

DAILY LOG BOOK

MISSION
NUMBER

#2002-08
#2002-09

DATE:

From: May 8 to: May 19, 2002
CCGS J.P. Tully + CCGS Vector
(2002-08) (2002-09)
La Perouse, Covariability, Georgia Strait,
WCVI, BIO Mooring

VESSEL:

PROJECT:

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

Captain: John Anderson First Officer: Richard
Second Officer: Mark Third Officer: _____

Mission Participants / Agencies: 1.0.5. OSAF

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

Name	Watch	Cabin
Dave Spear		
Steve Mihaly		
John Lovd		
Jane Eert		
Melvie Quenneville		
Sheila Toews		
Lucius Penneault		
Scott Rose		
Doug Moore		

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

[illegible]

Data logging computer: ES02

Data acquisition program: _____

CTD deck unit make: _____ model: _____ serial number: 0508

Primary CTD

Make: _____ model: 911 serial number: 0585

Primary conductivity serial number: 1769

Secondary temperature serial number: 2968

Secondary conductivity serial number: 2173

Transmissometer: _____ Model: _____

Fluorometer: Model Sepoint Cable gain: _____

Oxygen sensor: 8-9014 Model: 4

PAR sensor: _____
PAR sensor: _____
Model: _____

Other sensors:

Other sensors:

Other sensors:

Other sensors:

Primary CTD

Make: 911 serial number: 0550

Primary temperature serial number: 0668

Primary conductivity serial number: 2102

Secondary temperature serial number: 2374

Secondary conductivity serial number: 1766

Transmissometer: _____ Model: _____

Fluorometer: Model _____	Cable gain: _____
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Oxygen sensor: _____
Model: _____

PAR sensor: _____ Model: _____

Other sensors: _____

Other sensors:

Other sensors:

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

Date	Time PDT	
08/05/02	0730	- Science crew John L., Dave S., Jane E., Steve M., Lucius P., Scott R., Tom J. and Captain Anderson meet at I.O.S.
		- contacted ship and drove to Port Alberni 0800 - 1130/1200 in 4 vehicles
		- Dave Mackas crew departs except Sheila T., Melanie Q., and Doug M. stay.
		- crossloading complete
01:04:40.224		- we set up and ship runs some errands in town.
	1600	- Tully departs for EOI mooring.
	1630	- Tully called to aid local fishing vessel just outside Alberni Harbour.
	1730	- SAR completed we proceed to EOI
	2222	- O ₂ sensor set up on seawater loop; gives noisy data Sheila is collecting winklers from loop
	1945	- BEGINNING OF ULTRA ERRATIC FLOW RATES ON SEAWATER LOOP
	2030	- SHUT DOWN PERROT THERMOSALINOGRAPH COMPUTER
	2045	- THERMOSALINOGRAPH BACK ON

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month MAY				US	Year 2002			Ship TULLY				Cruise ID 2002-08			
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								
129	TEST	0129	LOOPS	TC	1	49° 09.26	124° 48.15	—	—	1				O2 TEST LOOPS	
	TEST	0320	LOOP		2	48° 56.70	125° 01.88			2					
	LOOP3	2348	USW		3	49° 4.69"	126° 55.2"			3				49.0781 - 126.9200	
10	Loop4	0310	LOOP		4	49° 00.54	127° 03.37' W			4					
	LG07	0351	NET	BE	5	48° 59.27'	127° 07.03' W	1769	250					Bongo	
	LG07	0401	NET	BO		48° 59.38'	127° 07.09' W								
		0406	NET	EN		48° 59.46'	127° 07.12' W								
10	LG07	0427	ROS	BE	6	48° 59.31	127° 07.16	1773		5-28				par sensor removed, (S.T.)	
		0455		BO		48° 59.62	127° 07.32		1770					strong sulfur odor in	
		0554		EN		49° 00.16	127° 07.47							Bot #20 (sample 21) @ 35m	
	LG07	0556	Loop5		7	49° 00.16	127° 07.47							→ FOR O2 SENSOR	
10	LG05	0742	CTD	BE	8*	49° 07.540	126° 54.975	268						* FILE ORIGINALLY LASEL	
		0746		BO	↑	49° 07.566	126° 54.944		258					OUT. (JAMES), PROB.	
		0752		EN	↑	49° 07.602	126° 54.935							SOME LEGACY OF THAT IN THE HORIZON	
10	LG04	0858	ROS	BE	9	49° 12.839	126° 46.977	134		29-42				FILE RENAMED BOB IN WINDOWS	
		0902		BO		49° 12.943	126° 46.875							STATION SHIFTED ~ 1/4 NM SHORE	
														WARD ON THE LG LINE	
														FROM LG04 TO AVOID	
														CABLE LATER "NEXUS"	
10	LG04		NET		10	49° 12.943	126° 46.875	134						BONGO CONGO 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

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

22 March 2002

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130.33014 - 130 07:55:24.10

Additional comments

130.09334 = 02:14:24.576

#4 49 00.54 = 49.0090 127 03.37 = 127.0562 03:10 = .0486 .1736 = 04:10

#6 48 59.31 = 48.9885 127 02.16 = 127.1193 04:27 = .1854

Date Time PDT

- May 9 0730 - on station E01-HH for recovery.
- directly above mooring - drifting over ranges 112, 100, 98, 100, 111
- drifting away to release position. 169, 175 right over
- 0744 - 199 m range sent 6451 and then 6484
- 0745 - sighted on surface
- 0830 - all on deck - winch broke down during recovery operation
completed it by crane
- bottom set of glass balls showed markings (abrasion) by very large diameter wire.
- 1104 - preparing new mooring on deck.
- deployed E01-II 49° 17.547' 126° 35.801' in 99 m water.
- head for E03-HH for recovery.
- 1310 - on station
- sent 6462 received no response repeated transmission - same
- sent 3000 " " " " " "
- listened with pinger Helle + Mesotech - no pinger signal.

Date Time PDT

E03-HH Recovery continues

May 9 1321

- moving along contour 2 nm to NW. - likely track of fish boat
- sending 6462 + 3000 as we go
- stopped 2 nm $49^{\circ} 07.138'$ $126^{\circ} 57.548'$
- sent 6462 1152 1338 1357 1456 rec'd + executed each time
- sending 3000 733 699 1024 728 1055 646
- declutched sent 6462 1359 1063 - nothing consistent
- used dunking transducer - no signals
- used pinger receiver - no signal
- moving along same track back to original position stopping 1 nm from station to NW.

1406

- stopped 1 nm NW of station $49^{\circ} 06.261'$ $126^{\circ} 56.603'$
- declutched sending 6462 and 3000 from both deck boxes and hull and dunking transducer - no responses to multiple tries

1425

- back on station.
- sent 6462, 6463 and 3000 repeatedly without response
- tried 6465 without result.
- no pinger signal.

Date Time PDT

May 9 1437

- E03 HH recovery continues
- stopped 1 nm to SE along ^{contour} $49^{\circ} 04.480'$ $126^{\circ} 55.25'$
- sent 6462 received 896, 894, 969, 977, 969.
- sent 6442 wrong code + received same responses
- sent 3000 trips too early $< 200m$.

1506

- stopped 2 nm to SE along contour $49^{\circ} 03.600'$ $126^{\circ} 54.231'$
- sent 6462 rec'd 895, 936, 944
- no pinger signal.
- sent 3000 rec'd too early $< 200m$.
- move to location 1 nm into deeper water from mooring site.

1543

- stopped 1 nm to west of station.
- no pinger signal
- sent 6462, 3000 repeatedly with same confusing results

1615

- back on station with same results
- decided to leave mooring until mysteries are solved in Sep. sent 6463 *

1630

- preparing new mooring for deployment

FRI-2 OFF

1911

- deployed mooring E03-II in 400 m water at position $49^{\circ} 05.640'$ $126^{\circ} 55.981'$

- proceed to offshore end LG line.

Fish found in sink downstream of deep salinometer. It was impeding the water from draining out of the sink
Location LG3. 10 MAY 1030.

Date Time PDT

May 10 1030 - completed Angelica cast at B10-1 for O_2 , Sal, Nats, Chlor. + Chlor
Size Frac.

- proceed to B10-1 mooring for recovery.

1048 - on station B10-1

- ranges 213 216

- sent ABEF and received confirmation

- mooring surfaced without problem but was not immediately sighted - could simply have not been seen or was deeper than anticipated.

- buoy surfaced upside down - release did not give it sufficient righting moment
on four point wire bridle

1207 - on station A1-HH for recovery.

1212 - sent 6442 received 753 m

- sent A000 got repeated sensible ranges. 753 - 816 m. as we drift away
this is app. 300 m distance

- move closer for release

- sent A000 range 609 m

- sent 6441 then 6484 received confirmation range 663 m

Date Time PDT

May 10

1646

- deployed mooring A1-II in 500 m depth at position.
48° 31.762 126° 12.161'

1655

- proceed to offshore end LB Line for CTD/Rosettes

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month MAY					Year 2002			Ship JP TULLY					Cruise ID 2002-08			
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	LG03		ROS	BE	11	49 15.028	126 43.622	122	118							
		1020		BO		49 15.064	126 43.627									
		1023		EN		49 15.093	126 43.619									
10	B101	1608	ROS	BE	12	48° 32.029	126 11.339	410		43-56	20	DS/K				
		1615		BO					406							
10	LOOP6	2354	LOOP		13	48° 3.79"	126° 12.13'			57		MQ				
11	LB12	0231	ROS	BE	14	48 12.947	125 51.963	510		58-77	20	MQ				
		0246		BO		48 12.93	125 51.94		505					Rosette valves 16, 17, 18		
		0307		EN		48 12.93	125 51.87							were left open during		
11	LOOP7	0309	USW		15	48 12.93	125 51.87		Loop					cast		
11	LB10	0424	CTD	BE	16	48 18.54	125 41.28	152						Seasave trouble - reboot		
		0427		BO		18.53	41.25									
		0430		EN		18.57	41.25									
11	Loop8	0411	USW		17	48° 18.56'	125° 41.26		Loop					Oxy + sal		
11	LB8	0547	CTD	BE	18	48° 25.27	125° 28.51	133								
		0549		BO		25.27	28.52		131							
		0552		EN		25.28	28.50									
	Loop9	0555	USW		19	48° 25.56	125° 28.74							Oxy + sal		

Cast type:

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ROS = Rosette plus CTD

USW = sea water loop
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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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DE = deployment time
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RE = recover mooring time

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

22 March 2002
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Additional comments

Winkler O₂ system recalibrated - May 10/02 by S.T.

035 5/12 = .18737

041 11 = .1743

48 18 56 = .3093

125 4/26 = 125.6877

Date Time PDT

- May 11 0743 - on station JF2F-CV-A for recovery
 - sent XPNL ranges 284 m 283 m
- 0744 - sent CDEF range 298 299 received positive response
 - ranges reducing 256 251 250 249 247 244 243
 then ranges started rising
- 0756 - sighted on surface.
- cleanup - extensive corrosion noted under tape wrapped around stainless frame - frame disassembled for inspection esp main rods
 - crevice corrosion evident on main nuts holding frame
- 0930-1015 - in Port Renfrew to meet Mike Dempsey to pick up RDI WH frames, MORs anodes and Nortek box for download cable.
- 1320 - on station JF2E-CV-A for recovery app. 1 cable off
 - sent 6432 no response repeated.
 - sent 9000 no response repeated.
 - moved directly over station no responses
 - moved to 1 nm east to search for mooring set to automatic transponder
 - pick up signal at app. 837 m continued east ranges diminishing
 - got to site $48^{\circ} 14.422'$ $124^{\circ} 08.038'$ range 165 m in 150 m depth
 - we are almost on mooring
- 1352 - moved off to 360 m range sent 6431 and 6434 received release confirmation
- 1356 - nothing sighted on surface

May 11

- JF2E recovery continues

- moving close to position with lowest range. - diminishing ranges along the way.
- 1402 - range 327 m slant range nothing on surface - flat calm + sunny.
- sent 6431/6434 release got rec'd + executed confirmation again.
- 1404 - 265 m
- 1405 - 220 m, 211 m, 195 m, 192 m
- 189 m - lower pinger receiver got one strong pinger and one faint pinger.
- 1411 - 360 m away sent 6431/6434 got rec'd + executed confirmation - but does surface.
- move over position declutch and listen with pinger.
- 1421 - surfaced on its own as we were approaching station to listen for pinger in anticipation of dragging.
- mooring completely entangled with gill netting - the upper 2 instruments were covered all around by netting and lead line dangled down to the 3rd instrument and may have affected direction readings.
- the pick-up float and witness buoy were heavily fouled by kelp and skeleton shrimp.
- prepare new mooring for deployment. (JF2E-CV-B (MKII)) RDI added top RCM removed.
- 1840 - deployed JF2E-CV-B in 150.4 m water at position
48° 15.155' 124° 09.711'
- 1845 - head for JF2C-CV-A for recovery.

DAILY LOG

Ocean Sciences and Productivity Division

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Month		MAY		TC		Year		Ship				Cruise ID			
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	LB07	0640	ROS	BE	20	48° 28.62'	125° 21.99'W	157		78-91					
		0642		Bo		28.66	22.07		155						
		0656		EN		28.65	22.02								
	Loop10	0646	USW	Loop	21	48° 28.68	125° 22.07							(2x) oxy + sal + nuts	
11	LB06	0755	ROS	BE	22	48 32.234	125 15.575	115							
		0757		Bo		48 32.212	125 15.597		110	92-104					
		0806		EN		48 32.234	125 15.821								
	Loop11	0848	USW	Loop	23	48 34.069	125 12.047							oxy, sal, nuts	
11	LB05	0849	CTD	BE	24	48 34.072	125 12.044	104							
		0852		Bo		48 34.070	125 12.029		102						
11	LB04	0932	ROS	BE	25	48 35.73	125 8.67	112		105-117					
		0934		Bo		48 35.731	125 8.656		107						
		0945		EN		48 35.80	125 8.71								
11	LB03	1024	CTD	BE	26					118-127					
		1026		Bo		48 37.329	125 5.512	93							
		1027		EN		48 37.34	125 5.50		90						
	Loop12	1043	USW	Loop	27	48 38.40	125 3.45							oxy	

Date Time PDT

- May 11 1946
- on station JF2C-CV-A for recovery
 - sent 6422 no response repeated transmission with same result
 - sent 8000 no response " " " " " "
 - listening with pinger no response.

2000-2145 - completed a search 2 nm to east and west of the position and 1 nm to north + south. in an elongated diamond pattern with the ship moving at 3-4 knots and acoustic commands and transponds continuous on.

2145 - head for JFE + JFD CTD lines

DAILY LOG

US ^{finis}

Ocean Sciences and Productivity Division

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Month					Year				Ship				Cruise ID	
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	LB02	1058	ROS	BE	28	48 38.99	125 2.61	58						
		1059		BO		39.004	2.631		50	118-127				
				EN										
	LOOP13	1100	USW		29	48 39.06	125 02.63							sal + nuts.
11	LB01	1146	ROS	BE	30	48 40.44	124 59.51			128-133				
		1146		BO		48 40.44	124 59.51	30	27					
		1154		EN		48 40.52	124 59.44							sal + nuts.
	Loop 14	1145	USW		31	48 40.42	124 59.53	33						
12	JFE1	0542	ROS	BE	32	48 27.25	124 15.18	27	22	134-136				std file has JFE7 as sln
	LOOP15	0547	USW		33	48 27.26	124 15.01'W							sal + oxy
	JFE2	0615	ROS	BE	34	48 25.21	124 14.82	136	131	137-139				
		0620		BO		48 25.22	124 14.76							
		0625		EN		25.23	14.71							
	Loop 16	0621	USW		35	48 25.22	124 14.75							sal + oxy
	JFE3	0649	CTD	BE	36	48 23.27	124 14.87	185	185	/				
		0653		BO		48 23.26	124 14.86							
		0655		EN		48 23.27	124 14.85							
	LOOP17	0655	USW		37	48 23.27	124 14.85							sal + oxy
12	LOOP18	0710 ¹²	USW		38	48 21.954	124 14.964							sal + oxy

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bottle firing method:
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22 March 2002
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DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month		MAY		TC	Year	2002		Ship	TULLY		Cruise ID				2002-08
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	JFE4	0725	ROS	BE	38	48 21.27	124 15.11	228		140-145	C	SW		PLAT CALM	
				Bo		48 21.27	124 15.13		220					NO HEAVE COMPEN -	
		0736		EN		48 21.29	124 15.13							SATION	
12	LOOP19	0750/0754	USW		39	48 20.337	124 15.234					SW		OXY(TIME)/SAL	
12	JFE5	0805	ROS	BE	40	48 19.32	124 15.08	211		146-148	3	SW		About a cable NW	
				Bo					206					of ship to stay out of	
		812		EN		48 19.33	124 15.12							traffic	
12	LOOP20	0841 ^{oxy}	USW		41	48 18.25	124 15.21							sal + oxy	
12	JFE6	0853	ROS	BE	42	48 17.8	124 14.99			149-151	3	SW			
				Bo				175	175						
		0905		EN		48 17.82	124 14.97								
12	LOOP21	0924/0930	USW		43	48 16.532	124 15.024					SW		OXY/SAL	
12	JFE7	0941	ROS	BE	44	48 16.37	124 15.03	85		152-154	3	SW			
				Bo					81						
		0948		EN		48 16.37	124 15.05								
12	LOOP22	1010/1014	USW	1116	45	48 15.61	124 10.03							OXY/SA	
	JFE7	1114	ROS	BE	46	48 11.95	123 59.96	55							
		1116		Bo		48 11.95	123 59.96		51	155-157					
		1119		EN		48 11.98	123 59.95								

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Date Time PDT

- | Date | Time PDT | |
|--------|----------|---|
| May 12 | 0730 | - approaching station JF2C-CV for recovery waiting for 3 freighters transiting site to leave. |
| | | - sending 6422 (ON) and 8000 range - no response |
| | 0746 | - returning to station. |
| | | - sending 6422 and 8000 range - no response |
| | 0758 | - on station - heard one pinger distinctly another possibly |
| | | - we are drifting fast - move back over station to determine 2nd pinger |
| | 0811 | - back on station - sent 6422 and 8000 - no response. |
| | | - again we hear one pinger well and possibly a second faintly. |
| | | - we are app. 2 cables away - sent 6422 concluding mooring is close to station. |
| | | - sent 6421 / 6484 release - no response - no surface |
| | 0838 | - sent 6422 no response |
| | | - sent 6421 / 6484 repeated - on both FR1 + FR2 mode no response |
| | | - moving back on station after drifting 1 plus cables off to try with dunking transducer. |
| | 0851 | - back on station to SE |
| | | - using dunking transducer. sent 6422, 8000, 6421 / 6484 without result repeatedly. |
| | 0858 | - set up for dragging. |
| | 0945 | - start drag #1 |

Date Time PDT

May 12 1130

- mooring surfaces - top buoy only - drag line caught anchor.
- winch is capable of lifting load.
- we speculate that something else is entangled.
- at various times 1-3 buoys are seen at surface then resubmerge.
- we can tow mooring to shallow water on Canadian side.
- as we proceed to shallow water (slowly app. 2 knots) shortening up on mooring on 2 occasions and in the process 3-of the 5 buoys surface.
- during the tow there were 2 times when very heavy load came on, sufficient to pull cable of winch against mechanical + hydraulic brake, and then released. (as if something were tangled in parted.). At this point the 4th buoy appeared on surface.
- we attach a marker buoy (SS28) on 37m wire to top of mooring in case it falls off and sinks.
- when the 4th buoy appears we recovered buoy 1-3 + instruments and moved marker to top of 4th buoy.
- the tow continues - at one point we hit the bottom with the anchor and the drag line ($\frac{1}{2}$ " 3x19) parts. The 4th buoy sinks but the marker buoy stays on the surface.
- we cannot recover top first under load of anchor (4500/lbs) because $\frac{5}{16}$ " wire rope (used), nice crimped (UBS x 85%) leaves less than 2:1 safety factor.
- drag around mooring + successfully recover bottom complete cutting poly line @ release.
- top 2 instruments have rotor missing.
- we head back to I.O.S. packing up for off loading.

1700

DAILY LOG

Ocean Sciences and Productivity Division

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Month MAY					Year			Ship				Cruise ID			
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	Loop23	1116	UWS		47	48 11.95	123 59.96	55							
12	JFD6	1143	ROS	BE	48	48 13.75	124 00.06			158-160					
		1145		BO		48 13.74	124 00.06	130 ¹¹⁴							
		1149		EN		48 13.72	124 00.07		110						
12	Loop24	1142	UWS		49	48 13.75	124 00.06								
	JFD5	1221	CTD	BE	50	48 15.76	124 00.06	181	180						
		1225		BO		48 15.75	124 00.14	181							
		1228		EN		48 15.69	124 00.16								
	Loop25	1221	USW		51	48 15.76	124 00.05								
12	JFD4	1311	ROS	BE	52	48 17.73	124 00.03	188		161-166				chl a, Sal. calib ⁴	
		1314		BO		48 17.73	123 59.99								
		1323		EN		48 17.77	123 59.94								
	Loop26	1308	USW		53	48 17.71	124 00.04							Oxy., sal.	
	JFD3														
1															

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:

- 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

Cruise 2002-09

Date Time PDT

- | Date | Time PDT | |
|--------|----------|---|
| May 13 | 0800 | - tie up at I.O.S. |
| | | - we off load Tully and load Vector simultaneously. |
| | | - biology and chemistry D Macker group off loaded first |
| | | - PGIC eager to start loading Tully but graciously allowing us to use flatdeck and forklift first (NB 2nd gas forklift broken down) |
| | | - cement trucks and 3 ships Tully, Bartlett and Vector all on one arm of jetty leads to serious congestion. |
| | | - due to gale warnings in Juan de Fuca - we decide in consultation with captain to do the inland waters (Georgia Strait) leg first. |
| | 1700 | - loading + set up done |
| | | - we all take a short break to home |
| | 2100 | - Vector sails all on board |
| May 14 | 0705 | - on station JTO-1 for recovery |
| | | - winch required set up. |
| | | - we stand by |
| | 0729 | - back on station |
| | | - range 446 m |
| | 0730 | - sent ADGH received positive response |
| | 0731 | - mooring sighted on surface. |

Date Time PDT

May 14 1238 - launched J101-B in 351 m water at $49^{\circ}45.205'$
 $124^{\circ}14.203'$

- high pressure filling in and moderate winds blowing.
- contacted Shannon Harris (UBC) to coordinate her joining ship. - left message
1605 - on station SG03-CV-A for recovery.
- sent ABD.

- range 635, 631
- moved closer app. 1 cable off.
1611 - range 414, 415, 417, 423, 425, 426 drifting off. to release
- range 441, 427, 431, 430, 433, 435, 449, 451

1617 - sent ABCD for release - got positive response

1618 - sighted on surface

- Shannon calls back - she won't be ready for Wed., we agree to meet
her first thing Thursday morning

- cleaning + assembling new SG03 mooring.
1930 - launched SG03-CV-B in 414 m water at $49^{\circ}17.000'$ $123^{\circ}48.057'$
- depth seemed to vary between 414-416 and 423-425 ranges
- attaching Vemco sensors did not slow mooring deployment but did require
participation of an additional person to log Vemco serial numbers + depths
- we go to anchor.

Date Time PDT

May 15 0717 - on station SG02-CV-A for recovery.

- range 369 m

0719 - sent BCFG received positive response

- sighted on surface.

- cleanup.

0901 - on site TM2-D for recovery.

- range 368 m

0907 - sent CDEH got positive response.

0908 - sighted on surface.

0950 - on station TM1-D for recovery

- ranges 260, 261, 269 m

0952 - sent ACEH got positive response

0953 - sighted on surface.

- recovered without incident - cleanup

- head for GS01 for recovery.

- contacted Shannon - she will be ready at W. Van lab. 0700 Thursday morning.

Date Time PDT

May 15 1227 - on station SGO1-CV-A for recovery.

huc 108.
250-2468509

- sent BCE

- range 203 too close

- moved to a better release position

- range 270

1232 - sent ACFG - received positive response

- immediately sighted on surface.

- top buoy + pinger + instrument show marks of heavy wire rope

- instrument vane + rotor broken

- pinger rod bent.

1434 - on station TM5-D for recovery

- range 267 m

1435 - sent BCEH - received positive response

- sighted on surface.

- recovered without incident

- head for W. Van. Lab.

1803 - tie up at W. Van. for the night.

Date Time PDT

May 16

0700

- along side W. Van jetty overnight
- Shannon arrives and her equipment is loaded.

0730

- Vector leaves dock.
- preparing mooring en route to SG02 site

1233

- deployed mooring SG02-CV-B in 271 m water at position $49^{\circ} 01.497'$ $123^{\circ} 23.890'$
- head for W. Van to drop Shannon off.

1505

- Shannon sent ashore with equipment.
- head for SG01 mooring for deployment preparing mooring en route.

1931

- deployed SG01-CV-B in 191 m water at $48^{\circ} 46.257'$ $123^{\circ} 02.906'$

2200

- head for I.O.S. to reload for Juan de Fuca Leg.
- arrive I.O.S. tie up.
- reloading between 2200 - 2430
- some dork has loaded the flatdeck

Date Time PDT

May 17 0753 - on station JF2A-CV-A for recovery.

- directly on top

- move off to recovery position.

0802 - range. 259m

0803 - sent DEGH - received positive response.

0804 - sighted on surface

- cleanup + head for JF2B.

0937 - on site JF2B-CV-A for recovery.

- range 234, 236

0938 - sent ABGH - received positive response

- sighted on surface

- preparing moorings

1331 - launched JF2A-CV-B in 106m water in position:
48°24.760' 124°09.957'

1606 - launched JF2B-CV-B in 167m water in position:
48°22.920' 124°11.056'

- we are out of ready instruments, vases, pingers etc.

- head for anchor near Sheringham point

Date Time PDT

May 17 app. 1800 - we anchor.

- instruments are prepared for next day
- instruments 7 x RCM's, 2 TG's, 2 releases, 6 pingers, 8 vanes are prepared for Aquaculture moorings FS and TC.

May 18 0817 - launch JF2C-CV-B in 191 m water at position:
48° 21.214' 124° 12.265'

0830 - head for I.O.S. and off loading

- equipment for Dario cruise left on board, instruments running ready for deployment as per previous discussions.