

DAILY LOG BOOK

MISSION
NUMBER

2004-16

DATE:

From: July 2004 to: August 2004

VESSEL:

Louis S St Laurent

PROJECT:

JWACS / BGFE 2004

Canada Basin

INSTITUTE OF OCEAN SCIENCES
OCEAN SCIENCES AND PRODUCTIVITY DIVISION
SIDNEY, BC, CANADA

The format for labels is:

Sample number	001
Sample type	ALK
Station name	LG01
Cruise ID	2002-12
Bottle number	BOT 1

Captain: Andrew McNeill First Officer: John Jenner
Second Officer: _____ Third Officer: _____

Mission Participants / Agencies: IOS WHOI Jamstee, NAF, Inst. of Oceanology (Poland)

Scientific Personnel:		Party Chief:	
Name	Watch	Cabin	Name
			Sarah Zimmerman

[illegible]

Second leg of Mission:

Name	Party Chief:	Watch	Cabin	Name	Watch	Cabin

[illegible]

Data logging computer: mind

Data acquisition program: Seave Win32 Ver 5.28c

CTD deck unit make: SB model: 11 + serial number: 11P31679-0649

Primary CTD

Make: SB model: 9 serial number: _____

Primary temperature serial number:

Primary conductivity serial number:

Secondary temperature serial number:

Secondary conductivity serial number:

Transmissometer:

Transmissometer:		s/n:
Model:		

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

Oxygen sensor: _____ Model: _____ s/n: _____

PAR sensor: _____ Model: _____ s/n: _____

Other sensors: Altitude (wtoI) Oortag sensors PS A-916F/n:

Other sensors: _____ s/n: _____

Other sensors: s/n:

Other sensors: _____ s/n: _____

Secondary CTD

Make: SBE model: 9 serial number:

Primary temperature serial number:

Primary conductivity serial number:

Secondary temperature serial number:

Secondary conductivity serial number:

Transmissometer:

Transmissometer: _____ s/n: _____
Model: _____

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

Oxygen sensor: _____ Model: _____ s/n: _____

PAR sensor: _____ Model: _____ s/n: _____

Other sensors: _____ s/n: _____

Other sensors: s/n:

Other sensors: _____ s/n: _____

Other sensors: _____
s/n: _____

CTD calibration bottle location (height above CTD in metres):

Number of bottles: _____

Manufacturer: _____ (Ocean Test Equip., General Oceanics, IOS)

Volume of bottles (litres): _____

1. Make:	_____	model:	_____	serial #:	_____	used for:	_____
2. Make:	_____	model:	_____	serial #:	_____	used for:	_____
3. Make:	_____	model:	_____	serial #:	_____	used for:	_____
4. Make:	_____	model:	_____	serial #:	_____	used for:	_____
5. Make:	_____	model:	_____	serial #:	_____	used for:	_____
6. Make:	_____	model:	_____	serial #:	_____	used for:	_____
7. Make:	_____	model:	_____	serial #:	_____	used for:	_____
Comments: _____							

Thermosalinograph System:

Comments: _____

Computer time zone: _____

Sampling interval (sec): _____

Bin Length: (2^x): _____

Pulse Length: _____

Buffer (bytes): _____

Gyro Offset: _____

Comments: _____

User Exits: Name: _____ Exit points: _____

 Name: _____ Exit points: _____

 Name: _____ Exit points: _____

Work File: _____

Blank lined paper for writing.

Guide to cable terminations:

Date of cable termination: _____

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 nominal cable diameter:

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

At cable end:

1. _____
2. _____
3. _____

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"

Winch: _____

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? _____

(flaking, not just looks rusty)

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.

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:

Guide to cable terminations:

Date of cable termination: _____

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 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. _____

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? _____

(flaking, not just looks rusty)

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.

Evergrip helical Rods:

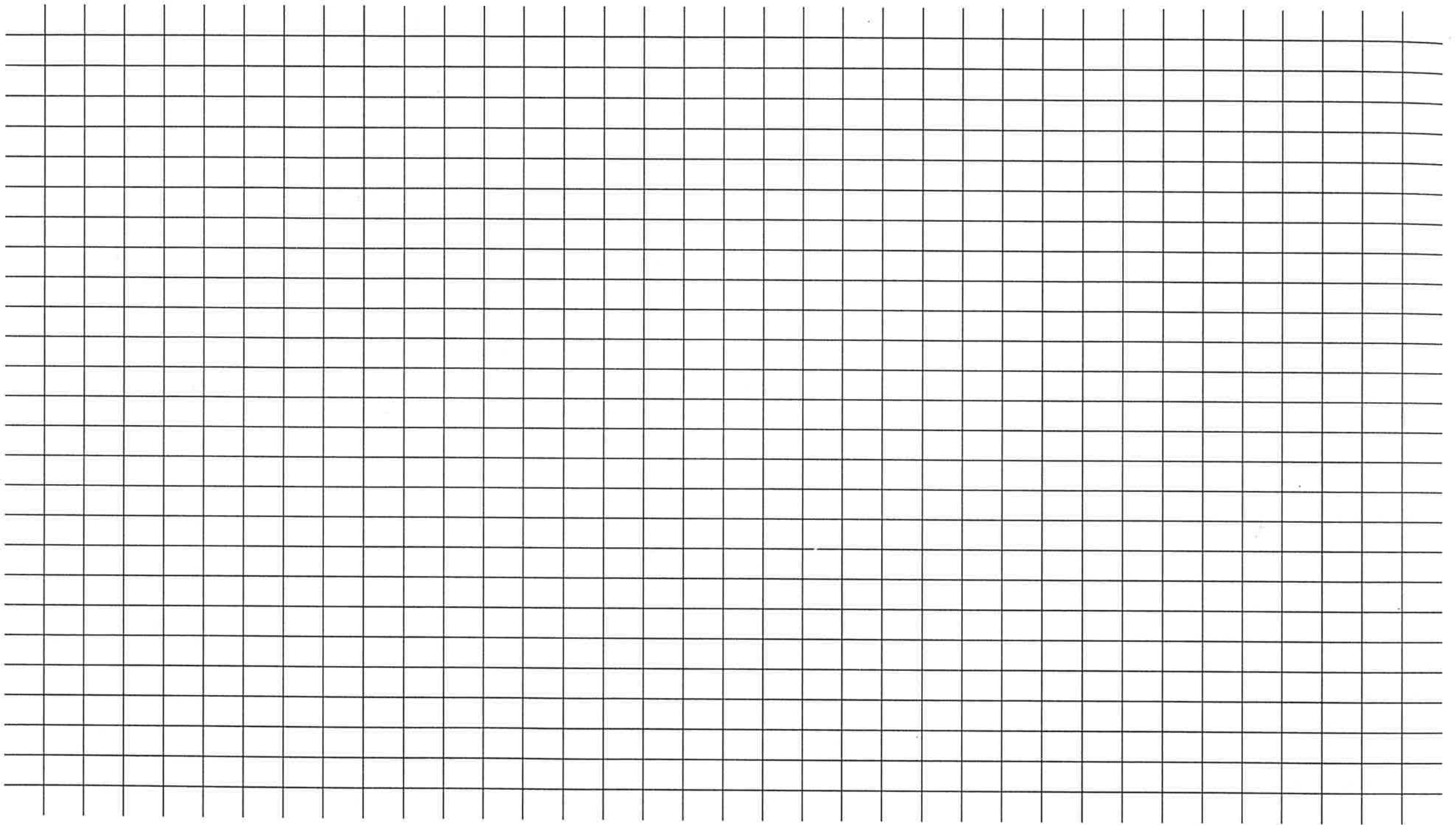
The part number is 9005-9002 and covers left hand lay cables of diameter range .309" to .333".

Presence of grit on inner surface (yes / no) _____

Condition of wires (damaged ends?) _____

Are the wires rusted? _____

Comments:



Part 1 Transit From Resolute

w/ 4 science party and 10 VIP's

A few stations (Rös) were taken
~~the~~ along the way. Only
Salt, Nutrients + Bacteria samples
were taken.

Science: Sarah Zimmermann

Doug Siebert

Motoyo Itoh

Masuo Hosono

VIP:

Eddy Carmack

Martin Bergmann

+ 8

$$ELAC + 9m$$

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

[illegible]

Cast type:	USW = sea water loop	bottle firing method:
BOT = bottle cast, no CTD	MOR = mooring	US = up / stop
CTD = CTD without Rosette	NET = net haul	UN = up / no stop
ROS = Rosette plus CTD	DRF = drifter	DN = down / no stop

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 for each cast, do not use Ammonia products

28 May 2003
Daily_log_book.doc

④

① Cast 1: config file had wrong channel for oxy. This was changed after cast and oxy data recovered
Bacteria not sampled because fixative had not been thawed
No bottom contact alarm $\Rightarrow$ we did not get w/in 5m of bottom

③ ~~2~~ Cast 6: Bottom came up sharply as we drifted along
We moved quite a bit even though the cast was short

② Cast 5: Middle of Bellot Strait Mixed Top to Bottom!

④ Cast 7: Entered Ice btw casts 6 + 7. Broke opening, lowered CTD into small hole.

No proper labels for these first set of samples. Casts 1-7.
Nutrient tubes may be over full; and not frozen in upright position.

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month JUL				Year 04			Ship 255L			Cruise ID 2004-16					
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch keepers	Trans. cleaned	Comments
							Latitude	Longitude							
	Back through Bellot Strait to Resolute														
27	7	19:58	DE	DRF		8	71°55.68	95°25.75	~115						Bottle # 106-111
27	8	20:24	BE	BOF	UN	start	71°57.77	95°11.49'W	272	+9m	49-57	9		NO	at 5m waiting
			BO				71°57.79	95°11.32'W	235	+9m					1 minute
		20:43	B			stop	71°57.87	95°11.22'W							No bottom alarm
			EN							248dbar					(75m off bottom)
27	9	21:11	BE	ROS	UN	9/10	71°58.52'N	95°3.63'W	342	+9m	58~69	12		NO	at 5m waiting
									389	+9m, 394m					1 minute
									400m						no bottom alarm
		21:35	EN				71°58.54	95°2.54'W		400dbar					
27		2040	DE	DRF		11	71°57.8'N	95°11.1'W	~200m						Bottles 112, 113, 114, 117
	CTD winch seal blew. Hydraulic fluid on deck. Opened + repaired														
	Finished by 9pm.														
27		2100	DE	DRF		12	71°58.5	95°03.6	—						Bottles 115, 116, 118, 119, 120
27		no time	DE	DRF		13	71°59	94°52	—						Bottle 121-126, 128-130
28		00:21	DE	XCTD	Stn 38	14	71°59.237	94°52.86	320						Bellot St.
28		00:35	DE	XCTD	Stn 39	15	72°058	94°45.753	152						Bellot St.

Cast type:

BOT = bottle cast, no CTD
CTD = CTD without Rosette
ROS = Rosette plus CTD

USW = sea water loop

MOR = mooring
NET = net haul
DRF = drifter

bottle firing method:

US = up / stop
UN = up / no stop
DN = down / no stop

Time Code

BE = beginning time of cast
BO = bottom time of cast
EN = end time of cast

DE = deployment time
MR = messenger release time
RE = recover mooring time

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

28 May 2003
Daily_log_book.doc

[illegible]

cast event

28	UTC	00:40	16	DE DRF	72 00.2'N	94 44.5'W	@ 152m	Bottle #131-133
28	UTC	03:29	17	XCTD Stn 40	72 12.943	93 34.035	@ 129 m	
28	UTC	03:31	18	DE DRF	71 12.9'N	93 33.7'W	@ 129 m	Bottles #134-140

28	UTC	03:29	17	XCTD	Stn 40	72	12.943	93	34.035	@	129 m
----	-----	-------	----	------	--------	----	--------	----	--------	---	-------

28	UTC	03:31	18	DE	DRF	71	12.9'N	93	33.7'W	@ 129 m	Bottles #134-140
----	-----	-------	----	----	-----	----	--------	----	--------	---------	------------------

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month <u>JUL</u>				Year <u>2004</u>			Ship <u>LSSL</u>			Cruise ID <u>2004-16</u>					
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch keepers	Trans. cleaned	Comments
							Latitude	Longitude							
28	10	16=14	BE	ROS	UN	10/19	74°16.11'N	91°25.50'W	327		70~80	11		NO	with SBE19 at 5m 3 min wait waiting
		16=43	EN	and SBE19	test cast		74°16.24'N			322dbr+5m					bottom alarm sounded
							74°16.23'N	91°24.92'W							
28	11	1719	BE	ROS	UN	11/20	74°15.70'N	91°24.54'W	317 ⁺		81-104	24		NO	with SBE19
		1734	BO	and SBE19	test cast		74°15.58'	91°24.13'	316 ⁺	300db					
							Acquisition stopped after bottles tripped at bottom								
							problems. Start new cast for up trace. slowly bringing up w/								
							rough sounding winch.								
		17=57	EN				74°15.64'N	91°23.55'W			title 20	is not closed			

Cast type:
 BOT = bottle cast, no CTD
 CTD = CTD without Rosette
 ROS = Rosette plus CTD

USW = sea water loop
 MOR = mooring
 NET = net haul
 DRF = drifter

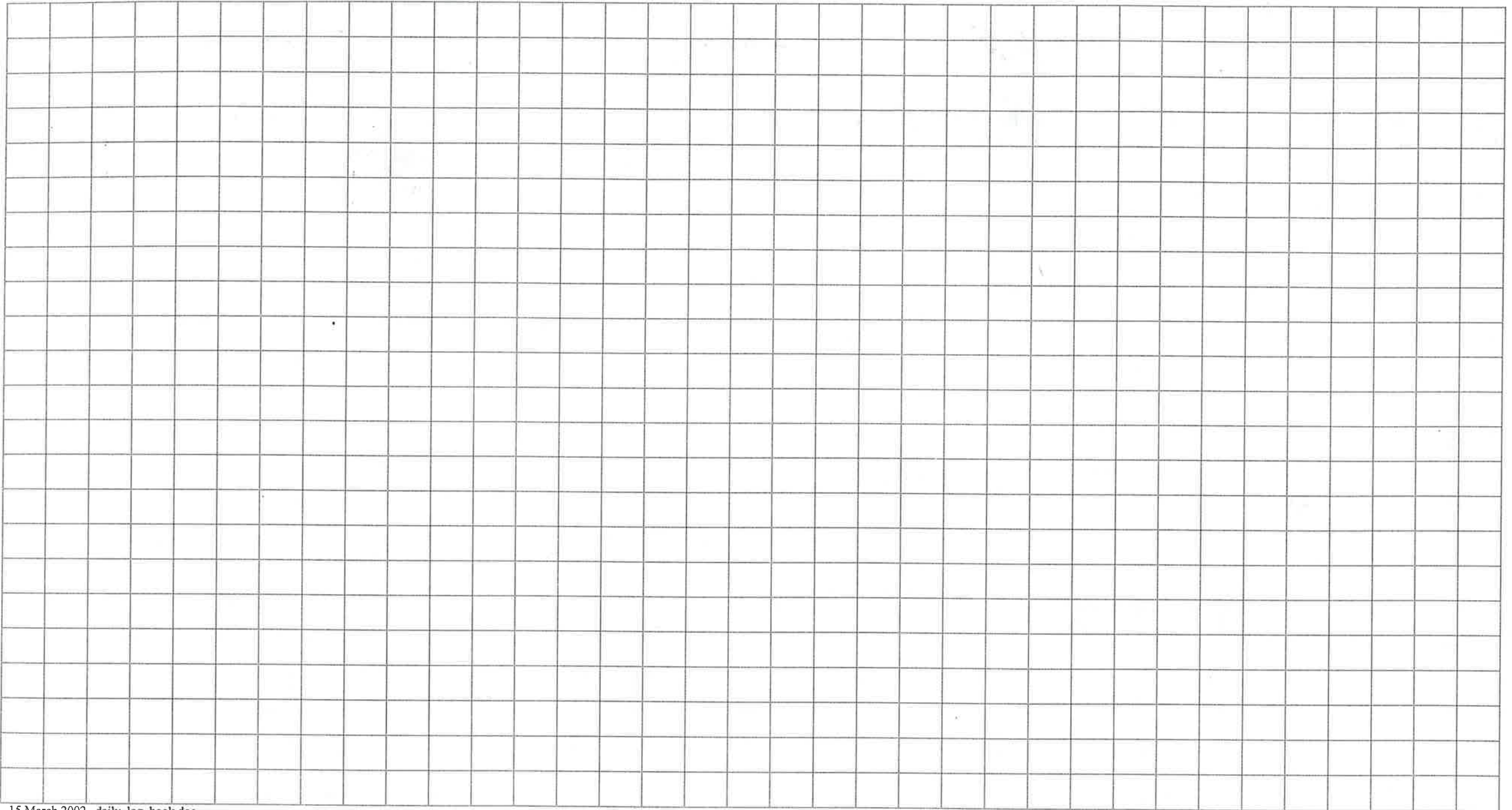
bottle firing method:
 US = up / stop
 UN = up / no stop
 DN = down / no stop

Time Code
 BE = beginning time of cast
 BO = bottom time of cast
 EN = end time of cast

DE = deployment time
 MR = messenger release time
 RE = recover mooring time

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

28 May 2003
 Daily_log_book.doc



DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month JUL / AUG		Year 2004		Ship LSSL		Cruise ID 2004-16									
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch keepers	Trans. cleaned	Comments
							Latitude	Longitude							
30	12	2250	BE	CTD		12/21									Test cast
		23=16					73°13.69'N	90°51.45'W	318+7m		no samples drawn				test LADCP,
		23=55					73°13.59'N	90°51.30'W	318						SBE19, Winch
Aug 3		04:32	BE	DRF		-/22	69 40.153	99 48.825							Bottle 145 & 147
3	13	18=30	BE	ROS	UN	13/23	68°41.76	103°45.79	107		105-110	6			In outside
		18=40	BO				68°41.74	103 45.95		99.5					of Cambridge
		18=47	EN				68°41.71	103°46.09							Bay
3		19:04	BE	DRF		-/24	68 42.7	103 54.1							Bottle 148-150
4	14	14=08	BE	ROS	UN	14/25	68°23.53	112°29.41	187+9		111~118	8			
		14=12	BO				68°23.53	112°29.39		191					
		14=21													
		14=28	EN				68°23.54	112°29.33							
4		—	BE	DRF		/26	near 68 23.53	112°29.41							Coronation Gulf
															Bottle 151-153

Cast type:

BOT = bottle cast, no CTD
 CTD = CTD without Rosette
 ROS = Rosette plus CTD

USW = sea water loop

MOR = mooring
 NET = net haul
 DRF = drifter

bottle firing method:

US = up / stop
 UN = up / no stop
 DN = down / no stop

Time Code

BE = beginning time of cast
 BO = bottom time of cast
 EN = end time of cast

DE = deployment time
 MR = messenger release time
 RE = recover mooring time

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

28 May 2003

Daily_log_book.doc

→ Bottle stops taken for the purpose of calibrating the SBE19 #
with the SBE9 data. But no samples drawn.

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month <u>AUG</u>				Year <u>2004</u>				Ship <u>LSSL</u>				Cruise ID <u>2004-16</u>			
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch keepers	Trans. cleaned	Comments
							Latitude	Longitude							
5	15	22-19	BE	ROS	USTUN	15/27	70°33.15'	122°54.40'	650		119-142	24			new procedure: waiting 3 min @ 5m to stabilize + soak oxy sensor
	(AG-5)	22-45	BO				70°33.10'	122°54.72'		648					
		23-08	EN				70°32.95'	122°54.81'							
	15	23.30	BE	NET		/28	70°32.80'	122°54.83'	650	100m					All samples preserved Formalin - TEST
		23.33	EN				70°32.78'	122°54.87'							
	15		BE	SBE19 CTD											No Data; Problems w/ instrument
	15	2340	DE	DRF		/29	70 32.8	122 54.9							Bottles 154, 157, 158
	CB-1/		BE	ROS	UN	16/30	71°46.60'	131°46.16'	1080+9m	1090db	143-162	20	BILL ANDREW MASURO	NO INACCESSIBLE	
	CABOS-2		BO		From the hip		71°46.67'	131°45.80'							
			EN				71°46.66'	131°45.43'							
7	CB-1	14.42	BE	Net1		/31	71°46.649	131°46.024	1080	100m					All preserved - Formalin
		14.48	EN												
7	CB-1	15.06	BE	Net2		/32	71°46.67	131°45.67	1080	100m					236 & 53 Preserved - Ethanol 150 - Biomass
		15.13	EN												
7	CB-1	1538	DE	DRF		/33	71 48.643	131 44.871							Bottles 155, 156, 159

Cast type:

BOT = bottle cast, no CTD
CTD = CTD without Rosette
ROS = Rosette plus CTD

USW = sea water loop
MOR = mooring
NET = net haul
DRF = drifter

bottle firing method:

US = up / stop
UN = up / no stop
DN = down / no stop

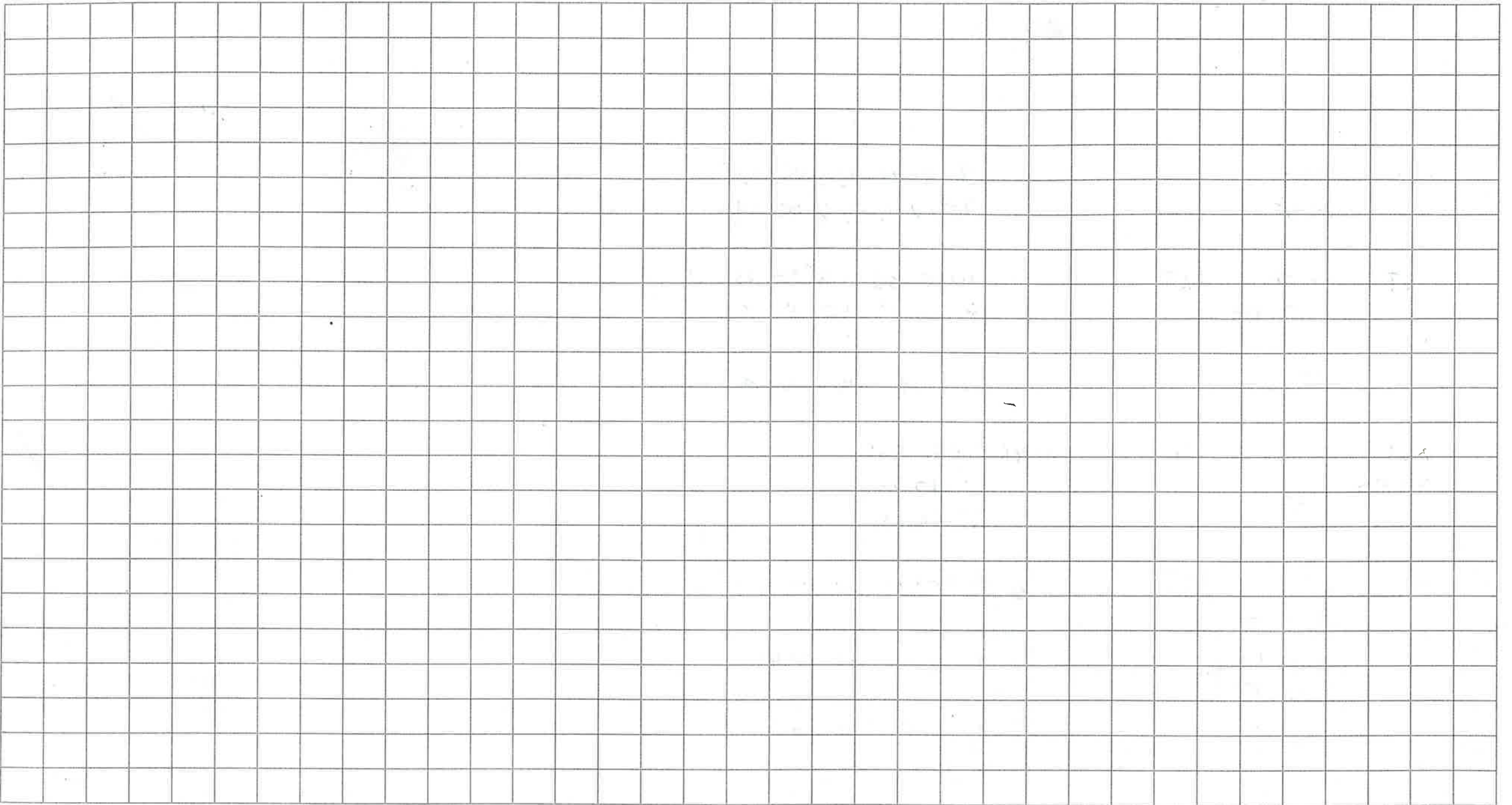
Time Code

BE = beginning time of cast
BO = bottom time of cast
EN = end time of cast

DE = deployment time
MR = messenger release time
RE = recover mooring time

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

28 May 2003
Daily_log_book.doc



DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month				Year				Ship				Cruise ID			
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position	Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch keepers	Trans. cleaned	Comments	
							Latitude	Longitude							
7	CABOS-2		BE	MOR		34								Mooring Recovery	
			EN												
8	XCTD 41	1=58		XCTD		35	71°22.822N	133°59.179W							
"	XCTD 42	4=38		XCTD	#	36	71°17.733N	136°00.133W							
	XCTD 43	7=35		XCTD		37	71°15.274N	138°00.135W							
	XCTD 44	10=08		XCTD		39	71°19.536N	139°59.241W							
9	CB-2	09:55	BE	ROS	UN	17	38°0.21'N	150°04.22W		163-186	23			no bottle #17 (#179)	
		11:23	BO				73°0.41'N	150°04.20W							
		12:35	EN				73°0.75'N	150°03.86W							
	XCTD 45	12=51		XCTD		40	71°23.953N								
	XCTD 46	15=45				41	71°35.947N								
	XCTD 47	18=27				42	71°43.707N								
	XCTD 48	21=41				43	71°56.634N								
9	XCTD 49	1=31				44								more XCTDs	
9	CB-2	01:50		DRIFTER BOTTLE			75°01.52N	150°02.77W		163, 160, 161					
9	CB-2	10:07	BE	NET 3		52	73°00.16N	150°04.38W	100m			Amanda Majumdar		All Preserved Formalin	
		10:26	EN				73°00.16N	150°04.41W							
	CB-2	11:00	BE	NET 4		53	73°00.31N	150°04.35W	100m					263 & 53M Ethanol / 150M Bionas	
							73°00.35N	150°04.30W							

Cast type:

BOT = bottle cast, no CTD
 CTD = CTD without Rosette
 ROS = Rosette plus CTD

USW = sea water loop

MOR = mooring
 NET = net haul
 DRF = drifter

bottle firing method:

US = up / stop
 UN = up / no stop
 DN = down / no stop

Time Code

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

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

28 May 2003

Daily_log_book.doc