

CRUISE
NUMBER

9707

DAILY LOG

INSTITUTE OF OCEAN SCIENCES
OCEAN PHYSICS

DATE

Apr. 7 - 27, 97

VESSEL

J. P. Tully

PROJECT

Globec, La Perouse, Rogue Wave,
Barkley Canyon, CRD Proj's.

Captain: John Anderson First Officer: Al Taylor
Second Officer: Simon Third Officer: Patty Murphy
Cruise Participants / Agencies: _____
Scientific Personnel: Party Chief: _____

Name	Watch	Cabin	Name	Watch	Cabin
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Second leg of cruise: Party Chief: _____

Name	Watch	Cabin	Name	Watch	Cabin
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Data logging system: Unit no.: _____

Program Name: _____ Program version: _____

CTD deck unit make: _____ model: _____ serial no.: _____

Computer make: _____ model: _____ serial no.: _____

1st CTD make: _____ model: _____ serial no.: 0443

Temperature sensor
coefficients: slope: _____ serial no.: _____
offset: _____

Conductivity sensor
coefficients: slope: _____ serial no.: _____
offset: _____

Pressure sensor range: _____ psi
coefficients: FSP: _____ dB
serial no.: _____

Transmissometer
coefficients: slope: _____ model: _____ serial no.: _____
offset: _____

Comments: _____

June 1523 1601 all casts except 115-118.

2023 2038

1729

2nd CTD make: _____ model: _____ serial no.: 0437
Temperature sensor model: _____ serial no.: _____
coefficients: slope: _____ offset: _____
Conductivity sensor model: _____ serial no.: _____
coefficients: slope: _____ offset: _____
Pressure sensor range: _____ psi serial no.: _____
coefficients: FSP: _____ dB offset: _____
Transmissometer model: _____ serial no.: _____
coefficients: slope: _____ offset: _____

Winches:

1. make: _____ model: _____ serial no.: _____ use: _____
2. make: _____ model: _____ serial no.: _____ use: _____
3. make: _____ model: _____ serial no.: _____ use: _____
4. make: _____ model: _____ serial no.: _____ use: _____
5. make: _____ model: _____ serial no.: _____ use: _____
6. make: _____ model: _____ serial no.: _____ use: _____
7. make: _____ model: _____ serial no.: _____ use: _____

Salinometer: make: _____ model: _____ serial no.: _____

SAIL System:

Program version: _____ Time zone: _____

Sampling interval: _____ sec

CTF module no.: _____ serial no.: _____

Remote temperature model: _____ serial no.: _____
Flow sensor model: _____ serial no.: _____

Other sensors: (special for this cruise)

Name: _____ module ID: _____ serial no.: _____
Name: _____ module ID: _____ serial no.: _____
Name: _____ module ID: _____ serial no.: _____

Comments: _____

ADCP Setup:

Program version: _____ number of depth bins: _____
Time zone: _____ bin length (2x): _____
Sampling interval: _____ sec pulse length: _____
Blank beyond transmit: _____ pings per ensemble: _____
Pulse cycle time: _____
% pings good threshold: _____

Comments: _____

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INSTITUTE OF OCEAN SCIENCES

YEAR		MONTH		SHIP		CRUISE		PAGE		OF				
1997		APRIL		TULLY		9707		1		1				
DAY (UTC)	STATION ID	CAST TYPE	TIME (UTC)	TIME CODE	STD/HYDRO CONSEC #	LATITUDE	LONGITUDE	POSITION CODE	BOTTOM DEPTH (m)	MAX SAMPLING DEPTH (m)	CONSEC SAMPLE #	# OF BOTTLES	INIT	COMMENTS
8	LBA1	ROS	1836	BE	1	48 31 86	125 04 34		127				1748	surface light on BL21 2106
8	LBA1	ROS	1843	BO	2	48 31 92	04 47		102	102				+Bongo
	LBA2	ROS	2120		3	48 25.34	125 07.70		116	106			1748	
	LBA2	ROS	2125		4	48 25 22	125 7 66							-Bongo
	C1	ROS	2228	BE	5	48 28 09	125 15 35		156	148			1748	
		ROS	2252		6						1-19	19		Rollie
9	LBO2	ROS	0053		7	48 38 97	125 02 29		56				1748	Stop Down
9	LBO2	ROS	0059		8	48 38 98	125 02.23		50		20-24	5		up
9	LBO4	ROS	0149		9	48 35 61	125 08 81		114	101			1748	Stop Down
9	LBO4	ROS	0153		10	48 35 56	125 08 83		114	100				Stop
9	LBO6	ROS	0239		11	48 32 13	125 15 58		115				1748	Stop Down - ?dk
9	LBO6	ROS	0242		12	48 32 07	125 15 58			97.25	25-27	3		PAR (OK) 3-Phyto
9	LBO7	ROS	0330		13	48 28 67	125 22 14		158	150			1748	
9	LBO7	ROS	0344		14	48 28 38	125 22 24		"					PAR
9	C3	ROS	0430		15	48 23 45	125 20 83		124	113			1748	Stop Down
9	C3	ROS	0435		16	48 23 43	125 20 90		124					-Bongo
9	LBO8	ROS	0543		17	48 25 23	125 28 81		154	145			1748	
9	LBO8	ROS	0551		18						28-37	19		view up (see note over)

CAST TYPE -

BOT -

bottle cast

CTD -

ctd

MOR -

mooring

ROS -

NET -

DRF -

rosette

net haul

dritter

USW -

sea water loop

TIME CODE -

BE -

BO -

EN -

beginning time of cast

bottom time of cast

end of cast

DE -

MR -

RE -

deployment time

messenger release

recover mooring

POSITION CODE -

RAD -

GPS -

LOR -

RADAR

GLOBAL

LORAN

reproven cards 134 to 231

134

138

143

147

151

April 8/97 - Tuesday

PDT

~1100 - started Licor #2, mean per 10

Bro Manual from SB
SR Manuals / Sarsa
~~from John White~~

Apr 8/97

2300 - station LB08 - surface bottle (apparently) failed - fired two more - used #11

since #10 got air sample

- bottle #1 fired on downcast file (oops)

- bottles 1-9, 11 sampled (10 dumped) - will use O_2 to determine which didn't trip

- chl + nutrients drawn before O_2 (? I don't think so)

- most stations quite spikey - large, low swell (no compensation)

- IAN PERRY'S sampling logged in his own (separate) log.

1B12

0430 -

GPS not active on Ag Sy.
Software unable to pick up
Turned off in 97070443. CON

0520 -

2 lines of the 4 weight black lines
let go. One took off aluminum tab.
will repair - w/new 3pt.

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9	LB09	ROS	0702	BE	19	48 22.066	125 34.835		153	145			1748	2106
9	LB09	ROS	0710	BO	20	48 22.120	125 34.58		"	"	38-46	9		1748
9	LB10		0819		21	48 18.479	125 41.001		153				1748	2106
9	LB10		0824		22	48 18.559	125 40.906							1748
9	LB11	ROS	0924	BE	23	48 15.008	125 47.814		212				1748	2106
9	LB11	ROS	0934	BO	24	48 14.93	125 47.85				47-57	11		1748
9	LB12	ROS	1055		25	48 13.378	125 51.714		512				1748	2106
9	LB12	ROS	1152		26	48 13.731	125 52.926		440		58-72	15		1748
9	LB14	ROS	1410		27	48 08.325	125 59.930		966				1748	2106
9	LB14	ROS	1440		28	48 08.501	125 00.034		853		73-92	20		1748
9	LB15		1604		29	48 04.438	126 08.584		1450				1748	2106
9	LB15		1635		30	48 04.588	126 08.202			1008				1748
9	LB16	ROS	1755		31	48 00.458	126 17.182		1530				1748	2106
9	LB16	ROS	1819		32	48 00.489	126 17.474		1003		93-112	20		1748
9	A2		2150		33	48 22.668	126 03.715		375				1748	2106
9	A2		2201		34	48 22.875	126 03.704		346					1748
9	BARCAN	ROS	2313		35	48 24.547	126 01.010		752				1748	2106
9	BARCAN	ROS	2329	BO	36	48 24.63	126 00.60				113-135	23		1748

CAST TYPE - BOT - bottle cast
CTD - ctd
MOR - mooring

ROS - rosette
NET - net haul
DRF - drifter

USW - sea water loop

TIME CODE - BE - beginning time of cast
BO - bottom time of cast
EN - end of cast

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

POSITION CODE - RAD - RADAR
GPS - GLOBAL
LOR - LORAN

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97		APRIL		TULLY		9707		3						
DAY (UTC)	STATION ID	CAST TYPE	TIME (UTC)	TIME CODE	STD/HYDRO CONSEC #	LATITUDE	LONGITUDE	POSITION CODE	BOTTOM DEPTH (m)	MAX SAMPLING DEPTH (m)	CONSEC SAMPLE #	# OF BOTTLES	INIT	COMMENTS
10	LCB4		0200		37	48 32.003	125 35.591		80m				1748 2106	
10	LCB4		0211		38	48 31.98	125 35.49			73m				CT
10	LCB3		0302		39	48 34.5	125 30.08		115m				1748 2106	
10	LCB3		0307		40	48 34.54	125 30.107			108m				CT
10	LD2	ROS	0630		41	48 58.387	125 47.119		45				1748 2106	
10	LD2	ROS	0632		42	48 58.395	125 47.233		"	40	137-141	5		
10	LD4	ROS	0756		43	48 53.095	125 57.176		65				1748 2106	
10	LD4	ROS	0801		44	48 53.080	125 57.210			55	142-146	6		Filename is 07070043
10	LBP2	ROS	1839	BE	45	50 04.08	127 54.41		99				1748 2106	
10	LBP2	ROS	1902	BO	46	50 04.29	127 54.44		92	90	147-159	13		
10	LBP3	ROS	2102	BE	47	50 03.72	127 55.80		139				1748 2106	
10	LBP3	ROS	2111	BO	48	50 03.71	127 56.04			125	160-168	9		
10	LBP3	ROS	2151		49	50 03.90	127 56.62						1748 2106	Recast 15m
10	LBP3	ROS	2154		50	50 03.88	127 56.65			25	169-	1		
10	LBP5	ROS	2257	BE	51	49 59.910	128 00.136							
10	LBP5	ROS	2317	BO	52	49 59.585	127 59.902			1000	170-188	19		
11	LBP7	ROS	0217	BE	53	49 52.321	128 11.282						1748 2106	
11	LBP7	ROS	0233	BO	54	49 52.235	128 11.300			1000	189-211	23		

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rosette
net haul
drifter

USW - sea water loop

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YEAR		MONTH		SHIP			CRUISE			PAGE	OF			
1997		APRIL		TULLY			9707			4				
DAY (UTC)	STATION ID	CAST TYPE	TIME (UTC)	TIME CODE	STD/HYDRO CONSEC #	LATITUDE	LONGITUDE	POSITION CODE	BOTTOM DEPTH (m)	MAX SAMPLING DEPTH (m)	CONSEC SAMPLE #	# OF BOTTLES	INIT	COMMENTS
11	LBP8	ROS	0418		55	49 48 80	128 16 85		27200				1748	2106
11	LBP8	ROS	0437		56	49 48 87	128 16 67		2097					
11	LBP6	ROS	0603		57	49 56 208	128 05 604		769					
11	LBP6	ROS	0615		58	49 56 28	128 05 48							
11	LBP4	ROS	0715		59	50 01 436	127 58 069			1003				
11	LBP4	ROS	0740		60	50 01 494	127 58 310							
11	LBP2	DION	0900		61	50 4.12	127 54.23		94					Browness tow - file in PDT
11	LBP4	BION	1111		62	50 1.73	127 57.81							-Browness, 2 nd section
11	LBP1	ROS	1440		63	50 04 85	127 52 90		53					CTD
11	LBP1	ROS	1449		64	50 04 79	127 52 81		51	43				CTD
11	DR40	ROS	1715		65	50 14 729	128 05 957		145					CTD - Drifter 40 P/U
11	DR40	ROS	1725		66	50 15 110	128 05 609			128				CTD upcast
11	DR	ROS	2015		67	50 01.162	127 54.124		1200	500				DOWN DRIFTER RECOVER.
11	DR	ROS	2026		68	50 01.136	127 58.958			500				COMPLETE 2035
12	LG6	ROS	0605		69	49 03 443	127 06 193		972					
12	LG6	ROS	0613		70	49 03 576	127 00 775		890	880	212- 234 234	23		
12	LG4	ROS	0816		71	49 11 361	126 49 410		145					
		ROS	0822		72	49 11 381	126 49 262		145		230A-230H	8		235-242

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April 12

Finish LBP1

Run for drifter P/U

First on found N of Brookes 10 am

950: Test rosette bottle firing at LGS - bottles: 1, 2, 3, 4, 5, 6, 7

1-252	stopped		
2-230	on fly		
3-200	—	phyto	stop
4-200	—	phyto	stop
5-200	—	phyto	stop
6-170			
7-150		No Fire	
8-100			
9-50		No Fire	
10-5	—	phyto	stop
11-4	—	phyto	stop
12-3.8	—	phyto	stop
13			

5
2 2 6
2 3 A
2 2 2 3
2 2 2 3
2

#72 238

231

#80

#235 251

125
001
52
75
05
06
20
02
10
05
0

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12	LG04	BION	09						145	50				Bioness tow along LG42LG6 night CANCELLED
12	LG07	ROS	1414		73	48 59 398	127 07 180		1468				1748 2106	Bongo
12	LG07	ROS	1518		74	48 59 58	127 06 45		1060	998				UP 1537
12	LG5		1643		75	49 07 355	126 55 093		270				1748 2106	
12	LG5		1655		76	49 07 34	126 54 87			150				P - premature pull up
12	LG5				77				263				1748 2106	recast CTD
12	LG5		1720		78	49 07 44	126 54 61			253	243-254			recast up phyto - Rad
12	LG3	ROS	1825	BE	79	49 14 93	126 43 65		126				1748 2106	
12	LG3	ROS	1833	BO	80	49 14 90	126 43 53			110	235-251	17.		
12	LG2		2047		81	49 18 809	126 38 195		100	97			1748 2106	1344
12	LG2		2048		82	49 18 803	126 38 148		100	97				
12	LG1	ROS	2121		83	49 20.461	126 35.118		60	50			1748 2106	
12	LG1	ROS	2123		84	49 20 50	126 35.16		56	50	252-256	5		
13	LC02	ROS	0318		85	48 48.577	125 30.568		110				1748 2106	
13	LC02	ROS	0322		86	48 48 572	125 30.481			100	257-263	7		
13	LC04	ROS	0528		87	48 43.369	125 40.950		166				1748 2106	
13	LC04	ROS	541		88	48 43 316	125 40 930			150	264-279	16		
13	LC05		0707	BE	89	48 39.829	125 47.054		65	60			1748 2106	

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sea water loop

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13	LC05	ROS	0709	RO	90	48	39.729	125 47.049		65	60				
13	LC06	ROS	0800	BE	91	48	36.512	125 53.887		93				1748	2106
13	LC06	ROS	0805		92	48	36.52	125 53.87		93	91+				
13	LC07	ROS	0914		93	48	33.012	126 00.429		132					
13	LC07	ROS	0920		94	48	33.079	126 0.428			125	280-287	8		
13	LC08	ROS	1030		95	48	29.487	126 07.066		201					
13	LC08	ROS	1036		96	48	29.530	126 07.07			190	288-298	16		
13	LC9	ROS	1449		97	48	25.91	126 13.65		612					
13	LC9	ROS	1526		98	48		126			625	299-321	23		
13	LC11	ROS	1801		99	48	18.96	126 26.698			1460				
13	LC11	ROS	1825		100	48	18.86	126 26.42			1008	322-341	20		
13	LC12	ROS	2018		101	48	14.955	126 39.977		2000	1000				3: det on
13	LC12	ROS	2035		102	48	14.997	126 39.982			5 m	no sh	7		STD/R
13	LD11	ROS	2254		103	48	28.816	126 42.947							
13	LD11	ROS	2312		104	48	28.971	126 43.041		1946	1000				winch stopped for REPAIR @ 30 m
14	LD09	ROS	0105		105	48	35.621	126 29.702		1100	1008				
14	LD09	ROS	0129		106	48	35.309	126 29.890				342-357	16		
14	LD08		0259		107	48	39.262	126 23.564		794					

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ctd
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sea water loop

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• d 3, 1
= 1
1000
1000

use secondary sensors to process data



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14	LD08		0315		108	48 39.098	126 23.915			790				
14	LD07	ROS	0418	BE	109	48 42.677	126 68.76		475				1748	2106
14	LD07	ROS	0427	BO	110	48 42.578	126 16.904			450	358-372	15		
14	DR30 pick up	ROS	0954		111	49 07.966	126 42.681		142					
14	"	ROS	0958		112	49 07.991	126 42.584		142					
14	PR39	ROS	1540		113	49 25.502	126 49.29		95				1748	2106 Drift 39 Pick up
14	PR39	ROS	1548		114	25 526	49 030		95	80				
15	LJ9	CTD	0524		115	49 15.93	127 47.50	✓	2500	2483			1729	2014
16	LJ9	CTD	0626		116	49 15.63	127 48.39	✓						
16	LJ8	CTD	0800		117	49 20.165	127 40.930	✓	1752	1904			1729	2038
16	LJ8	CTD	0837		118	49 20.062	127 41.351	✓	1800					
17	LJ01	ROS	0256	BE	119	49 44.30	127 02.50	✓	62				1748	2106
17	LJ01	ROS	0301	BO	120	49	127	✓			373-377	5	PAR	FLUOR
17	LJ02	ROS	0332	BE	121	49 42.56	127 05.34	✓	84				1748	2106
17	LJ02	ROS	0335	BO	122	49 42.55	127 05.50	✓			378-383	6	PAR	FLUOR
17	LJ03	ROS	0446		123	49 39.10	127 11.32	✓	128				1748	2106
17	LJ03	ROS	0450		124	49 39.17	127 11.36	✓						

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

POSITION CODE -
RAD - RADAR
GPS - GLOBAL
LOR - LORAN

primary report

Wrong enson
file used.
0100437.cdl

switched to
17070437.cdl
- pressure wrong
(see note over)

Date Time PDT

14 Apr. 1500

- shore party meets Tully at public jetty in Gold River.
- Dave M., U.B.C. people and Rod F. leave ship
- Tom J., Bernard M., Dave S., Doug. A., Tammy M. & Marie M. join ship
- people + equipment loaded on ship by 1 large (and full) launch load.

- ship departs for Nootka to deploy tide gauge

1910

- Nootka TG deployed 1810 PST in 31.5 m water at $49^{\circ} 37.398'$ $126^{\circ} 37.245'$

- weather on outside predicted to be full gale force $\rightarrow$ storm 45-50 kt winds
- ship anchors in Mooya Bay overnight to allow storm to pass.

Apr 15

0825

- on station E01-X
- range 127 m 129, 131, 132, = 86 m dist.

- ship manoeuvred
range 248 m 250 m = 226 m distance

0837

- sent ABCF received positive response

0838

- on surface. - recover service on deck and prepare for redeployment.

1139

- deploy E01-Y in 101 m water at $49^{\circ} 17.357'$ $126^{\circ} 35.936'$

- head for E03 for recovery

1500

- on station E03-X

- marginal condition

- XPND - no reply

- sent ABD - range $5\frac{1}{4}$ m

- moved off range = 530 m, 552 m, = 223 m

1507

- sent ABCD - received positive response

1509

- sighted on surface

Date Time (PDT)

- Apr. 15 1509
- recover mooring EOB-X in marginal conditions that continue to deteriorate - very rough recovery with equipment damage
 - decide not to redeploy EOB-Y in these conditions
 - head for off shore end of L-L-Line doing CTD's only (not Rosette's) and bouys and newton sampling as Lau Perry see fit.

Cast 115 - X-missometer not working

04/16/97

- 0100 - cast 117 - switched to 97070437.CON
(CTD0437.CON IS INCORRECT)
- 0115 - @ 1530 m paused, wrench problems (sm A frame turned on)
 - #118 upcast
 - 1791 m wire out
 - bottom depth = 1800 m
 - 1900 m on CTD (bad calibration?) - error corrected in CON file 97070437.CON
- wrench not spooling well @ one end

Date Time (PDT)

Apr 16

0810

- on station BP1-X

- range 145m

0825

- manoeuvred for better position

- deditched and came out of generator mode

- ranges 129, 133, 154, 168, 206

-0827

- sent ABFH positive response

-0829

- sighted on surface

- serviced mooring on station

-1122

- deployed mooring BP1-Y in 100m
at 50° 03.740 127° 53.560

- head to Kyugot to deploy TG on
east side of Amos Is.

-1615

- deployed tide gauge at Amos Is.
in 281.5 m water at
position 50° 00.932' 127° 30.443'

- depart for nearshore end of LJ line
for Rosette/CTD's and Bongo work.

- LJ Line completed overnight Apr 16/17

Apr 17 0800

- heading for E03 for deployment
- preparing mooring E03-Y on deck

1030 - on station E03

- final preparations completed

1102

- launched mooring E03-Y in 508 m water
at 49° 04.88' 126° 57.27'

1135

- depart for recovery of mooring A1-X app.
4 hour steaming south

1550

- on station A1-X for recovery.

- sent XPND

- no response

1552

- sent ABF

- range 591 m 597m

= 330 m distant

1555

- AFGH

- received positive response

- range 498 range 199

1557

- sighted on surface.

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR			MONTH			SHIP			CRUISE			PAGE		OF	
1997			APRIL			TULLY			9707						
DAY (UTC)	STATION ID	CAST TYPE	TIME (UTC)	TIME CODE	STD/HYDRO CONSEC #	LATITUDE	LONGITUDE	POSITION CODE	BOTTOM DEPTH (m)	MAX SAMPLING DEPTH (m)	CONSEC SAMPLE #	# OF BOTTLES	INIT	COMMENTS	
17	LJ04	ROS	0633		125	49 35.48	127 16.87	✓	164				PAR	FLUOR	
17	LJ04	ROS	0637		126	49 35.48	127 16.85	✓			384 - 392	9	PAR	FLUOR	
17	LJ05	ROS	0801		127	49 31.597	127 22.568	✓	1068				FLUOR	43070443 CON changed - PAR removed.	
17	LJ05	ROS	0834		128	49 31.597	127 22.242	✓					FLUOR	xmuSS spikey	
17	LJ06	ROS	1019	DE	129	49 27.873	127 28.651	✓	1040				PAR	-checked & reset cabling -still spikey	
17	LJ06	ROS	1039	DE	130	49 27.910	127 28.588	✓		1000	393 - 410	18	PAR	FLUOR	
17	LJ07	ROS	1229		131	49 24.13	127 34.74	✓	1804					FLUOR	
17	LJ07	ROS	1309		132	49 24.13	127 35.00	✓							
18	LD10	ROS	0129		133	48 32.13	126 36.39	✓	1480					FLUR	
18	LD10	ROS	0201		134	48 32.28	126 35.63	✓			411 - 430	20			
18	LD9	ROS	0323		135	48 35.80	126 29.80	✓	1040	1053				*Calcd 1st LD11 in header* *NO GPS DATA*	
18	LD9	ROS	0341		136	48 35.76	126 29.74	✓							
18	LD8	ROS	0438		137	48 39.21	126 23.38	✓	772	760					
18	LD8	ROS	0451		138	48 39.14	126 23.21	✓			431 - 447	17			
18	LD07	ROS	0553		139	48 27.67	126 16.75	✓							
18	LD07	ROS	0604		140	48 42.63	126 16.73	✓	465						
18	LD06	ROS	0704		142	48 46.171	126 10.255	✓	140				FLUOR		
18	LD06	ROS	0710		143	48 46.170	126 10.283	✓		131	448 - 455	8	FLUOR		

CAST TYPE - BOT - bottle cast
CTD - ctd
MOR - mooring

ROS - rosette
NET - net haul
DRF - drifter

USW - sea water loop

TIME CODE - BE - beginning time of cast
BO - bottom time of cast
EN - end of cast

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

POSITION CODE - RAD - GPS
LOR - LORAN

RADAR
GLOBAL
LORAN

Date Time (PDT)

Apr. 17 1730 - head for LD-Line to complete CTD/Rosettes.

Apr. 18 - 0800 - on station A1-Y to deploy mooring - prepare mooring on deck.

- 1105 - launched A1-Y in 497 m water, corrected for draft in position 48° 31.920' 126° 12.260'

- 1130 - proceed to Barkley Canyon

- completed CTD/Rosette cast to get filter water to determine turbidity peak in canyon - app. 731 m depth.

- set up BCWASP-A mooring

NB*

* - 1616 - launched BCWASP-A in 240 m water at position 48° 24.900' 125° 56.810'

- set up BC01-A mooring

- 1847 - launched BC01-A mooring in 402 m water at: 48° 23.936' 125° 54.716'

- proceed to LC-Line to complete:

- vertical net haul intercomparisons

- Bioness To-Yo

- 2 Neuston tows + CTD's

- Bongo haul series.

DAILY LOG

OCEAN PHYSICS

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DAY (UTC)	STATION ID	CAST TYPE	TIME (UTC)	TIME CODE	STD/HYDRO CONSEC #	LATITUDE	LONGITUDE	POSITION CODE	BOTTOM DEPTH (m)	MAX SAMPLING DEPTH (m)	CONSEC SAMPLE #	# OF BOTTLES	INIT	COMMENTS	
18	LD05	ROS	0835		144	48 49.681	126 03.557	✓	91						
18	LD05	ROS	0839		145			✓						150.04	
18	LD04	ROS	0931	BE	146	48 53.259	125 57.041	✓	62					60.00	
18	LD04	ROS	0932		147	48 53.28	125 56.981	✓		50	456-460	5		120.04	
18	LD03	ROS	1022		148	48 56.68	125 50.39	✓	47					150.04	
18	LD03	ROS	1024		149	48 56.70	125 50.35	✓						150.04	
18	LD02	ROS	1055	BE	150	48 58.29	125 46.90	✓	44					50.00	
18	LD02	ROS	1057	BO	151	48 58.262	125 46.885	✓		40	461-465	5		200.04	
18	LD01	ROS	1137		152	49 00.04	125 43.74	✓	37						
18	LD01	ROS	1138		153	49 00.03	125 43.73	✓			466-469	4			
18	ROD1	ROS	2041	BE	154	48 40.627	125 59.516	✓	765					code for Rod's water	
18	ROD1	ROS	2059	BO	155	48 20.806	125 59.014	✓	730	718	no sh	24			
19	LC09	BION	0522		157	48 26.0	125 13.5		610					Life time in EDT BIONECS LC9-7	
19	LC08	BION	0806		158	48 29.388	126 7.238		201					BIONECS second leg (LC8-7)	
19	LC06	ROS	1000	BE	159	48 36.525	125 53.912	✓	93						
19	LC06	ROS	1004	BO	160	48 36.50	125 53.90	✓		5	no sh	1			
19	LC08	ROS	1206		161	48 29.466	126 01.111	✓	196						
19	LC08	ROS	1210		162	48 29.566	126 06.981	✓		5	no sh	1			

CAST TYPE -

BOT - bottle cast
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NET - net haul
DRF - drifter

USW - sea water loop

TIME CODE -

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BO - bottom time of cast
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POSITION CODE -

RAD - RADAR
GPS - GLOBAL
LOR - LORAN

Date Time PDT

Apr. 19 -0800 - on station BC02 to deploy mooring BC02-A

- during the night all biological work outstanding from Leg 1 was completed with the exception of launching drifting buoys

- preparing mooring on deck in rain and light - moderate winds - gale warning along north coast

-0935 - launched BC02-A in 550 m water at $48^{\circ} 22.290'$ $125^{\circ} 58.550'$

- preparing mooring BC3-A for deployment at position BC3

-1012 - launched BC03-A in 542 m water at position $48^{\circ} 21.08'$ $125^{\circ} 56.14'$

- proceed to LC9 to launch 1st drifting buoy

-1304 - launched drifting buoy at LC9 and completed CTD (see table)

- proceed to LC7 to launch 2nd drifting buoy

-1504 - launched drifting buoy at LC7 and complete CTD

- proceed to LB14 to complete vertical net haul series.

-1930 - proceed to LA8 to complete CTD/Rosette's on LA Line.

Apr. 20 -0830 - on station by Gilbert Island to deploy Effingham Is. Tide Gauge mooring

- preparing mooring on deck + head into station

-0924 - launch Effingham tide gauge in 19 m water at high tide at position:
 $48^{\circ} 32.340'$ $125^{\circ} 19.280'$

- head for Port Alberni and science party crew change

DAILY LOG

OCEAN PHYSICS

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1997		April			Tully		9707							
DAY (UTC)	STATION ID	CAST TYPE	TIME (UTC)	TIME CODE	STD/HYDRO CONSEC #	LATITUDE	LONGITUDE	POSITION CODE	BOTTOM DEPTH (m)	MAX SAMPLING DEPTH (m)	CONSEC SAMPLE #	# OF BOTTLES	INIT	COMMENTS
19	Drif 39	ROS	2018		163	48 25.498	126 13.192	✓	602	594.			1748	site of drifter 39 deploy 2106
19	Drif 39	ROS			164			✓						
19	Drif 40	ROS	2217		165	48 32.576	126 01.089	✓	130					site of drifter 40 deploy 2107
19	Drif 40	ROS	2220		166			✓	135	130				
20	LA8	ROS	04:44		167	48 05.90	125 30.84	✓	140	135				
20	LA8	ROS	04:48		168	48 05.93	125 30.80	✓			466-473	8.		
20	LA7	ROS	05:34		169	48 09.26	125 23.82	✓	115					
20	LA7	ROS	05:37		170	48 09.30	125 23.74	✓						
20	LA06	ROS	06:21	BE	171	48 12.63	125 17.17	✓	115	105				
20	LA06	ROS	06:24	BO	172	48 12.65	125 17.15	✓			474-481			
20	LA05	ROS	07:18		173	48 16.086	125 10.541	✓	122					- large loose wrap on which - CTD dropped to deck - checked over & seems OK
20	LA05	ROS	07:21		174	48 16.117	125 10.602	✓						
20	LA04	ROS	08:08	BE	175	48 19.436	125 03.924	✓	190					
20	LA04	ROS	08:13	BO	176	48 19.502	125 03.792	✓		175	482-491	10		
20	LA03	ROS	09:08		177	48 22.947	124 57.665	✓	112					
20	LA03	ROS	09:11		178	48 22.989	124 57.624	✓						
20	LA02	ROS	09:57		179	48 26.358	124 51.338	✓	306					
20	LA02	ROS	10:03		180	48 26.489	124 51.380	✓		300	492-504	13		

CAST TYPE - BOT - bottle cast
CTD - CTD
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TIME CODE - BE - beginning time of cast
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EN - end of cast

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

POSITION CODE - RAD - RADAR
GPS - GLOBAL
LOR - LORAN

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

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DAY (UTC)	STATION ID	CAST TYPE	TIME (UTC)	TIME CODE	STD/HYDRO CONSEC #	LATITUDE	LONGITUDE	POSITION CODE	BOTTOM DEPTH (m)	MAX SAMPLING DEPTH (m)	CONSEC SAMPLE #	# OF BOTTLES	INIT	COMMENTS	
20	LA01	ROS	1109		181	48 29.666	124 44.222	✓	260						
20	LA01	ROS	1117		182	48 28.786	124 44.225	✓							
21	LC07	BION	0540		183	48 33.115	126 00.388		126					Night BIONESS ^{named 15} ^{a re-encased}	
21	LC08	BION	0739		184	48 30.890	126 04.370							" " (cont) seg	
21	LC08	BION	0946		185	48 28.579	126 08.831		245					" " (cont) seg	
21	LC10	ROS	1330	BE	186	48 22.519	126 19.800	✓	1115				PAR	FLUR	
21	LC10	ROS	1354	BO	187	48 22.59	126 19.64	✓		1000	505-524	21	PAR	FLUR	
21	LC9	ROS	1505		188	48 26.99	126 13.79	✓	615						
21	LC9	ROS	1526		189	48 25.97	126 14.38	✓		600					
21	LC8	ROS	1907	BE	190	48 29.44	126 07.04	✓	200				PAR	bottle is only half out - clipped	
21	LC8	ROS	1921	BO	191	48 29.52	126 06.60	✓		175	525-539	17	PAR		
21	LC7	ROS	2051	BE	192	48 33.128	126 00.339	✓	129				PAR		
21	LC7	ROS	2054	BO	193	48 33.17	126 00.32	✓		120	540-548	9	PAR	cont	
22	LG6	BION	0358		194	48 03.21	127 1.29		979					night BIONESS from LG6 → 4 - segment 1	
22	~LG5.5	BION	0522		195	49 5.04	126 58.63								
22	LG3	ROS	1215		196	49 15.09	126 43.56	✓	122				PAR	FLUR	
22	LG3	ROS	1222		197	49 15.16	126 43.20	✓		160			PAR	CTD UP	

CAST TYPE - BOT - bottle cast
CTD - ctd
MOR - mooring

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DRF - drifter

USW - sea water loop

TIME CODE - BE - beginning time of cast
BO - bottom time of cast
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DE - deployment time
MR - messenger release
RE - recover mooring

POSITION CODE - RAD - RADAR
GPS - GLOBAL
LOR - LORAN

Date

Apr. 20

Time (PDT)

1330

- ship tied up at Port Alberni #3 jetty
- meet Rod, Shannon and B.W. Lu, in Port Alberni.
(Shannon + B.W. join ship)
- Dave, Bernard, Maite, and Ian leave ship

1415

- depart Port Alberni for Bamfield.

Bo # 5, 7, 21 have moved on seal ROS
casts, as well as just OTD cast. (Test) Pol on was
removed & cleaned. 5, 7, 9, 19, 21 had sticky problems.
Will watch & mark others.

LG7 - Trip 7 bottles to test # 5 & 7

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

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1997		APRIL		04		Tully		9707						
DAY (UTC)	STATION ID	CAST TYPE	TIME (UTC)	TIME CODE	STD/HYDRO CONSEC #	LATITUDE	LONGITUDE	POSITION CODE	BOTTOM DEPTH (m)	MAX SAMPLING DEPTH (m)	CONSEC SAMPLE #	# OF BOTTLES	INIT	COMMENTS
22	LG4	ROS	1309	BE	198	49 11 32	126 49 39	✓	145				PAR	
22	LG4	ROS	1322	BO	199	49 11 29	126 48 98	✓		136	549-557	9	PAR	
22	LG5	ROS	1620	BE	200	49 07 30	126 54 93	✓	272				PAR	
22	LG5	ROS	1627	BO	201	49	126 5	✓			558-571	18	PAR	558-575 (18)
22	LG6	ROS	1755		202	49 03 41	126 01 18	✓	954				PAR	
22	LG6	ROS	1817		203	49 03 54	127 01 10	✓		958		7	PAR	bottle test
22	LG7	ROS	1942	BE	204	48 59 36	127 07 40	✓					PAR	
22	LG7	ROS	2005	BO	205	48 59.36	127 07 40	✓			572-590		PAR	
23	LBP2	ROS	1319	BE	206	50 04 03	127 54 36	✓	96				PAR	
23	LBP2	ROS	1321	BO	207	50 04 03	127 54 38	✓			591-598	7	PAR	
23	LBP3	ROS	1352		208	50 03 09	127 55 76	✓	186				PAR	
23	LBP3	ROS	1405		209	50 03 02	127 56 04	✓		200		7	PAR	
23	LBP4	ROS	1459		210	50 01 44	127 58 25	✓		1080			PAR	
23	LBP4	ROS	1530		211	50 01 81	127 58 90	✓		825	599-622	24	PAR	
23	LBP5	ROS	1731		212	50 00 09	128 00 00	✓		1286			PAR	
23	LBP5	ROS	1756		213	50 00 19	128 00 04	✓					PAR	
23	LBP6	ROS	1906	BE	214	49° 56.06	128° 05 44	✓	736	730			PAR	
2	LBP6	ROS	1925	BO	215	49° 56.10	128° 05 30	✓			623-639	17	PAR	

CAST TYPE -

BOT -
CTD -
MOR -bottle cast
ctd
mooringROS -
NET -
DRF -rosette
net haul
drifter

USW -

sea water loop

TIME CODE -

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

POSITION CODE -

RAD -
GPS -
LOR -RADAR
GLOBAL
LORAN

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR				MONTH				SHIP				CRUISE				PAGE		OF	
97				APRIL 04				TULLY				9707							
DAY (UTC)	STATION ID	CAST TYPE	TIME (UTC)	TIME CODE	STD/HYDRO CONSEC #	LATITUDE		LONGITUDE		POSITION CODE	BOTTOM DEPTH (m)	MAX SAMPLING DEPTH (m)	CONSEC SAMPLE #	# OF BOTTLES	INIT	COMMENTS			
23	CPE2	ROS	0213		216	50 43.04		128 40.60		✓	123				PAR				
24	CPE2	ROS	0217		217	50 43.03		128 40.82		✓			640-655	16					
24	LQ03	ROS	0418		218	50 39.86		129 02.09		✓	1264								
24	LQ03	ROS	0435		219	50 40.08		129 02.59		✓									
24	JI22	ROS	0628	BE	220	50 39.79		129 17.58		✓	1150	1000							
24	JI22	ROS	0651		221	50 39.86		129 17.75		✓									
24	JO23	ROS	0904	BE	222	50 40.57		129 38.90		✓	1970								
24	JO23	ROS	0924	BO	223	50 40.88		129 38.86		✓		1000	656-673	18					
24	CS3B	ROS	1250		224	50 59.93		129 26.94		✓	220					Bongo			
24	CS3B	ROS	1309		225	50 59.79		129 26.92		✓		211				650 Lv 1350			
24	CS2B	ROS	1552	BE	226	50 59.01		129 00.07		✓	64								
24	CS2B	ROS	1556	BO	227	50 55.99		128 59.87		✓		55.3	674-679	6		Bongo			
24	CS1B	ROS	1737		228	50 52.93		128 39.93		✓	72								
24	CS1B	ROS	1744		229	50 52.97		128 39.69		✓		67				Bongo Lv			
24	CPE1	ROS	2103		230	50 59.90		127 49.71		✓	158								
24	CPE1	ROS	2108		231	50 59.87		127 49.62		✓			680-693	15	PAR	FLUR			
25	WPT9	BION			232	49 36.53		124 5.44			250	200				Bioness day calibration ^{232 aborted}			

CAST TYPE -

BOT -
CTD -
MOR -bottle cast
ctd
mooringROS -
NET -
DRF -rosette
net haul
drifter

USW - sea water loop

TIME CODE -

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

POSITION CODE -

RAD -
GPS -
LOR -RADAR
GLOBAL
LORAN

Date Time PDT

Apr 26 0730

- Doug + Tom join ship at 10.5 and load 4xRTMs
- Darren already on board

0800

- Tully sails for Victoria to take care of CRD project.

1115

- on station CRD5A-K for recovery.
- ranges - fls - drifted off site
- moving closer

1125

- on station ranging - no reply
- changed deck boxes - could hear CRD5-K
- changed transducers - " " but not CRD5A-K

* release not communicating *

1130

- sent ABEF
- mooring surfaced without any response
- recovering mooring.

1225

- on station - small boat fishing on spot
- waiting for it to move off.

1227

- sent XPND - 171m

1227

- sent ADFH - received positive response.

1228

- sighted on surface.

1334

- 1549 - completed CRD stations 1-9 with CTD casts

- noticed a 7m difference in pressure reading of CTD and depth sounder

- CTD was placed on bottom on 2 occasions
- at CRD9 depth was 97m and CTD touched bottom when pressure showed 90m.
- pressure cal. coefficients ??

1627 - deployed mooring CRD5-L at $48^{\circ}23.760'$

in 56.4m depth

1707 - deployed mooring CRD5A - L at $48^{\circ}23.430'$

$123^{\circ}20.880'$

in 86.7m depth

1715 - head for 10S, pickup on way home.

DAILY LOG

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1997			April 04			TULLY			9707						
DAY (UTC)	STATION ID	CAST TYPE	TIME (UTC)	TIME CODE	STD/HYDRO CONSEC #	LATITUDE	LONGITUDE	POSITION CODE	BOTTOM DEPTH (m)	MAX SAMPLING DEPTH (m)	CONSEC SAMPLE #	# OF BOTTLES	INIT	COMMENTS	
26	CRD1	CTD	20:34		233	48 23.96	123 24.17		62.4					Downcast	
26	CRD1	CTD	20:41		234	48 23.98	123 24.19		62.4					Downcast	
26	CRD1	CTD	20:44		235	48 24.01	123 24.15		62.4					Upcast	
26	CRD2	CTD	20:56		236	48 24.09	123 23.37		63.9					Downcast	
26	CRD2	CTD	21:00		237	48 24.09	123 23.28		63.9					Upcast	
26	CRD3	CTD	21:15		238	48 23.48	123 24.21		66.0					Downcast	
26	CRD3	CTD	21:20		239	48 23.50	123 24.23		66.0					Upcast	
26	CRD4	CTD	21:32		240	48 24.25	123 24.87		55.0					Downcast	
26	CRD4	CTD	21:34		241	48 24.23	123 24.85		59.0					Upcast	
26	CRD5	CTD	21:57		242	48 23.71	123 20.79		61.0					Downcast	
26	CRD5	CTD	22:00		243	48 23.71	123 20.74		61.0					Upcast	
26	CRD6	CTD	22:11		244	48 23.52	123 20.56		81.0					Downcast	
26	CRD6	CTD	22:15		245	48 23.50	123 20.53		81.0					Upcast	
26	CRD7	CTD	22:25		246	48 23.87	123 20.90		44.0					Downcast	
26	CRD7	CTD	22:27		247	48 23.87	123 20.90		44.0					Upcast	
26	CRD8	CTD	22:36		248	48 23.57	123 21.12		74					Downcast	
26	CRD8	CTD	22:38		249	48 23.53	123 21.14		74					Upcast	
26	CRD9	CTD	22:49		250	48 23.17	123 20.96		98					Downcast	

CAST TYPE - BOT - bottle cast
CTD - ctd
MOR - mooring

ROS - rosette
NET - net haul
DRF - drifter

USW - sea water loop

TIME CODE - BE - beginning time of cast
BO - bottom time of cast
EN - end of cast

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

POSITION CODE - RAD - RADAR
GPS - GLOBAL
LOR - LORAN

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CAST TYPE -	BOT -	bottle cast	ROS -	rosette	USW -	sea water loop	TIME CODE -	BE -	beginning time of cast	DE -	deployment time	POSITION CODE -	RAD -	RADAR
	CTD -	ctd	NET -	net haul				BO -	bottom time of cast	MR -	messenger release		GPS -	GLOBAL
	MOR -	mooring	DRF -	drifter				EN -	end of cast	RE -	recover mooring		LOR -	LORAN

* 7 m difference between sounder and CTD pressure reading. CTD 7m less