

DAILY SCIENCE LOG BOOK

MISSION
NUMBER

2008-29

DATE:

From: July 2 2008 to: JULY 17 2008

VESSEL:

CCGS LOUIS S ST LAURENT

PROJECT(S):

C30

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

WaterProperties.ca

Treat this daily science log as an invaluable source of information of what happened on your research mission. Months, years, or even decades after your research has been completed, people will still consult this logbook for information and as such, one should make all efforts to complete this logbook (and any associated sheets for rosettes, fish sets, plankton tows, etc) as events unfold on a daily basis. This logbook has been supplied with extra sheets of paper for you to record any additional information.

Please remember to record such events as:

- An observed failure or strange reading of a sensor during a CTD cast
- A computer crash or software issue
- Switching of a CTD or sensor unit, including the removal or replacement of a PAR sensor
- A bottle that fails to trip or bottles that are tripped without commands being sent to the pylon during the cast
- A syringe that is left on a cell during a cast
- The cleaning (or lack thereof) of a transmissometer
- A nutrient sample from the seawater loop
- A failure of a NMEA string input into the deck unit
- Failure of the CTD pump to turn on or failure to turn on the CTD pump during a cast
- A CTD or rosette that is recovered with mud or jellyfish attached to it
- A sample bottle is removed or switched or weights are added or removed from the rosette or CTD unit
- Any unusual biological observations (e.g., large numbers of squid, jellyfish, birds, zooplankton swarms, thick waters due to phytoplankton)
- Any change in sampling protocols that either do not follow standard procedures or are using different standard procedures

*Please ensure that you have reviewed the required standardized sampling protocols prior to taking any samples.
Current copies of sampling protocols may be found on the Water Properties website at WaterProperties.ca*

The format for sample labels is:

Sample Number	124
Sample Type	Sal
Station Name	LC12
Cruise ID	2008-16
Bottle Number	Bot 1

Water Properties Emergency Contacts:	
CTD/Rosette:	Doug Anderson, 250.363.6305 Hugh Maclean, 250.363.6594 Ron Lindsay, 250.363.6592
Nutrients:	Janet Barwell-Clarke, 250.363.6815 Wendy Richardson, 250.363.6544
Salinities/Oxygen:	Sheila Sloman, 250.363.6300
Other Questions:	Steve Romaine, 250.363.6868

Captain: Marc Rothwell
 Second Officer: Carey
 Fishing Master: W/A

First Officer: Catherine Lacomb
~~Third Officer:~~ Stephen Legault
Chief Officer

Mission Participants / Agencies: DFO, Env Can, Uvic, Various Media

Scientific Personnel:

JANE Cert

JANE Cert

Name	Watch	Cabin
Robie MacDonald		404
Charles Gobeil		
Danielle Dubien		551
Marie-Eve Ruellet		528
Marty Davelaar		
Sheila Sloman		
Will Burt		
Glenn Cooper		
Phil Benoit		
Adam Shahan		

Second leg of Mission:

Chief Scientist:

[illegible]

Data logging computer:

Data acquisition program: SEASAVE 7

CTD deck unit make: SEA-BIAT model: 11 serial number:

Primary 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:
PAR sensor:	Model:	s/n:

Other sensors: _____ s/n: _____ P, S or NO pump?

Other sensors: _____ s/n: _____

Other sensors: _____ s/n: _____

Other sensors: _____ s/n: _____

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 _____ s/n: _____
Cable gain: _____
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: _____
Manufacturer: _____
Volume of bottles (litres): _____

Winches:

	Make:	Model:	Serial #:	Used for:
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):

Salinometer:

Make: _____ Model: _____ Serial Number: _____

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

Oxygen Kit(s):

	Make:	Model:	Kit Number:
Make:	_____	Model: _____	Kit Number: _____

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

Thermosalinograph System (SBE21):

Program: _____ Version: _____

Sampling interval (seconds): _____

Fluorometer sensor serial number: _____

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

ADCP Setup:

Computer time zone: _____ User Exits: Name: _____ Exit points: _____

Sampling interval (sec): _____ Name: _____ Exit points: _____

Bin Length: (2^x): _____ Name: _____ Exit points: _____

Pulse Length: _____ Work File: _____

Buffer (bytes): _____

Gyro Offset: _____

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

CTD Test Cast Information

Test Cast along side? Yes ☐ No ☐

Comments _____

Test Cast in Saanich Inlet or other location? Yes ☐ No ☐

Comments _____

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

Pumps working? Yes ☐ (0011) No ☐ (0010)

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

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

Additional Comments:

Captain: _____

Second Officer: _____

Fishing Master: _____

First Officer: _____

Third Officer: _____

Mission Participants / Agencies:

[illegible][illegible]

Data logging computer: _____

Data acquisition program: _____

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

Primary 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:

Oxygen sensor: _____ s/n: _____ P, S or NO pump? _____
Model: _____

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: _____

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

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):

Salinometer:

Make: _____ Model: _____ Serial Number: _____

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

Oxygen Kit(s):

Make: _____	Model: _____	Kit Number: _____
Make: _____	Model: _____	Kit Number: _____

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

Thermosalinograph System (SBE21):

Program: _____ Version: _____
Sampling interval (seconds): _____
Fluorometer sensor serial number: _____

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

ADCP Setup:

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

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

CTD Test Cast Information

Test Cast along side? Yes ☐ No ☐
Comments _____

Test Cast in Saanich Inlet or other location? Yes ☐ No ☐
Comments _____

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

Pumps working? Yes ☐ (0011) No ☐ (0010)

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

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

Additional Comments:

Date of cable termination:

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 from Tom Juhász, IOS room 1221, phone 250.363.6598.

Please identify nominal cable diameter: _____ Winch: _____

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

At cable end:

at 5 metres:

1.

$$\frac{2}{2}$$

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

Rust flaking off cable

Cable round or oval

Does cable have loose outer armour?

(Raised wires or space between wires.)

Are outer armour wires flattened?

Remove cable that exhibits these

Remove cable that exhibits these signs of deterioration. To be authorised by Chief Scientist of the cruise or the winch shop, Phil Lobb at 250.363.6799.

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.

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)

Condition of wires (damaged ends?)

Are the wires rusted?

Comments:

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 from Tom Juhász, IOS room 1221, phone 250.363.6598.

Please identify nominal cable diameter: _____ Winch: _____

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

At cable end: at 5 metres:

1. _____
 2. _____
 3. _____
 1. _____
 2. _____
 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: _____

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Describe cable:

Kinks:

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Cable round or oval

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Sliding the sleeve onto the cable should be difficult.

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) _____

[illegible]

Are the wires rusted?

Comments:

[illegible]

Date of cable termination:

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 from Tom Juhász, IOS room 1221, phone 250.363.6598.

Please identify nominal cable diameter:

Winch: _____

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

At cable end:

at 5 metres:

1.

2. _____

2. _____

33

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

Rust flaking off cable

Cable round or oval

Does cable have loose outer armour?

(Raised wires or space between wires.)

Are outer armour wires flattened?

Remove cable that exhibits these signs of deterioration.

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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.

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)

Condition of wires (damaged ends?)

Are the wires rusted?

Comments:

[illegible]

4

4

Winch:

Actual diameter measured back from termination.

at 5 metres:

1. _____
2. _____
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

Rust flaking off cable

(flaking, not just looks rusty)

Cable round or oval

Does cable have loose outer armour?

(Raised wires or space between wires.)

Are outer armour wires flattened?

Remove cable that exhibits these signs of deterioration. To be authorised by Chief Scientist of the cruise or the winch shop, Phil Lobb at 250.363.6799.

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

Inner armour to conductor 1

Inner armour to conductor 2

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Please identify PMI sleeve used by checking the appropriate blank:

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For .322" cable, diameter of inner dimension of sleeve should be .340"

part number 9004897-14, cable range .321" to .333".

Sliding the sleeve onto the cable should be difficult.

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)
1	
2	
3	
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[illegible]

Are the wires rusted?

100

Comments:

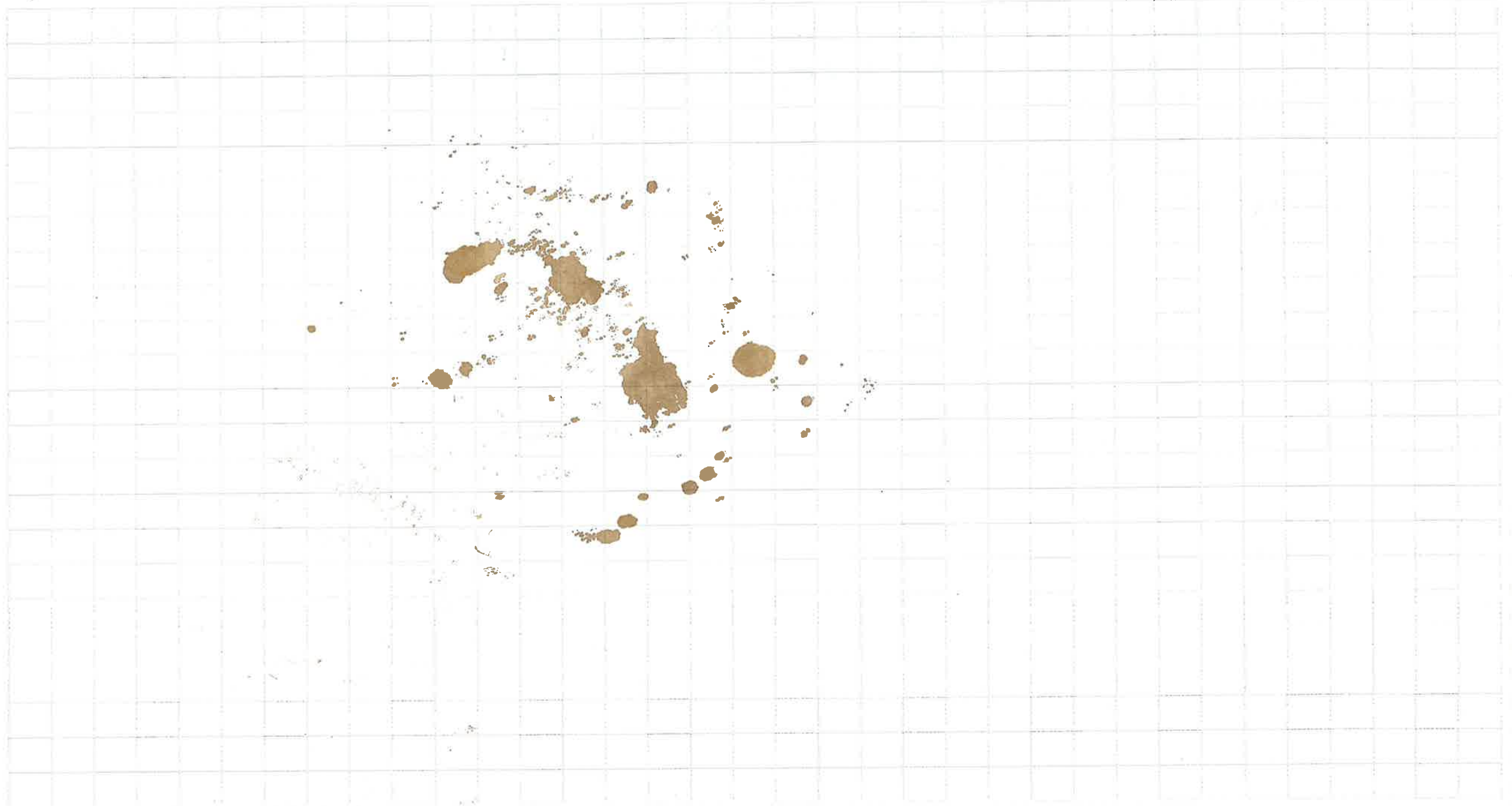
Blank lined paper for writing.

Depart dock @ 1630 July 4, 2008. Delayed from planned sailing on July 2 due to difficulties scheduling fuelling barge and propulsion issues when engines were started & tested.

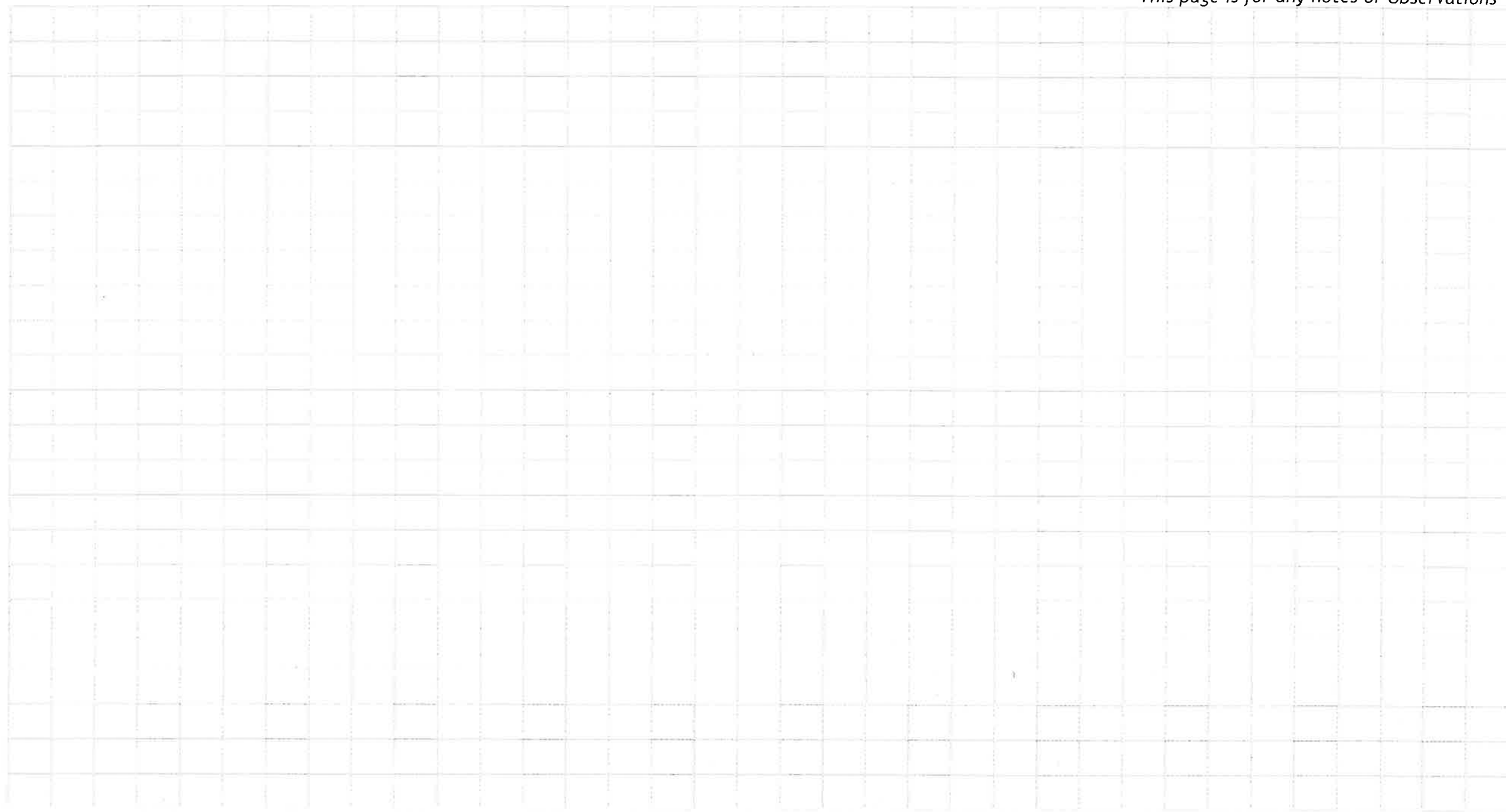
1800 Finish compass swings - heading out of harbour @ 12 kts.

2000 Heading along NS coast in fog - 14 kts.

This page is for any notes or observations



This page is for any notes or observations



DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 1 of

Month JULY				Year 2007			Ship LSSL				Cruise ID 2008-29				
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	XCTD1	1917	BE	XCTD1	/	XCTD1	53° 19.5' N	54° 33.6' W	378	378	/	/	JS/AS/SW	N/A	Se# 07033328 →
6	XBT1	2135	BE	TS	/	XBT1	53° 49.53' N	54° 18.86' W							198919 + 1 fail
6	XCTD2	2332	BE	XCTD1	/	XCTD2	54° 18.75' N	54° 04.60' W	210	210					07033329
6	/	2359		LOOP		Loop 1 ✓	54° 24.92' N	54° 01.82' W							Loop sal for TSG
7	XBT2	0129	BE	TS	/	XBT2	54° 48.90' N	53° 19.69' W	345	345			AS/SS		198909
7	XCTD3	0327	BE	XCTD1		XCTD3	55° 18.14' N	53° 35.25' W	'				AS/SS		07033330
7	L53	630	BE	ROS	US	001	55 57.898	53 15.630	3090	1000	1-22	22	MD/	✓	→
		64	BO				55 57.637 N	53 15.800 W							all bottles closed to
		731	EN				55 57.156	53 16.380							check integrity, salts taken
7	L53	0720	EN	NET		NET 1				100			GC		
7	XBT3	1011	BE	TS		XBT03	56° 35.84' N	53 31.36 W	3225						@ 12kts 198917
7	XCTD4	1239	BE	XCTD1		XCTD4	57 16.20 N	53 48.83 W	3250	1100					
7	/	1434		LOOP		LOOP2 ✓		' W							Loop Sal for TSG
7	XBT4	1447	BE	TS		XBT4	57° 49.88 N	54° 03.03' W	3300	1401			ADAM/NA/DOIC		198916
7	XCTD5	1703	BE	XCTD1		XCTD5	58° 25.02' N	54° 17.94' W	3246	1100					07033332
7	/	1710	BE	DRIF	/	DRIF1	58 26.81	54 18.76			193-240	48			
		1717	EN				58 25.02	54 17.94							
7	XBT5	1858	BE	TS		XBT5	58 55.07 N	54° 31.54	3244	1400			ADAM/NA/DOIC		198912

Cast Type:

BOT = Bottle cast, no CTD
 CTD = CTD without Rosette
 ROS = Rosette plus CTD
 SET = Fish Set

USW = Sea Water Loop

MOR = Mooring

NET = Plankton Net Haul

DRF = Drifter

___ =

Bottle Firing Method:

US = Up / Stop
 UN = Up / No stop
 DN = Down / No stop

Notes: _____

Time Code:

BE = Beginning Time of Cast
 BO = Bottom Time of Cast
 EN = End Time of Cast

DE = Deployment Time

MR = Messenger Release Time

RE = Recover Mooring Time

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

Produced by the Water Properties Group, IOS

WaterProperties.ca
 Version: 06 March 2008

RAW

→ file was overwritten because sequence # did not change automatically, but 1m file OK

Memo by shige

(RAW file of XCTD-01 was exist, but, RAW files of XCTD-02 and XCTD-03 were not exist.)

(Date and time in XCTD-01 RAW file were Japanese standard time.)

→ Between 400 & 550 m one Oxygen and one Salinity sensor stopped working also one transmissometer gave a negative value for the entire cast. Around 800 m on upcast started going out again to fix wrap on winch

Although cast was XBT #5 program labeled as #6. When changed to #5, the data file still wrote # as #6. Data exists in RAW file though. Renamed files as XBT005.

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Page 2 of

Month JULY				Year 2008			Ship LSSL				Cruise ID 2008-29				
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							
7	XCTD 6	21:00	BE	XCTD1		XCTD 6	59°26.10'N	54°44.89'W	—	1081			AS/Waldd/JW		07033333
7	XBTG	23:00	BE	TS		XBTG	59°57.17'N	55°00.67'W	3200	1050			WW/AS/WB		198915
8	XCTD 7	01:05	BE	XCTD1		XCTD 7	60°28.88'N	55°13.32'W		1047			WW/AS		07033335
8	XBT 7	02:55	BE	TS		XBT 7	60°58.79'N	55°28.80'W	2800	1350			WW/WB/GC		198914
8	XCTD 8	05:02	BE	XCTD1		XCTD 8	61°31.15'N	55°43.13'W	2677	1100.			WB/GC		7033336
8	XBT 8	07:02	BE	TS		XBT 8	62°00.75'N	55°58.25'W		1200			WB/GC		198913
7	/	21:08	/	LOOP		LOOP3	57°03.43'N	60°10.12'W			out of order		SS		Loop sal for TSG
8	XCTD 9	09:02	BE	XCTD1		XCTD 9	62°32.69'N	56°12.84'W	2291	1100.1			WB/GC		7033334
8	/	10:47	/	LOOP		LOOP4	63°00.75'N	56°27.54'W							
8	XBT 9	10:56	BE	TS		XBT 9	63°02.28'N	56°28.35'W	2192	1190.0			WB/GC		198910
8	/	1203	/	LOOP		LOOP5	63°20.13'N	56°37.41'W					JE		
8	XCTD 10	1306	BE	XCTD1		XCTD 10	63°36.53'N	56°45.74'W	1392	1100.0			WB		7033339
8	XBT 10	1518	BE	TS	/	XBT 10	64°11.30'N	57°02.98'W	720			/	JE	/	198918
8	XCTD 11	1705	BE	XCTD1		XCTD 11	64°39.35'N	57°17.21'W	773	800			AS/WW		07033338
8	XBT 11	1900	BE	TS		XBT 11	65°10.92'N	57°35.27'W	685	670			AS		198911
8	XB														

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

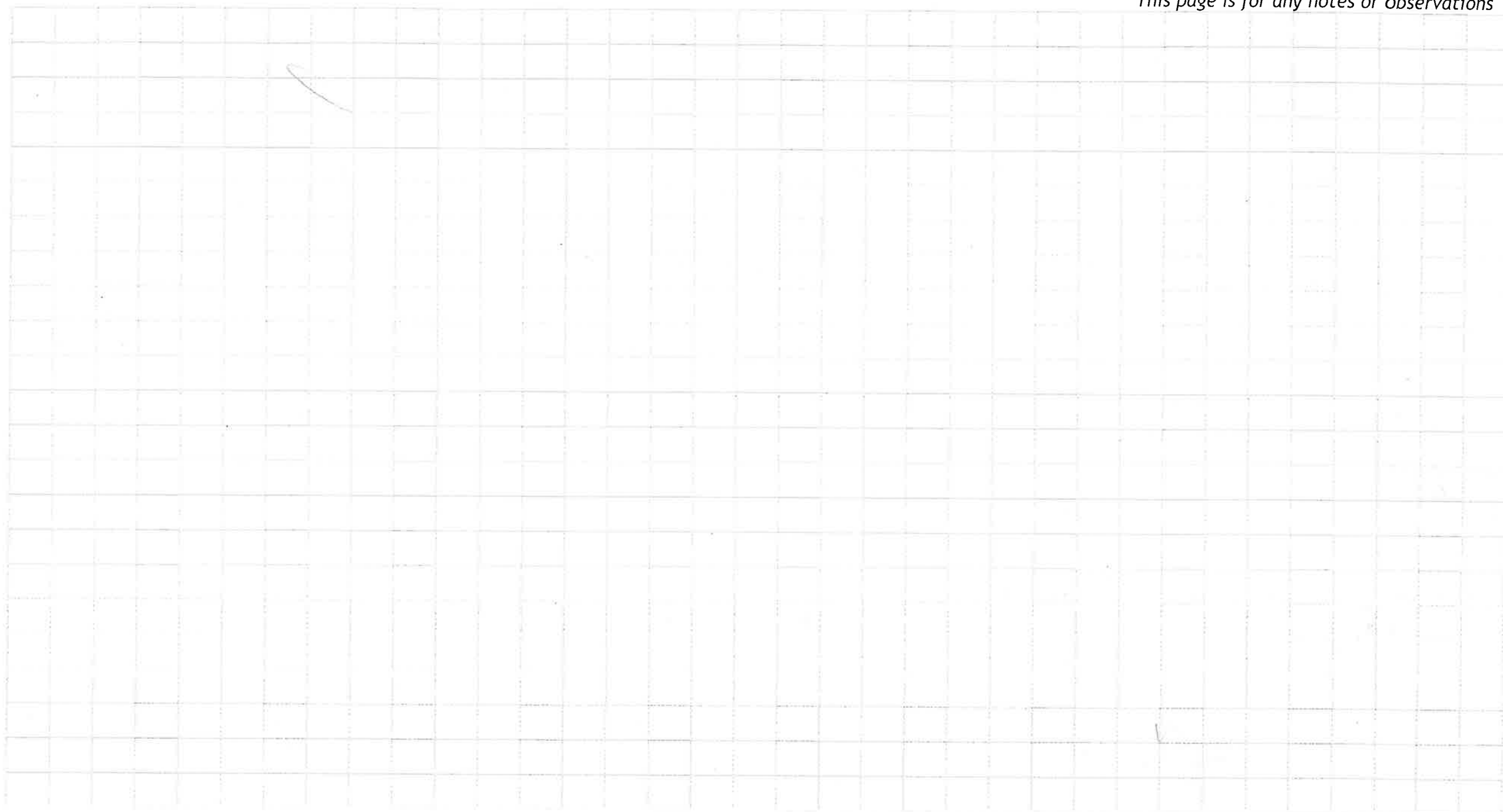
Transmissometer to be cleaned before each cast, do not use Ammonia products

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14

This page is for any notes or observations



DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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Month <u>July</u>				Year <u>2008</u>			Ship <u>LOUIS ST LAURENT</u>		Cruise ID <u>2008-29</u>						
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
8	DS1	2038	BE	ROS	US	002	65°28.910N	57°44.886W	570	577	23-38	16	AS/SE		ADCP IN - 2039
		2049	BO												
		2120	EN				65 29.22	57 46.09							
	DS1	20:	BE	NET		NET 2									
			EN												
	DS1	2121	BE	Box CORE		COR 1	65 29.22	57 46.15							
		2135	BO				65 29.25	57 46.26	575						
		2145	EN				65 29.20	57 46.38							ADCP OUT - 2140
	YDI														
	✓			LOG		L									
	XCTD														
	BT														
8	XBT12	2330	BE	TS		XBT12	65°53.73	57°57.58'	525	550			AS		194018
9	XCTD12	000100	BE	XCTD1		XCTD12	66°14.70	58°13.47'	610	615			AS		07033337

Cast Type:

BOT = Bottle cast, no CTD
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SET = Fish Set

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

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XBT NO. 12 WAS MISFIRE. CORD SHORTED ON RAIL, XBT 13 RAW FILE WAS RENAMED XBT12

DAILY SCIENCE LOG

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Month <u>JULY</u>			Year <u>2008</u>				Ship <u>Louie</u>				Cruise ID <u>2008-29</u>				
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
8	LOOP 6	2038		✓	/		66° 58.99N	58° 35.08					SS		
						4									
9	XBT13	0200	BE	TS		XBT13	66° 31.66	58° 22.64	691				AS		194019/194022
9	DS2	0316	BE	ROS	US	003	66° 45.58	58° 32.34	765			17	SS/AS	✓	ADCP IN 0317h.
		0334	BO				66° 45.56	58° 32.35		770 ^{+10m}	39-55				the most
		0411	EN				66° 45.48	58° 32.56							beautiful sunset!
	DS2	0316	BE	NET		NET3	66° 45.58	58° 32.34	765	100					rainbows!
		0332	EN				66° 45.54	58° 32.34							
	DS2	0400	BE	BOX CORE		CORE2	66° 45.51	58° 32.48							
		0424	BO				66° 45.45	58° 32.72							
		0445	EN												ADCP OUT 0434
9	XCTD13	0730	BE	XCTD1		XCTD13	67° 27.64N	58° 00.48W	390	410			PB/WB		0712693/
9	DS5	1009	BE	ROS	US	004	68° 02.198	57° 32.201	330	320	56-70		PB/WB/MD		ADCP IN 10151st
		1015	BO				68° 02.206	57° 32.213							
		1039	EN				68° 02.208	57° 32.183							ADCP OUT 1050

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Notes: _____

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BIRD HIT FIRST PROBE WIRE → ABORTED

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Month <u>JULY</u>		Year <u>2008</u>		Ship <u>LSSL</u>		Cruise ID <u>2008-29</u>									
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
9	DSS		BE	NET		NET4			330	100			RC		
			EN												
9	DSS	1025	BE	CORE		CORE3	68 02.206	57 32.226							
			BO							340					
			EN												
9	DSS	1057	BE	DRIF	-	-	68 08.17	057 32.43			^{bot 2} 1-48	48	DH/SE		Bonita bottles
		1059	EN												
9	-	1235		LOOP		LOOP7	68 26	57 45					SS		
9	XBT14	1300	BE	TS		XBT14	68 32.53	057 49.27	310	310			GC/WW		194020
9	XCTD14	15:00	DE	XCTD	-	XCTD14	69 04.90	058 08.51	295	295					07121932
9	XBT15	17:00	BE	TS	-	XBT15	68°36.06	058 23.13	286	320			WW/A		194029
9	XCTD15	19:00	BE	XCTD		XCTD15	70°06.75'N	058°40.99'W	300m	323			AS/JW		07126933
9	XBT16	21:00	BE	TS		XBT16	70°38.35N	59° 01.78	600				AS/WW		194025

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Notes: _____

Time Code:

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EN = End Time of Cast

DE = Deployment Time

MR = Messenger Release Time

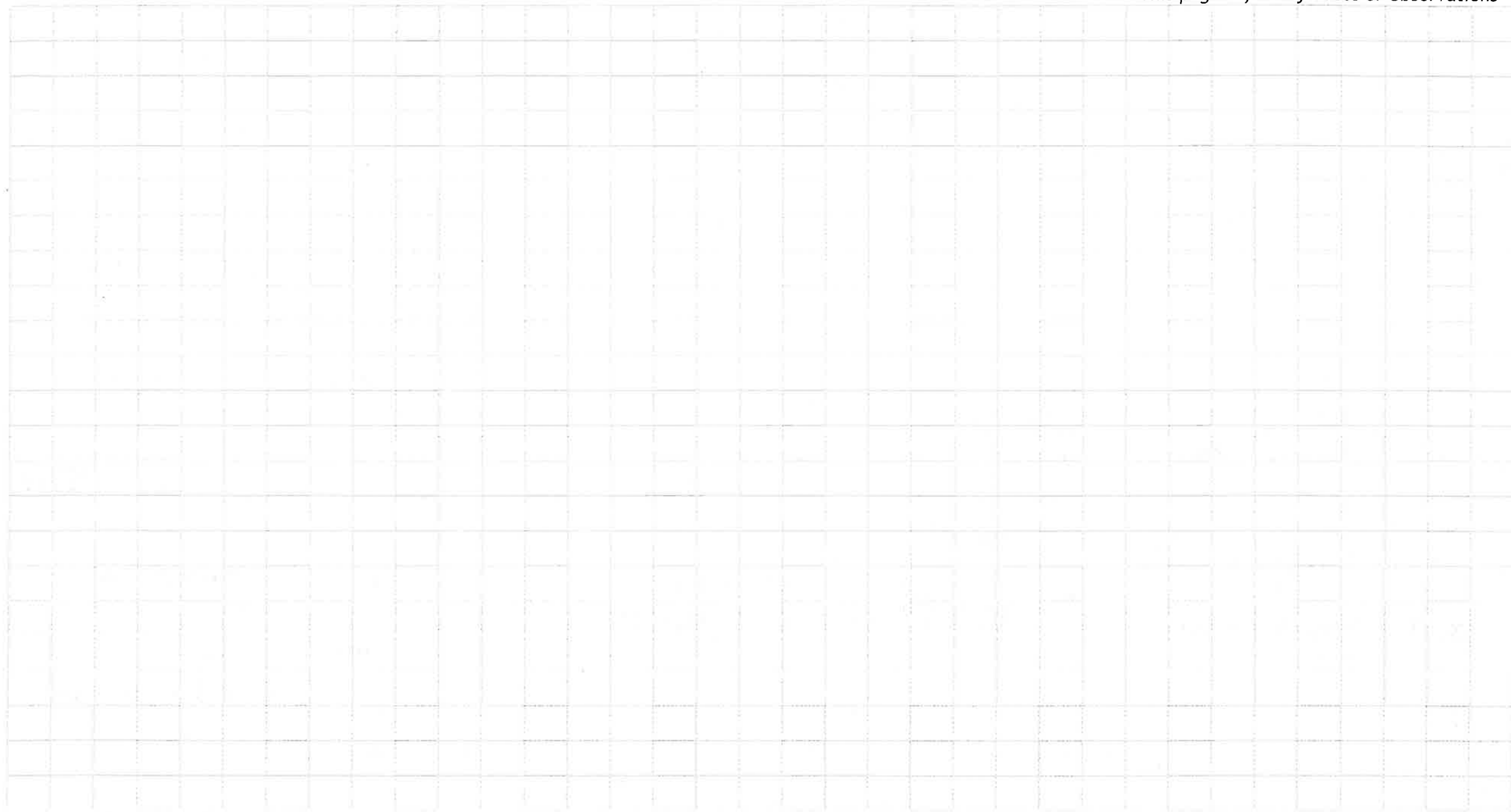
RE = Recover Mooring Time

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

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Month <u>July</u>				Year <u>2008</u>			Ship <u>LOUIS</u>				Cruise ID <u>2008 29</u>				
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
8	XCTD16	2300		CTD		XCTD16	71°13.98'N	059°54.23'W	543	430	07126836		NU/AS		Lost connection
9	—	2359		LOOP		Loop8✓	71 21.17	60 17.62					JE		
10	XBT17	0100	BE	T5		XBT17	71 33.54'N	60°39.14'W	2287	1400			AS/WV		194023
10	XCTD16	0300	BE	XCTD1	FAIL	XCTD1	72°05.31'N	61°07.93'W	1525				AS/WV		07126934 (No good)
10	XCTD16	0318	BE	XCTD1	FAIL	XCTD1	72°10.09'N	61°12.74'W	1500		07126935		AS/JW		Compensator hung again
10	XBT18	0500	BE	T5		XBT18	7237.91'N	61 32 44'W	637	640					
10	XCTD16	0709	BE	XCTD1	FAIL	XCTD1	73 07.26	62 09.58	425				GC/PB/WB		error 8
10	XCTD16	0900	BE	XCTD1	FAIL	XCTD1	7322.42	62 27.82			07126939		GC/PB		Ice = no depth soundings
10	XBT19	0925	BE	T5		XBT19	73 21.58'N	62 40 43'W	425	568	194028 SN		GC/PB		
10	XCTD17	1021	BT	XCTD1	FAIL	XCTD17	73 23.46	63 09.81	481				JW/WB		Comm Error. saved screenshot
10	XCTD18	1202	BE	XCTD1		XCTD18	73 25.04'N	63 59.53'W	1325	1100	07126941		WB		
10	—	1156		LOOP		Loop9✓			—	—	—		JE		
10	XBT20	1403	BE	T5		XBT20	7327.61'N	65 03.47'W	2165	1370	194025		WB/PB		Successful conversion to 1m file
10	XCTD19	1604	BE	XCTD1		XCTD19	7331.44'N	66 02 86'W	2300	368	07126940		WB/PB/JE		Comm Error @ 368m
10	XBT21	18:08	BE	T5		XBT21	73°34.40'N	67°16.47'W	2260	1100	194027		WB/JW		bot file saved fine broke in ice
10	XCTD20	20:15	BE	XCTD1		XCTD20	73°38.63'N	68°33.26'W	2040		07022641				no file, screenshot
10	XBT22	2200	BE	T5		XBT22	73°41.77'N	70°06.43'W	1575	1100			AS/WV/JW		635816

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FIRST DEPLOYMENT, DATA DISPLAYED NORMALLY BUT
DID NOT LOG FILE. RESTARTED W/SAME FILE NAME PROBE 07126935

→ Did not save to log on computer. Computer got stuck @ 100% CPU
+ didn't complete calculating salinity & saving

XCTD Error = -2147220989 Communication Error Probe 7126938
install backup deck unit & launcher & serial cable. System in use is now 064120039

↳ Same error occurred for X-CTD 16^{@ 0900}, problem is likely within Computer...

↳ replace XCTD Laptop
XCTD 17 - Same result.

↳ replace transformer remove MF500-0 sr 61-14751, install 5T500-03

↳ XCTD 18 worked.

ISSUE is actually that the Abort button should never be pressed.

DAILY SCIENCE LOG

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Month <u>JUL</u>				Year <u>2008</u>			Ship <u>LSSL</u>				Cruise ID <u>2008-29</u>				
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
11	XCTD21	0000	BE	XCTD1		XCTD21	73°46.55	72°07.93	1008	1100	07022642		JW/JE AS		hangloss sham while probe descends.
11	\			LOOP		LOOP10									
11	XBT23	0200	BE	TS		XBT23	73°49.06	74°05.12	848	856	635819/635814		JS/WW		PROBE DID NOT FUNCTION (NO DATA) USED ANOTHER
11	XCDT22	03:58	BE	XCDT1		XCDT22	73°52.40'N	76°08.11'W	860		07012640		JW/WW		
11	BB11	0604	BE	CORE		CORE 4	73 55.9	77 55.8	850	850					
		0630	BO				73 56.0	77 55.8							
		0652	EN												
11	BB11	0651	BE	XCTD1	FAIL	XCTD23	73°55.62N	77°56.91'W	843	868	07012639		GC/WB		did not save file
11		0942		LOOP		LOOP11	72°45.197	103°17.078							at end screenshot
11	BB11	0657	BE	DRIF		DRIF3	73 55.76N	78 02.20'W							
		0700	EN				73 55.82N	78 04.66'W	830		49-96	48	DH/JE/WR/KC/LH		Bonita Bottles
11	XBT24	0857	BE			XBT24	73 55.53N	80°05.74'W	779	1832.8	635818		GC/PB		
11	CAA1	1058	BE	ROS	US	0005	73 56 052	81 49 867	640	636	71-87	16	WB/GC/MD	✓	ADCP in 1108
		1119	BO				73 55 853	81 49 570							
			EN				73 55 632	81 49 069							
	CAA1	1057	BE	NET		NETS	73 56 051	81 49 869							
		1108	BO				73 55 955	81 49 573							
	CAA1		BE												
			BO												

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24

Underwater Camera now attached to Rosette. Camera turns on @ 40m, then has a two minute delay. Camera will shoot 13 minutes of film.

- Bottle did not fire @ 175 so we went down from 150 to 175 to try again (bottle 7), this time it fire and sequential bottle fire indicator box now has bottle # fired 2 below next bottle to be fired. so there maybe 2 samples (Niskin 7 & 8) from 175m.
So 17 bottle were tripped and not 16.

DAILY SCIENCE LOG

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Month				Year			Ship			Cruise ID					
JULY				2008			LSSL		2008 - 29						
							below hull f. CTD								
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							
11	CAA1	1135	BE	CORE		CORE5	73 55.772	81 49.352	630						
		1156	BO				73 55.603	81 48.826		616					
			EN												ADCP out 1200
11	XCTD24 XCTD23	14:20		XCTD1		XCTD24 NET6	73 54.47	81 59.25	614	~620	07012637		PBRW		→
11	CAA2	1648	BE	ROS	US	006	73 55.981	86 09.74	342						ADCP in: 1650
		1702	BO				73 55.92	86 09.07		354	88-101				
		1727	EN				73 55.96	86 07.93							
11	CAA2	1649	BE	NET		NET6	73 55.9	86 09.6							
		1655	EN				73 55.9	86 09.4		100					
11	CAA2	not reported	BE	CORE		FAIL									Core
		17:25	BO				73°55.942'N	86°08.002'W							got a rock
		17:27	EN				73°55.951'N	86°07.938'W							ADCP OUT: 17:33
11	CAA2	1736	BE	Box CORE		FAIL 6	73 56.0'N	86 07.5'W	349						did not drip
		1744	BO				73 56.046'N	86 07.266'W		Cable out 366					
11	CAA2	1753	BE	Box CORE		CORE6	73 56.064	86 06.790	353						short core
		1801	BO				73 56.105	86 06.458		368 cable out					
		1808	EN				73 56.151	86 06.241							

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RAW file of XCTD-24 was not exist, but 1m file was exist.

FRC put in water for media

- DO sensor reading 15.46 steady, 5V - was bad cable

FRC back on board 1843

DAILY SCIENCE LOG

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Month				Year				Ship		Cruise ID					
Jul				2008				LSSL		2008-29					
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							
July 14	PS1	0720	BE	NET		NET7	73 35.8'N	96° 17.6'W					MD/MD/WB		
		0730	EN				73 35.8	96 17.6		100					
July 14	PS1	745	BE	ROS	UN	007	73 35 838	96 17 714	240	242	102-113	12		✓	→
		0818	BO				73 35 839	96 17 720							ADCP not in due to
	PS1	0828	EN				73 35 839	96 17 719							ice
		833	BE	Box core		CORE7	73 35 839	96 17 719							
			BO												
14	PS2	1530	BE	ROS	UN	008	72 59 998	96 13 198	333		114-127	14	EF/MD/MD		CTD oxygen reading full scale during
		15:40	BO		UN		73 00 01.	96 13 167.					WB		cast cast.
		15:55	EN				73 00 01	96 13 165							Adam examined issue after cast.
July 14	PS2	1605	BE	NET		NET8									- SZ
		1608	EN							100					
	PS2	1615	BE	CORE		CORE8									
		1625	BO				73 00 0'N	96 13.1'W		340					
		1630	EV												
July 15	BE2	0250	BE	NET		NET9	71 58.5	95 59.5							
			EN							100					

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→ ON going down to 5m for 3 minute Sork winch operator continued down to 87m, Rasette was brought back to surface before returning down. CTD file was stopped & restarted to get rid of Data when CTD was sent down in error. The new file was called 0007A. Also bottles were tripped on the fly

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Month <u>JUL</u>				Year <u>2008</u>			Ship <u>LSSL</u>				Cruise ID <u>2008-29</u>				
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
JUL 15	BE2	02:58	BE	ROS	UN	009	71 58.454	95 59.906	420		128-142	15	ED		Lots of up & down to find space bringing ROS up, better. last bottle is friggent.
			BO				71 58.464	95 59.891		418					
		03:42	EN				71 58.438	95 59.928							
JUL 15	BE2		BE	Box core		Core 89									
		0355	BO				71 58.4	95 59.9		431					
		6402	EN				71 58.4	95 59.9							
JUL 15	FS1	1500	BE	Net		Net 10				100					
			EN												
JUL 15	FS1	1526	BE	ROS	UN	010	70 59.971	97 59.924	145		143-151	9	WP		FS-1 or FS-2?
			BO				70 59.97	97 59.89		141					Labels are all FS-2 58
	FS1	1540	EN				70 59.969	97 59.884							
			BE	Box CORE		Core 910									
		1548	BO				70 59.95	97 59.85		141					
		1552	EN												
16	VSI	0542	BE	Net		Net 11	70 14.96	98 55.76	209				WB		
		0546	EN				70 14.96	98 55.75		100			MD		
		0548	BE	ROS	UN	011	70 14.962	98 55.792	209		152-163	12			
		6001	BO				70 14.959	98 55.784		203					
		612	EN				70 14.954	98 55.789							

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Prior to cast 9

← Adam Shahan swapped oxygen sensor # 435 with oxygen sensor # 1115

New con file is called 200829-0007a - NEWDOSENSOR.CON

Still on Voltage ϕ

Note: Casts 7+ have been in 10/10 ice cover

After cast 9: Bottle 5 bottom seal replaced and PVC groove cleaned.
Bottle 15 spigot stick - replaced 2 #012 bore rings with silicon
O rings.
- checked bottles 13-16 for cracks after being knocked off
mounts by ice on recovery - OK. - MD.

➤ Rosette brought to 10M and held there until there was a hole in the ice, at that point the rosette was brought and final bottle was tripped @ 5 meters from the surface.
Bottle #1 - top mount broken and side has hole in it - sample invalid
Bottle #12 - replaced -
Bottle #12 - small leak in bottom seal - checked and re-sealed. MD.

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Month July				Year 2008			Ship LSSL			Cruise ID 2008-29					
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							
	VSI	0615	BE	Box Core		Core 10 11									
		0618	BO				70 14.96	98 55.73		210					
17	QM-1	0208		Net		Net 12	68 39.9	103 00.2		100					
17	QM-1	02:34	BE	ROS	UN	12	68 39.988	102 00.182	113		164-171	8			in water. Scm 11795 2:41
		02:52	BO				68 39.985	103 00.241		108					
		03:07	EN				68 39.991	103 00.252							
				BoxCORE		CORE 12									not logged by bridge
17	DVI	1215		Net		Net 13									
		1229	BE	ROS	UN	13	69 0 025	106 9 371	130		172-179	8	MP URD		
		1239	BO				69 0 030	106 9 367		125					
		1241	EN				69 0 029	106 09 358							

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 Ha
DRF = Drifter

Bottle Firing Method:

US = Up / Stop
UN = Up / No stop
DN = Down / No stop

Notes:

Time Code:

BE = Beginning Time of Cast DE = Deployment Time
BO = Bottom Time of Cast MR = Messenger Release Time
EN = End Time of Cast RE = Recover Mooring Time

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

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Bad kink discovered in CTD wire ~ 5m from end. Plan Re-term for Cambridge Bay

After DV-1 Remove 15m of wire and re-terminate CTD wire.

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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[illegible]

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