

DAILY LOG BOOK

MISSION
NUMBER

2003-11

DATE:

From: 26 MAY to: 16 JUNE 2003

VESSEL:

JOHN P TULLY

PROJECT:

LINE P / ARGO

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

Rosette Setup:
 Number of bottles: _____
 Manufacturer: _____ (Ocean Test Equip., General Oceanics, IOS)
 Volume of bottles (litres): _____

1. Make:	1-AW50LDT	model:	B3242/s	serial #:	17026	used for:	CTD / Pos, STBD
2. Make:	"	model:	"	serial #:	17027	used for:	CTD / Pos, MID-SHIP
3. Make:	SWAN20	model:	320	serial #:	1207	used for:	Moorings
4. Make:	"	model:	455	serial #:	145	used for:	"
5. Make:	"	model:	455	serial #:	1451	used for:	"
6. Make:	"	model:	420	serial #:	1432	used for:	Bongos
7. Make:	"	model:	"	serial #:	"	used for:	"

Thermosalinograph System:

ADCP Setup:

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: _____

Comments:

Guide to cable terminations:

Date of cable termination: 2003/6/05

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: .322 Winch: 17027

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

At cable end:

- at 5 metres:
1. .323
 2. .322
 3. .323

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?

NO
NO
NO
NO
NO
NO

(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

NO
NO
NO

} NO MEGGER

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.

.3400

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?

YES
NO
NO

} NEW

Comments:

Winch termination shorted. Measured $\approx$ 100 Ω from conductor 1 to
short outer armour with termination intact. (When connector removed
OK between conductor 1 and outer armour.

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

MonthMAY					Year2003			ShipJOHN P. TULLY				Cruise ID2003-11		
Day	Station Name	Time (UTC)	Cast type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch keeper	Trans. cleaned	Comments
						Latitude	Longitude							
27	SI03	2337	ROS	BE	1	N 35.57	123 29 89	222					✓	
		2343		BO		48 35.55	123 29 90		210	1-12	12			
		0006		EN		48 35 47	123 29 93							
28	JF01	0542				48 16.00	123 29.884					T.S.		LOOPS TAKEN SAL, NOT CAL
28	JF02	0738				48 18.08	124 00.12					DA		" "
28	JF03	0955				48 20.96	124 30.45					DA		
28	JF4	1145	USW			48°32.31	125°01.02							Loops taken
28	P1	1400	ROS	BE	2	48 34 50	125 30 06	125					✓	
		1407		BO		48 34 50	125 30 09		115		13			Loop 2 Sm
		1411		EN		48 34 48	125 30 07							
28	P1	1440	NET	Net	3	48 34 50	125 30 07		100					BONGO → DNA
28	P2	1715	ROS	BE	4	48°36.06'	125°59.94	116	101	14-	1			Wrong cruise # in header
		1716		BO		48°36.11	125°59.89							
		1724		EN		48°36.07	125°59.92							
28	P3	1916	ROS	BE	5	48°37.51	126°19.89	812	805	15	1			
		1935		BO		48°37.49'	126°19.99							
		1938		EN		48°37.48'	126°19.93							
28	P4	2300	MOR	DE										RECOVER LAP 20.
29	T4	0250	MOR	DE		48 38.1057	126 35.686							DEPLOY LAP 20.

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 of cast time

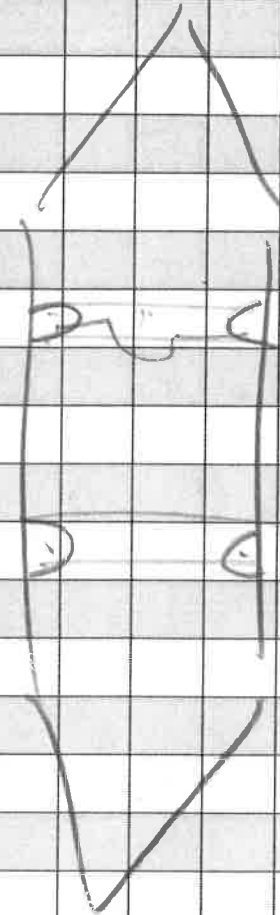
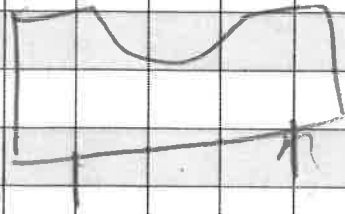
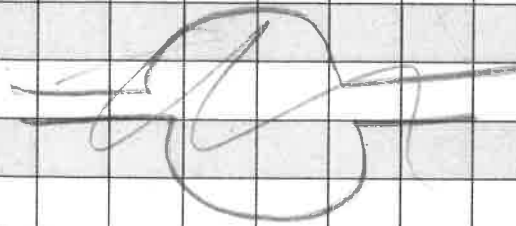
DE = deployment time
MR = messenger release time
RE = recover mooring time

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

22 March 2002
Daily_log_book.doc

Additional comments

P1- CTD barged on deck during deployment - new operator



DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month <i>May</i>					Year <i>2003</i>			Ship <i>John P. Tully</i>				Cruise ID <i>2003-11</i>		
Day	Station Name	Time (UTC)	Cast type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch keeper	Trans. cleaned	Comments
						Latitude	Longitude							
29	P4	0331	ROS	BE	6	48°39.01	126°39.98	1318	201	16-33	18			DIMS. shallow cast
		0338		BO		48°39.02	126°39.98							file started while
		0359		EN		48°39.02	126°39.94							rosettes on deck
29	P4	0428	NET	BO	7	48°39.01	126°39.95	1321	150					
		0434		EN		48°39.02	126°39.95							
29	P4		USW											Loop 1 taken when ROS
29	P4		USW		8									Loop 2 taken when ROS
29	P4	0547	ROS	BE	8	48°39.02	126°39.98	1318	1311					Deep cast
		0612		BO		48°39.02	126°39.96			3452	19			
		0703		EN		48°39.02	126°39.95							
29	P5	0949	ROS	BE	9	48°41.57	127°09.68	2083		53	1			
		1013		BO		48°41.51	127°09.96							
		1033		EN		48°41.49	127°09.92							
29	P6	1303		BE	10	48°44.58	127°39.98	2542		54	1			Stop cast 114m lost power
				BO										
				EN										
	SWITCH		FROM			PRIMARY	CTD 0585	TO	SCR	CTD	0550			
	SWITCH		WINCH			MID SHIP	TO	STBD.						

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 of cast time

DE = deployment time

MR = messenger release time

RE = recover mooring time

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

22 March 2002

Daily_log_book.doc

Additional comments

@ 10 m

@ 5 m

P6 - crash @ 114m, no communication with canosel brought back on deck. Replaced Sea Cable Fuse and Sea cable + Canosel connectors. Still blows Fuse. Swapped other CTD Seemed okay. Hooked up main CTD without Canosel but still blew Fuse

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month MAY					Year 2003			Ship JOHN P. TULLY				Cruise ID 2003-11		
Day	Station Name	Time (UTC)	Cast type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch keeper	Trans. cleaned	Comments
						Latitude	Longitude							
29	P6	1632	DRF		—	48 44.67	127 39.19	2542						Deploy float 48 0.5 m cast of P6
29	P6	1825	ROS	BE	10	48 44.67	127 40.00		2000					
		1856		BO		48 44.62	127 40.05			54 ^{9A} 546	23			
				EN		48 44.61	127 39.97							
29	P7	2151	ROS	BE	11	48 46.63	128 10.04	2503						Data error light
		2222	ROS	BO		48 46.68	128 10.16		1500	55	1			intermittently on.
				EN										No bottle confirm
30	P8	0110	ROS	BE	12	48 49.02	128 39.96	2516		56-74	19			Changed Deck Unit →
		0139		BO	12	48 49.04	128 39.98		1500					682m error alarm
		0233		EN	13	48 49.04	128 39.90							Bongo
	P8	0315	NET		14	48 49.02	128 09.69	150						↓
30	P9	0531	ROS	BE	15	48 51.39	129 9.93	2340	1500	75	75			
		0555		BO		48 51.40	129 9.98							
		0613		EN		48 51.39	129 9.97							
30	P10	0836	ROS	BE	16	48 53.58	129 39.94	2640						
		0901		BO		48 53.61	129 39.91		1500	76	76			
		0926		EN		48 53.60	129 40.00							
30	P11	1155		BE	17	48 56.00	130 9.98	2749						
				BO		48 56.03	130 9.98			77	1		✓	Loops @ 10m

Cast type: USW = sea water loop
 BOT = bottle cast, no CTD MOR = mooring
 CTD = CTD without Rosette NET = net haul
 ROS = Rosette plus CTD DRF = drifter

bottle firing method:
 • US = up / stop
 • UN = up / no stop
 • 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 of cast time RE = recover mooring time

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

22 March 2002
 Daily_log_book.doc

Additional comments

DATA ERROR STILL TURNS ON FOR SHORT TIMES. T° SPIKES, ALARM GOES OFF BRIEFLY, STOPS AFTER ≈ 700 m.

TAKE SAL SAMPLES 546 @ 2000 m

→ changed deck unit from 0508 to 0619

P8- 650m error light on 682m alarm beep on down cast

Send 2 trips no confirm, new cast #13 - restart Seagor but not reboot

3rd trip shows confirm - 1499m, 4th trip 1000, 5th trip @ 804 seems okay?

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month <u>MAY</u>					Year <u>2003</u>			Ship <u>Tully</u>			Cruise ID <u>2003-11</u>			
Day	Station Name	Time (UTC)	Cast type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch keeper	Trans. cleaned	Comments
						Latitude	Longitude							
30	P11	1243		EN	17	48 56 02	130 9 98	2749	1500	77	1		✓	
30	P12	1502	ROS	BE	18	48 58 24	130.39.99	3225	3272					Deep cast
		1553		BO		48 58 20	130 39 99			78-100	23			
		1708		EN		48 58 26	130 39 96							
30	P12	1805	NET	BO	19	48 58.07	130 39.94		150					Bowgo
		1807		EN		48 58.12	130 39.95							
30	P12	1843	ROS	BE	20	48 58 30	130 39 91		200					Shallow DMS cast
				BO						101-118	18			
		1902		EN		48 58 33	130 39 98							
30	P13	2350	ROS	BE	21	49 02.67	131 40.14	2999.2					✓	
31		0014		BO		49 02.67	131 40 67		1500					
		0040		EN		49 03.01	131 40.22			119	1			
31	P14	0510	ROS	BE	22	49 7.49	132 39.98	3308	1500	120				
		0535		BO		49 7.43	132 39.97							
		0602		EN		49 7.40	132 39.98							
31	P15	1053	ROS	BE	23	49 12 02	133 39.94	3401						
		1119		BO		49 12 01	133 39.90		1500	121	1			
		1144		EN		49 12 02	133 39.83							

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 of cast time

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

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

22 March 2002
Daily_log_book.doc

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month <i>May</i>					Year <i>2003</i>			Ship <i>Tully</i>				Cruise ID <i>2003-11</i>			
Day	Station Name	Time (UTC)	Cast type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch keeper	Trans. cleaned	Comments	
						Latitude	Longitude								
<i>31</i>	<i>P16</i>	<i>1638</i>	<i>ROS</i>	<i>BE</i>	<i>24</i>	<i>49, 17.03</i>	<i>134, 39.99</i>	<i>3617</i>	<i>3674</i>					<i>Deep cast</i>	<i>→</i>
		<i>1755</i>		<i>BO</i>	<i>25</i>	<i>49 17.00</i>	<i>134 39.98</i>			<i>122-145</i>	<i>24</i>			<i>Series of bedrock</i>	<i>→</i>
		<i>1916</i>		<i>EN</i>		<i>49 17.00</i>	<i>134 39.98</i>								<i>→</i>
<i>31</i>	<i>P16</i>	<i>1950</i>	<i>NET</i>	<i>BO</i>	<i>26</i>	<i>49 17.05</i>	<i>134 40.01</i>		<i>150</i>						
	<i>P16</i>	<i>2005</i>	<i>NET</i>	<i>EN</i>	<i>27</i>	<i>49 17.05</i>	<i>134 40.13</i>		<i>50</i>					<i>Bongo for SWIN</i>	
	<i>P16</i>	<i>2025</i>	<i>Go-Flu</i>	<i>EN</i>	<i>28</i>	<i>49 17.13</i>	<i>134 39.86</i>		<i>5</i>					<i>Go-Flu for coccos comp</i>	
<i>31</i>	<i>P16</i>	<i>2049</i>	<i>ROS</i>	<i>BE</i>	<i>29</i>	<i>49 17.04</i>	<i>134 39.98</i>	<i>3618</i>						<i>Shallow cast</i>	
		<i>2055</i>		<i>BO</i>		<i>49 17.05</i>	<i>134 39.94</i>		<i>200</i>	<i>146-163</i>	<i>18</i>			<i>Loop 3 taken @ 5m</i>	
		<i>2113</i>		<i>EN</i>		<i>49 17.08</i>	<i>134 39.90</i>								
<i>01</i>	<i>P17</i>	<i>0215</i>	<i>ROS</i>	<i>BE</i>	<i>30</i>	<i>49° 21.63</i>	<i>135° 39.93</i>	<i>3504</i>		<i>164</i>	<i>1</i>				
		<i>0236</i>		<i>BO</i>		<i>49 21.01</i>	<i>135 40.00</i>								
		<i>0251</i>		<i>EN</i>		<i>49 21.01</i>	<i>135 40.02</i>								
<i>01</i>	<i>P18</i>	<i>0746</i>	<i>ROS</i>	<i>BE</i>	<i>31</i>	<i>49 26.00</i>	<i>135 39.94</i>	<i>3814</i>							
		<i>0811</i>		<i>BO</i>		<i>49 26.10</i>	<i>136 39.86</i>		<i>1500</i>	<i>165</i>	<i>1</i>				
		<i>0834</i>		<i>EN</i>		<i>49 26.02</i>	<i>136 39.94</i>								
<i>01</i>	<i>P19</i>	<i>1332</i>	<i>ROS</i>	<i>BE</i>	<i>32</i>	<i>49 30.07</i>	<i>137 39.91</i>	<i>3902</i>							
		<i>1357</i>		<i>BO</i>		<i>49 30.03</i>	<i>137 39.99</i>		<i>1500</i>	<i>166</i>	<i>1</i>				
		<i>1420</i>		<i>EN</i>		<i>49 29.98</i>	<i>137 39.81</i>								

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 of cast time

DE = deployment time

MR = messenger release time

RE = recover mooring time

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

22 March 2002

Daily_log_book.doc

Additional comments

NOISE SPIKE AT ABOUT 900M. PLUS DATA ERROR NGHT FLASHED

at 3500, realize that the bottles don't close. Go back to 3650m, re-start the program.
reboot the computer

→ P16: FIRST FROZEN SAMPLE FOR SURE. PROBLEM WITH QUICK FREEZER

P16 - Sacrificed scientist to the CTO gods. We hope this will please them.

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month <u>June</u>					Year <u>2003</u>			Ship <u>John P. Tully</u>			Cruise ID <u>2003-11</u>			
Day	Station Name	Time (UTC)	Cast type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch keeper	Trans. cleaned	Comments
						Latitude	Longitude							
01	P20	1900	ROS	BE	33	49 34.04	138 39.99	3940						
		1953		BO		49 34.02	138 39.98		4014	167 - 190	24	DA		No 1000 m, No surface
		2109		EN		49 34.02	138 39.99							
	P20	2240	NET	BO	34	49 34.05	138 40.03		150					
		2247		EN		49 34.02	138 40.00							
	P20	2218	ROS	BE	35	49 34.03	138 39.96	3940						robotic trip #13
		2224		BO		49 34.04	138 39.97			191-208	18	DA		Loop 4 taken @ 5m
		2254		EN		49 34.02	138 40.04							PCO2
02	ARGO 1	0405	DRF		/	49 00.37	139 29.45	4044						Deploy Argo float 1949
02	ARGO 1	0426	ROS	BE	36	48 59.99	139 29.92	4044	2000					
		0451		BO		48 59.99	139 30.01			191	1			Check STD name /
		0513		EN		49 0.00	139 30.04							
02	P21	0917	ROS	BE		49 38.00	139 39.98	3935						
		0941		BO		49 38.10	139 40.02		1500	192	1	DA		Check STD name!
		1005		EN		49 38.04	139 39.92							
02	P22	1436	ROS	BE	38	49 42.02	140 40.01	3893		209	1		/	
		1500		BO		49 42.06	140 39.89							
		1526		EN		49 42.00	140 39.55							

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

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

22 March 2002
Daily_log_book.doc

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month <i>June</i>					Year <i>2003</i>			Ship <i>Tully</i>				Cruise ID <i>2003-11</i>		
Day	Station Name	Time (UTC)	Cast type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch keeper	Trans. cleaned	Comments
						Latitude	Longitude							
02	P23	1950	ROS		39	49 45.99	141 40.17	4024						
		2015				49 46.02	141 39.94		1501	210	1	DA		
		2014				49 46.14	141 39.88							
03	P24	0049	ROS		40	49 50.44	142 40.38	3964						
		0108				49 50.35	142 40.55		1500	211/212	2	DT	✓	Tripped 10m bottle on down cast # 211
		0123				49 50.42	142 40.19							
03	P25	0533	ROS	BE	41	50 00.06	143 36.46	4063	1500	213	1			
		0558		BO		49 59.97	143 36.32							
		0615		EN		49 59.95	143 36.34							
03	P35	0936	ROS	BE	42	50 00.04	144 18.25	4122						
		1000				50 00.12	144 18.14		1500	214	1	DA		Data error light at 1250m
		1026				50 00.11	144 18.38							
03	P26	1642	DRF	DE	43	50 06.765	144 56.83							FD # DEPLOYED.
3	P26	2108	Net	BO	44	50 00.33	144 59.89		250					DNA
	P26	2140	Net	BO	45	50 00.35	144 59.89		150					BIO / Tax
03	P26	2212	ROS	BE	46	50 00.07	144 59.92	4219						
				BO										
		2213		EN		50 00.12	144 59.92			215-238	221	DA		Data error @ 670m will restart cast

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 of cast time

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

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

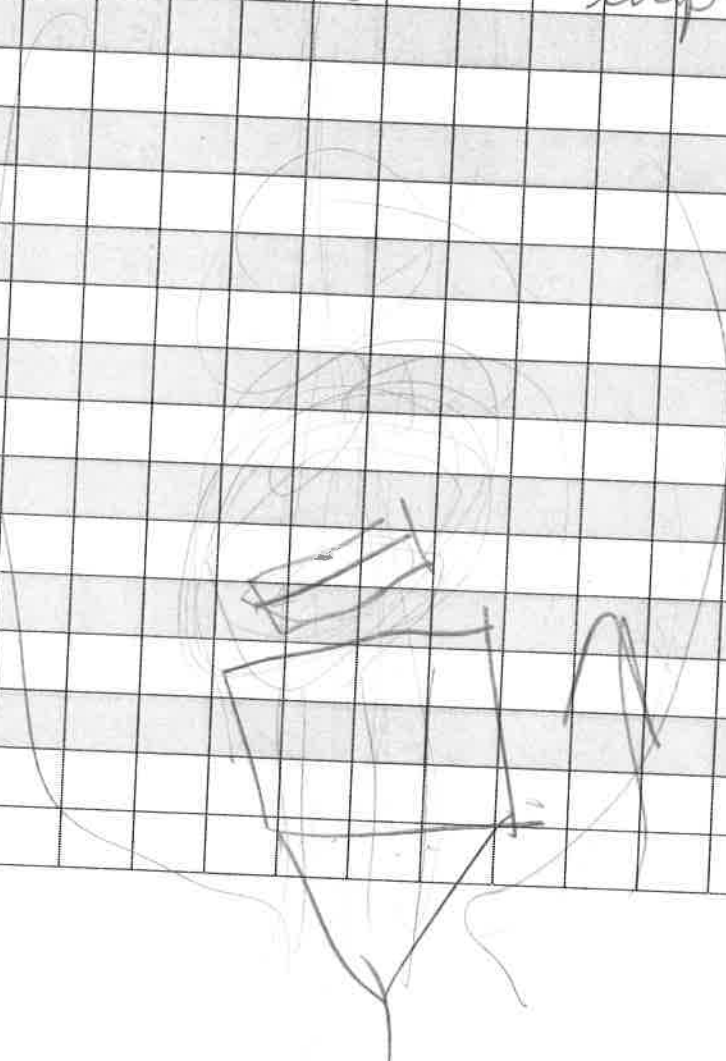
22 March 2002
 Daily_log_book.doc

Additional comments

2003-11 June 3 UTC P24

1749 local / 0049 UTC - Tripped bottle #1 @ 10m - Nisk 1 Sample 211
on down cast

1823 local / 0123 UTC tripped 10m bottle on upcast - Nisk 2 Sample 212



DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month <i>June</i>					Year <i>2003</i>			Ship <i>Tully</i>			Cruise ID <i>2003-11</i>			
Day	Station Name	Time (UTC)	Cast type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch keeper	Trans. cleaned	Comments
						Latitude	Longitude							
03	P26	2318	ROS	BE	47	50 00 09	145 00 03	4219		215-238	24		✓	678m Spike
4		0021		BO		50 02 96	144 59.97		4300					
				EN										
				BE	48	50 00 00	145 00 06							Start @ 1255m
		0221		EN		49 59.81	145 00.19							
4	P26	1137	ROS	BE	49	50 00 01	145 00 06	4221						Retruncated cable →
		1139		BO		50 00 09	145 00 09			239-246				Prim. Prod. Cast
		1149		EN		50 00 12	145 00 09							
		0002	BOT		50	50	145			247				Prim. Prod. Go-Flo
4	P26	1326			51	50 01.48	145 00.09							Deploy Prim Prod Drifters
					52	Recover SOLAS MOORING								
4	Sdas		ROS	BE	53	} CRASH								
				BO										- See notes
				EN										
4	Solas	1838	ROS		54	50 01 59	144 56 21			248-256				up cast
						50 01 63	144 56 28							
		1851				50 01 64	144 56 26							
	Sdas									257				Solas Loop Cal
4	P26	2044				50 00 638	144 58 70			↳ O ₂ sample for Susan				Recover Prim Prod Drifters

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 of cast time

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

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

 22 March 2002
 Daily_log_book.doc

 0042
 off 844 8400

Additional comments

Sul Spike 678m To Spike @ 2800m

1729m on upcast Alarm + light

1591 upcast error light

No indication of trip for bottle & sample #222 - will try again @ 01:18 - no joy

Turned off pumps & stopped logging @ 0120 UTC Cast 47

Computer crashed when trying to start cast 48 while in comments field

448 alarm on way up

386 alarm error light

292 — " —

256 — " —

250 error

206 — " —

> Reterminated cable Removed 850 m of wire from winch 17026.

Cast 49 upcast - Transm. signal all over @ 70m

^{Steady}
Error Alarm Blm Cast 53 Re start Sea sawe Cast #54 upcast

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month <i>June</i>					Year <i>2003</i>			Ship <i>Tully</i>				Cruise ID <i>2003-11</i>		
Day	Station Name	Time (UTC)	Cast type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch keeper	Trans. cleaned	Comments
						Latitude	Longitude							
4	P26	0705	ROS	BE	55	50 00.02	144 50.06	4219						
		0710		BO		50 00.02	145 00.00		200	258-271 ²⁷⁰	13 14	DA		Probably another load seen on cable ~ 200m
		0728		EN		50 00.02	145 00.01							LOOP 5 TAKEN
5	P26	1920	ROS	BE	56	50 00.07	144 59.97	4218						
		1927		BO		50 00.10	145 00.03		200	271-288	14	DA		LOOP 6 TAKEN @ 5m
		1948		EN		50 00.19	145 00.35							
6		0254	MOR	DE	57	49 58.34	145 05.91							SW P Sed trap Moving
6	P26ish	1500	FD* DRF		58	50 08.85	144 58.01							FD* Trigger Release
		1622				50 08.185	144 58.16							Completed Recovery
6	P26ish	1703				50 08.5	144 57.8							Skimmer going out
	"	1908				50 09.75	144 56.35							
6	P26	2110		DE		50 04.59	144 55.51							BEGIN SOLAS MOORING
6	P26	2235		DE		50 01.678	144 56.170	4202						DROP ANCHOR SOLAS
7	P26	0358		DE		50 01.875	144 56.156	4202						DROP ANCHOR AGAIN
7 1/2	P26 Solas	2040	MOR	DE		50 01.688	144 56.180	4202						End of Solas deployment
	BACK	TO			MID-SHIP	WINCH								
7	SOLAS	0028	ROS	BE	59	50 00.32	144 56.74	4210						
		0033		BO		50 01.35	144 56.79		150	289-305	16	DK		#305 - Acoustics Loop
		0047		EN		50 01.26	144 56.92							

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 of cast time

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

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

22 March 2002
 Daily_log_book.doc

Additional comments

→ PA 32 Sed. Trap Mooring.

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month JUNE					Year 2003			Ship JOHN P TULLY				Cruise ID 2003-11			
Day	Station Name	Time (UTC)	Cast type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch keeper	Trans. cleaned	Comments	
						Latitude	Longitude								
8	Argo 2	921	DRF	DE	/	49 59.56	146 59.05	4336				DA		Deploy float 954	
8	Argo 2	939	Bongo	BE	60	50 00.10	146 59.99	4313	150			DA		Flow Side remained	
		951		EN											
8	Argo2	1014	ROS	BE	61	50 00.14	147 00.06	4313							
		1040		BO		50 00.08	146 59.99		2000	306-329	24	DA			
		1139		EN		50 00.04	147 00.03								
8	New 1	1828	ROS	BE	62	51.0,10	147°0,00	4314		330-353	24	DA		LOOP 7	
		1850		BO		51 0.01	147.0,00		1500						
		1913		EN		51 00.03	147 00.08								
9	Argo 3	0212	Bongo	NET	63	52,00,001	147.00,09	4223	150					Bongo 150m	
		0251	ROS	BE	64	52 0,07	147. 0,10	4227	2180						
		0325		BO		52,0,03.	147. 0,04.			354-377	24				
		04.23		EN		52,0.09	147 0,08								
9	Argo 3	0428	DRF	DE	/	52.00,199	147 00.141							Deploy Float 955	
9	NEW2	1354	ROS	BE	65	52 30 03	145 00.02	3804						LOOP # 8	
		1424		BO		52°29.98	145°00,03		1500	378		1			
		1453		EN		52°30.00	145°00.01								

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 of cast time

DE = deployment time

- MR = messenger release time
- RE = recover mooring time

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

22 March 2002
Daily_log_book.doc

Additional comments

* Flow meter side sample remained unfrozen for 2 days before being
put in freezer. DA

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month June				Year 2003				Ship Tully				Cruise ID 2003-11		
Day	Station Name	Time (UTC)	Cast type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch keeper	Trans. cleaned	Comments
						Latitude	Longitude							
10	New 3	02:00		BE	66	53°00.04	143°00.01	3842					✓	
		02:25		BO		53°00.06	143°00.01		1500.6					
		02:50		EN		53°00.05	143°00.04			379	1			Loop #9
10	ARGO 4	1107	NET		67	53°30.212	140°59.871	3744	150					Bongo - 150m
10	ARGO 4	1159	ROS	BE	68	53°30.01	140°60.00	3742						
		1232		BO		53°30.00	140°59.96		2000.7	380-403	24			
		1330		EN		53°30.04	140°59.89							
10	Argo 4	1339	DRF	DE	✓	53°30.191	140°59.494	3744						Deploy Float 959
	Skimmer	14:24			✓	53°30.622	137°29.860							Skimmer OUT
10	NEW 4	1915	USW		✓	53°30.01	139°29.98			404				OXY LOOP SAMPLE FOR NHD
10	NEW 4	1943	ROS	BE	69	53°29.94	139°29.93	3532						
		2011		BO		53°29.85	139°29.84		1500	405	1	DA		
		2030		EN		53°29.80	139°29.76							
11	Argo 5	0309	NET	BO	70	53°29.94	137°59.90	3258	150					
		0312		EN		53°29.93	137°59.93							
11	Argo 5	0334	ROS	BE	71	53°30.02	138°0.03'							
		0405		BO		53°29.98	138°0.12'			406-429	24			
		0502		EN		53°30.11	138°0.22							
11	Argo 5	0506	DRF	DE	✓	53°30.19	138°0.15							Deploy Float 958

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 of cast time

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

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

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month <i>June</i>					Year <i>2003</i>			Ship <i>Tully</i>				Cruise ID <i>2003-11</i>		
Day	Station Name	Time (UTC)	Cast type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch keeper	Trans. cleaned	Comments
						Latitude	Longitude							
11	New 5	11:06	ROS	BE	72	53 30.02	136 30.02	2589						
		11:31		BO		53 30.04	136 30.00		1500	430	1	DA		
		11:53		EN		53 30.04	136 29.99							
11	Argo 6	17:32	NET	BO	73	53 30.19	135.00.04	2924	150					
		17:42		EN		53 30.24	135.00.06							
11	Argo 6	18:02	ROS	BE	74	53 30.01	134 59.94	2926	2000	431-454	24			
		18:33		BO		53 30.02	134 59.99							
		19:29		EN		53 30.11	135 00.06							
	Argo 6	19:36	DRF	✓		53 30.31	134 59.81							Deploy Float 950
11	New 6	21:46	ROS	BE	75	53 30.03	134 30.03	2843						
		22:15		BO		53 30.02	134 30.05		1500	455-456	2	DA		455 @ 1500 for Phil 456 @ 10m
		22:33		EN		53 30.03	134 30.02							
12	New 7	1:00	ROS	BE	76	53 30.05	134 0.13	2874	1500	457	✓ 1	PT		
		1:23		BO		53 30.03	134 0.01							
		1:42		EN		53 30.05	133 59.86							
12	New 8	04:00	ROS	BE	77	53 30.08	133 30.26	2286	1500	458	1			
		04:24		BO		53 30.06	133 29.97							
		04:52		EN		53 29.90	133 29.76							

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 of cast time

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

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

22 March 2002
Daily_log_book.doc

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month <i>June</i>					Year <i>2003</i>			Ship <i>Tully</i>				Cruise ID <i>2003-11</i>		
Day	Station Name	Time (UTC)	Cast type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch keeper	Trans. cleaned	Comments
						Latitude	Longitude							
12	New 9	6:59	ROS	BE	78	53 30.05	133 05.98	442						
		7:11		BO		53 30.02	133 05.98		445	459	1	DA		Wind 35K
		7:21		EN		53 30.00	133 05.90							
13		04:30	STA WATER LOOP SYSTEM TURNED OFF FOR ABOUT 5 MIN.											
13	Shelf	10:27	ROS	BE	79	50 59.99	129 55.08	?						
		10:44		BO		50 60.00	129 54.97			460-476	17	DA		Wind 27 K
				EN		51 0.04	129 54.93							Significant sea state.
13	SP5	16:01	ROS	BE	80	51 21.06	128,46.96	220	208					
		16:06		BO		51 21.10	128,47.02			477-488	12	ML		
		16:20		EN		51 21.06	128 47.07							
14	SM5	00:17	ROS	BE	81	51 21 33	127 6.28	906		489	1	PT		
		00:20		BO		51 21 31	127 6.25		90					
		00:24		EN		51 21 31	127 6.22							
14	SM4	00:55	ROS	BE	82	51 21.64	127 08.85	181						out and back in again
		01:01		BO		51 21.66	127 08.82		162	490-500	11	MR		no salinities taken
		01:14		EN		51 21.67	127 08.76							
14	SM3	02:02	CTD ROS	BE	83	51 18.47	127 14.49	322		501	1			
		02:09		BO		51 18.45	127 14 49		309					
		02:16		EN		51 18.43	127 14 49							

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 of cast time

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

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

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month <u>June</u>					Year <u>2003</u>			Ship <u>John P. Tully</u>			Cruise ID <u>2003-11</u>			
Day	Station Name	Time (UTC)	Cast type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch keeper	Trans. cleaned	Comments
						Latitude	Longitude							
14	SM 2	0305	CTD	BE	84	51.17.95	127 22.22	370	349	502	1	ML		
		0312	ROS	BO		51.17.92	127 22.25							
		0319	ROS	EN		51.17.89	127 22.28							
14	SM 1	0408	CTD	BE	85	51.18.73	127.30.06	215	192	503	1	ML		
		0411		BO		51 18.73	127.30.06							
		0416		EN		51 18.72	127.30.05							
14	RI 1	0712	ROS	BE	86	51 26.44	127 38.02	336						
		0719		BO		51 26.48	127 38.00		330	504-520	17	DA		
		0743		EN		51 26.48	127 38.15							
14	RI 2	0831	ROS	BE	87	51 31.28	127 33.62	332						
		0836		BO		51 31.34	127 33.64		325	521	1	DA		
		0842		EN		51 31.35	127 33.71							
14	RI 3	0921	ROS	BE	88	51 35.98	127 32.17	325						
		0929		BO		51 36.01	127 32.18		320	522	1	DA		
		0934		EN		51 36.03	127 32.18							
14	RI 4	1018	ROS	BE	89	51 38.90	127 26.79	300						
		1023		BO		51 38.90	127 26.81		290	523-538	16	DA		
		1048		EN		51 38.89	127 26.84							

Cast type: USW = sea water loop • bottle firing method: • Time Code
 BOT = bottle cast, no CTD MOR = mooring • US = up / stop • BE = beginning time of cast DE = deployment time
 CTD = CTD without Rosette NET = net haul • UN = up / no stop • BO = bottom time of cast MR = messenger release time
 ROS = Rosette plus CTD DRF = drifter • DN = down / no stop • EN = end of cast time RE = recover mooring time

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

22 March 2002
 Daily_log_book.doc

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month June					Year 2003			Ship Tully				Cruise ID 2003-11		
Day	Station Name	Time (UTC)	Cast type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch keeper	Trans. cleaned	Comments
						Latitude	Longitude							
14	Ri 5	1133	ROS	BE	90	51 40.68	127 19.96	202						
		1138		BO		51 40.71	127 19.91		190	539	1	DA		
		1143		EN		51 40.72	127 19.86							
15		0630	POWER	FAIL	SHUT DOWN	LOOP	PUMP							
15		15:20	RESTART	LOOP	PUMP.									
15		1541		DE	91	51 24.868	127 47.323							CC MOORING DEPLOY @ RIVERS INLET.
15	CC	1605	ROS	BE	92	51 25 08	127 46 93	126		540-556	17	ML		
		1607		BO		51 25 10	127 46 94		117	557 LOOP ONLY				
		1624		EN		51 25 19	127 47 00							
15	QCS 4	2225	ROS	BE	93	50 46 66	127 24 36	403		558	1	DA		DAK ONLY 2 bot tripped for RT
		2234		BO		50 46 64	127 24 44							
		2242		EN		50 46 63	127 24 54							
15	QCS 3	2349	ROS CTD	BE	94	50 43.68	127 14.99	215		559	1	ML		
		2353		BO		50 43 66	127 14 99		201					
		2359		EN		50 43.65	127 14.96							
16	QCS 1.5	0136	ROS	BE	95	50 42.92	126 55.74	134						
		0140		BO		50 42.92	126 55.80		121			Ø	MR	
		0143		EN		50 42.89	126 55.84							

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 of cast time

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

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

22 March 2002
 Daily_log_book.doc

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

[illegible]

Cast type:	USW = sea water loop	• bottle firing method:	• Time Code	
BOT = bottle cast, no CTD	MOR = mooring	• US = up / stop	• BE = beginning time of cast	DE = deployment time
CTD = CTD without Rosette	NET = net haul	• UN = up / no stop	• BO = bottom time of cast	MR = messenger release time
ROS = Rosette plus CTD	DRF = drifter	• DN = down / no stop	• EN = end of cast time	RE = recover mooring time

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

22 March 2002
Daily_log_book.doc