHN P TULLY **Cruise I.D.** 2000-01

| Day | Station I.D. | Cast Type | Time (UTC) | Time Code | Consec. Number | Latitude | Longitude | Position Code | Bottom Depth | Max Depth | Consec Sample # | # of Bottles | initials | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 | HM 11 | LOOPS | 0123 | BE | — | 52°23.870 | 130°57.080 | | 124 | | | | | LOOPS TAHEAN |
| 12 | HM 12 | CTD | 0208 | BE | 44 | 52°22.14 | 131°05.51 | | 122 | | | | | |
| 12 | HM 12 | CTD | 0211 | BO | 44 | 52°22.13 | 131°05.58 | | | 114 | | | | |
| 12 | HM 12 | CTD | 0214 | EN | 44 | 52°22.11 | 131°05.63 | | | | | | | |
| | | | | | | | | | | | | | | |
| 12 | MC 21 | CTD | 1552 | BE | 45 | 51°57.26 | 130°58.35 | | 103 | | | | | CTD 31.98 T3 23.76 } S |
| 12 | MC 21 | CTD | 1555 | BO | 45 | 51°57.28 | 130°58.33 | | | 99 | | | | CTD 7.3 T3 7.7 } T° |
| 12 | MC 21 | CTD | 1558 | EN | 45 | 51°57.27 | 130°58.33 | | | | | | | |
| 12 | MC 20 | LOOP | 1617 | BE | — | 51°57.27 | 130°55.32 | | 136 | | | | | |
| 12 | MC 19 | CTD | 1648 | BE | 46 | 51°57.25 | 130°50.32 | | 185 | | | | | Neg P. @ surface Back to + on its own. |
| 12 | MC 19 | CTD | 1653 | BO | 46 | 51°57.25 | 130°50.33 | | | 179 | | | | Stop @ 57m ↓ to change winch gear |
| 12 | MC 19 | CTD | 1656 | EN | 46 | 51°57.24 | 130°50.34 | | | | | | | Problem with A frame |
| 12 | MC 18 | LOOP | 1720 | BE | — | 51°57.27 | 130°47.62 | | | | | | | |
| 12 | MC 17A | CTD | 1753 | BE | 47 | 51°57.18 | 130°41.22 | | 302? | | | | | |
| 12 | MC 17A | CTD | 1800 | BO | 47 | 51°57.14 | 130°41.21 | | | 325 | | | | |
| 12 | MC 17A | CTD | 1805 | EN | 47 | 51°57.03 | 130°41.16 | | | | | | | |
| 12 | MC 17 | CTD | 1844 | BE | 48 | 51°57.30 | 130°34.98 | | 350 | | | | | spike. will reboot |
| 12 | MC 17 | CTD | 1850 | BO | 48 | 51°57.27 | 130°34.95 | | | 363 | | | | |
| 12 | MC 17 | CTD | 1857 | EN | 48 | 51°57.24 | 130°35.03 | | | | | | | |

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| Day | Station I.D. | Cast Type | Time (UTC) | Time Code | Consec. Number | Latitude | Longitude | Position Code | Bottom Depth | Max Depth | Consec Sample # | # of Bottles | initials | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 | MC16 | ROS | 1941 | BE | 49 | 51 57.34 | 130 27.11 | | 423 | | | | | HIT BOTTOM (Seamill Now) |
| 12 | MC16 | ROS | 1951 | BO | 49 | 51 57.35 | 130 27.10 | | | 423 > | 101-110 | 10 | | |
| 12 | MC16 | ROS | 2002 | EN | 49 | 51 57.40 | 130 27.18 | | | | | | | |
| 12 | MC15 | CTD | 20:51 | BE | 50 | 51 57.30 | 130 18.32 | | 298 | | | | | LOOPS TAKEN |
| 12 | MC15 | CTD | 20:58 | BO | 50 | 51 57.33 | 130 18.27 | | | 291 | | | | |
| 12 | MC15 | CTD | 21:04 | EN | 50 | 51 57.36 | 130 18 37 | | | | | | | |
| 12 | MC14 | CTD | 21:49 | BE | 51 | 51 57.44 | 130 10.66 | | 178 | | | | | |
| 12 | MC14 | CTD | 21:53 | BO | 51 | 51 57.46 | 130 10.69 | | | 174 | | | | LOOPS TAKEN |
| 12 | MC14 | CTD | 21:56 | EN | 51 | 51 57.45 | 130 10.67 | | | | | | | |
| 12 | MC13 | LOOP | 22:35 | BE | / | 51 57.27 | 130 01.74 | | | | | | | LOOP |
| 12 | MC12 | CTD | 23:07 | BE | 52 | 51 57.47 | 129 54.26 | | 125 | | | | | |
| 12 | MC12 | CTD | 23:11 | BO | 52 | 51 57.49 | 129 54.24 | | | 116 | | | | LOOPS TAKEN |
| 12 | MC12 | CTD | 23:13 | EN | 52 | 51 57.49 | 129 54.23 | | | | | | | |
| 12 | MC11 | CTD | 2358 | BE | 53 | 51 57.18 | 129 45.90 | | 128 | | | | | |
| 13 | MC11 | CTD | 0002 | BO | 53 | 51 57.19 | 129 45.82 | | | 120 | | | | |
| 13 | MC11 | CTD | 0005 | EN | 53 | 51 57.21 | 129 45.78 | | | | | | | |
| 13 | SP4 | ROS | 0146 | BE | 54 | 52 10.09 | 129 29.94 | | 213 | | | | | SPONGE REEF STN |
| 13 | SP4 | ROS | 0151 | BO | 54 | 52 10.13 | 129 29.90 | | | 210 | 111-118 | 8 | | TS SAL BACK TO 31 |
| 13 | SP4 | ROS | 0202 | EN | 54 | 52 10.15 | 129 29.88 | | | | | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 13 | SP4 | Bongo | 0238 | BE | 55 | 52° 10. 013 | 129° 30. 092 | | 240 | 250 | | | | MUD ON WEIGHT BUT NOT IN CUPS |
| 13 | SP4 | Newston | 0305 | BE | 56 | 52° 09. 902 | 129° 30. 049 | | 214 | | | | | |
| 13 | SP4 | Newston | 0320 | EN | 56 | 52° 10. 492 | 129° 30. 020 | | | | | | | |
| 13 | SP3 | ROS | 0520 | BE | 57 | 51 52. 10 | 129 23. 71 | | 228 | | | | | |
| 13 | SP3 | ROS | 0526 | BO | 57 | 51° 52. 12 | 129 23. 68 | | | 220 | 119 - 127 | 9 | | |
| 13 | SP3 | ROS | 0536 | EN | 57 | 51 52. 10 | 129 23. 62 | | | | | | | |
| 13 | SP3 | Newston | 0637 | BE | 58 | 51 52. 15 | 129 23. 66 | | | | | | | |
| 13 | SP3 | Bongo | 0709 | BE | 59 | 51 52 14 | 129 23 65 | | 228 | 210 | | | | |
| | | | | | | | | | | | | | | |
| 13 | MC9 | CTD | 1556 | BE | 60 | 51° 52. 98 | 129° 38. 35 | | 243 | | | | | |
| 13 | MC9 | CTD | 1601 | BO | 60 | 51° 52. 97 | 129° 38 35 | | | 237 | | | | |
| 13 | MC9 | CTD | 1606 | EN | 60 | 51° 52 97 | 129° 38. 34 | | | | | | | |
| 13 | MC8 | Loop | 1631 | BE | — | 51° 50. 34 | 129° 34 65 | | 275 | | | | | |
| 13 | MC7 | CTD | 1655 | BE | 61 | 51° 47 92 | 129° 31. 95 | | 247? | | | | | |
| 13 | MC7 | CTD | 1700 | BO | 61 | 51° 47. 90 | 129° 32. 05 | | | 246 | | | | |
| 13 | MC7 | CTD | 1705 | EN | 61 | 51 47. 87 | 129° 32. 15 | | | | | | | |
| | | | | | | | | | | | | | | |
| 13 | MC6 | Loop | 1725 | BE | — | 51° 46.13 | 129° 30.06 | | 205 | | | | | |
| | | | | | | | | | | | | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 13 | MC5 | CTD | 1745 | BE | 62 | 51 44.34 | 129 28.04 | | 93 | | | | | Neg Pr @ beginning |
| 13 | MC5 | CTD | 1747 | BO | 62 | 51 44.34 | 129 28.12 | | | 85 | | | | |
| 13 | MC5 | CTD | 1749 | EN | 62 | 51 44.33 | 129 28 18 | | | | | | | |
| 13 | MC4 | LOOP | 1826 | BE | — | 51 40.07 | 129 23.07 | | 61 | | | | | |
| 13 | MC3 | CTD | 1910 | BE | 63 | 51 35.36 | 129 18.51 | | 60 | | | | | Neg Pr @ surface |
| 13 | MC3 | CTD | 1912 | BO | 63 | 51 35.36 | 129 18.60 | | | 52 | | | | 1 spike |
| 13 | MC3 | CTD | 1913 | EN | 63 | 51 35.35 | 129 18.66 | | | | | | | Reboot |
| 13 | MC2 | LOOP | 1956 | BE | / | 51 35.29 | 129 09.89 | | | | | | | |
| 13 | MC1 | CTD | 2035 | BE | 64 | 51 35.36 | 129 02.19 | | 48 | | | | | LOOPS TAKEN |
| 13 | MC1 | CTD | 2038 | BO | 64 | 51 35.40 | 129 02.27 | | | 42 | | | | |
| 13 | MC1 | CTD | 2040 | EN | 64 | 51 35.43 | 129 02.34 | | | | | | | |
| 13 | C1 | LOOP | 2121 | BE | / | 51 34.03 | 128 54.81 | | | | | | | LOOP |
| 13 | C4 | CTD | 2153 | BE | 65 | 51 30.01 | 128 54.41 | | 52 | | | | | Header says MC4 → wrong! |
| 13 | C4 | CTD | 2155 | BO | 65 | 51 30 01 | 128 54.40 | | | 45 | | | | LOOPS TAKEN |
| 13 | C4 | CTD | 2157 | EN | 65 | 51 30.02 | 128 54 40 | | | | | | | |
| 13 | C7 | LOOP | 2240 | BE | / | 51 24.40 | 128 54.40 | | | | | | | LOOP |
| 13 | C9 | CTD | 2301 | BE | 66 | 51 21.01 | 128 54.41 | | 236 | | | | | |
| 13 | C9 | CTD | 2307 | BO | 66 | 51 20.97 | 128 54.30 | | | 231 | | | | LOOPS TAKEN |
| 13 | C9 | CTD | 2310 | EN | 66 | 51 20.99 | 128 54.25 | | | | | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 13 | C10 | LOOP | 23:33 | BE | 1 | 51 18 N1 | 128 53. 22 | | | | | | | LOOP |
| 13 | C11 | LOOP | 23:50 | BE | 1 | 51 15. 37 | 128 51. 99 | | | | | | | LOOP |
| 14 | C12 | CTD | 0018 | BE | 67 | 51 12. 50 | 128 50. 24 | | 128 | | | | | |
| 14 | C12 | CTD | 0022 | BO | 67 | 51 12. 50 | 128 50. 24 | | | 118 | | | | |
| 14 | C12 | CTD | 0024 | EN | 67 | 51 12. 52 | 128 50. 22 | | | | | | | |
| 14 | SP6 | ROS | 0203 | BE | 68 | 51 19. 97 | 128 54 23 | | 240 | | | | | went up to surface, then back down to |
| 14 | SP6 | ROS | 0209 | BO | 68 | 51 19 86 | 128 54 28 | | | 230 | 128-136 | 9 | | 25 m to trip bottle |
| 14 | SP6 | ROS | 0225 | EN | 68 | 51 19 59 | 128 54 40 | | | | | | | |
| 14 | SP6 | Bongo | 0302 | BE | 69 | 51 19 861 | 128 54 236 | | 240 | 245 | | | | |
| 14 | SP6 | Newston | 0322 | BE | 70 | 51 19 642 | 128 54 228 | | 241 | | | | | |
| 14 | SP6 | Newston | 0339 | EN | 70 | 51 20 159 | 128 54 249 | | 241 | | | | | |
| 14 | SP5 | ROS | 0421 | BE | 71 | 51 20. 96 | 128 46. 83 | | 225 | | | | | |
| 14 | SP5 | ROS | 0428 | BO | 71 | 51 20. 95 | 128 46. 79 | | | 212 | 137-145 | 9 | | Loops Taken |
| 14 | SP5 | ROS | 0440 | EN | 71 | 51 21. 01 | 128 46. 90 | | | | | | | |
| 14 | SP5 | Newston | 0515 | BE | 72 | 51 20. 96 | 128 46. 83 | | | | | | | 15 min. 0515-0530 |
| 14 | SP5 | Bongo | 0545 | BE | 73 | 51 20. 97 | 128 46. 86 | | 224 | 220 | | | | |
| 14 | HEDO1 | ROS | 1849 | BE | 74 | 52 20. 09 | 132 00. 00 | | 2082 | | | | | |
| 14 | HEDO1 | ROS | 1914 | BO | 74 | 52 20. 05 | 131 59 94 | | | | 146-160 | 15 | | |
| 14 | HEDO1 | ROS | 1952 | EN | 74 | 52 19. 98 | 131 59. 89 | | | | | | | |

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* WINCH SURGES WITH WAVES - FROM 1.5 m/s TO .75 m/s BETWEEN SWELLS (2m). THIS IS WITH 1500 m OUT
WHAT WOULD IT BE LIKE WITH 4200m OUT? THIS WITH THE SLIPPAGE PROBLEM WHEN STOPPED WARRANTS
A WINCH SERVICING (SQUEALING NOISE FROM VALVES ALSO)

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14 | HED02 | CTD | 21:19 | BE | 75 | 52 20.08 | 132 17.97 | | 2923 | | | | | |
| 14 | HED02 | CTD | 21:42 | BO | 75 | 52 20 06 | 132 19.90 | | | 1500 | | | | Loops Taken |
| 14 | HED02 | CTD | 21:59 | EN | 75 | 52 20.10 | 132 19.98 | | | | | | | |
| 14 | HED03 | ROS | 2358 | BE | 76 | 52 19 99 | 132 40.03 | | 2885 | | | | | Loops taken |
| 15 | HED03 | ROS | 0019 | BO | 76 | 52 19.97 | 132 39.95 | | | | 161-175 | 15 | | Stop on ↑ @ 690 to redo spooling. |
| 15 | HED03 | ROS | 0055 | EN | 76 | 52 19 96 | 132 39 95. | | | | | | | |
| 15 | HED03 | B NET | 0139 | BE | 77 | 52 19 80 | 132 39 97 | | 2880 | 400 | | | | Bongo |
| 15 | HED 03 | B NET | 0207 | BE | 78 | 52 19 988 | 132 40.198 | | 2880 | 250 | | | | |
| 15 | HED 03 | B NET | 0231 | BE | 79 | 52 19 946 | 132 40 206 | | 2879 | 100 | | | | Another jump in sal & in TS |
| 15 | HED 03 | B NET | 0253 | BE | 80 | 52 20 011 | 132 40 229 | | 2885 | 50 | | | | |
| 15 | HED 03 | N NET | 0304 | BE | 81 | 52 19 979 | 132 40 312 | | 2883 | SURFACE | | | | NEUSTON TOW 15 min |
| 15 | HED 03 | N NET | 0322 | EN | 81 | 52 19.974 | 132 41.402 | | 2873 | | | | | |
| 15 | HED04 | CTD | 0438 | BE | 82 | 52 19.99 | 132 59 86 | | 2773 | | | | | CHECKED TS CELL |
| 15 | HED04 | CTD | 0459 | BO | 82 | 52 20 02 | 132 60.00 | | | 1500 | | | | LOOPS TAKEN |
| 15 | HED04 | CTD | 0519 | EN | 82 | 52 20.00 | 133 00, 02 | | | | | | | STOPPED PART WAY DOWN TO RE-ALIGN WINCH |
| 15 | HED10 | CTD | 1537 | BE | 83 | 52 20 14 | 134 59 96 | | 3281 | | | | | |
| 15 | HED10 | CTD | 1604 | BO | 83 | 52 20.28 | 135 00, 02 | | | 1507 | | | | TS: 32.128 |
| 15 | HED10 | CTD | 1624 | EN | 83 | 52 20 37 | 134 59 98 | | | | | | | CTD ~~Sal~~: 32.14 |
| | | | | | | | | | | | | | | TS: 7.34 |
| | | | | | | | | | | | | | | CTD: 7.04 |

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Checked TS cell on thermosalinograph for blockage. Small mussel shell in poison cell on end of TS cell. Blockage has removed itself.

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 15 | HED09 | Neuston | 1744 | BE | 84 | 52 20.195 | 134 41.660 | | 3104 | | | | | |
| 15 | HED09 | Neuston | 1800 | EN | 84 | 52 20.007 | 134 41.097 | | | | | | | |
| 15 | HED09 | Bongo | 1815 | BE | 85 | 52 20.049 | 134 39.952 | | 3109 | | | | | |
| 15 | HED09 | ROS | 1932 | BE | 86 | 52 20.02 | 134 40.04 | | 3110 | | | | | Wait 30 min for winch to be fixed |
| 15 | HED09 | ROS | 1959 | BO | 86 | 52 20.10 | 134 40.01 | | | 1500 | 176-190 | 15 | | Loops Taken |
| 15 | HED09 | ROS | 2036 | EN | 86 | 52 20.02 | 134 40.08 | | | | | | | |
| 15 | HED08 | CTD | 2204 | BE | 87 | 52 20.06 | 134 20.12 | | 2260 | | | | | |
| 15 | HED08 | CTD | 2224 | BO | 87 | 52 20.01 | 134 20.25 | | | 1500 | | | | Loops Taken |
| 15 | HED08 | CTD | 2246 | EN | 87 | 52 19.98 | 134 20.17 | | | | | | | Stopped at 1500 to realign winch. |
| 16 | HED07 | CTD | 0013 | BE | 88 | 52 19.94 | 134 00.09 | | 2235 | | | | | |
| 16 | HED07 | CTD | 0038 | BO | 88 | 52 19.80 | 133 59.94 | | | 1507 | | | | |
| 16 | HED07 | CTD | 0102 | EN | 88 | 52 19.51 | 133 59.88 | | | | | | | |
| | | | | | | | | | | | | | | |
| 16 | HED06 | Bongo | 0230 | BE | 89 | 52 19.963 | 133 40.133 | | 2767 | | | | | |
| 16 | HED06 | ROS | 0253 | BE | 90 | 52 19.83 | 133 40.18 | | 2767 | | | | | |
| 16 | HED06 | ROS | 0317 | BO | 90 | 52 19.83 | 133 40.17 | | | 1506 | 191-205 | 15 | | Bottle 1 did not trip. |
| 16 | HED06 | ROS | 0359 | EN | 90 | 52 19.91 | 133 40.16 | | | | | | | Salinity labels say "HED09" |
| 16 | HED06 | Neuston | 0406 | BE | 91 | 52 19.897 | 133 40.164 | | 2768 | | | | | |
| 16 | HED06 | Neuston | 0422 | EN | 91 | 52 19.991 | 133 39.438 | | | | | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 16 | HE005 | CTD | 05:45 | BE | 92 | 52 20.01 | 133 20.07 | | 2675 | | | | | |
| 16 | HE005 | CTD | 06:10 | BO | 92 | 52 20.00 | 133 20.06 | | | 1500 | | | | LOOPS TAKEN |
| 16 | HE005 | CTD | 06:34 | EN | 92 | 52 20.01 | 133 20.03 | | | | | | | |
| | | | | | | | | | | | | | | |
| 17 | Ri 1 | ROS | 1625 | BE | 93 | 51 26 35 | 127 38.06 | | 334 | | | | | Rivers Inlet |
| 17 | Ri 1 | ROS | 1631 | BO | 93 | 51 26 41 | 127 38 05 | | | 326 | 206-219 | 14 | | Loops taken |
| 17 | Ri 1 | ROS | 1651 | EN | 93 | 51 26 52 | 127 38 04 | | | | | | | |
| 17 | Ri 2 | CTD | 1743 | BE | 94 | 51 31.21 | 127 33.64 | | 334 | | | | | Neg P @ surface then ok |
| 17 | Ri 2 | CTD | 1750 | BO | 94 | 51 31.06 | 127 33.66 | | | 322 | | | | Loops taken |
| 17 | Ri 2 | CTD | 1756 | EN | 94 | 51 31.04 | 127 33.56 | | | | | | | Huge wire angle |
| 17 | Ri 3 | CTD | 1842 | BE | 95 | 51 35.92 | 127 32.13 | | 329 | | | | | Loops taken |
| 17 | Ri 3 | CTD | 1849 | BO | 95 | 51 35 81 | 127 32 04 | | | 315 | | | | wire out 322 m |
| 17 | Ri 3 | CTD | 1854 | EN | 95 | 51 35.77 | 127 31, 95 | | | | | | | |
| 17 | Ri 4 | ROS | 1946 | BE | 96 | 51 38.91 | 127 26.68 | | 302 | | | | | |
| 17 | Ri 4 | ROS | 1952 | BO | 96 | 51 38.92 | 127 26.68 | | | 293 | | | | Loops taken |
| 17 | Ri 4 | ROS | 2006 | EN | 96 | 51 38.94 | 127 26.69 | | | | | | | |
| 17 | Ri 5 | CTD | 2053 | BE | 97 | 51 40.73 | 127 19.89 | | 202 | | | | | |
| 17 | Ri 5 | CTD | 2058 | BO | 97 | 51 40.72 | 127 19.86 | | | 194 | | | | Loops taken |
| 17 | Ri 5 | CTD | 2101 | EN | 97 | 51 40.73 | 127 19.87 | | | | | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | SM4 | ROS | 0248 | BE | 98 | 51 21.55 | 127 09.07 | | 186 | | | | | Loops taken |
| 18 | SM4 | ROS | 0253 | BO | 98 | 51 21.55 | 127 09.06 | | | 179 | 233-242 | 10 | | |
| 18 | SM4 | ROS | 0306 | EN | 98 | 51 21.57 | 127 09.06 | | | | | | | |
| 18 | SM3 | CTD | 03:53 | BE | 99 | 51 18.47 | 127 14.55 | | 321 | | | | | |
| 18 | SM3 | CTD | 03:59 | BO | 99 | 51 18.48 | 127 14.56 | | | 314 | | | | Loops taken |
| 18 | SM3 | CTD | 04:03 | EN | 99 | 51 18.49 | 127 14.57 | | | | | | | |
| 18 | SM2 | CTD | 04:46 | BE | 100 | 51 17.98 | 127 22.04 | | 370 | | | | | |
| 18 | SM2 | CTD | 04:52 | BO | 100 | 51 17.99 | 127 22.09 | | | 363 | | | | No Loops |
| 18 | SM2 | CTD | 04:59 | EN | 100 | 51 17.99 | 127 22.11 | | | | | | | |
| 18 | SM1 | CTD | 05:41 | BE | 101 | 51 18.72 | 127 29.94 | | 220 | | | | | |
| 18 | SM1 | CTD | 05:46 | BO | 101 | 51 18.72 | 127 29.96 | | | 207 | | | | No Loops |
| 18 | SM1 | CTD | 05:50 | EN | 101 | 51 18.72 | 127 29.97 | | | | | | | |
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Cast type: BOT = ottle cast; CTD = CTD; MOR = mooring; ROS = Rosette; NET = net haul; DRF = drifter; USW = sea water loop

Time Code: BE = beginning time of cast; BO = bottom time of cast; EN = end of cast time; DE = deployment time; MR = messenger release time; RE = recover mooring time