

DAILY LOG

CRUISE
NUMBER

2001-20

INSTITUTE OF OCEAN SCIENCES

OCEAN SCIENCES AND PRODUCTIVITY DIVISION

DATE

July 3-13, 2001

VESSEL

John P. Tully

PROJECT

MPA / EFFINGHAM / LAP

CRUISE 2001-20 PROCESSING NOTES

CTD #0550

Deck unit: #0424

Configuration file: 0550ctd.con

Casts done, number 1 to 121.

Instruments used: Seatech transmissometer,

Seapoint fluorometer,

Biospherical PAR sensor

Seabird dissolved oxygen sensor

sn. 192D
sn. 2356 (cable 10x)
sn. 4615
sn. 0047

- Cast no. 1 is only a test cast done at the jetty at IOS.
- Casts 1 to 100 were done with the CTD in the rosette frame
- Casts 101 to ~~121~~ ⁸³ were done as stand-alone CTDs. The CTD was set vertically since we did not have the bridle to set it horizontally. All the instruments were kept on the CTD and the same configuration file was used. Only the water sampling option was modified to GO1015 instead of Sequential.
- Casts done with the PAR sensor on:
2, 5, 39, 40 to 71, 93 - ~~121~~. 122 *SM*
- Salinity samples for calibration were taken on casts 34 (4 bottles) and 83 (1 bottle)
- Casts with bottles: 2, 6, 10, 11, 34, 39, 48 - 51, 53 - 65, 83.
- Cast 51: header says EF03A but the station was EF03B.
- Cast 66: header says LB06 but the station was LB01.
- Cast 106: header says JFE3, but the station was JFE5.
- Casts 36 and 77: hit jellyfish, messy transmissometer signal.
- 122 Added in the Strait of Georgia

Captain: PAUL FROST First Officer: DARYL MINTENKO
Second Officer: RICHARD MARRIOTT Third Officer: RUSS McNEIL
Mission Participants / Agencies: IOS / UBC

Scientific Personnel:

Party Chief: RICK THOMPSON

Name	Watch	Cabin	Name	Watch	Cabin
PAUL FARQUHARSON	12-4	E			
ADRIAN MARCHETTI	12-4	D			
STEVE MIHALY	8-12	F			
ALICE ORTMANN	4-8	H			
MARIE ROBERT	12-4	C or B			
DAVE SPEAR	8-12	G			
VERA TAI	4-8	H			

Second leg of Mission: Party Chief:

Name	Watch	Cabin	Name	Watch	Cabin

Data logging computer:

Data acquisition program:

CTD deck unit make: Seabird model: 11plus serial number: 0424

Primary CTD

Make: Seabird model: 911plus serial number: 0550
Primary temperature sensor serial number: 2449 Calibration date: _____
Primary conductivity sensor serial number: 1746 Calibration date: _____
Secondary temperature sensor serial number: 2038 Calibration date: _____
Secondary conductivity sensor serial number: 2173 Calibration date: _____
Other sensors: Seabird Transducer s/n: 192D
Other sensors: Seapoint Fluorometer s/n: 2356 (cable 10x) 15 µg/l
Other sensors: Biospherical Inst. Par Sensor s/n: 4615 cable
Other sensors: Seabird Dissolved Oxygen Sensor s/n: 0047

Secondary CTD

Make: _____ model: _____ serial number: _____
Primary temperature sensor serial number: _____ Calibration date: _____
Primary conductivity sensor serial number: _____ Calibration date: _____
Secondary temperature sensor serial number: _____ Calibration date: _____
Secondary conductivity sensor serial number: _____ Calibration date: _____
Other sensors: _____ s/n: _____
Other sensors: _____ s/n: _____
Other sensors: _____ s/n: _____

Comments:

July 3/01

0910 PDT Repart JOS dock after testing CTD at dock. Sunny & hot.

Proceed to Swan de Fica Eddy site

48 32.035 125 35.480

Adrian Marchetti Samples —

0915 —

Ship made it as far as 100 m off the dock and then found major drop in oil level. Oil leaking into ship in stern tube culture shaft goes into water.

Also brought tech out to fix gyro.

Repart for DOI @ 1300 PDT

July 4/01

• 0300 PDT Arrive at 48° 32.035, 125° 35.480. Repart for

Adrian Marchetti Station for Demersal food study

Winds 20-25 kts in Strait & SW coast.

Plan is to conduct CTD, GB-F10 bottles, vertical plankton haul

Winds 125 kts from West.

Sensors T, S, DO, Chlorophyll, % from

file 2 to 122

July 4/01

Current Meters

NOOTER AQUADOP (High Power Setting)

2 MHz; 1.7° beam width; Temp/Pressure

12 seconds of sampling every 20 min.

each 1 second ping consists of 69 pings (23 pings per transducer). Each 23 pings is = vector averaged.

Blanking = 0.5 m.

Measurement cells = 0.5 to 1.25 m range.

We give salinity 34.6 psu to work out sound speed.

Also will burst sample 2x/per day (every 70 min takes 80×1.5 samples (high-freq samples))

SONTEK ARGONAUT M1D (power was uped to 0.3 W)

1.5 MHz; 1.7° beam width Temp/

6 minute vector averaging (≈ 360 pings) each 20 minutes ($\Delta t = 20$ min)

SONTEK & NOOTER are 10 min. out of phase.

Blanking = 0.5 m

Range = 0.5 to 2.0 m.

No burst sampling

S4 3000 m (set up by Les Spearling)

5 minute sampling with 1 minute averaging?

Aanderaa RCM11

600 pings over 20 minute interval

No vertical component

2 MHz

ADUX, 1246

PDT: Start thermosalinograph, Problems with Sae + FLUO readings

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Year 2001					Month JULY			Ship JOHN P. TULLY				Cruise I.D. 2001 20		
Day	Station I.D.	Cast Type	Time (UTC)	Time Code	Consec. Number	Latitude	Longitude	Position Code	Bottom Depth	Max Depth	Consec Sample #	# of Bottles	initials	Comments
03	LOS Dock	Test	0903 PDT		0001									Test of CTD Rosette newly fixed O ₂ sampling probe
	OLD PLANKTON STATION				PLB7									
4	PLB7	ROS	1009	BE	2	48° 31.97	125° 35.47		78					CTD/bottles x4
			1013	BO		48° 31.97	125° 35.50			75	1-4	4		
			1019	EN		48° 31.99	125° 35.52							
4	PLB7	Go. Ros	1203	EN	3	48° 32.15	125° 35.63		77					
4	PLB7	Net	1310	EN	4	48° 32.01	125° 35.90							2 plankton nets.
4	PLB7	ROS	1320	BE	5	48° 32.02	125° 35.94		76					CTD for PAR data
			1322	BO		48° 32.04	125° 35.96							
			1324	EN		48° 32.04	125° 35.98							
5	ER01c	ROS	0624	BE	6	47° 56.98	129° 05.73		2170			24		Par Sensor Removed
		Ros		BO		47° 56.89	129° 05.78	end	15 m above bottom					Bottle 23 Removed & W/L added
				EN										ER01 - main Vent
6	ER03c	ROS	0946	BE	7	47° 55.69	129° 09.50		2280					only a weak trace
			1030	BO		47° 55.68	129° 09.51		2421	30 m ab				of the pump
5	ER04c		1101	EN		47° 55.75	129° 09.50							NO BOTTLES.
5	ER06c	CTD	1121	BE	8	47° 55.17	129° 09.624		2020					

Cast type:

 BOT = otter cast
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 NET = net haul
 DRF = drifter

USW = sea water loop

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ER06

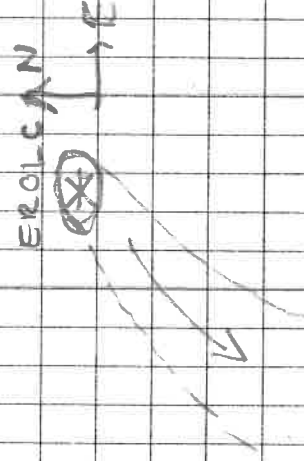
 47° 55.56 N 129° 07.96
 @ 2290 T from ER01

STATION EROI-C MAIN Endeavour SITE
 July 4/5 2001

FEATURE	DEPTH	LAT	LONG
EROI-C Start	1867	4756.9	1295.81
largest trans	1910	4756.9	1295.81
bottom of top layer	2000	4756.86	1295.84
second to bottom layer	2020	4756.85	1295.84
start third layer	2075	4756.85	1295.84
bottom?	2100	4756.86	1295.84
increasing trans bottom			
max depth	2114	4756.88	1295.8

- lost plume on upcast when on station
- found ~ 2 ship lengths to SW.

Ship maneuvered to SW of station site (after getting back on station) to find plume again. Suggests plume was being strongly advected to SW from site.



Cast 10. Wasp transducer now pointing down
Trans much noisier

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Day	Station I.D.	Cast Type	Time (UTC)	Time Code	Consec. Number	Latitude	Longitude	Position Code	Bottom Depth	Max Depth	Consec Sample #	# of Bottles	initials	Comments
5	ER06.c	ROS	1121	BE	8	47 55.117	129 08.624		~2000					wind 25kt @ 311°T
			1204	BO		47 55.14	129 08.70		~2200	1284				~25m above bottom
5	ER07.c	ROS	1210	BO	9				~2100					low around 5km arc.
			1302	EN		47 53.843	129 07.420							~1975m 15kt
5	ER2001 S	Moor	1722			47 56.106	129 06.180							mooring at southern end of the axial valley.
5	ER2001 N	Moor	2004			47 59.250	129 04.318							mooring at northern end of axial valley.
														Had to tow in a complete loop back on station
5	ER2001 C	Moor	2058			47 57.534	129 05.580		2164					
* There are no STATIONS ER08 or ER09.									2416					
5	ER10	ROS	2221	BE	10	47 57.10	129 09.42		2416			22		5km west of ER01
		ROS	2300	BO		47 56.903	129 09.716		2389					15m above bottom
6			0020	EN		47 56.93	129 09.75							wind 15kt @ 003°
6	ER11	ROS	0234	BE	11	47 56.877	129 13.655		2466			22		10km W of ER01
		ROS	0315	BO		47 56.899	129 13.702		2460					30m above bottom.
		ROS		EN		47 56	129 13							

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STATION ER03-C 5 km SW of main site July 5/01

PLUME FEATURE	Depth (m)	LAT (N)	Long (W)
TOP OF PLUME	2102	47 55.70	129 09.50
small peaks	~ 2150		
ABOAT skirting / CTD profile only			

STATION ER06-C 5 km @ 229° T from ER01 July 5/01

Plume feature	Depth (m)	LAT (N)	Long (W)
---------------	-----------	---------	----------

top of plume? 2130 47 55.13 129 09.91
very weak

towed LTD 1975-2100m in 5km arc to SE
- no hint of plume
- pulling up N 535

Station ER10-C 5 km W of Main Site 47 56.91 129 09.69

Feature	Depth Lat Long
small signal	1960 47 56.89 129 09.67
top of plume	
in plume	2020 " "
decrease in plume	2100 " "
bottom of plume	2190 47 56.90 129 09.76

ER11-C 10 km W of ER01 (Main Vent) 47 56.87 129 09.55

Feature	Depth Lat Long
top of plume	1935 47 56.89 129 09.63
peak	2040 47 56.90 129 09.68
bottom of plume	2200 47 56.89 129 09.69

July 7/01 1012 UTC

- * STATION EROIS — TC south of Moore Mts
ER2001-S. Trying to hit deep hole in
centre of valley.

Feature	Lat	Long	Time
Hit/plume	47 55.271	129 06.601	"
Top plume	47 55.268	129 06.603	1021 UTC
approx 325 m above bottom.			

Care ~2000 47 55.266 129 06.584 1023
Slowly moving down on station from NNW

TC within 30 m of bottom — lost sonder
fracker. Ship was a bit to the WNW of
station (about 1 ship length)

Plume trace upcast nearly identical to
downcast.

- * STATION EROIN — just to SW of Moore Mts
ER2001N

SALTY DOG SITE

Feature	depth	Lat	Long	Time
Top of plume	1885	47 59.026	129 04.973	1208
250 m above bottom				

at 18 mab started to go below plume

NOTE: around 500 m % becomes uniform, inversion,
in DO and sharp knee in T & S.

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6	ER12C	ROS	0701	BE	12	47 56.645	129 25.297		2272					25km W of ER01
			0737	BO		47 56.914	129 25.733		2247					100m above bottom
			0809	EN		47 56.927	129 25.769							No PLUME SIGNAL
6	ER12C	ARGO	0815	-		47 56.94	129 25.83							Deploy Alacé float 256
6	ER01S	ROS	0955	BE	13	47 55.260	129 06.501		2235					wind 17-kt 316°
			1037	BO		47 55.221	06.541							within 30m, lost
			1104	EN		55.230	06.508							Sounder tracking.
6	ER01N	ROS	1137	BE	14	47 58.983	129 04.889		2170					#20200014, dat
			1220	BO		59.001	05.006							within 15m off
			1248	EN		47 59.001	129 05.001							bottom.
	Proceed to coast													WASP REMOVED
6	LG9	ROS	2054	BE	15	48 50.345	127 30.383		2184					station at the end of
			2133	BO		48 50.44	127 30.47			2229				LG line.
			2211	EN		48 50.45	127 30.57							
6	LG08	ROS	2346	BE	16	48 55.281	127 13.297		2083					
7			0023	BO		48 55.368	127 13.389			2050				
			0110	EN		48 55.205	127 13.455							

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July 7/01

Scuba Axial Movement

Function : Transponder
Modification :

Delivery : APRIL 1994
Customer : IOS

Electronic board

Electronical specifications

Reference	Function	S/N	Transmit width	9,3 ms
194 2002	RT 6X1 Board soft V2.5	164	Transmit level	192 db +/-3 ref:1µPa
			Transmit delay	15 ms
			Transmit inhibition	7µ s
			FT0 =	120 kHz
	Bit 1 = 05 Bit 0 = 07		FR1 =	125 kHz
			FR2 =	90 kHz
			FR3 =	10,5 kHz
			FR4 =	11,5 kHz
			FT4 =	12, kHz
			FT5 =	120 kHz
			FT7 =	120 kHz

Function / code - TT301 TT201 sequence code specifications

ON FR1-FR2	6422	2 2	- FT0	
OFF FR1-FR2-PINGER	6423	2 3	- FT0	
ON FR1 - OFF FR2	6428	2 8	- FT0	
ON FR2 - OFF FR1	6424	24	- FT0	
DIAGNOSTIC	6425	2 5	- FT0 - FT7	Measure delay : 3 s Verticality offset : 10 s
WINDOW	6421	2 1	- FT0	Wait time : 15 s Active time : 15 s
RELEASE 1 (W)	6484	8 4	- FT0 - FT5	
PINGER (W)	6494	9 4	- FT0 - FT4...	Pulse width : 9,14 ms Recurrence : 1 s

(W) : code active only during Window active time

Power configuration	:	3	banks of	6	serie R 20 cells	Alkaline
	:	1	banks of	1	serie 6F22 cells	Alkaline
Power repartition	:				standby-power-motor motor safety	3 banks of 6 R20 1 bank of 1 6F22

Other specifications : structure : 308 9001
Option :

DIAGNOSTIC Measure : t (1-17)-t (FT0) - 3 s (13 s with horizontal position)
Cells Voltage (V) : DIAGNOSTIC Measure x 4,1

HAB INSTRUMENT

115m 2CM-S S/N

75.0 SBE 37SM #1549

25.0 SBE 37SM #1537

16.75 PCM-S S/N

15.00 2CM-11 S/N 39

TIME IN WATER

ANCHOR MMY@ JULY 5, 2001 17:22:19 UTC

LAT / LONG 47° 56.10' N 129° 06.18' W

DEPTH Sounder: 200-280m

6 July 2100

Interesting dip in transmittance centered @ 800m for about
~150m at stn L606. This is at the steep part of the shelf slope
(break), we should look for it on the other lines

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7	LG07	ROS	0157	BE	17	48 59.408	127 07.167		1774					
			0234	BO		48 59.436	127 07.248			1725				
			0306	EN		48 59.421	127 07.217							
7	LG06	ROS	0354	BE	18	49 03.480	127 01.137		915					Steep shelf slope region
			0410	BO		49 03.452	127 01.145		-950	945				Calm with long low swell. centered transverse @ ~ 800 for 150 m
			0513	BE	19	49 07.400	126 55.230		270					Strong dip in
			0519	BO		49 07.400	126 55.232			265				
			0525	EN		49 07.375	126 55.274							
7	LG04	ROS	0612	BE	20	49 11.280	126 49.341		142					Strong variation from down to up cast
			0616	BO		49 11.276	126 49.350			134				
			0620	EN		49 11.278	126 49.345							
7	LG3	ROS	0702	BE	21	49 14.94	126 43.62		125					
			0706	BO		49 14.94	126 43.61			119				
			0708	EN		49 14.94	126 43.61							
7	LG2	ROS	0753	BE	22	49 18.71	126 38.12		100					
			0755	BO		49 18.71	126 38.12			93				
			0757	EN		49 18.70	126 38.11							

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MOORING ER2001-N

HAB	Instrument	Time in water
115	RCM 5-8558	1233 PDT
25	SBE 37 #1614	1236
1675	RCM-8 #10699	1237
1500	S4 31522492	1237
XT6000		1237
MORZ		1237

ANCHOR

We had to tow the mooring for 27 minutes to go back to the right position.

(see 2nd page of tabular notes)

WASP - ENDEAVOUR RIDGE, 2001, CRUISE 20

UNIT: WASP 6, ITC 150kHz TARNSDUCER, DEEP CASE

ADDED TO ROSETTE: JULY 5, 2001 AT BOTTLE 23

CAST	TIME (UTC) BE/BO/EN	DATE (UTC)	STN.	LAT (BE)	LONG (BE)	DEPTH	NOTES
6	0624	05/07/01	ER01	47 56.98	129 05.73	2170	
7	0946/1030/1101	05/07/01	ER03	47 55.69	129 09.51	2421'	WEAK TRACE OF PLUME
8	1121/1204/-	05/07/01	ER06	47 55.117	129 08.624	2284	
9	1210-/1302	05/07/01	ER07	47 53.883	129 07.420		
10	2221/2300/0020	05/07/01	ER10	47 57.10	129 09.42	2388	
11	0234/0315/-	06/07/01	ER11	47 57.877	129 13.655	2460	
12	0701/0737/0809	06/07/01	ER12	47 56.645	129 25.297	2247	
13	0955/1037/1104	06/07/01	ER01S	47 55.260	129 06.501	2235	
14	1137/1220/1248	06/07/01	ER01N	47 58.983	129 04.889	2170	

OUTWARD LOOKING TRANSDUCER

DOWNWARD LOOKING TRANSDUCER

WASP SCHEDULE

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7	LG1A	ROS	0818	BE	23	49° 19.57	126° 36.57		79					
			0821	BO		49° 19.56	126° 36.57			72				
			0822	EN		49° 19.55	126° 36.56							
7	LG1	ROS	0840	BE	24	49° 20.52	126° 35.06		55					Got shallower
			0842	BO		49° 20.53	126° 35.04			34				
			0843	EN		49° 20.53	126° 35.04							
7	LG0	ROS	0903	BE	25	49° 21.73	126° 34.01		31					
			0905	BO		49° 21.73	126° 34.01			25				
			0906	EN		49° 21.72	126° 34.01							
7	LE01	ROS	1157	BE	26	49° 06.999	126° 00.918		43					
			1201	BO		49° 07.000	126° 00.903			40				
			1202	EN		49° 07.011	126° 00.901							
7	LE02	ROS	1233	BE	27	49° 04.315	126° 04.494		56					
			1237	BO		49° 04.303	126° 04.521			50				
			1238	EN		49° 04.303	126° 04.525							
7	LE03	ROS	1324	BE	28	49° 00.517	126° 10.552		77					
			1328	BO		49° 00.527	126° 10.552			70				
			1330	EN		49° 00.525	126° 10.501							

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7	LE04	ROS	1410	BE	29	48 56.429	126 15.095		117					
			1413	BO		48 56.411	126 15.197			115				
			1415	EN		48 56.408	126 15.210							
7	LE05	ROS	1457	BE	30	48 52.805	126 20.466		150					
				BO		48 52.802	126 20.49							
			1505	EN		48 52.802	126 20.50							
7	LE06	ROS	1601	BE	31	48 48.48	126 26.35		210					
			1604	BO		48 48.49	126 26.39							
			1607	EN		48 48.49	126 26.40							
7	LE07	ROS	1657	BE	32	48 44.22	126 32.20		525	520				
			1707	BO		48 44.26	126 32.18			520				
			1713	EN		48 44.29	126 32.14							
7	LE08	ROS	1801	BE	33	48 40.28	126 37.92		1302					
			18:17	BO		48 40.30	126 38.02			1298				
			18:30	EN		48 40.25	126 38.10							
7	LE09	ROS	1921	BE	34	48 35.98	126 43.94		1450					Salinity samples
			1942	BO		48 36.03	126 44.09			1462	S-8	4		for calibration
			2002	EN		48 36.06	126 44.16							

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Day	Station I.D.	Cast Type	Time (UTC)	Time Code	Consec. Number	Latitude	Longitude	Position Code	Bottom Depth	Max Depth	Consec Sample #	# of Bottles	initials	Comments
7	LD11	ROS	2101	BE	35	48° 28.86	126° 42.82		1616					Light counts
			2126	BO		48° 28.80	126° 42.93			11608				"
			2146	EN		48° 28.92	126° 42.77							
7	LC11	ROS	2328	BE	36	48 18.962	126 26.680		1423					Hit Jellyfish (?) around 500 m. Blocked % cleaned off by going up
			2351	BO		48 18.966	126 26.712			1465				
8			0010	EN		48 18.953	126 26.729							
8	LC10	ROS	0057	BE	37	48 22.365	126 20.173		1252					
			0119	BO		48 22.394	126 20.188			1238				within 15 m ab.
			0137	EN		48 22.383	126 20.214							
8	LC09	ROS	0224	BE	38	48 25.938	126 13.656		596					
			0235	BO		48 25.900	126 13.689			601				~10 m above
			0244	EN		48 25.905	126 13.693							
8	AMA1	ROS	0340	BE	39	48 30.957	126 12.020		554			9		Domestic Acid 10 m ab
				BO						580.4				Spec. Adrian
			0416	EN		48 31.021	126 12.041				STW. Manta net haul.			samples @ A1
8	LC08	ROS	0724	BE	40	48 29.38	126 07.02		198					
			0728	BO		48 29.39	126 07.04			190				
			0731	EN		48 29.39	126 07.05							

Cast type:

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Time Code

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DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Year 2001					Month JULY			Ship JOHN P TULLY				Cruise I.D. 2001-20		
Day	Station I.D.	Cast Type	Time (UTC)	Time Code	Consec. Number	Latitude	Longitude	Position Code	Bottom Depth	Max Depth	Consec Sample #	# of Bottles	initials	Comments
8	LC7	ROS	0817	BE	41	48° 32.92	126° 00.45		129					
			0820	BO		48° 32.93	126° 00.48			120				
			0821	EN		48° 32.94	126° 00.47							
8	LC6		0905	BE	42	48° 36.47	125° 54.03		93					
			0907	BO		48° 36.48	125° 54.04			87				
			0909	EN		48° 36.48	125° 54.03							
8	LC5		1011	BE	43	48° 39.98	125° 47.43		65					
			1014	BO		48° 39.99	125° 47.41			57				
			1015	EN		48° 39.99	125° 47.							
8	LC04		1103	BE	44	48 43.429	125 40.829		169					Fog. Flat calm.
			1108	BO		48 43.449	125 40.830			160				WIND $\pm$ 0 knots
			1110	EN		48 43.450	125 40.825							
8	LC03		1156	BE	45	48 46.975	125 34.245		135					
			1200	BO		48 46.980	125 34.225			130				
			1201	EN		48 46.983	125 34.215							
8	LC02	ROS	1228	BE	46	48 48.678	125 30.956		110					
			1231	BO		48 48.687	125 30.960			105				hit bottom.
			1233	EN		48 48.695	125 30.997							

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DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Year					Month			Ship					Cruise I.D.		
Day	Station I.D.	Cast Type	Time (UTC)	Time Code	Consec. Number	Latitude	Longitude	Position Code	Bottom Depth	Max Depth	Consec Sample #	# of Bottles	initials	Comments	
8	L001	ROS	1258	BE	47	48 50.446	125 27.736		95						
			1302	BO		48 50.441	125 27.714			89					
			1303	EN		48 50.440	125 27.705								
8	EF02	ROS	1658	BE	48	49 04.966	125 10.250		70		9-15	7			
			1655	BO		49 04.966	125 10.250			66					
			1703	EN		49 04.956	125 10.239								
8	EF02A	ROS	1720	BE	49	49 04.476	125 09.731		100		16-22	7			
			1725	BO		49 04.470	125 09.728			97					
			1735	EN		49 04.471	125 09.735								
8	EF03	ROS	1746	BE	50	49 04.279	125 09.429		120		23-30	8			
			1753	BO		49 04.258	125 09.407			114					
			1801	EN		49 04.252	125 09.398								
8	EF03B	ROS	1815	BE	51	49 04.051	125 09.154		120						
			1819	BO		49 04.053	125 09.152			114					Syringes left on - bad reading
			1823	EN		49 —	125 —								overwrite file.
8	EF03B	ROS	1823	BE	51	49 04.056	125 09.153		120		31-38	8			The header file for this station says EF03A
			1827	BO		49 04.055	125 09.156								but it should be
			1834	EN		49 04.053	125 09.150								EF03B

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DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Year					Month			Ship				Cruise I.D.		
Day	Station I.D.	Cast Type	Time (UTC)	Time Code	Consec. Number	Latitude	Longitude	Position Code	Bottom Depth	Max Depth	Consec Sample #	# of Bottles	initials	Comments
8	EF03A	ROS	1847	BE	52	49° 03.813'	125° 09.082		90					
			1851	BO		49° 03.812	125° 09.083			92				
				EN		49° 03.82	125° 09.09							
8	EF04	ROS	1910	BE	53	49° 03.10	125° 08.59		64					
			1912	BO		49° 03.10	125° 08.59				39-43	5		
			1917	EN		49° 03.10	125° 08.60							
8	EF04A	ROS	1930	BE	54	49° 02.87	125° 09.13		192					
			1935	BO		49° 02.87	125° 09.13			185	44-54	11		
			1947	EN		49° 02.87	125° 09.13							
8	EF05	ROS	2000	BE	55	49° 02.540	125° 09.159		204					H ₂ S in bottom 3 bottles @ 201, 195, 190 m.
			2006	BO		49° 02.54	125° 09.17				55-67	13		
			2021	EN		49° 02.54	125° 09.17							
8	EF05A	ROS	2043	BE	56	49° 02.799	125° 09.147		202		68-79	13		
			2050	BO		49° 02.80	125° 09.15		40	194				
			2103	EN		49° 02.793	125° 09.152							
8	EF06	ROS	2121	BE	57	49° 01.784	125° 09.185		150					
			2125	BO		49° 01.775	125° 09.190			151	80-88	9		
			2133	EN		49° 01.772	125° 09.193							

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DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Year					Month			Ship				Cruise I.D.		
Day	Station I.D.	Cast Type	Time (UTC)	Time Code	Consec. Number	Latitude	Longitude	Position Code	Bottom Depth	Max Depth	Consec Sample #	# of Bottles	initials	Comments
8	EF07	ROS	2146		58	49 01.268	125 09.398		120					
			2152			49 01.275	125 09.403			116	89-96	8		
			2200			49 01.290	125 09.413							
8	EF07A	ROS	2213		59	49 00.393	125 09.812		139					
			2219			49 00.88	125 09.81				97-105	9		
			2231			49 00.88	125 09.83							
8	EF08	ROS	2243	BE	60	49 00.66	125 10.252		87					
			2246	BO		49 00.658	125 10.253			79	106-112	7		
			2250	EN		49 00.643	125 10.255							
8	EF09	ROS	2304	BE	61	49 00.095	125 10.852		62					
			2307	BO		49 00.099	125 10.844			61	113-118	6		
			2311	EN		49 00.094	125 10.848							
8	EF10	ROS	2320	BE	62	48 59.846	125 11.224		99					
			2325	BO		48 59.834	125 11.243			100	119-125	7		
			2331	EN		48 59.824	125 11.267							
8	EF11	ROS	2344	BE	63	48 59.111	125 11.044		85		126-132	7		
			2347	BO		48 59.111	125 11.050			85				
			2353	EN		48 59.101	125 11.042							

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DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Year 2001					Month July			Ship Tully				Cruise I.D. 2001-20		
Day	Station I.D.	Cast Type	Time (UTC)	Time Code	Consec. Number	Latitude	Longitude	Position Code	Bottom Depth	Max Depth	Consec Sample #	# of Bottles	initials	Comments
9	EF12	ROS	0011	BE	64	48 57.935	125 10.463		93					
			0014	BO		48 57.934	125 10.465			90	133-139	7		
			0021	EN		48 57.973	125 10.469							
9	EF13	ROS	0045	BE	65	48 56.51	125 10.72		103					
			0048	BO		48 56.51	125 10.72			95	140-146	7		
			0056	EN		48 56.50	125 10.68							
9	LB01	ROS	0330	BE	66	48 40.40	124 59.47		30					Mislabeled in header as LB06
			0334	EN						24.7				
9	LB02		0358	BE	67	48 39.03	125 02.43		56					
			0401	BO		48 39.03	125 02.43			47.7				
			0403	EN		48 39.03	125 02.42							
9	LB03		0430	BE	68	48 37.28	125 05.54		93					
			0432	BO		"	"			87.8				
			0434	EN		"	"							
9	LB04		0502	BE	69	48 35.63	125 08.65		113					
			0504	BO		48 35.64	125 08.64			101				
			0506	EN		48 35.64	125 08.65							
9	LB05	ROS	0540	BE	70	48 33.95	125 11.98			101				
			0544	EN		48 33.95	125 11.95				93			

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DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Year <u>2001</u>					Month <u>July</u>			Ship				Cruise I.D.		
Day	Station I.D.	Cast Type	Time (UTC)	Time Code	Consec. Number	Latitude	Longitude	Position Code	Bottom Depth	Max Depth	Consec Sample #	# of Bottles	initials	Comments
9	LB06	ROS	612	BE	71	48 32.13	125° 15.49		114					TOOK PAR SENSOR
			616	BO		48 32.13	125° 15.48			103				OFF AFTER THIS CAST
				EN										
9	LB07		0702	BE	72	48 28.66	125 22.07		155					
			0705	BO		48 28.66	125 22.08			146				
			0708	EN		48 28.66	125 22.08							
9	LB08		0755	BE	73	48 25.28	125 28.67		142					
			0758	BO		48 25.28	125 28.65			132				
			0800	EN		48 25.28	125 28.63							
9	LB09		0844	BE	74	48 22.04	125 34.81		150					
			0847	BO		48 22.05	125 34.84			145				
			0850	EN		48 22.03	125 34.85							
9	LB10		0936	BE	75	48 18.58	125 41.27		152					
			0940	BO		48 18.60	125 41.25			147				
			0942	EN		48 18.61	125 41.24							
9	LB11	ROS	1027	BE	76	48 15.16	125 47.69		207					WIND 24kt @
			1030	BO		48 15.160	125 47.707			206				350°
			1033	EN		078	.78							

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DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Year 2001					Month July			Ship Tiller			Cruise I.D. 2001-28			
Day	Station I.D.	Cast Type	Time (UTC)	Time Code	Consec. Number	Latitude	Longitude	Position Code	Bottom Depth	Max Depth	Consec Sample #	# of Bottles	initials	Comments
9	LB12	ROS	1104	BE	77	48°12.890	125°51.869		509					Hit Jellyfish @ 280m
			1114	BO		48 12.866	125 51.846			506				Had to clean sensor during
			1120	EN		48 12.863	125 51.875							cast. trans has very messy trace on way up
9	LB13		1152	BE	78	48 10.603	125 56.149		914					
			1209	BO		48 10.628	125 56.161			962				
			1219	EN		48 10.607	125 56.189							
9	LB14		1255	BE	79	48 08.436	125 59.964		1177					
			1309	BO		48 08.466	126 00.023			1184				
			1322	EN		48 08.474	126 00.051							
9	LB15		1414	BE	80	48 04.348	126 08.427		1554					wind 15 kts @ 346°T
			1438	BO		48 04.370	126 08.420			1551				
			1456	EN		48 04.367	126 08.453							
9	LB16		1547	BE	81	48 00.530	126 16.962		1810					Depth here varies
			1615	BO		48 00.567	126 16.944			1836	Swab			by nearly 300m from
			1646	EN		48 00.537	126 16.761							reported depth
9	LW12	ROS	1753	BE	82	47 59.98	126 00.01		1460	1460				Wind: 15 kts Nor-Nor West
			1812	BO		47 59.99	126 59.99			1451				
			1827	EN		47 59.99	126 59.98							

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LIKELY
DATE ERROR →

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Year 2001					Month JULY			Ship JOHN P. TULLY			Cruise I.D. 2001-10			
Day	Station I.D.	Cast Type	Time (UTC)	Time Code	Consec. Number	Latitude	Longitude	Position Code	Bottom Depth	Max Depth	Consec Sample #	# of Bottles	initials	Comments
9	LW11	ROS	1938	BE	83	47° 59.98	125° 45.07		1032					Close 1 bottle @
			1956	BO		47° 59.99	125° 44.99			1031	147	1		1031 m for sal calibration
			2015	EN		47° 59.94	125° 45.00							
9	LW10		2106	BE	84	48° 00.01	125° 35.05		193					
			2111	BO		48° 00.02	125° 35.05			186				
			2115	EN		48° 00.03	125° 35.03							
9	LW9		2204	BE	85	48° 00.01	125° 26.01		161					
			2208	BO		48° 00.03	125° 25.97			153				
			2212	EN		48° 00.04	125° 25.94							
9	LW7		2238	BE	86	48° 00.05	125° 21.97		631					
			2251	BO		48° 00.066	125° 22.019			626				we got touched bottom 1845 @ 328°
			2304	EN		48° 00.119	125° 21.821							
9	LW5		2342	BE	87	48° 00.017	125° 15.031		160					
			2347	BO		48° 00.000	125° 14.982			150				
			2352	EN		48° 00.002	125° 14.977							
9	LW4	ROS	0147	BE	88	48° 00.011	125° 05.027		130					
10			0153	BO		47° 59.990	125° 05.022			125				
			0157	EN		48° 00.004	125° 04.964							

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DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Year 2001					Month July			Ship J.P. Tully				Cruise I.D.		
Day	Station I.D.	Cast Type	Time (UTC)	Time Code	Consec. Number	Latitude	Longitude	Position Code	Bottom Depth	Max Depth	Consec Sample #	# of Bottles	initials	Comments
9	LW 3	ROS	0246	BE	89	47 59.987	124 55 017		85					
10			0248	BO		47 59.988	124 55 041			79				
			0250	EN		47 59.991	124 55 010							
10	LW 2		0322	BE	90	48 00.016	124 50 036		52					HEAVY FOG OFF
			0329	BO		48 00.013	124 50 013			48				COAST OF WASHINGTON
			0331	BE		48 00.014	124 50 1026							- WELL MIXED WATERS
10	LW 1		0360	BE	91	48 00.008	124 45.008		33					I.E. COOL SURFACE ~ 10°
			0404	BO		48 00.018	124 45.023			29.5				LIKELY CAUSE
			0407	EN		48 00.029	124 45.030							
10	RT 1		0606	BE	92	48 15.006	124 52.625		64					
			0610	BO		48 15.005	124 52.612			58				
			0612	EN		48 15.000	124 52.626							
														Par Sensor Put On
10	JFF 7		0922	BE	93	48 21.08	124 30.04		31					
			0924	BO		48 21.09	124 30.05			27				
			0925	EN		48 21.09	124 30.05							
10	JFF 6	ROS	0944	BE	94	48 22.47	124 30.06		106					
			0947	BO		48 22.46	124 30.05			98				
			0949	EN		48 22.46	124 30.05							

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DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Year 2001					Month JULY			Ship JOHN P TULLY			Cruise I.D. 2001-20			
Day	Station I.D.	Cast Type	Time (UTC)	Time Code	Consec. Number	Latitude	Longitude	Position Code	Bottom Depth	Max Depth	Consec Sample #	# of Bottles	initials	Comments
10	JFF5	ROS	1027	BE	95	48°24.51	124°30.02		212					10-12 kts from 310°T
			1031	BO		48 24 51	124 29.99			204				
			1034	EN		48 24	124							
10	JFF4		1112	BE	96	48°26.519	124°30.047		231					WAVED FOR FURTHER
			1118	BO		48 26 528	124 30 021			226				
			1120	EN		48 26 520	124 30 009							
10	JFF3		1144	BE	97	48 28 490	124 30 037		212					
			1149	BO		48 28 471	124 30 064			208				
			1151	EN		48 28 464	124 30 056							
10	JFF2		1215	BE	98	48 30 485	124 29 964		140					E of station due to salmon test fishery boat.
			1219	BO		48 30 468	124 29 944			138				
			1220	EN		48 30 458	124 29 925							
10	JFF1		1240	BE	99	48 31 865	124 30 012		58					
			1242	BO		48 31 854	124 30 006			53				
			1243	EN		48 31 848	124 29 996							
10	JFE1	ROS	1408	BE	100	48 27 137	124 14 987		30					
			1408	BO		48 27 126	124 14 954			22.6				
			1409	EN		48 27 120	124 14 943							

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July 10/01

STATION JFEA. Hydraulics failed just as we were about the lower the CTD into the water. Had OOIROS above deck ready to swing over the side. Turned out to be a major hydraulic system failure. Not even Capstan is working. No pressure to any system. Coil is not overheated. Chief suggests it is the switches.

"Worst trip ever on Tully".

1130

Set up with CTD only - same instruments.
Start up lines - JFEA.

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Year 2001					Month JULY			Ship J P Tully				Cruise I.D. 2001-20		
Day	Station I.D.	Cast Type	Time (UTC)	Time Code	Consec. Number	Latitude	Longitude	Position Code	Bottom Depth	Max Depth	Consec Sample #	# of Bottles	initials	Comments
10	JFE1A	CTD	1848	BE	101	48 26.543	124 15.071		25	20	148	1		CTD only - no
			1848	BO		48	124							rosette. Same instr
			1953	EN		48	124							ments, same config like
10	JFE1B	CTD	1906	BE	102	48 25.93	124 15.02		134		149	1		
			1910	BO		48 25.96	124 15.04			120				
			1913	EN		48 25.99	124 15.05							
10	JFE2	CTD	1929	BE	103	48 25.12	124 15.13		138		150	1		
			1933	BO		48 25.09	124 15.15			131				
			1936	EN		48 25.08	124 15.16							
10	JFE3	CTD	1959	BE	104	48 23.18	124 15.08		181		151	1		
			2003	BO		48 23.18	124 15.08			170				
			2008	EN		48 23.21	124 15.07							
10	JFE4	CTD	2036	BE	105	48 21.28	124 15.04		223		152	1		Adrian's station.
			2041	BO		48 21.30	124 15.05			211				
			2046	EN		48 21.32	124 15.04							
GO FLO CASTS on Hydro wire for Adrian Marchetti														with 22 lbs O ₂
10	JFE5	CTD	2331	BE	106	48 19 244	124 14 985		211		153	1	* Note	station mislabeled
			2339	BO		48 19 295	124 14 940			200				JFE3 in header
			2345	EN		48 19 213	124 14 966							-wind 27 knots 330°T

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DATE NOT
ADVANCED. SM

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Year	2001				Month	July		Ship	JS Tully				Cruise I.D.			2001-20	
Day	Station I.D.	Cast Type	Time (UTC)	Time Code	Consec. Number	Latitude		Longitude		Position Code	Bottom Depth	Max Depth	Consec Sample #	# of Bottles	initials	Comments	
10	JFE6	CTD	0004	BE	107	48 17 578	124 14 951		171			154	1				
11			0009	BO	108	48 17 580	124 14 943				160						
			0013	EN		48 17 575	124 14 925										
10	JFE7	CTD	0029	BE	108	48 16 399	124 14 931		97			155	1				
11			0032	BO		48 16 405	124 14 928				84						
			0034	EN		48 16 404	124 14 944										
10	JFD7	CTD	0145	BE	109	48 11 765	123 59 901		50			156	1				
11			0147	BO		48 11 735	123 59 905				35						
			0148	EN		48 11 741	123 59 884										
10	JFD6	CTD	0212	BE	110	48 13 767	124 00 016		118			157	1				
11			0215	BO		48 13 764	124 00 013				101						
			0217	EN		48 13 770	124 00 005										
10	JFD5	CTD	0243	BE	111	48 15 745	123 59 978		180			158	1			-pump would not turn on → started aquisition then turned pump OK.	
11			0247	BO		48 15 757	123 59 990				160						
			0250	EN		48 15 767	124 00 010										
10	JFD4	CTD	0315	BE	112	48 17.690	123 59.932		138	131		159	1				
11			0321	BO		48 17.671	123 59.919										
			0325	EN		48 17.671	123 59.919										
11	JFD3	CTD	0345	BE	113	48 19.655	123 59.885					160	1				

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Year 2001					Month JULY			Ship JPTULLY				Cruise I.D. 2001-20				
Day	Station I.D.	Cast Type	Time (UTC)	Time Code	Consec. Number	Latitude		Longitude		Position Code	Bottom Depth	Max Depth	Consec Sample #	# of Bottles	initials	Comments
11	JFD3		0351	BO	113	48	19.697	123	59.973		165					Wind dying down
			0355	EN		48	19.680	123	59.928			158				to 23 kt @ 290
11	JFD2	CTD	0417	BE	114	48	21.776	123	59.932		116		161	1		Seas almost responding
			0421	BO		48	21.799	123	59.873			115				immediately
			0424	EN		48	21.791	123	59.868							- 1 m seas
11	JFD1	CTD	0438	BE	115	48	23.045	123	00.091		64		162	1		Windown
			0441	BO		48	23.064	123	00.114			55				
				EN		48		123								
11	JFC1	CTD	0556	BE	116	48	20.192	123	45.043		61		163	1		25 kts again
			0602	BO		48	20.169	123	45.012			59				
			0604	EN		48	20.185	123	44.975							
11	JFC2	CTD	0621	BE	117	48	18.533	123	44.932		172		164	1		
			0626	BO		48	18.520	123	44.935			168				
			0629	EN		48	18.525	123	44.878							
11	JFC3	CTD	0650	BE	118	48	16.52	123	45.08		180		165	1		
			0656	BO		48	16.453	123	45.149			175				
			0659	EN		48	16.441	123	45.142							
11	JFC4	CTD	0720	BE	119	48	14.316	123	45.086		166		166	1		
			0726	BO		48	14.283	123	45.051			158				

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INSTITUTE OF OCEAN SCIENCES

Year					Month			Ship					Cruise I.D.		
Day	Station I.D.	Cast Type	Time (UTC)	Time Code	Consec. Number	Latitude	Longitude	Position Code	Bottom Depth	Max Depth	Consec Sample #	# of Bottles	initials	Comments	
11	JFC4	CTD	0729		119	48 14.161	123 45.212								
11	JFC5	CTD	0755		120	48 12.472	123 45.126			139	167	1			
			0758			48 12.492	123 45.069		130						
			0800			48 12.487	123 45.042								
11	JFC6	CTD	0819		121	48 10.423	123 45.101		52		168	1			
			0923			48 10.422	123 45.104			45					
			0825			48 10.419	123 45.107							Fair Complet	
11	Snowy		0730		Paul Fangerhansen leaves ship. Doug Anderson joins ship.										
			0800		Repair for T-chain mooring in Strait of Georgia										
11	SGR11	CTD	1709		122	48 54.446	123 16.277		190		169	1		Very serious, wire	
			1715			48 54.316	123 15.989			179				angle, some diversion	
			1720			48 54.239	123 15.646							reversals as a result	
11	TM5-B		1730			48 54.208	123 16.019	Ranges from 320 to 360 m Range 450 m					} RECOVERY		
			1740		Ship	48 54.086	123 15.723	Release code BCPF sent.							
11	TM5-B		1959			48 53.947	123 16.025			Top floats				Deployment	
			2000			48 53.964	123 16.033			T-chain near end and bottom float					
	TM5-B (out'd)		2007	Depth =		48 54.117	123 16.043			Anchor Away Depth 200m on sounder					

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