

DAILY LOG BOOK

MISSION
NUMBER

2007-20

Book 1

DATE:

From: 26 July 2007 to: 30 August 2007

VESSEL:

CCGS Louis S St-Laurent

PROJECT:

JOIS / JWACS / BGOS

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: _____ First Officer: _____
Second Officer: _____ Third Officer: _____

Mission Participants / Agencies: _____

Scientific Personnel: Name	Party Chief: Watch	Cabin	Name	Watch	Cabin
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Second leg of Mission: Name	Party Chief: Watch	Cabin	Name	Watch	Cabin
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

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: _____ 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?

Secondary CTD

Make: _____ model: _____ serial number: _____

Primary temperature serial number: _____

Primary conductivity serial number: _____

Secondary temperature serial number: _____

Secondary conductivity serial number: _____

Transmissometer: _____ Model: _____ s/n: _____

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

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

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

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

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

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

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

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

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:

Salinometer:

Make: _____ Model: _____ Serial #: _____
Comments on performance during cruise:

Oxygen Kit # _____

Comments on performance of kit and chemicals:

Thermosalinograph System:

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

Comments on performance during cruise:

ADCP Setup:

Computer time zone: _____
Sampling interval (seconds): _____
Bin Length (2^x): _____
Pulse Length: _____
Buffer (bytes): _____
Gyro Offset: _____
Work File: _____

Comments:

CTD Test Cast Information

Test Cast at IOS Jetty? (optional) yes ☐ no ☐

Comments: (i.e. how did everything work??)

Test cast in Saanich Inlet? (recommended) yes ☐ no ☐
If no, give reason: _____

Comments: (i.e. how did everything work??)

CTD pressure reading on deck (db): _____
(Should be 0.0 db ± 0.5)

Pumps working? yes ☐ no ☐
(i.e.. Was the red LED display on the deck unit 0011 and not still 0010?)

Secondary Temp- Primary Temp: _____
(Average from the Mixed Region)

Secondary Salinity- Primary Salinity: _____
(Average from the Mixed Region)

Additional 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:

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"

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: _____

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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.

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Kinks: _____

Birdcage _____

Rust flaking off cable _____

Cable round or oval _____

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(flaking, not just looks rusty)

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Evergrip helical Rods:

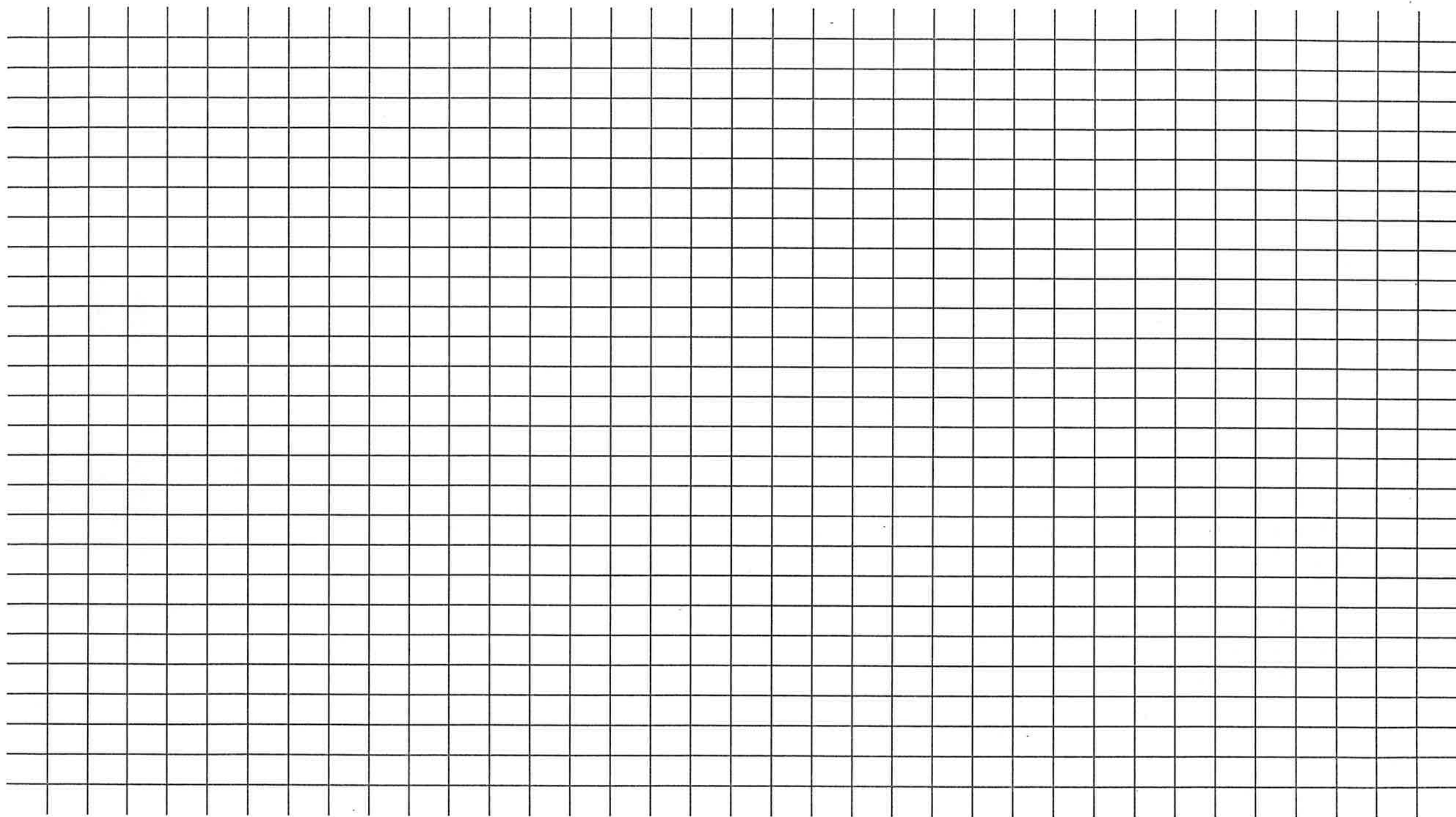
The part number is 9005-9002 and covers left hand lay cables of diameter range .309" to .333".

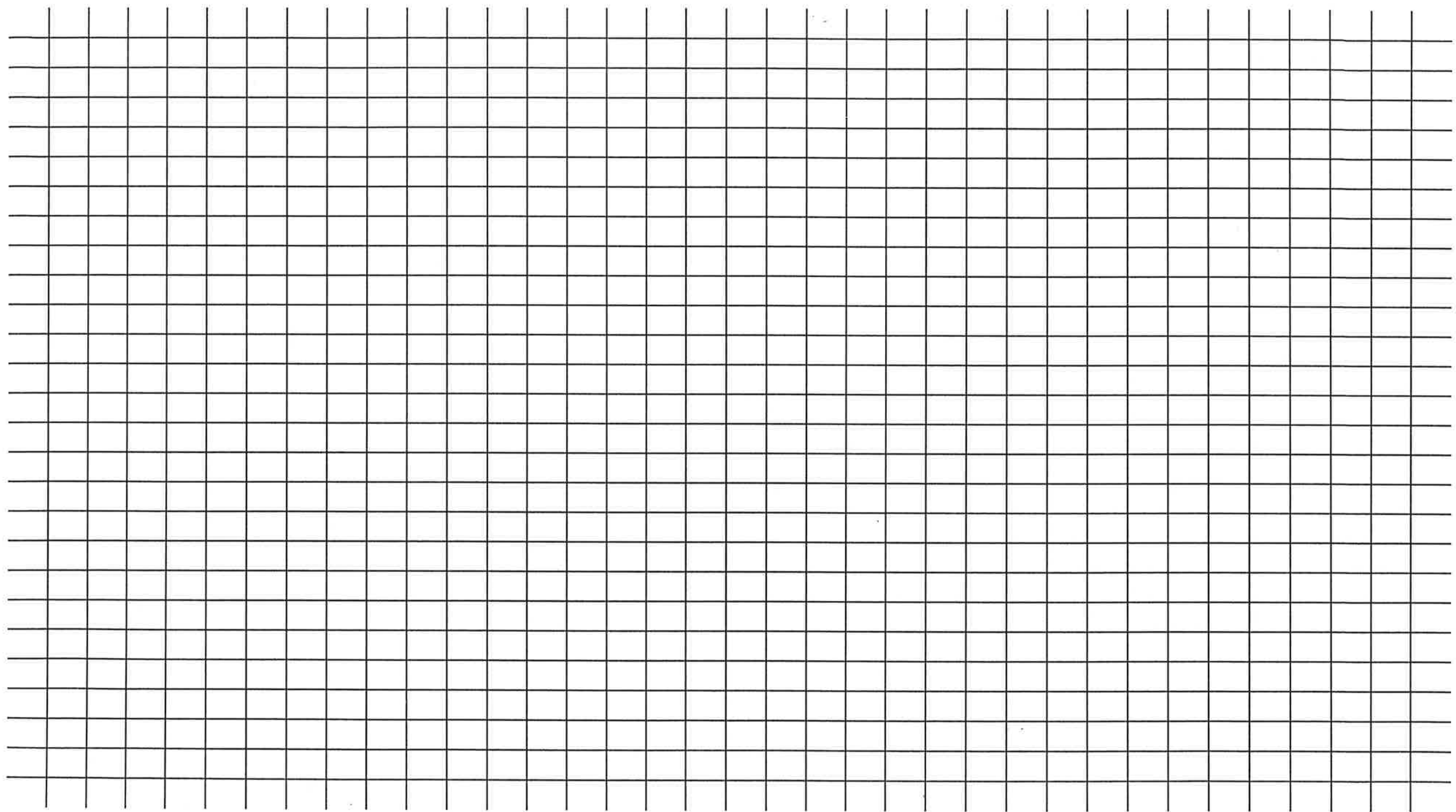
Presence of grit on inner surface (yes / no) _____

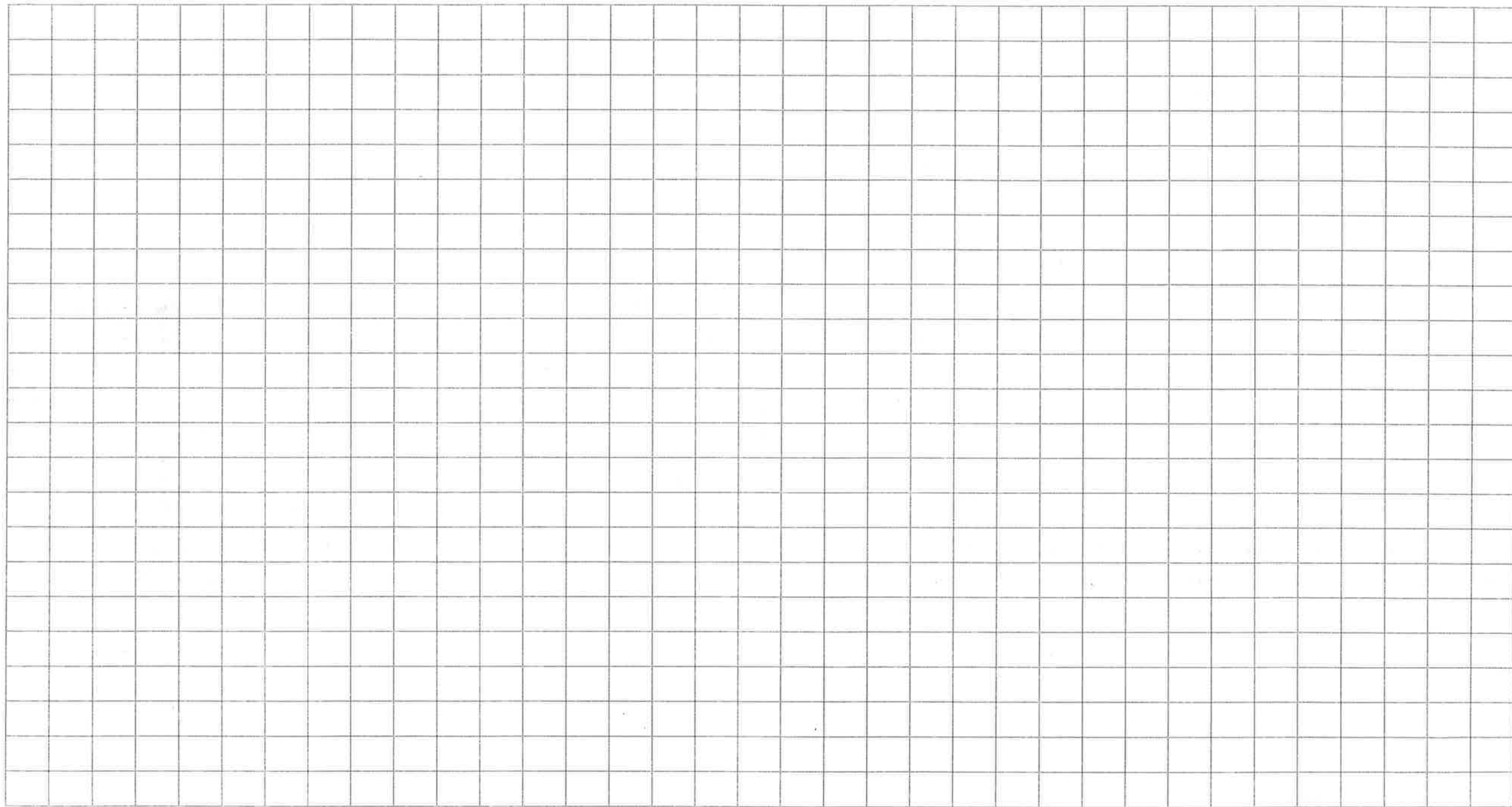
Condition of wires (damaged ends?) _____

Are the wires rusted? _____

Comments:







DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month <i>July</i>			Year <i>2007</i>				Ship <i>LOUIS ST-LAURENT</i>				Cruise ID <i>2007-20</i>				
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	AGS	1357	BE	ADCP			70 32.83	122 54.38							heading 216-224 T
		1634	EN				70 32.77	122 54.14							
28	AGS	1416	BE	ROS	US	1	70 32.83	122 54.14	631 ⁺⁹	150	1-20	20	JE/MD/HD	✓	Pic-Me
		1458	EN				70 32.80	122 53.61							
28	AGS	1547	BE	ROS	UN	2	70 32.77	122 53.28	613 ⁺⁹						note stopped for 30s
		1611	BO		\$US		70 32.77	122 53.14		618	21-43	23	JE/MD/HD	✓	before tripping bottles 23, 10
		1630	EN				70 32.77	122 53.14							
28	AGS	1635	BE	DRIF			70.42.33	123.20.85			BL(196-198)				Tim Kane launched
29	XCTD-1	0535	BE	XCTD			73° 01.13	129° 08.55	654						XCTD-1
29	XCTD-2	0635	BE	XCTD			73 11.61	128 44.74	420						XCTD-2
29	XCTD-3	0836	BE	XCTD			73 32.37	127 53.68	197						XCTD-3
29	BI-1	1044	BE	ADCP			73 51.54	127 20.98	194 ⁺⁹						heading 163-170-159
		1121	EN				73 51.34	127 19.98							
29	BI-1	1057	BE	ROS	UN	3	73 51.46	127 20.69	189 ⁺⁹		44-53	10	JE/MD/HD/EN	VV	
		1110	BO				73 51.40	127 20.31		189 ⁺⁵					
		1116	EN				73 51.37	127 20.10							

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

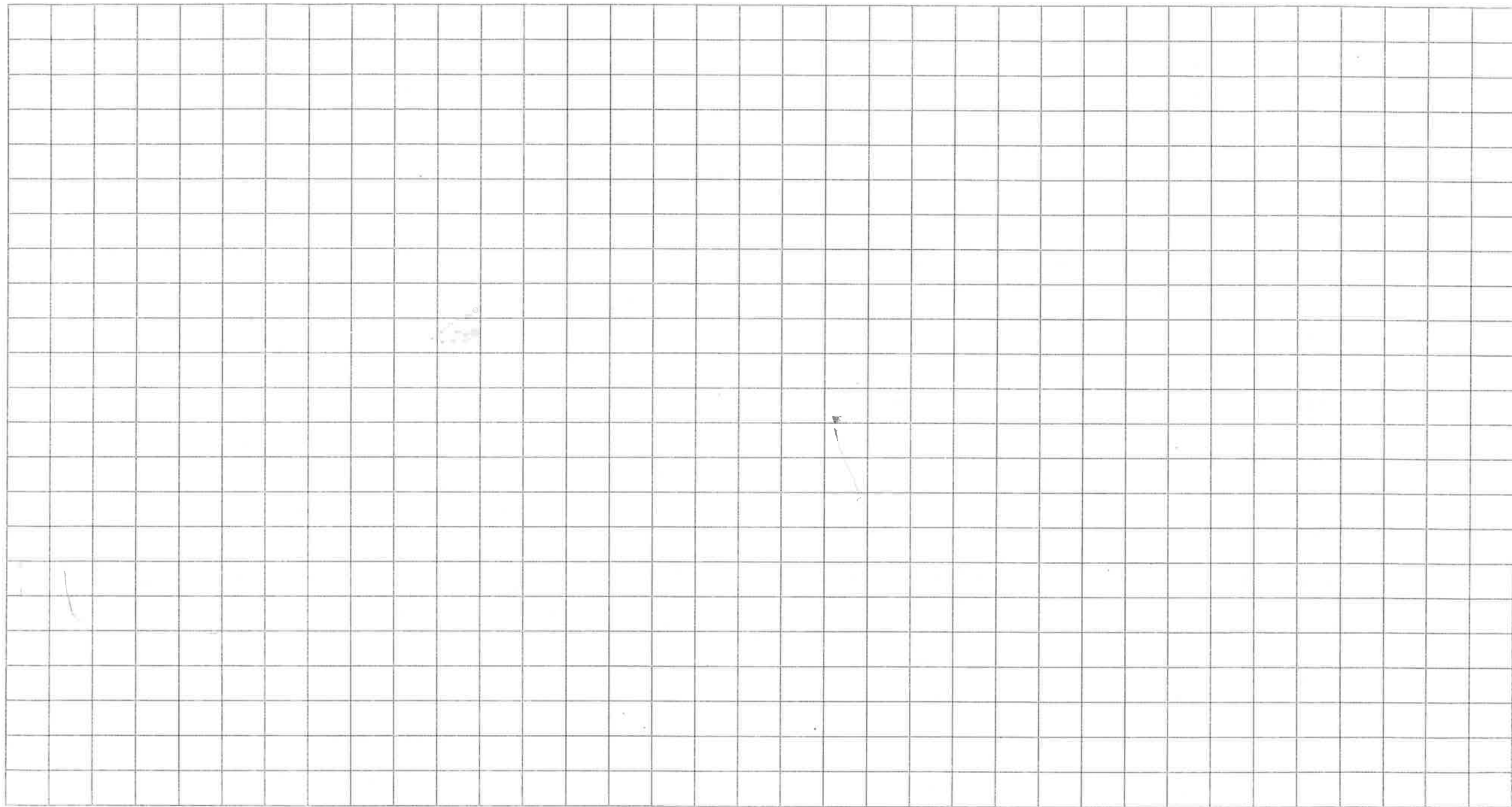
BE = beginning time of cast
BO = bottom time of cast
EN = end time of cast

DE = deployment time

MR = messenger release time
RE = recover mooring time

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

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DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month <i>JULY</i>			Year <i>2007</i>				Ship <i>LOUIS ST. LAURENT</i>				Cruise ID <i>2007-20</i>				
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							
<i>29</i>	<i>BI-1</i>	<i>1121</i>		<i>DRIF</i>			<i>73 51.35</i>	<i>127 20.00</i>	<i>183^{±9}</i>		<i>BL 199,200,201</i>	<i>3</i>	<i>HD</i>	<i>none.</i>	
<i>29</i>	<i>XCTD-4</i>	<i>1302</i>	<i>BE</i>	<i>XCTD</i>			<i>73 50.56</i>	<i>128 13.15</i>	<i>331</i>						
<i>29</i>	<i>BI-3</i>	<i>1640</i>	<i>BE</i>	<i>ADCP</i>			<i>73 48.77</i>	<i>129 35.56</i>	<i>1008</i>						<i>heading 144-133-150-</i>
		<i>1746</i>	<i>EN</i>				<i>73 48.41</i>	<i>129 35.77</i>							<i>168-166</i>
<i>29</i>	<i>BI-3</i>	<i>1649</i>	<i>BE</i>	<i>ROS</i>	<i>UN</i>	<i>4</i>	<i>73 48.71</i>	<i>129 35.45</i>	<i>1008^{±9}</i>		<i>54-70</i>	<i>17</i>	<i>JE/MO/HD/KN</i>		<i>ISUS/ PAR on package, did</i>
		<i>1718</i>	<i>BO</i>				<i>73 48.55</i>	<i>129 35.52</i>		<i>1011^{±15}</i>					<i>not want to go deeper.</i>
		<i>1741</i>	<i>EN</i>				<i>73 48.44</i>	<i>129 35.71</i>							
<i>29</i>	<i>BI-3</i>		<i>BE</i>	<i>DRIF</i>			<i>73.48.385 N</i>	<i>129 .35 .843 W</i>	<i>1008</i>		<i>BL 202,203,204</i>	<i>3</i>	<i>JE/MO/HD/KN</i>	<i>-</i>	
<i>29</i>	<i>BI-4</i>	<i>19=55</i>	<i>BE</i>	<i>ADCP</i>			<i>73°46.611'N</i>	<i>129°48.367'W</i>							<i>158.5 heading</i>
		<i>21=16</i>	<i>EN</i>				<i>73°46.764</i>	<i>129°55.719'W</i>							<i>136.2 heading</i>
		<i>20=00</i>	<i>BE</i>	<i>ROS</i>	<i>UN</i>	<i>5</i>	<i>73°46.537'N</i>	<i>129°57.923'W</i>	<i>1487m + 10m Alt</i>						<i>ISUS PAR is removed</i>
		<i>20=40</i>	<i>BO</i>				<i>73°46.598</i>	<i>129°56.585'W</i>							
		<i>21=10</i>	<i>EN</i>				<i>73°46.727</i>	<i>129°55.955</i>							

Cast type:
BOT = bottle cast, no CTD
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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

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MR = messenger release time
RE = recover mooring time

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

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12

TSVS $V = 11.93$ changed batteries new $V = 14.62$ (nominal 13.5V)

← ADCP: Transducers drifting too close to CTD, pull out ^{when CTD is} ~~200m~~ ^{200m} from surface.

} CTD:
Secondary temperature is reading constant value of 7.5°C
Secondary ~~oxygen~~ conductivity is reading lower than primary ^(9513 comp + 1.0022)
 ↳ ~~is something~~ ? software? connection?
Secondary oxygen is reading too high. Cables need to be checked.
This has been intermittent problem during 2007-19 cruise.

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							
29	BI-5	22:50	BE	ADCP			173°47.818'N	130°26.204'W	2007m						155.1 heading
30		0:37	EN				73°47.491'N	130°22.141'W							53.7 heading
29	BI-5	23:05	BE	ROS		6	73°47.841'N	130°25.924'W	2008 (bar 9m)						ISUS PAR) TS removed
29		23:50	BO				73°47.808'N	130°23.689'W							secondary TS
30		0:30	EN				73°47.514'N	130°22.39			92-108	4			7532 const!
30	BI-2	2:50	BE	ADCP			73°51.090'N	129°10.476'W							heading at end 223
		0635					73 49.41	129 11.64	508+9						
30	BI-2	2:51	BE	ROS		7	73°51.065'N	129°10.447'W			105-126				ISUS+PAR put back on
		3:11	BO				73°50.882'N	129°10.118'W	49/d bar						secondary T works well
		3:49	EN				73°50.539'N	129°09.772'W							
30	BI-2	4:30	BE	NET		N(1)	73 59.10	129 09.91	491	100			A.M.		BONGO #1
	BI-2	0500	BE	NET		N(2)	73 59 10	129 09.91	441	100					#2
30	BI-2	0522	BE	ROS		8	73 50.11	129 10.39	500						Pylon comm failed
		0550	EN						232						mid-cast, no bottles tripped

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DRF = drifter

bottle firing method:
US = up/stop
UN = up/no stop
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14

Bad serial port, Carouse/ serial input changed to COM4

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month <u>July</u>				Year <u>2007</u>			Ship <u>LOUIS ST-LAURENT</u>				Cruise ID <u>2007-20</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							
30	B1-2	0714	BE	ROS	UN/US	9	73 49.43	129 11 80	511 ⁺⁹		127-149	23	JE/MD/ HD/RN		PROD/GEOCHEM
		0730	BO				73 49.42	129 11.92		232					
		0746	EN				73 49.42	129 12.24							
30	B1-2	7:00		DRIF	WIND + GRAVITY		73°49.39N	129°11.79W		510	205, 206, 207	3			Dale + Danay (LT + HILTZ) yellow ducky's
30	B1-6	1151	BE	ADCP			73 45.48	130 56.46	2497 ⁺⁹						heading 224-
			EN												
30	B1-6	1159	BE	ROS	UN	10	73 45.45	130 56.32	2495 ⁺⁹		150-173	24	JE/MD/ HD/RN	✓	
		1254	BO				73 45.16	130 55.13		2496 ⁺⁷					
		1341	EN				73 44.82	130 54.17							
30	B1-6	1219	BE	NET		0	73°45.93	130°55.223	2495 ⁺⁹	100			HD		{ forgot to record + plus
30	B1-6	1234	BE	NET		0				20 m					} meters - discard casts.
30	B1-6	1250	BE	NET		03	~	~		100m					ok ✓
30	B1-6	1303	BE	NET		04	~	~		100m					ok ✓
30	XCTD-5	1601	BE	XCTD		XCTD 37	73	132	2809				JE/MD		further west than planned - computer issues

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← CTD ISUS+PAR removed for BI-6

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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								
31	BI-7	0=20	BE	ADCP			73°40.884	134°48.875							232 heading	
		3=03					73°39.612	134°46.056							222.2 heading	
31	BI-7	0=25	BE	ROS		11	73°40.880	134°48.853	3000m + 9m		174-197	24	ME/AM		Bottle #24 does not fire.	
		1=32	BO				73°40.445	134°47.240	2995m	10m						
		3=03	EN				73°39.612	134°46.056								
31	BI-7			NET											Not DONE	
31	XCTD-6	5=37		XCTD			73°20.23	135°22.166								
31	XCTD-7			XCTD												
31	CB23a	0832	BE	ADCP			72°53.82	136°00.54	2744				MD/RN		heading 174, 179, 191, 234	
		1040	EN				72°53.62	135°59.22							, 226	
31	CB23a	0835	BE	Ros	UN	12	72°53.81	136°00.53	2729		198-221	24	JE/AD/MD/RN	✓	Bottle 14 top seal leak	
		0939	BO				72°53.71	135°59.94		2742 ¹⁷						
		1032	EN				72°53.63	135°59.25								

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16

7253.581

136.00168

CTD: After BI-7

examine secondary oxygen. The cable connection looks fine - both connectors are OK. Cable is new, ~~is~~ ~1m long, looks fine.

Restart ~~A~~ Seisave

Primary oxy on $V\phi = 1.542$

secondary oxy on $V4 = 4.919$ The value changes btw 4.919 and 4.923.

secondary oxy is not 'Y'd w/ any other sensor and $V5 = 0$ as it should.

Try plugging into diff aux. Swap primary + secondary

now secondary oxy on $V\phi = 4.922$

primary oxy on $V4 = 1.469$

So this is not the problem, secondary still bad.

✓ pylon head soaked + replaced btw BI-7 and CB-23

⊕ Replaced toporing.

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								
31	CB23a	1050	BE	DRIF			72°53.581	136 00.168			6552 BL 22, 23, 218				Mille D + 2m bag 2 Brown + 1 clear	
	XCTD-8	1312	BE	XCTD			72°35.266	137.718	2604	1101						
	XCTD9	1603	BE	XCTD			72°17.818	138° 33.272	2585	1100						
31	CB-29	20=57	BE	ADCP			71°59.341	140°2.337	2675m						heading 195g	
		21=14													heading 265	
		0=14	EN				71°59.288	140 3.877							heading 258	
		21=10		ROS	US	13	71°59.541	140° 2.337	2676m+9m		222-233				DHF1 Bottle 205, 206, 207	
							71°59.499	140° 2.386								
		21=35					71°59.471	140° 2.438								
31	CB-29	22=13	BE	ROS	UN	14	71°59.405	140° 2.875	2685m+9m		234-257					
			BO				71°59.320	140° 3.628								
8/1		0=07	EN				71°59.294	140° 03.845								

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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
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20

Before CB-23A

Removed 2° SBE43 DO sensor 4415 and replaced with CSTAR Xmiss s/n 9931R
Calibration checked. CFB file updated and confirmed.

PAR & TSUS put on for 1st cast. TSUS turned on just before going in water.
Maybe this late start caused noisy data on TSUS, PAR, trans?
Likely TSUS tried to start on CTV power — because it didn't have
battery until later.
Anyways, PAR used for depth choice but rest of data could be
ignored. Use second goosene cast.

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month August			Year 2007				Ship LSSL				Cruise ID 2007-20				
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							
01	—		DE	XCTD		XCTD-10							MI		
01	—		DE	XBT } T-5 }		T ₅ -4							MI/LR/52		Probe 1-4/ →
01	CB286	0846	BE	ADCP			70 57.97	140 01.76	2046 ⁺⁹						heading 271, 248, 314, 320,
01		1233	EN				70 57.75	140 06.98							303
01	CB286	0851	BE	ROS	US	15	70 57.94	140 01.92	2030 ⁺⁹		258-280	23	JE/MD/HD/RN		POC/TSS - RNA/DNA
		0943	EN				70 57.91	140 03.20		653					~2mi off station due to ice
01	CB286	1107	BE	ROS	UN	16	70 57.87	140 05.32	2037 ⁺⁹		281-304	24	"	✓	Geochem
		1156	BO				70 57.81	140 06.29		2039 ⁺⁶					
		1236	EN				70 57.75	140 06.98							
01	CB286		BE	Net		(M)	70° 57.795	140° 04.077		50			HD		For ABO media
		10:20		NET		(5)	70° 57.779	140° 04.435		100					ouch! Dnt pull
		10:35		NET		(6)	70° 57.823	140° 05.032		100					on something when under
01	CB286	1242	DE	DRIF			70 57.75	140 06.98			208, 209, 210				ice chunks
				XBT											

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22

deployed. All failed. Bad probes? Problem with wire against hull?

—

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month <i>AUG</i>				Year <i>2007</i>			Ship <i>LOUIS ST-LAURENT</i>				Cruise ID <i>2007-20</i>				
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							
01	MK4	1421	BE	XCTD		XCTD-12	70 45.29	140 06.58	1470						extra, Jane's confusion.
01	MK4	1517	BE	ADCP			70 48.80	140 02.74	1473						heading 329, 314, 269, 280
			EN												
01	MK4	1525	BE	ROS	UN	17	70 48.82	140 03.02	1524 ⁺¹⁹		305-328	24	Je/MD/HN/RN	✓	delayed trying to find
		1602	BO				70 49.14	140 04.20		1487 ⁺⁷					right depth
		1632	EN				70 49.21	140 04.80							
01	MK4		BE	XCP											
			EN												
01	MK4	16:57	BE	DRIF	Toss		70°48 102	140°02.702			35, 36, 37				MAR'S + Time K.
	MK4			CTD			next to CTD wire						Luc Rainville		2 from FRC
															using SBE19+
	MK4			CTD			~100m away from ship						Luc Rainville		+ rope
															→
				XBT											

Cast type:

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bottle firing method:

US = up/stop

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Time Code

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02 Aug Downloaded data from fish - was only 1 cast recorded Aug 1, data down
1500 to 6m only.

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							
/	MK-3	18:41	BE	ADCP			70°34.525	140°00.566							heading 330.6
		21:50					70°35.189	140° 3.319							heading 340.6
/	MK-3	18:45	BE	ROS		18	70°34.541'	140° 0.648	822		329-352	1-24		Yes	
		19:10	BO				70°34.644	140° 1.132	815+9m						
			EN				70°34.612	140° 1.439							
/	MK-3	20:17	BE	ROS		19	70°34.626'N	140° 2.002'W			353-	1-23			leak at PAR plug
		20:31	EN	CTD			70°34.680'N	140° 2.287'W							
/	MK-3	21:10	BE	ROS		20	70°34.927'N	140° 2.902'W			353-376				
		21:33	BO				70°35.083'N	140° 3.157'W							
		21:49					70°35.189	140 3.319							
/	MK-3	23:15	BE	ROS		21	70°34.352'N	140° 00.023'W			377-				
		23:54	EN				70°34.516	140° 00.208'W							
				XBT											

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26

← 15m on upcast error light + spike in data + communication error on screen
some bouncing ... connector? termination?

} PAR reading ^{close to} then noise. Pull back on deck and unplug PAR bulkhead connector and find pin has corroded away + is now stuck in cable. Removed PAR + jumper cable. Put dummy plug on 'Y' ~~not~~ shared w/ ISUS

Start of cast 20, again had error light + 'communication error'. Brought on deck checked power connector, and rosette connection on pylon. All looked good. Restart seasure and IMS. No problem on cast.

Steamed back on station after 20 for cast 21 (3rd @ MK-3)

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month August				Year 2007			Ship LSSL				Cruise ID 2007-20				
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							
2	MK-2	1=19		ADCP			70°24.042'N	139°58.414'W							heading 30/
2	MK-2	1=29	BE	ROS		(15)	70°24.103	139°58.314'W			327-399				
		1=57	Bb				70°24.359	139°57.619'W			400-423	24			
		2=25	EN				70°24.457	139°56.781'W							
2	MK-2	0235		Net		(7)	70°24.467	139°56.661	524	100m			HD		
													HD		
2	MK-2	0250		Net		(8)	70°24.569	139°56.088	326	100m					
2	MK-2			Camen						250			SZ/TK		
2				XBT											

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28

← Camera worked well. Stopped ~1min @ 250, 200, 150, 100, 50 although water still moving too much to catch good look. Maybe frame by frame? Next time add SBE19+ to match time + pressure exactly. Wire angle means depth less than "meters wire out".

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							
02	MK1	5:30		ADCP			70°13.787'N	140°00.173'W	243						208 heading
		0617													
02	MK1	5:35	BE	ROS	US	23	70°13.787'N	140°00.248'W			424-446	23			check con file
		0614	EN												has second xmiss
02	MK1	6:15		NET ₂		(09/10)	70°13.780	140°00.046		100m					
02				XBT									MI		
				XBT											
02	CB28aa	0816	BE	ADCP			70 00.91	140 00.18	50 ¹⁷				MI		
			EN												
02	CB28aa	0837	BE	ROS	UN	24	70 00.19	140 00.58	50 ¹⁹		447-451	5	JE/MD/HD/EN	✓	
		0850	EN				70 00.30	140 00.81		53					
02	CB28aa	0900	BE	DRIF			70 00.38	140 00.98			BL214,215,216	3			
02	XCTD-13	1135	BE	XCTD			70 25.989	140 52.856	443						
02	XCTD-14	1219	BE	XCTD			70°34.113	141 07.029	775						

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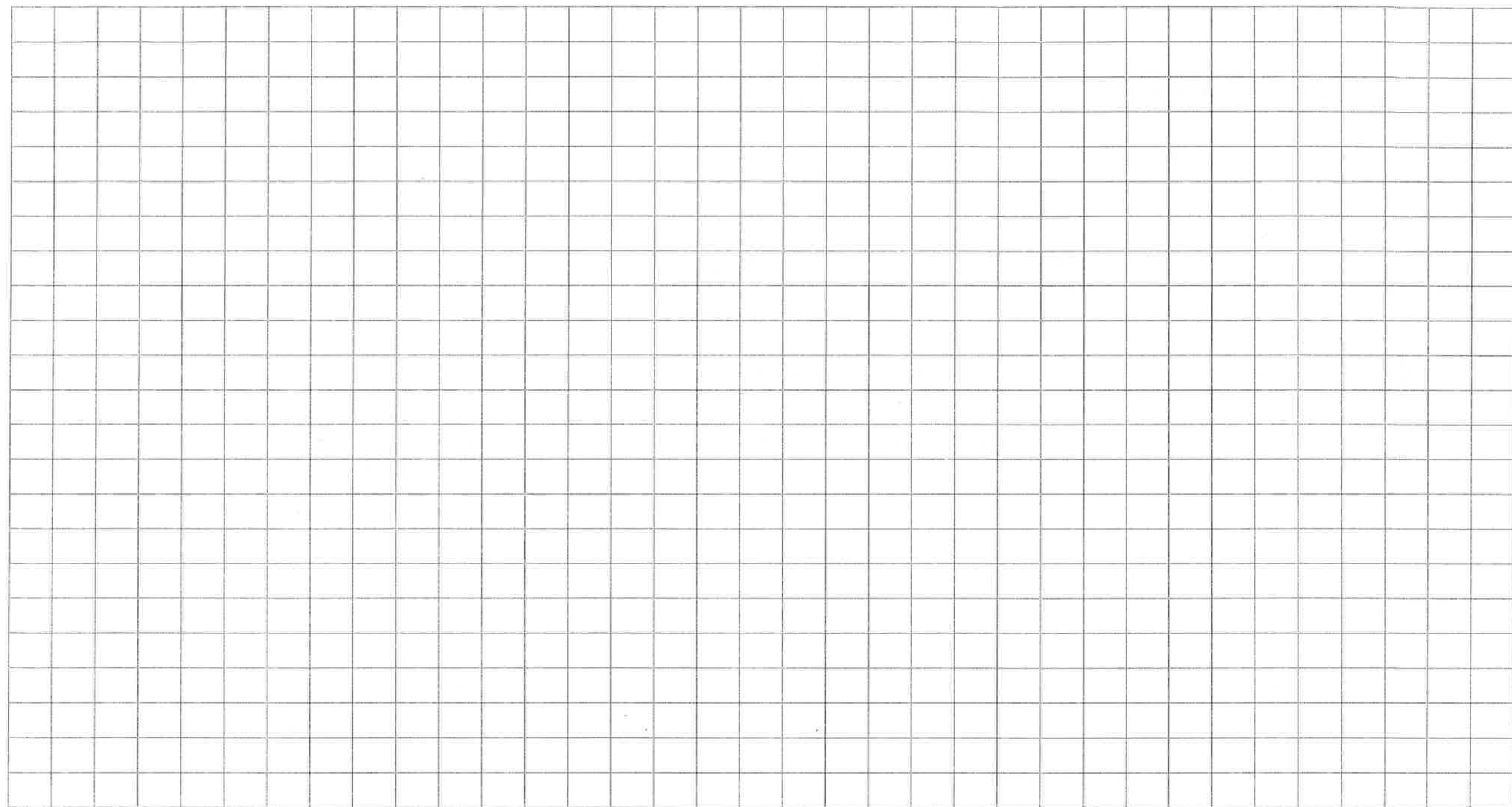
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30



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							
02	XCTD-16	1524	BE	XCTD			71°1.489'	142°37.634'	2105	1100			MD		
02	XCTD-17	1748	BE	XCTD			71°28.791'	143°42.580'	3037	1100			MD		
02	XCTD-18	1728	BE	XCTD			71°28.079'	144°57.129'	2983?	1100					
02	XCTD-19	2059	BE	XCTD			71°31.250'	146°08.755'	3004	1100					
02	XCTD-20	2231	BE	XCTD			71°37.340	147°19.740'	2992	1100					
03															
03	XCTD-21	0021	BE	XCTD			71°45.690'	148°36.030'	2916	1100					
03	XCTD-22	0157	BE	XCTD			71°54.515'	149°50.300'	2973	1100					
03	XCTD-23	0426	BE	XCTD			72°09.811'	151°42.800'	2975	1100					
03	XCTD-24	0539	BE	XCTD			71°56.360'	152°18.510'	2050	1100					
03	XCTD-25	0640	BE	XCTD			71°47.217	152°45.406	1200	1100			MD		

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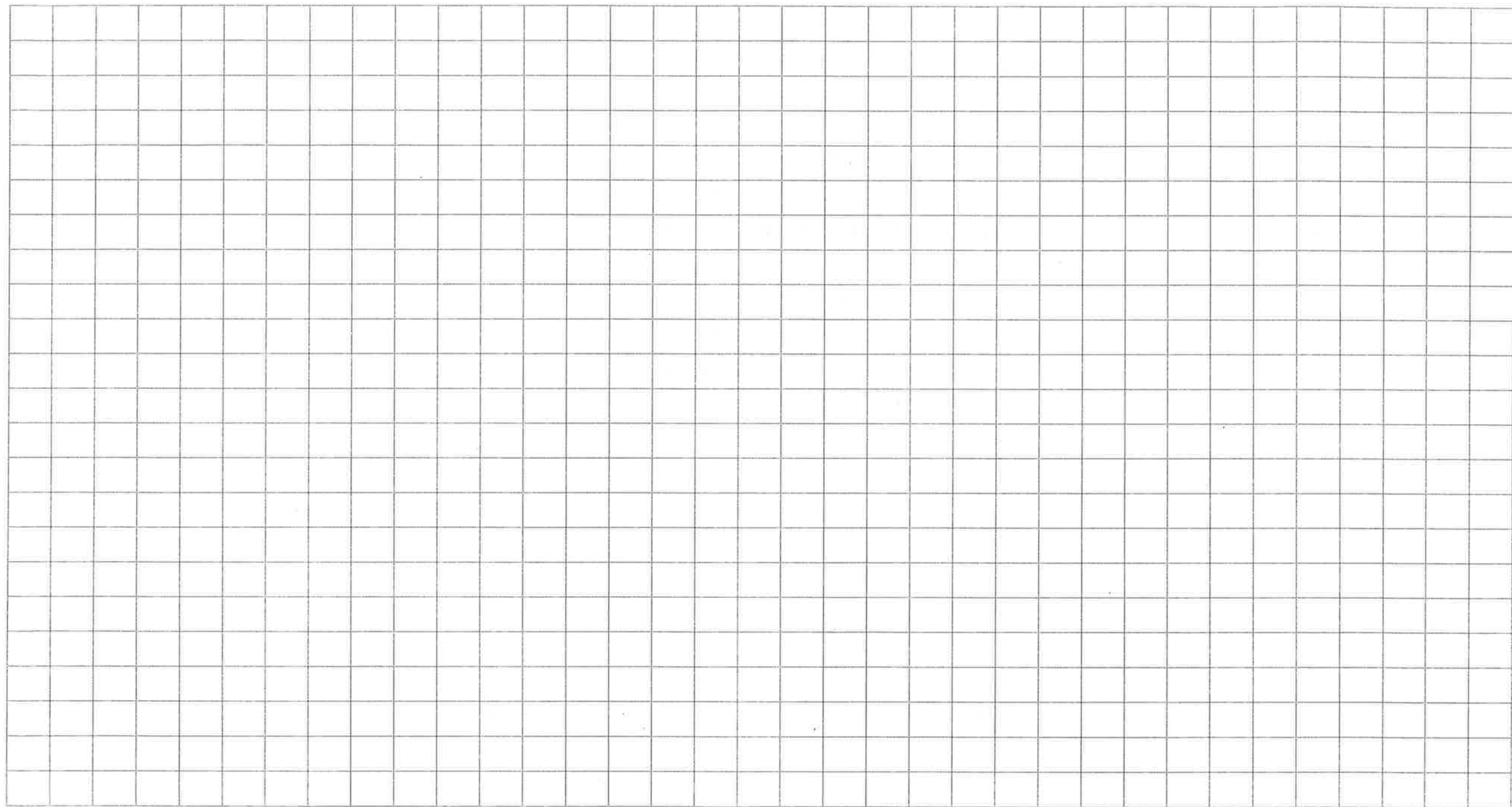
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bottle firing method:
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Month				Year				Ship				Cruise ID			
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	#of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
03	XCTD-26	0657	BE	XCTD			71°45.051	152°51.359°	800				MD		
03	XCTD-27	0721	BE	XCTD			71°41.769	152°58.395	171				MD		
03	XCTD-28	0749	BE	XCTD			71°38.275'	153°09.130'	67				HD		
In to Barrow to															
① Drop off sick crew man															
② send off Mesotech Deck Unit + Transducer to Humphrey Melling															
③ P/U package from Fairbault															
④ computer cable for Jenny															
⑤ surfactant for Linda															
⑥ Chocolate for the nerdy															
Water near Barrow is green + warm ~ 9°C															
TSG is on + logging															
Rosette Lab: Penetrating Oil aerosol sprayed by accident - emptied into Field Box. Could be contaminant for NH ₄ and DOC / CDOM. Aerosol "aromatics"															

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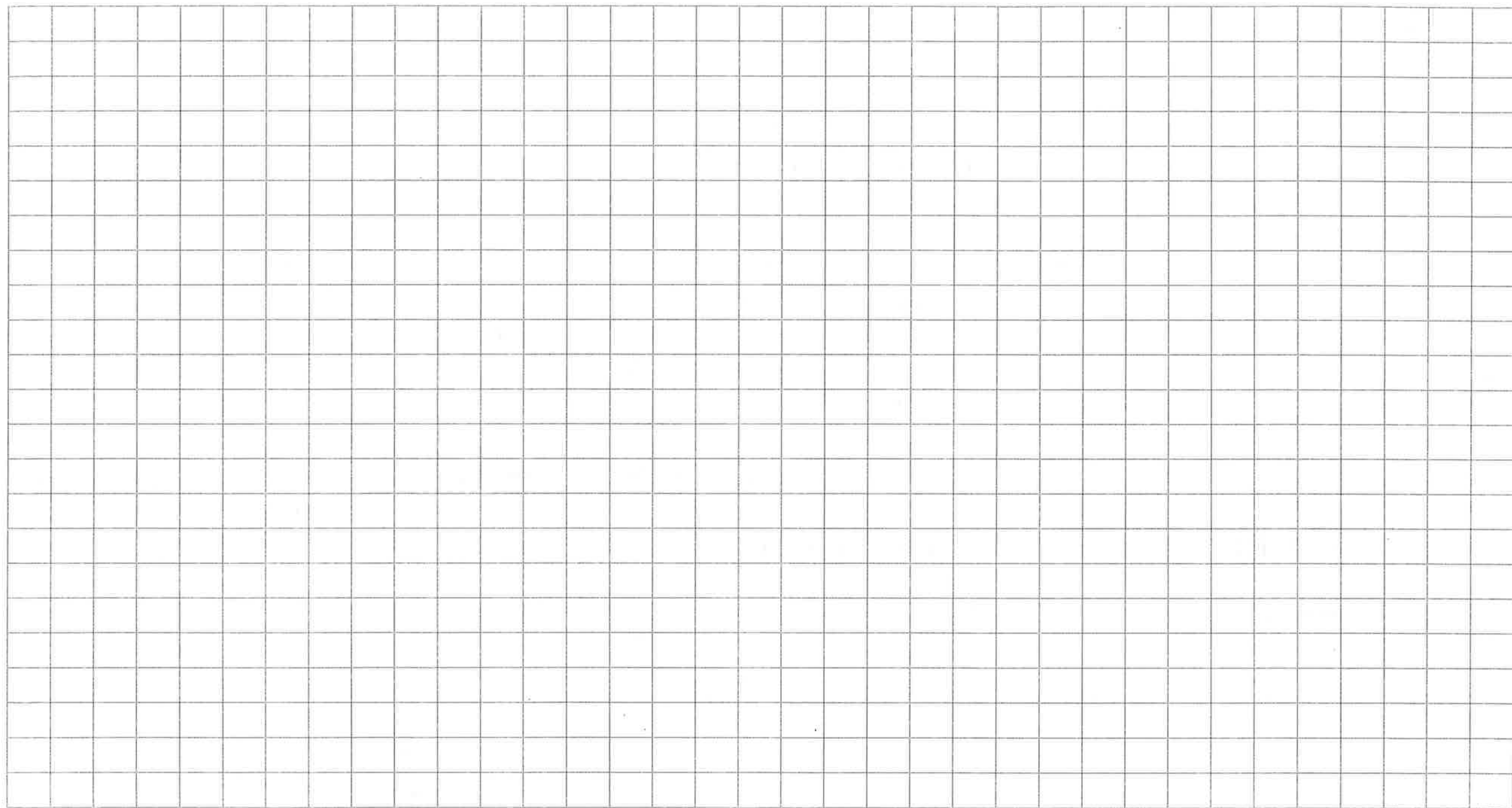
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could have Carbon + could stick to bottles etc.
Transmissometer to be cleaned for each cast, do not use Ammonia products
Oxy tube used prior to CDOM sampling will be rinsed prior to use.

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34



Month <u>Aug</u>				Year <u>2007</u>			Ship <u>LSSL</u>				Cruise ID <u>2007-20</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							
04	BL-1			ADCP			71° 19.616	152° 13.214							26.0 heading
04	BL-1	3:37	BE	ROS	25		71° 19.499	152° 13.055	51+9m	51m	456-461				
		3:53	EN				71° 19.616	152° 13.214							
04	BL-2	4:39	BE	ADCP			71° 23.913	152° 1.866	149+9m						↑
04	BL-2	4:50	BE	ROS	26		71° 23.986	152° 1.901	146+9m		462-473				315.6 heading
			BO												
		5:10	EN				71° 23.987	152° 2.032							← Reference PAR
04	BL-2	5:38	BE	ROS	27		71° 24.096	152° 2.392	151+9m		474-492	19			wiped w/ distilled water (first time
		0612	EN				71 24.30	152 02.84	149						since 4 July) →
															see
	BL-2	4:30		NET	N/11/12)		71° 24 01	152° 02.01		100x2			HM		note

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36

Mike Dempsey repaired PAR.
PAR sensor bulkhead connector replaced, new cable spliced onto
existing cable. Back up + running for BL line. SZ

Pylon does not fire bottles via computer control. Pump did not turn off via
computer control, Sassane got error, had to close down.