

Book ① of 3

CRUISE
NUMBER

9403 / 1

DAILY LOG
INSTITUTE OF OCEAN SCIENCES
OCEAN PHYSICS

DATE

94-09-06 → 94-10-05

VESSEL

J. P. Tully

PROJECT

WOCE

September 6th 1994

PST

1600 Leave the jetty

We will make a test cast in Saanich Inlet
TRIP ALL BOTTLES, ONLY SALINITY AND OXYGEN.

All bottles tripped. For some bottles, had to try 2 or 3 times.

Bottle #6: Had to try 3 times. The last time, the current went up and down, but the program did NOT detect it. It was still written Trig. NOT conf.

Station TEST

Downcast: File 94030001

Upcast + bottles: File 94030002.

7 Sept.

0830 removed conductivity sensor from SAIL, cleaned cell with 1N HCL, reinstalled cell.
Salinity reading 30.00.

Fluke temperature probe failed, broken thermocouple wire (T type PN 399204) used with
Fluke 2175A digital thermometer.

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR		MONTH		SHIP		CRUISE		PAGE		OF				
1994		09		J. P. TULLY		9403		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
6	Test	ROS	2351	BE	1	48°38.344	123°30.136	GPS	197				HR	Test in Spanish Inlet
6			2400	BO	1	48 38.37	123 30.08			194				Bottles all tripped
7			0001	BE	2	"	"			194	1-23	23		
7			0028	EN		48 38.19	123 30.01							
7	JF1	Loop	06:00	BE	—	48 16. N	123.30 W		171.10	—	L1	—	MEB	
7	JF2	Loop	07:51	BE	—	48 17.99	124 00.15		186.90	—	L2	—	MLJ	
7	JF3	Loop	10:10	BE	—	48 26.99	124 30.02		215.40	—	L3	—	MLJ	
7	JF4	Loop	1220	BE	—	48 32.36	125 00.70	GPS	67.0	—	L4	—	JW	
7	P01	Loop	1438	BE	—	48 34.69	125 32.81		104.6	—	L5	—	2W	
7	P02	Loop	16:24	BE	—	48 36:	126. 00		115.40	—	L6	—	MEB	
7	P03	Loop	17:52	BE	—	48:37	126:20		147.9	—	L7	—	MEB	
7	P04	Loop	19:23	BE		48 38.95	126 39.94		1310.1		L8			
7	MP04	ROS	2006	BE	003	48°39.397	126°39.243							Block unlatched at 200m
7	MP04	ROS	2034	BO	003	48 39.39	126 39.24			1313				
7	MP04	ROS	2035	BE	004	48 39.38 N	126 38.81			1289/10	24-46	23		Rosette upcast
7	MP04	ROS	21:19	EN	004	48 39 48 N	126 38 54			1314	L9		JFG	
7	ROS	Loop	23:57	BE	—	48 41.6 N	127 10.3				L10		JFG	
8	P06	Loop	02:16	BE	—	48°44.6N	127 41.2W		2510.6		L11		JFG	

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

8 Sept

0837 RAM lowered and sounder cable switched over to ram.

12h20 Local: Arrive on Station P13
Reg. Tim and Ron on Deck.

Bottom depth varying between 2960 and 3000

Little delay the cable to pull up the weight is too short

1620 removed liquid reversing thermometer T431 (not working - loglay always reads 5.502)
replaced with T 577

9 Sept.

1230 arrive Sta MP18
renew compensation cylinders greases.

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1999			09			J.P. Tully			9403			2			
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8	P07	Loop				48:46	128:10						MEB	waypoint missed	
8	P08	Loop	0644	BE	-	48:49	128:40	-	2486	-	L12	-	MEB		
8	P09	Loop	0847	BE	-	48 51.37	129 09.95	-	2321.7	-	L13	-	MLJ		
8	P10	Loop	1047	BE	-	48 53.56	129 39.72	-	2675	-	L14	-	MLJ		
8	P11	Loop	1253	BE		48° 56.0	130° 10.0		2710		L15		JFC		
8	P12	Loop	1505 ^{15H}	BE	-	48° 58.0	130° 39.7	-	?	-	L16	-	MEB	DEPTH SOUNDER NOT WORKING.	
8	P13	Loop	1947	BE	-						L17		MLJ		
8	P13	ROS	1944	BE	5	49°02.638	131°39.883	GPS	2950			23	MR		
8	P13	ROS	2031	BO	5	49°02.927	131°39.238	GPS		3027					
8	P13	ROS	2032	BE	6	49°02.927	131°39.233	GPS	3040	3024	47-69	23	MR		
8	P13	ROS	2146	EN	6	49°03.379	131°38.317	GPS							
9	P14	Loop	0228	EN	-	49°07.347	132° 39.87 W	GPS	3263	-	L18		JFC		
9	P15	Loop	0638	BE	-	49:12:000	133:39:550	GPS	3339.2	-	L19	-	MEB		
9	P16	Loop	1058	BE	-	49 17.015	134 40.177	GPS	3570.4	-	L20	-	MLJ		
9	P17	Loop	15:11.44	BE	-	49 21:000	135:40:198	GPS	3511.2	-	L21		MEB		
9	P18	ROS	2030	BE	7	4925.07	136 39.67						BM		
9	P18	Loop	2037.34	BE	-	49:24:92	136:39:69	GPS	3815	-	L22		MLJ		
9	P18	ROS	2135	BO	7	4924.85	136 39.78		365	3869				3869 JB	

CAST TYPE -

BOT -

bottle cast
ctd
mooring

ROS -

rosette
net haul
drifter

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

Sept 11:

S:45 (Local) Finish Co-Flos for VBC.

Cast 93040010, at bottle 4, 300 m: CTD jammed, logging but no changed in data.

So stop 93040010 and start cast 93040011 @ 1451
50°00.306; 144°58.361

The software locked again after bottle #9 at 50 m, so started file 93040012 from 50 m to 25 m, including bottle #10 @ 25 m.

Software locked after bottle 10 @ 25 m, so started file 94030013 from 25 m to surface, including bottle #11 @ 10 m. The software did NOT lock after bottle 11 @ 10 m.

So, at Station Papa, shallow rosette, CTD 58483, cast 9 → Downcast
Casts 10 to 13 → Upcast

7h07 local: Shallow rosette on board

Bottle #1: tripped even though the Niskin bottle dial didn't turn on the black deck unit

DAILY LOG

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1994		Sept.		Tully		94-03								
DAY (UTC)	STATION ID	CAST TYPE	TIME (UTC)	TIME CODE	STD/HYDRO CONSEC #	LATITUDE	LONGITUDE	POSITION CODE	BOTTOM DEPTH (m)	MAX SAMPLING DEPTH (m) db	CONSEC SAMPLE #	# OF BOTTLES	INIT	COMMENTS
9	MP18	BE	2132	BE	8	49 24.86	136 39.78		3816	3870	70-92	23	BM	No SAMPLE FROM 2600m,
9	MP18	EN	2307	EN	8	49 25.16	136 40.45						BM	longyard hung up.
10	MP19	Loop	0421	BE	—	49 30.039	137 40.00	—	3781.6		L 23	—	MEB.	
10	MP20	Loop	0937	BE	—	49 33.99	138 40.025	—	3938.0	—	L 24	—	MLJ	
10	MP21	Loop	1410	BE		49° 37.98'	139° 40'		3880.0	—	L 25		JFG	
10	MP22	Loop	1833	BE	—	49° 42' 072	140° 39.762	GPS	3931.2	—	L 26	—	MEB.	
10	P23	Loop	2244	BE	—	49 46.02	141 40.17	GPS	2929.8	—	L 27	—	MLJ	
11	P24	Loop	02:40	BE		49° 50', 1	142 39.5	GPS	3959		L 28		JFG	
11	P25	Loop	06:29	BE	—	50° 00.0	143° 36'.19	GPS	4103.8		L 29		MEB.	
11	P35	Loop	0916	BE	—	50 00.074	144 18.219	GPS	4116.6	—	L 30		MLJ	
11	P26	GoFlo	1223	BE	—	50 00.12	144 59.42		4212	70m.	—	6		GoFlo Casts to 70m
11	P26	Loop	1227	EN	—	50 00.18	144 55.07		4212		L 31	1	MR	Pacific saury (sp) + squid in ship's lights.
11	P26	SH ROS	1417	BE	9	50° 00.371	144° 58.258	GPS	4204		—		MR	58483 CTD
11	P26	SH ROS	1433	BO	9	50° 00.346	144° 58.254	GPS	4210	1003	—			Manual trigger for the bottles on black deck unit.
11	P26	SH ROS	1433	BE	10	50° 00.35	144° 58.250	GPS	4210	1003	—			UPCAST
11	P26	SH ROS	1451	EN	10	50 00.32	144 58.36	GPS			100-103	4	MR	Software locked at 300 m.
11	P26	SH ROS	1451	BE	11	50° 00.306	144 58.361	GPS		300			MR	END OF UPCASt FOR
11	P26	SH ROS	1502	EN	11	50 00.25	144 58.35	GPS			95-99	5	MR	SHALLOW CAST

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

CAST TYPE -

BOT -
CTD -
MOR -bottle cast
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12 Sept

1645

launched XBT but system did not sense probe hitting water. Secured better ground connection.
launched 2nd probe, same problem.
tested hand launcher - broken red lead in hand launcher.

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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		
11	P26	SH ROS	1502	BE	12	50°00.250	144°58.355	GPS						{ From 50m to 25m,		
11	"	"	1505	EN	12	"	"			50	94	1		{ including bottle 10		
11	P26	SH ROS	1505	BE	13	50°00.261	144°58.354	GPS						{ Bottle 11, from		
11	P26	SH ROS	1507	EN	13	50°00.227	144°58.386	GPS	4214	25	93	1		{ 25m to surface		
11	P26	DEEP ROS	1540	BE	14	50°00.095	144°58.808	GPS	4211							
11	P26	DEEP ROS	1639	BO	14	49°59.897	144°58.261	GPS		4322.				10cm to bottom of John Love		
11	P26	DEEP ROS	1643	BE	15	49°59.928	144°58.264	GPS			104-124	21				
11	P26	DEEP ROS	18:25	EN	15	50 00 .04	144 57 76	GPS						End of upcast.		
						LEAVE STATION Edward FOR DUTCH HARBOR ASK.										
11	P146	Loop	23:22	BE	—	50 12.38	146 00.55	GPS	4315.2	—	L32		MLJ			
12	P147	Loop	04:09	BE	—	50°24.055	147°00.21	GPS	4464.8	—	L33		MEB	Dolphins + a Seal sighted		
12	P148	Loop	09:16	BE	—	50 35.756	148 00.57	GPS	4577.8	—	L34		MLJ			
12	P149	Loop	1436	BE	—	50 47.19	149 00.23	GPS	?43m-48m		L35			40 knt winds have slowed ship to ~5 knt		
12	P150	Loop	2207	BE	—	50 58.775	150 00.499	GPS	3998.4	—	L36		MLJ			
13	P151	Loop	0447	EN		51°12.5'	151°13.1'	GPS	4549		L37		JFG	Late due to Andregt (50° p.t.)		
13	P152	Loop	0830	BE	—	51 21.581	152 00.443	GPS	4793.0	—	L38		MLJ			
13	P153	Loop	1318	BE		51 32.996	153 00.42	GPS	4656	—	L39		JW			
13	---	XBT	1655	BE		5141.5	153 45.9	GPS	4400							

CAST TYPE -

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

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sea water loop

TIME CODE -

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POSITION CODE -

RAD -
GPS -
LOR -RADAR
GLOBAL
LORAN

13 Sept.

0855

XBT, s/n 199474.

5141.5

15345.9

Depth 4400m

XBT surface temp 12.39

4 Sep 0300 UTC

P26 BC samples # 107, 120, 122, 124, 112 broke when cooler door sprung open.

16:00 3 old XBTs launched # 6 good to 110 metres Surface temp 11.41
1 new probe launched - no good. # 7 good to 127 metres temp = 11.56
8 no good

5 s/n 199473
6 199477
7 181689
8 220743

Sept 15

0842 XBT #9 199479 10.53°C at 2.7 m good to 280 m.
XBT #10 220746 10.59

Sept 16

1045 XBT #11 53 26.26 164 23.67 Leg 10.32 Depth 5377.
12 53 26.72 164 25.18
1106 13 53 27.18 164 26.49 Surface temp 10.58

SEP 16
~2000 UTC Arr Dutch Har. Wait for Pilot. Tie up to fuelling dock. Shore leave.

SEP 17
~0800 UTC (2400 Local) Depart Dutch Har for WOCE LINE P15N.

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13	P154	hoop	18:17:21	RE		51°44'.891	154°03'.690	GPS	4111.8		L 40		MEB	
13	P155	Loop	23:35		—	51 55.465	155 00.047	GPS	4841.8	—	L 41		MLJ	
14	P156	Loop	07:50	UTC	—	52° 06'.129	156° 00.089	GPS	?	—	L 42		MEB	
14	P157	Loop	16:24	UTC		52° 17'.731	157° 00.00	GPS	4959.6	—	L 43		MEB	
14	—	XBT	1614	UTC		52 17.5	156 58.8	GPS			—		BM	
15	P158	Loop	01:44	UTC		52° 29.3'	158° 01.3	GPS	?	—	L 44		JFC	
15	P159	Loop	11:44		—	52° 40.01	159 00.007	GPS	?	—	L 45	—	MLJ	
15	—	XBT	1652	UTC		52 47.3	159 38.4		—				BM	
15	P160	Loop	20:42	UTC	—	52° 52' 4.90	160° 07.065	GPS	—		L 46		MEB	
16	P161	Loop	02:18	UTC		53° 02'.5	161° 01.7	GPS	5012.4		L 47		JFC	
16	P162	Loop	06:57	UTC	—	53° 10'.78	162° 01.453	GPS	5824.5	—	L 48		MEB	
16	P163	Loop	11:32		—	53 17.208	163 00.014	GPS	5961.6	—	L 49	—	MLJ	
16	P164	Loop	16:36:46	UTC	—	53° 23'.661	164° 00.046	GPS	4561.4	—	L 50	—	MEB	
16	—	XBT	1906	UTC		53 27.18	164 26.49	GPS						
16	P165	Loop		UTC	—	53 38.451	164 59.902	GPS	400.0	—	L 51	—	MLJ	
19						END	"P" LINE	→	into Dutch	ABR				

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 -
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RE -deployment time
messenger release
recover mooring

POSITION CODE -

RAD -
GPS -
LGR -RADAR
GLOBAL
LORAN

18 Sept

0020 transducer turned on, switched from RAM to starboard unit.

0631^(local) Deck unit turned on.

0643 Arrive on Station have to turn in the wind

Station W001, Downcast # 16
Upcast # 17

- No pinger on the sounder
- Not able to trigger any bottles. 6 or 7 tries at the bottom
- Counter of the Winch operating 2 tries at 50 m
→ outside doesn't work
- Radio problems
- Bernoulli not operating → we have to make a backup copy

0724 Leave station

0930 ship on both engines heading back to Dutch Harbour to take Draine to hospital.

Problems encountered with WOCE CTD - acquisition program. Using CTD.EXE (Bill's program) we could not get data to display or log, nor could we trigger the rosette. With GCTD however we could view the data and trigger bottles. I reprogrammed the WOCE CTD and tried to run CTD.EXE but to no avail. We thought that the acquisition program (CTD.EXE) might be corrupted so we deleted CTD.EXE and made a new copy from CTD-V135.EXE. We ran it, still no data showing on the screen. John put a RS232 Check Tester in the serial line and CTD.EXE worked. We believe that our problems are RS232 cable/connection problems so we minimized the number of connections and cables by running only one cable from the back of the WOCE CTD deck unit to the Dell computer. Tested CTD.EXE again and triggered about 8 bottles. System is operational now! DJS

1130

LINE PISN

DAILY LOG

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18	W001	ROS	1504	BE	16	53°55.277	164°59.425	GPS	92						MR	Shallow cast made with			
18	W001	ROS	1506	BO	16	53°55.240	164°59.382								MR	23 bottle rosette and			
18	W001	ROS	1507	BE	17	53°55.236	164°59.371				90					W001 CTD			
18	W001	ROS	1516	EN	17	53°55.225	164°59.179				88	125-127	3			Not able to trig bottle			
18	W001	LOOP	1507	EN	—	53°55.2	164°59.2												
19	W002	ROS	0350	BE	18	53°44.68	164°59.36												
19	W002	ROS	0358	BO	18	53°44.68	164°59.25			195m	178m					Trip of 3rd bottle			
19	W002	ROS	0400	BE	19	53°44.66	164°59.30									not confirmed			
19	W002	ROS	0412	EN	19	53°44.73	164°59.22				179	128-135	8						
19	W002	LOOP	0355	BE															
19	W003	ROS	0615	BE	20	53°30.02	164°59.74								MEB				
19	W003	LOOP	0634	BE						1992.5					MEB	CTD6 Paros Temp jumping by 0.3°C 1461			
19	W003	ROS	0641	BO	20	53°29.87	164°59.75				1482								
19	W003	ROS	0641	BE	21	53°29.86	164°59.75				1480	136-146	11						
19	W003	ROS	0719	EN	21	53°29.63	164°60.00												
19	W004	ROS	0905	BE	22	53°14.943	165°00.899												
19	W004	LOOP	0908		22					34430						1.0 m/sec after 250m			
19	W004	ROS	1003	BO	22	53°14.52	165°01.73	V			3697					1.25 m/sec after 1600m			

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

CAST TYPE -

BOT -
CTD -
MOR -

bottle cast
ctd
mooring

ROS -
NET -
DRF -

rosette
net haul
drifter

USW - sea water loop

TIME CODE -

BE -
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beginning time of cast
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deployment time
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POSITION CODE -

RAD -
GPS -
LOR -

RADAR
GLOBAL
LORAN

W003

Sample #137 bottle leaked badly little water left.

W004

- Squeak from right side of heave comp. system. Is there a grease nipple on inboard sheave?
- Port ram is sticking sometimes so that 200/300 lbs doesn't move it; it then lets go and operates normally for awhile. It may be a sheave?
- The nylon preventer onto the block could use bungee cords to hold them away when the angle brings the block to one side or the other.

- ON CTD ACQ program, I had to manually increment the core number + is this normal?
0005 - 2 + 210

- Maximum load cell readings at 1.2 M/SEC UP WERE REACHING 1100 LBS

19 Sept.

DRIFTER: # 5110 + 22217 ON AT 2040 UTC at $\sim 52^{\circ}45'N$

5111, 5109, 22137 (DEEP), 22209, 22212, 22213 (SHALLOW) ~ 2100 UTC

only CFC samples drawn from W006 within 2h of cast recovery. Niskin vents closed overnight. SAL + NUT drawn next day. No gas sampling (O_2 + CO_2)

20 Sep

1415 UTC High winds + rough seas stopped sampling overnight. Previous rosette (W006) was retrieved in 50 kt winds. Winds then increased, gusty to 70 kt + seas built. We sailed past W007, W008 + W009.

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YEAR		MONTH		SHIP		CRUISE		PAGE		OF				
1994		SEPT		TULLY		9304/1								
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
19	W004	ROS	10:03	BE	23	53 14 52	165 01 73	GPS	3690	3692	142-169	23		Salinity, only bottle 1-4
19	W004	ROS	11:32	EN	23	53 13 49	165 03 82	GPS	3690	3688				
19	W005	LOOP	Reported below				* NO CAST	24						
19	W005	ROS	1330	BE	25*	52° 59.9'	165° 00.16	GPS	3926					
19	W005	ROS	14 29	BO	25	52° 59.76	165° 00.58	GPS		3986				
19	W005	ROS	1432	BE	26	52° 59.76	165° 00.59	"			170-192	23		
19	W005	ROS	1606	EN	26	52 59.56	165 01.24	"	3909					
19	W005	LOOP	1338	BE		52 59.89	165 00.22	GPS						
19	W006	LOOP	1852	BE		52 44.39	165 00.18	GPS	3480				MEB	
19	W006	ROS	18:00	BF	27	52 44 79	164 59 66	GPS	4000+					
19	W006	ROS	19:08	BO	27	52 44 22	165 00 19	GPS		4134				
19	W006	ROS	19:09	BE	28	52 44 22	165 00 18	GPS	NO SOUNDING MADE	4136	193-215	23		upcast bottle samp
19	W006	ROS	20:49	EN	28	52 44 25	164 59 77	GPS						
19	"	DRIF	21:12	BE	—	52 44 558	164 59 576	"			DRIFTER # 5110			DEEP
19	"	DRIF	21:20	BE	—	52 44 470	164 58 786	"			DRIFTER # 22217			SHALLOW
20	W007	LOOP	0148	BE	—	52 14.28	165 29.74	GPS	—					
20	W009	LOOP	1318	EN		51° 21.5	165° 08.5	GPS			LOOP W009			

CAST TYPE -

BOT -

bottle cast

CTD -

CTD -

ROS -

rosette

NET

USW -

sea water loop

TIME CODE -

BE -

beginning time of cast

DE -

deployment time

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

W010 - WINDS ~ 40-45, UN FINE SUR, stopped ship, recovered situation, decided too rough
for CTD w' netting

20 Sept.

0748 XBT #14 5054.15 1645950 temp 9.37
S/n 199483
XBT #15 5052.48 16459.58 depth 4100 S/n 220745 good trace.
surface temp 9.64

TEMPERATURE THERMOMETERS FOR CAN # 30 W011

NISK # 10

T451 1.913
T798 1.912

NISK # 4

T647 1.499
T577 1.486

PRES 6314 3497 Dbar.

1445 Local (2245 UTC) 22136 + 22139 drifters (deep) started. }
1455 " 2255 UTC Magnet removed from 22210 (shallow). }

0355 UTC load while ascending at 0.7 m/s was as high as 4400 lbs. while package at 5000 m.

- typical loads at surface of 3000 - 3500 lbs.
- depth sensor original depth was 4950 m but we descended to 5100 why this error?
- followed ping-pong cross-over instead of original depth.

0414 UTC

- changed from 0.7 m/s to 1 m/s at 4300 m.
- changed ascender from 1.0 m/s to 1.2 m/s above 3000 m.

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR		MONTH		SHIP		CRUISE		PAGE		OF				
1994		SEPT		TULLY		9403/1								
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
						DRIFTER DEPLOYMENT								
20	W010	DRIFT	16:04	BE	N/A	51 00 31.7	164 59 83.9			# 22212				Shallow drifter
20	W010	DRIFT	16:11	BE	N/A	50 59 57.3	164 59 65.5			# 5111				Deep drifter
20	W010	LOOP	1621	EN	N/A	50° 58.03'	164° 59.45'		~4700		LOOP W010			Loop for SAL, NT, LHL, OIB, ALK, TCO2, etc
20	—	XBT	17:00	BE	—	50 52.48	164 59.58		4780				MGR	XBT #14 +15
20	W011	LOOP	1930	BE	—	50 29.94	164 59.59		4874					
20	W011	ROS	20:03	BE	29	50 29 46 N	164 59 26	GPS	5020					
20	W011	ROS	21:11	BO	29	50 28 83 N	164 59 25	GPS	5020	5012				
20	W011	ROS	21:11	BE	30	50 28 83 N	164 59 25	GPS		5008	216-238	23		Upcast 23 bottles
20	W011	ROS	23:04	EN	30	50 27 95	164 59 57	GPS						Leave STN W011
21	W012	LOOP	232	BE										
21	W012	ROS	2:32	BE	31	50° 00.02' N	165° 00.18' W	GPS	4950					Downcast
21	W012	ROS	3:51	BO	31	50° 00.37' N	165° 00.13' W	"		5102				
21	W012	ROS	05:51	BE	32	50° 00.37' N	165° 00.13' W	GPS	4946	5105	239-261	23		Upcast
21	W012	ROS	0544	EN	32	50° 00.74' N	164° 59.22' W	"						
21	W013	ROS	0934	BE	33	49 29 92.3	164 59 97.3	GPS	5085					
21	W013	LOOP	0940	BE	—									
21	W013	ROS	1042	BO	33	49 29 61	164 59 94	GPS		5174				

CAST TYPE -

BOT - bottle cast

ROS - rosette

USW - sea water loop

TIME CODE -

BE - biological time

EN - environmental time

BO - bottom time

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

3600 lb max when start up from 5000 m 3800 max peak load at
1 m/sec

Readout reset

WOP - #238. (5000 m) sample - bottom valve opened on recovery - lost approx 500 m sample.

WOP 13 .5 m/sec to 100 m then 1.25 to 550 m 1.5 m after 600 m.
Looks like weight on package.

THERMOMETERS

NISK #10 T451

T798

WOP 13

1.932

1.931

NISK #4

T647

T577

P 6314

1.473

1.459

4009 Dbar

21 Sept

1200 loc (2200 UTC) Removed magnets from DRIFTERS # 22138 + 22135 (deep)

22214 + 22215 (shallow)

W014 Rosette on bottom, system back on board. ETD cable damaged, by
wire being slack on the bottom. Cut off 20 metres of cable, reterminated cable.

Winch counters failed completely - no count - no speed, but line
tension still works.

W015 new sound velocity loaded into sounder.

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR		MONTH				SHIP				CRUISE				PAGE		OF	
1994		SEPT				TULLY				9403/1							
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			
21	W013	ROS	10:43	BE	34	49 29 62	164 59 95	GPS	5137*	5176	262-284	23		* uncorrected depth sound			
21	W013	ROS	12:42	EN	34	49 29 33	165 00 13	GPS						Upcast Bottle Sample.			
DRIFTER DEPLOYMENT																	
21	W013	DRF	13:06	BE	N/A	49 29 688	165 00 040	GPS	DEEP		SOUTH		# 22137				
21	W013	DRF	13:10	BE	N/A	49 29 694	165 00 686	GPS	SHALLOW		SOUTH WEST		# 22209				
21	W013	DRF	13:14	BE	N/A	49 30 121	165 00 714	GPS	DEEP		NORTH WEST.		# 22139				
21	W013	DRF	13:17	BE	N/A	49 30 146	165 00 010	GPS	SHALLOW		NORTH		# 22213	flume			
21	W013	DRF	13:28	BE	N/A	49 30 170	164 59 451	GPS	DEEP		NORTH EAST.		# 5109				
21	W013	DRF	13:34	BE	N/A	49 29 694	164 59 471	GPS	SHALLOW		SOUTH EAST.		# 22210				
21	W014	LOOP	1656	BE	—	49 00.245	165 00.439	"	5110								
21	W014	ROS	1656	BE	35	49 00.245	165 00.439	GPS	5110								
21	W014	ROS	1802	BO	35	48 59.93	165 00.12			5219				ROSETTE ON BOTTOM 5218			
21	W014	ROS	1819	BE	36	49 00.08	165 00.18			4503	285-307	23		file starts at 4500.			
21	W014	ROS	1943	EN	36	49 00.47	165 00.47							5216 bottom			
21	W015	ROS	23:12	BE	37	48 30 010	165 00 000		5290								
21	W015	LOOP	23:16	BE	—												
22	W015	ROS	00:28	BO	37	48° 28.82N	164° 58.80W	GPS		5255			DSS				
22	W015	ROS	00:29	BE	38	48° 28.82N	164° 58.79W	GPS		5254	308-330	23	DSS				

CAST TYPE -

ROS -

USW -

TIME CODE -

BE -

bottle cast

rosette

sea water loop

beginning time of cast

bottom

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

Sept 22/94

0000 - 0400 Watch

W017 -

The bypass valve for the power pack cooling water is faulty, needs replacing eventually.
The Temperature Gauge for the hydraulic oil reads in the red while the oil is cold. - Turns out its backwards - it starts out in the red when its cold and as it heats up moves into the green -

W017

Electronic file mislabelled on W016, but not numbers ok 9303041, 9303042

Whole stopped at 1750 m on up cast, maneuvered ship to get wire angle down.
This was necessary because of drifting in heavy compensation travelling part - nylon
prevents reb on CTD were slack when wire too much to the side.
Probe went up to ~ 1700 db, then out to 1940 db

- I manually edited Cons #41 + 42 *.HDR + *.RAW files to correct the station name. -DJS **

W018

changed 9 volt battery on radio handset.
Wind 25-30 knots. Temp 10.4.0

5407 db line tension 4100 pounds.

DAILY LOG

OCEAN PHYSICS

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YEAR		MONTH		SHIP		CRUISE		PAGE		OF				
1994		SEPT		TULLY		9403								
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	W015	ROS	02:13	EN	38	48°27.97N	164°55.93W	GPS				23	055	
	W015	Drift	02:58	BE	—	48°30.26N	164°59.69W	GPS	NE	Deep	#	22	135	
	W015	Drift	03:02	BE	—	48°29.78N	164°59.65W	GPS	SE	Shallow	#	22	135	
	W015	Drift	03:05	BE	—	48°29.83N	165°00.00W	GPS	S	Deep	#	22	138	
	W015	Drift	03:07	BE	—	48°29.78N	165°00.33W	GPS	SW	Shallow	#	22	14	
22	W015	Drift	03:12	BE	—	48°30.24	165°00.34	GPS	NW	Deep	#	22	136	
22	W016	ROS	06:41	BE	39	4800.00	16500.3		4940				BH	
22	W016	LOOP	06:54	BE	—	47°59:97	164°59.96	GPS				W016	MEB	
22	W016	ROS	07:53	BO	39	4800.03	16500.30	GPS		5135			BH	
22	W016	ROS	07:53	BE	40	4800.03	16500.30				331-353	23	BH	
22	W016	ROS	09:39	EN	40	4800.39	16500.46						BH	
22	W017	ROS	13:16	BE	41	47 30 00	165 00 000	GPS	5265				Jhu	
22	W017	USW LOOP	13:21	BE	—	47 30 230	164 59 49	GPS			Loop W017		Skir	
22	W017	ROS	14:40	BO	41	47 31.08	164 58.7	GPS		5345.				
22	W017	ROS	14:40	BE	42	47 31.08	164.58.7			5345	354-376	23		
22	W017	ROS	16:23	EN	42	47 32.18	164°58.70	GPS						
22	W018	DRF	19:34	BE	—	4704.99	16500.01	GPS						#8672(AES) ON AT 0810LDC
	W018	ROS	20:23	BE	43	46°59.99N	164°59.91W		5326					1810 UTC

CAST TYPE -

BOT -

bottle cast

ROS -

rosette

USW -

sea water loop

TIME CODE

BE

bottom depth

GPS

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

23/9/94

XBT #16 45 30.68 165 10.10 5200 m 11.78 XBT temp 12.41 good

#17 44.59.88 164 45.55 5397 122 XBT temp 12.43 good

#18 good to depth of 1273.9 2.86°C data point # 1969. loop temp 13.0
questionable data at surface

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR		MONTH		SHIP		CRUISE					PAGE		OF	
94		Sept.				9403/1								
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
	W018		2136	BO	43	47°00.67	164°59.47			5409				
22	W018	Loop	21:57	BE	—	47°00.76	164°59.73	GPS	5514				MEB	
22	W018	ROS	21:36	BE	44	47°00.67	164°59.47				377-399	23		
22	W018	ROS	21:36	BO	44	47°00.67N	164°59.46'W	GPS		5400				
22	W018	ROS	23:19	EN	44	47°00.24N	164°59.84'W	GPS						
23	W019	Loop	04:49	EN	—	46°29.82N	165°00.02W	GPS	?	SFC	Loop W019	1	JTB	Cancelled profile - too much ship motion
23	W020	Loop	09:31	BE	—	45°59.51	164°59.98	GPS	—			1	MEB	no bottom reading
24	W021	Loop	00:57	BE	—	45°30.24S	165°09.756	GPS	5244.2		Loop W021	1	MLJ	
24	W021	XBT	00:57	BE	—	"	"						BM	XBT temp 12.41
24	W022	XBT	04:00	BE	—	44°59.44	164°45.21	GPS	5400					XBT #17
24	W022	Loop	03:58	BE	—	44°59.80	164°45.34	GPS				1		
24	W023	XBT	07:38	BE		44°30.01	164°45.24	GPS	—					XBT #18
	W023	Loop	07:48	BE		44°30.01	164°47.41	GPS				1		
24	W023	CTD	09:31	BE	45	44°30.58	164°59.39	GPS	5453	4525.				CTD-6
24	W023	CTD	11:18	EN	45	44°30.74	164°58.53	GPS						
24	W024	CTD	14:51	BE	46	43°59.67	164°59.69	GPS	5514					CTD-6, cell dry, scrubbed
		CTD	15:57	BO	46	43°59.08	164°58.64	GPS		4856.				before use.
24	W024	Loop	14:52			43°59.7'	164°59.7'	GPS				1		

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

CTD6 To 4500 M (SPEED UP 1 To 1.8 M/SEC)
Big swells would use the full range of compensator.

Max Tension a 3200 LBS

Suggest we wait for sea conditions to improve before attempting a
Rosette cast. SL.

W024 - A lot of descent reversals / spikes in upper 100 m. Av. Descent ^{rate} ≈ 1.2 m/min
Some -

Logged up-cast because down-cast was so messy near surface - maybe up-cast will be better.

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR		MONTH		SHIP		CRUISE		PAGE		OF				
1994		SEP				9403								
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
24	W024	CTD	1558	BE	47	43° 59' 06	164° 58.62	GPS	5500	4830	—			CT06 UP CAST
24	W024	CTD	1648	EN	47	43° 58.86	164° 58.16							
24	W025	ROS	20:18	BE	48	43 29 31	165 00 48							shallow ROS.
24	W025	Loop	20:24	BE		43° 29' 23	165° 00' 56	GPS	5537.8			1	MEB.	
24	W025	ROS	2030	BO	48	43 29 15	165 00 54	GPS		603.				Shallow Ros
24	W025	ROS	20:30	BE	49	43 29 15	165 00 54			598	400-410	11.		up cast
24	W025	ROS	20:49	EN	49	43 28 90	165 00 47							
24	W025	ROS	2124	BE	50	43 28 58	165 00 56							Leg Rosette ($P_{AIR} = -0.416$)
24	W025	ROS	22:35	BO	50	43 28 10	165 00 57			5686.				Deep Rosette
24	W025	ROS	2235	BE	51	43 28 1	165 00 56			5684	411-433	23		" "
25	W025	ROS	00:27	EN	51	43 27 77	165 00 61							" "
25	W026	ROS	0339	BE	52	43° 00.08	164 59.81' W		5654					Down cast (WOCE CTD)
25	W026	ROS	0447	BO	52	43 00.51	164 59.45			5748.				
25	W026	ROS	0448	BE	53	43 00.508	164 59.44' W				434-456	23		Upcast
25	W026	ROS	0641	EN	53	43 01.08	164 57.91							
25	W026	Loop	09:00	EN		43° 00.8	164° 59.4'						TFU	Paros Reading on Deck ($P_{AIR} = -0.416$)
25	W027	ROS	1003	BE	54	42 29 98	164 59 98		5822	5950.				
25	W027	Loop		BE	—	42 30.00	164° 59.95	✓	5854.8			1	MEB.	

CAST TYPE -

BOT -

bottle cast

ROS -

rosette

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

Notes W027

No bottle Trip at 1750 m NO current. Trip OK on second try.

When the header file was examined there were two bottles trapped at 1750 m
This will offset the bottle position, the last bottle #23 will be 50 m
not 10 m

CTD wire connection to drum end of slip rope assembly broke. Reconnected
wire and clamp made to bolt cable inside drum to prevent wire flexing
as drum rotates.

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR		MONTH		SHIP		INSTITUTE OF OCEAN SCIENCES									
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	PAGE OF	
25	W027	ROS	13:10	EN	54	42 30 528	164 59 334	GPS		5927	457-479*	23		Down cast and up cast	
25	W028	ROS	16:30	BE	55	41° 59.9	164 59.9	GPS	5780				SFL	Down	
25	W028	LOOP	16:46	BE		41° 59.979	164° 59.710	GPS	5802			1		Loop	
25	W028	ROS	17:46	BO	55	42 00.16	164 59.22			5913.					
25	W028	ROS	17:47	BE	56	42 00.16	164 59.22								
25	W028	ROS	19:07	EN	56	42 00 2	164 58 50				486-502	17		Upcast stopped at 1100	
25	W028	ROS	20:56	BE	57	42 00 26	164 57 69								
25	W028	ROS	21:22	EN	57	42 00 26	164 57 51	GPS			480-485	6		upcast broken wire	
25	W028	ROS	21:55	BE	59	42 00 24	164 57 38							second upcast	
25	W028	ROS	22:09	BO	59	42 00 25	164 57 25	GPS		603					
25	W028	ROS	22:09	BE	60	42 00 24	164 57 25								
25	W028	ROS	22:32	EN	60	42 00 15	164 57 16	GPS			503-513	11		Upcast	
						CORRECTED TIME AND DATE ON COMPUTER									
						NOTE UTC TIME LOC DATE BEFORE CORRECTION TC									
26	W029	ROS		BE					5424						
26	W029	LOOP													
26	W029	ROS	02:03	BE	61	41 29.81N	164 59.83W		5408		Loop W029	1	MILJ		
26	W029	ROS	03:13	BO	61	41 29.38	164 59.09W			5598				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

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR		MONTH		SHIP		CRUISE		PAGE		OF				
1994						9403								
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	W029	ROS	03:13	BE	62	41°29.38'N	164 59.05'W	GPS		5596	514-536	23		Upcast
26	W029	ROS	05:02	EN	62	41°27.73'N	164°57.62'W	GPS						
26	W030	ROS	0823	BE	63	4059.91	165 00 24	GPS						
26	W030	Loop	0834	BE		40°59'.86	165°00'.35	GPS				1	MEB	
26	W030	ROS	0933	BO	63	4059.79	165 00 81	GPS		5498				
26	W030	ROS	0933	BE	64	4059.78	165 00 81	GPS			537-559	23		Upcast
26	W030	ROS	11:30	EN	64	4059.79	165 00 81	GPS						
26	W031	ROS	1438	BE	65	40°29.68	165°00.39	GPS	5814					Down cast
26	W031	Loop	1536			40°29.66	165°01.4	GPS				1		
26	W031	ROS	1552	BO	65	4029.28	165 01.94			5902				
	W031	ROS	1552	BE	66	4029.28	165 01.94				560-582	23		Started new cast
	W031	ROS	1553	EN	66	4029.26	165 01.97			5900db				
	W031	ROS	1553	BE	67	40 29.26	165 01.97							Restarted by mistake
	W031	ROS	1750	EN	67	4026.86	165 04.98							
26	W031	ROS	1839	BE	68	4030.24	165 00.26							Shallow Rosette
		ROS	1848	BO	68	4030.41	165 00.39			595db				
		ROS	1848	BE	69	4030.42	165 00.40				583-593	11		
	W031	ROS	1907	EN	69	4030.63	165 00.58							

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

Sept 26/94 1615 HRS HAWAIIAN TIME (0215 HRS U.T.C.) FROM C.I.S.S. "J.P. TULLY" "
27 Sept 1994

Stn W032 @ $40^{\circ}02'N$ $164^{\circ}58'W$.

Drifter bottle deployed - owner LEANNA BICKFORD

Drifter bottle deployed - owner HEATHER JONES

W033 Laster hydraulic oil filter ~~needs to be~~ replaced after station completed.
Sensitivity trace starting at 2400 db & 2900 db is noisy. Sensitivity response much better.
new Bernoulli disk put into computer.

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR		MONTH		SHIP		CRUISE		PAGE		OF				
1994		SEPT		TULLY		940311								
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	W032	ROS	2244	BE	70	40 00 078	165 00 000	GPS	5746					
26	W032	Loop	22:53								Loop W032	1	MLJ	
26	W032	ROS	23:59	BO	70	40°01.07	164° 59.67"			5677				
26	W032	ROS	23:59	BE	71	40°01.07	164° 59.67"			5673	594-616			
27	W032	ROS	02:07	EN	71	40°01.95	164° 58'							
27		DRF	0215	BE		40°02	164° 58'	GPS					JFL	beside Drifters - Lezanne Girdleford, Heather Jones
27	W033	ROS	0629	BE	72	39 29.89	164 59.52		5531					
		ROS	0746	BO	72	39 29.80	164 58.94			5659				
		ROS	0746	BE	73	39 29.80	164 58.94		5571		617-639	23		upcast
	W033	ROS	0939	EN	73	39 29.78	164 59.77							
	W033	Loop	0640	BE		39 29.89	164 54.43					1		
27	W034	ROS	1247	BE	74	38 59.95	165 00.02	GPS	5434					Deep List
27	W034	ROS	1407	BO	74	39 00.12	165 00.51			5520.				
27	W034	ROS	1407	BE	75	39 00.12	165 00.51			5518	640-662	23		upcast.
27	W034	ROS	15:58	EN	75	38 59.59	165 03.59							
27	W034	Loop									Loop W034	1	MLJ	
27	W034	ROS	1412	BE	76	38°59.9	165 00.34							Shut down
27	W034	ROS	1556	BO		38°59.6	165 03.4							

CAST TYPE -

BOT - bottle cast
CTD - ctd
MOR - mooringROS - 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 castDE - deployment time
MR - messenger release
RE - recover mooring

POSITION CODE -

RAD - RADAR
GPS - GLOBAL
LOR - LORAN

W34 - problems with wire angle, to starboard side,

After deep cut noticed kink in cable ~ 10 m above termination

CTD cable end reterminated to remove "kink" in wire. New retermination kit used.

27 Sept.

Lubricated Laster drive chain and spooling shaft.

28th UTC 01:26

checked conductivity cell: Found a loose tie wrap on cell cable which was free to float across the cell opening (Top of cell). Removed tie wrap.

checked electrical connections and regreased. They looked dry and in good condition.

SL

28 Sep 0246 UTC Tightened tubing on NISKIN #3, Large Rosette by removing about 1" from end + reef knot. This NISKIN had a small dripping leak from the end cap when the vent was opened.

Note

Winch would not start the drum when lowering CTD to the deck. It did work on the second try after going back to the stop, i.e. centre position.

This may, or may not, be the start of a problem.

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR			MONTH			SHIP			CRUISE					PAGE		OF	
			Sept.						7403								
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			
27	W034	MS	1649	BE	76	38°59.93	165°00.34	GPS	5428						Pressure Mids		
27	W034	MS	1658	BO	76	39°00.09	165°00.53			496 lb					3 db on deck		
27	W034	MS	1653	BE	77	39°00.09	165°00.54	GPS			663-671	9					
27	W034	MS	1730	EN	77	39°00.45	165°01.27										
27	W035	ROS	2051	BE	78	38°30.29	164°59.90	GPS	5513						wind 25 from 030°		
27	W035	Loop	2111	BE	✓							1					
27	W035	ROS	2208	BO	78	38°30.26	164°58.71	GPS		5620							
27	W035	ROS	2208	BE	79	38°30.25	164°58.70	GPS			672-694	23			Upcast.		
28	W035	ROS	0035	EN	79	38°29.40	164°58.13	GPS									
28	W036	ROS	0336	BE	80	37°59.92	165°00.21	GPS	5370						Downcast		
28	W036	ROS	0446	BO	80	37°59.77	165°00.68			5496							
28	W036	ROS	0447	BE	81	37°59.73	165°00.68				695-717	23			Upcast		
28	W036	ROS	0637	EN	81	38°00.23	165°01.14										
28	W036	loop	0345	BE	✓	37°59.9	165°00.2					1					
28	W037	ROS	0956	BE	82	37°30.113	165°00.108			5197							
28	W037	loop	0959		✓			✓			Loop W037		3123				
28	W037	ROS	11:10	BO	82	37°30.90	164°59.92	GPS							End. of downcast		
28	W037	ROS	11:11	BE	83	37°30.89	164°59.94	GPS			717-739	23					
CAST TYPE - BOT - bottle cast ROS - rosette USW - sea water loop TIME CODE - BE - bottom time / 1000 CR - current																	

CAST TYPE -

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

USW - sea water loop

TIME CODE -

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

POSITION CODE -

RAD - RADAR
GPS - GLOBAL
LOR - LORAN

new CTF cell Sp 94-4-1 does not fit into stainless steel housing. Engineers will remove extra plastic collar. module 104 & channel

29/9/94

0609 UTC installed new CTF sensor into sea-water loop. Change module as well
module #13 on SAIL system has new data string:

0.V.	11884	15627	0.V.
0.V.	11860	15600	0.V.

SAIL program has to be modified to strip out new data word and convert to real numbers for display.

* Edited *.HDR files to correct for incorrect station name

San 95

Post calibration of CTF module #104 cell 94-4-1 completed

SAN 10 +L 1995
See B Munkley
or J Love

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR		MONTH		SHIP		CRUISE		PAGE		OF				
1994		SEPT		J. T. Tully		9403/1								
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
28	W037	ROS	1309	EN	83	37 32.284	164 58.025	GPS	5200	5282			fine	Suspected mistrip on Niskin 21
28	W038	ROS	1633	BE	84	36° 59.88	164 59.96		5730					
28	W038	Loop	1635	SE	—	"	"							
28	W038	ROS	1743	BO	84	37 00.06	164 59.46							OVERSCALE ON W038 CTD PRESSURE SENSOR (est ~ 6040 db)
28	W038	ROS	1743	BE	85	37 00.07	164° 59.47				740-762	23		STOPPED 100m above bottom.
	W038	ROS	1955	EN	85	36 58.78	164 58.96							wind 15-20 knots.
	W038	DRF	2007	BE	—	36 58.56	164 58.95							drift bottle tossed.
28	W039	ROS	2319	BE	86	36 30 211	165 00 164	GPS						
	W039	ROS	2332	BO	86	36 30 268	165 00 380	GPS						
	W039	ROS	2333	BE	87	36 30 283	165 00 369	GPS			763-773	11.		end 23:57 3630.60/16500.48
28		Loop	2334		—						Loop W039			
29	W039*	ROS	0022	BE	88	36° 31.16	165° 00.5		5900					Downcast + * Station entered as W038
29		ROS	0139	BO	88	36° 31.95	165° 01.0							
29		ROS	0139	BE	89	36° 31.95	165° 01.02			5995	774-796	23		Upcast
29	W039*	ROS	0343	EN	89	36° 31.8	165° 03.2							Bottle 18 did not close
29	W040	ROS	0721	BE	90	35 59.93	165 00.04							
29	W040	Loop	0732	BE	—	35 59.88	165 00.12					1	RM	
29	W040	ROS	0840	BO	90	35 59.22	165 00.76			5812				

CAST TYPE -

BOT -
CTD -
MOR -bottle cast
ctd
mooringROS -
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 castDE -
MR -
RE -deployment time
messenger release
recover mooring

POSITION CODE -

RAD -
GPS -
LOR -RADAR
GLOBAL
LORAN

DRIFTER at 36° FOR Tim ARNDT @ 11:05 UTC

W041

Cost 93 - Shallow - JTFG made a mistake with Alt command, pushed Alt S instead of Alt B -
Started new cut
(At end noticed that station label might be W039 instead of W041)

Cost 96 - Bottom bottle would not trip - tried twice; then changed RS232 connection directly to back of deck unit. (Left everything running while I did that).
Bottle trip ok after that.

* Cons #92, 93, 94 have the wrong station # in the header. It should be W041 not W039.
I edited the *.HOR file to correct the station # to W041.

W042 Heave compensation cables inspected by Captain. Starboard cable shows a lot of wear.

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR		MONTH			SHIP			CRUISE				PAGE		OF	
1994		September			S. P. TULLY			940311							
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	
29	W040	DRF	11:05	EN		35 57.47	165 02.39	GPS	5800					Deploy by Louie.	
29	W040	ROS	0841	BE	91	35 59.23	165 00.76	GPS		5809	797-819	23			
29	W040	ROS	11:01	EN	91	35 58.21	165 02.46	GPS							
29	W041*	ROS	1404	BE	92*	35 29.94	164 59.91							down cast, shallow	
29	W041*	ROS	1413	BO	92*	35 29.90	164 59.97							58483	
	W041*	ROS	1413	BE	93*	35 29.89	164 59.98				830 ^(820?)	1		600db. upcast.	
	W041*	ROS	1420	EN	93*	35 29.86	164 59.98								
	W041*	ROS	1420	BE	94*	35 29.86	164 59.98				821-830	10		upcast bottle 300 to 10db.	
	W041*	ROS	1436	EN	94*	35 29.78	165 00.06								
29	W041	ROS	1459	BE	95	35 29.70	165 00.25		5820					Deep Rosette down	
29	W041	LOOP	1511	BE	—							1			
29	W041	ROS	1605	BO	95	35 29.45	165 00.62								
29	W041	ROS	1605	BE	96	35 29.45	165 00.61		5820	5928	831-853	23		upcast.	
29	W041	ROS	1758	EN	96	35° 28.82	165° 01.47								
29	W042	ROS	2113	BE	97	35 00.01	164 59.78								
29	W042	loop	21:22	BE	—	35 00.05	164 59.72					1	MEP		
29	W042	ROS	2227	BO	97	35 00.02	164 59.66								
29	W042	ROS	2227	BE	98	35 00.02	164 59.66				854-876	23			

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

Note All sample labels on cast WØ44 have been mislabeled WØ42

The numbers run from 900 — 932

Notes have been left in sample boxes and analyst have been notified.

Shore.

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR		MONTH		SHIP		CRUISE		PAGE		OF				
1994		Sept.				9403/1								
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
30	W042	ROS	0035	EN	98	35 00.28	164 59.02	GPS	5850	5825	854-876	23	LC	
30	W042	DRF	0046	/	/	34 59.99	164 58.99	GPS						Rg deployed
30	W043	ROS	03:55	BE	99	34 30.15	165 00.20		5719					Downcast
30	W043	ROS	05:10	BO	99	34 30.60	165 00.00			5819				
30	W043	ROS	05:11	BE	100	34 30.61	165 00.01				877-899	23		Upcast
30	W043	ROS	07:16	EN	100	34 30.60	164 59.57							
30	W043	loop	0627	BE	/	34 30.88	165 00.05					1		
30	W044	ROS	11:10	BE	101	34 00.112	165 00.035	GPS			900-910	11		shallow cast 58483
30	W044	loop	11:15	BO	101	34 00.075	164 59.633	GPS		601	loop W044		MLS	
30	W044	ROS	11:21	BE	102	34 00.075	164 59.633	GPS						
30	W044	ROS	11:41	EN	102	34 00.02	164 59.54	GPS						End of shallow cast
30	W044	ROS	12:23	BE	103	33 59.920	164 59.395	GPS						Start Deep cast
30	W044	ROS	13:33	BO	103	33° 59' 52N	164° 59' 25S	GPS	5812	5794				
30	W044	ROS	13:33	BE	104	33° 59' 52N	164° 59' 25	GPS		5792	911-933	23		
30	W044	ROS	15:33	EN	104	33° 59' 33N	164° 56.7	GPS						
30	W045	ROS	19:06	BE	105	33 29.99	165 00.00	GPS	5850					
30	W045	loop	19:12	EN		33 29.78	165 00.01	GPS						wind 25-30
30	W045	ROS	20:26	BO	105	33 29.68	165 00.67	GPS		5978				

CAST TYPE -

BOT - bottle cast
CTD - ctd
MOR - mooringROS - 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 castDE - deployment time
MR - messenger release
RE - recover mooring

POSITION CODE -

RAD - RADAR
GPS - GLOBAL
LOR - LORAN

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR		MONTH				SHIP				CRUISE				PAGE		OF	
1994		SEPT + OCT															
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			
30	W045	ROS	2026	BE	106	33 29 68	165 00 68	GPS			945-967	23		deep cast			
30	W045	ROS	2221	EN	106	33 28 04	165 01 51	GPS		5978				Sorry			
30	W045	ROS	2251	BE	107	33 28 01	165 01 51	GPS			934-944	11		oops!! Down cast			
30	W045	ROS	2355	EN	107	33 25 52	165 01 94	GPS		2303 (33 27 52 - 165 01 60)				and upcast 1 File			
1	W046	ROS	03:11	BE	108	32 59.94	165 00.54	GPS	5680					Downcast			
1	W046	Loop	0422	BE	—	32 59.72	165 00.87	"									
1	W046	ROS	04:27	BO	108	32 59.75	165 00.88	"		5771.							
1	W046	ROS	04:27	BE	109	32 59.75	165 00.88				968-990	23					
1	W046	ROS	0631	EN	109	32 59.41	165 00.63										
1	W047	ROS	1043	BE	110	32 30 302	164 59 752	"						shallow cast			
1	W047	Loop	1038		—						Loop W047	1	210				
1	W047	ROS	1055	BO	110	32 30 281	164 59 568	GPS		602							
1	W047	ROS	1055	BE	111	32 30 281	164 59 568	GPS			991-1001	11		Start of upcast			
1	W047	ROS	11:16	EN	111	32 30 145	164 59 459	GPS									
1	W047	ROS	11:55	BE	112	32 29 515	164 59 368	GPS	5579					Start of deep cast.			
1	W047	ROS	1304	BO	112			GPS		5670							
1	W047	ROS	1307	BE	113	32 29 .13	164 58 72	GPS		5670	1002-1024	23		Start of up cast			
1	W047	ROS	1453	EN	113	32 28.32	164 59.25	GPS									

CAST TYPE -

BOT - bottle cast
CTD - ctd
MOR - mooringROS - 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 castDE - deployment time
MR - messenger release
RE - recover mooring

POSITION CODE -

RAD - RADAR
GPS - GLOBAL
LOR - LORAN

Bottle # 2 had the CTJ termination cable trapped in
the top of the bottle.

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR		MONTH		SHIP		CRUISE		PAGE		OF				
1994		Oct.				9403/1								
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
1	W048	ROS	1914	BE	114	31 59.88	164 59.75	GPS	5897			23		
1	W048	Loop	2033	EN		31 59.86	164 59.74	GPS						
1	W048	ROS	2032	BO	114	31 59.66	164 59.83	GPS		5986				
1	W048	ROS	2034	BE	115	31 59.67	164 59.84	GPS			1025-1047	23		Start of Upcast
1	W048	ROS	2234	EN	115	31 58.74	164 59.72	GPS						End of deep Cast
2	W049	ROS	02:06	BE	116	31 30.98	165 00.22	GPS	5885					Shallow Downcast
2	W049	Loop	0213	BE	—	31 30.19	165 00.36	"						5848
2	W049	ROS	02:20	BO	116	31 30.26	165 00.44	GPS		800				
2	W049	ROS	02:21	BE	117	31 30.26	165 00.44				1048-1058	11		Shallow Upcast
2	W049	ROS	02:43	EN	117	31 30.36	165 01.00	GPS						5848
2	W049	ROS	0317	BE	118	31 29.96	165 00.06	GPS	5844					Deep Downcast
2	W049	ROS	0429	BO	118	31 30.30	165 00.79			6003-				Rosette weight on bottom
2	W049	ROS	0429	BE	119	31 30.71	165 00.78				1059-1081	23		Upcast
2	W049	ROS	0637	EN	119	31 30.76	164 59.60							
2	W050	ROS	1013	BE	120	31 00.219	165 00.389	GPS	5706					
2	W050	Loop	1031								Loop W050	5	MLJ	
2	W050	ROS	1134	BO	120	31 01.58	165 00.508	GPS						
2	W050	ROS	1134	BE	121	31 01.58	165 00.508	GPS			1082-1104	23		Start up Cast

CAST TYPE -

BOT - bottle cast
CTD - ctd
MOR - mooringROS - 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 castDE - deployment time
MR - messenger release
RE - recover mooring

POSITION CODE -

RAD - RADAR
GPS - GLOBAL
LOR - LORAN

Notes

1.3 KN North current at station W050

1242 UTC 31 02 454 165 00 762

Also

Tension / Speed indicator locking up.

Dropping power off main outside unit will restore operation for awhile.

Lanter winch greased.

CTD cable reterminated. Communication & STD loss when splice resistance — ohms.
30 metres of cable also removed.

Cons #126 - is a test file!

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR		MONTH				SHIP				CRUISE				PAGE		OF	
1994		October								9403/1							
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			
2	W050	ROS	13:52	EN	121	31 02 270	165 01 412	GPS						Upcast (1.3K+ North curved)			
2	W051	ROS	17:55	BE	122	30 30.19	165 00.04	GPS	5433					Down cast - shallow			
2	W051	LOOP	1744	BE	—	30° 30.26	164° 59.96	GPS						Down at 1m/sec to mooring structure?			
2	W051	ROS	1750	BO	122	30 30.23	164 59.97							Ship drift 1.2 knots			
2	W051	ROS	1750	BE	123	30 30.23	164 59.98				1105-1115	11					
	W051	ROS	1814	EN	123	30 30.02	164 59.97							SHALLOW CAST UP (REEL NOT WETTED)			
	W051	ROS	1843	BE	124	30 30.51	164 59.89							Downcast			
	W051		2002	BO	124	30 30.79	165 00.27										
	W051		2002	BE	125	30 30.79	165 00.27			5520	1116-1138	23		upcast deep			
	W051		2149	EN	125	30 30.93	165 01.29										
3	W052	ROS	04:05	BE	127	30 00.13	164 59.97	GPS	5423					Downcast			
3	W052	ROS	05:17	BO	127	30 00.40	164 59.875										
3	W052	USW		BE	—												
3	W052	ROS	05:17	BE	128	30 00.40	164° 59.87			5519	1139-1161	21		2 bottles not closed.			
3	W052	ROS	0721	EN	128	30 00.96	164 59.06										
3	W052	LOOP	01:47	BE	—	30 00 40	164 59.06	GPS					MLJ				
3	W053	ROS	11:08	BE	129	29 30.23	164 59.72							Shallow Cast			
3	W053	LOOP	11:19	BO	129	29 30 27	164 59 67	GPS	5419				MLJ				

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

130 1119 BE 29 30.27 16459.67

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR			MONTH			SHIP				CRUISE					PAGE	OF
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		
3	W053	ROS	1141	EN	130	29 30.47	164 59.46	GPS			1162-1172	11	fr	End of shallow Cast		
3	W053	ROS	1204	BE	131	29 30.72	164 59.36	GPS	5417	5526			fr	Downcast		
3	W053	ROS	1321	BO	131	29 31.51	164 59.21									
3	W053	ROS	1321	BE	132	29 31.505	164 59.21	GPS			1173-1195	23		upcast		
3	W053	ROS	1522	EN	132	29 32.65	164 59.00									
3	W054	ROS	1857	BE	133	29 00.03	164 59.77							Downcast		
3		Loop	1908	EN		29 00.11	164 59.65									
3		ROS	2012	BO	133	29 00.59	164 59.11									
3		ROS	2012	BE	134	29 00.60	164 59.11				1196-1218	23				
3	W054	ROS	2208	EN	134	29 02.18	164 58.62									
4	W055	Loop	0148			28 30.223	165 00.046	GPS	5341		Loop W055		mkj			
4	W055	ROS	0159	BE	135	28 30.44	165 00.098	GPS						Shallow Downcast		
4	W055	ROS	0215	BO	135	28 30.705	165 00.268	GPS								
4	W055	ROS	0223	BE	136	28 30.681	165 00.323				1219-1229	11		Shallow Upcast		
4	W055	ROS	0248	EN	136	28 30.88	164 59.94									
4	W055	ROS	0321	BE	137	28 29.96	165 00.01	GPS	5344					Deep Downcast		
4	W055	ROS	0455	BO	137	28 30.56	164 59.35							(P ₁₀₀ = 0.07 to -0.11 db)		
4	W055	ROS	0456	BE	138	28° 30.55	164 59.34			5429	1230-1252	23		Upcast		

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

W056

Cast was aborted at 1000 meters due to heavy loading (cycling) of the termination is 0 - 2000 lbs. (load cell.)

	Target	Actual	
Bottles were tripped at	1000	974	No current first try.
	800	820	
	600	644	
	500	534	
	400	436	
	300	334	
	200	231	
	100	130	
	50	82	

Thermometer data would not be good, did not stop at bottle depths.

Chief Scientist notified at 01:55 Loc. We were told to proceed to the next station W057.

W057 -

Arrived in station in dark - hard to see. Decided to substitute CTD profile for water cast. CTD G connected up ok but when put in the water the probe voltage + current became erratic + the jack unit shut down. Mike Johnson, after some experimentation with connectors. Eventual conclusion was that the connector + CTD G was faulty, would require disassembly of CTD G to fix. Cast done to 3000 - with CTD 58453.

W058

replaced broken hose clamp on Bottle #2 on deep nozzle.

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
4		W055	ROS	0655	EN	138	28 31.10	164 57.76	GPS						
4		W056	ROS	1051	BE	139	27 59.992	164 59.922	GPS			1253-1261	9		
4		W056	Loop	1110								Loop W056		MS	Bo 1112 2800.46 164 59.46
4		W056	ROS	11:51	EN	139	28 00.30	164 58.89	GPS	5070	1000				Cast A22PT 1000 m
4		W057	CTD	1556	BE	140	27 30.72	164 58.60	GPS	5181					CTD cast - 58483
4		W057	Loop	1601	BE		27 30.76	164 58.46							Run cns
4		W057	CTD	1637	BO	140	27 30.73	164 58.54	GPS		2900				Up cast
4		W057	CTD	1637	BE	141	27 30.73	164 58.6	GPS	5050					
4		W057	CTD	1717	EN	141	27 31.41	164 58.73							
4		W058	ROS	2103	BE	142	27 00.51	164 59.65		4820					Rosette lowered with ship
4		W058	ROS	2218	BO	142	27 01 000	164 58.99							speed of 1-1 1/2 knots.
4		W058	ROS	2217	BE	143	27 01 00	164 59.99				1262-1284	23		Up cast
4		W058	ROS	2354	EN	143	27 02 856	164 57 900							
4		W058	Loop	2105	BE		27 00.51	164 59.65							
5		W059	ROS	03:58	BE	144	26 29.96	165 00.00		4757					Downcast (shallow)
5		W059	ROS	04:09	BO	144	26 30.07	165 00.19			600				
5		W059	Loop	04:00	BE		26 29.95	165 00.092				Loop W059	1		
5		W059	ROS	04:09	BE	145	26 30.07	165 00.19				1285-1295	11		Up cast (Shallow)

CAST TYPE -

BOT -

CTD -

MOR -

bottle cast

ctd

mooring

ROS -

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 cast

DE -

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		
1994	Oct			J. P. TULLY			9403							
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
5	W059	ROS	04:26	EN	145	26 30.12	165 00.45	GPS						Shallow Upcast
5	W059	ROS	04:48	BE	146	26° 30.15	165° 00.62	GPS	4760					Deep Down Cast DRY CELL ON W059 CTD
5	W059	ROS	0559	BO	146	26 30.40	165 00.64			4803				
5	W059	ROS	0559	BE	147	26 30.39	165 00.63				1296-1318	23		Deep Upcast
5	W059	ROS	0742	EN	147	26 30.30	165 00.71							Touched Bottom!
5	W060	ROS	1102	BE	148	25 59 700	165 00 352	GPS	4665					Note Station ID is not changed 70 should be W060 in File. *Corrected by DJS*
5	W060	ROS	1215	BO	148	26 58 27	165 01 73	GPS						
5	W060	Log	11:10	BE	—						Loop W060	1	MJ	
5	W060	ROS	12:16	BE	149	25 58 32	165 01 72	GPS			1319-1341	23		Upcast
5	W060	ROS	1357	EN	149	25° 54.73	165° 01.9	GPS						Tuliz, + Steph Courtney
5	W060	DRF	1403	BE	—	25° 57.63	165° 02.12	GPS						W060 BOTTLES
5	W061	ROS	1711	BE	150	25 30.16	164 59.70		4867					Downcast
5	W061	WOP	1730	BE	—	25 30.30	164 59.79							
5	W061	ROS	1815	BO	150	25 30 52	164 59.63							
5	W061	ROS	1815	BE	151	25 30 52	164 59.63				1342-1364	21		Upcast bottle # 23 not closed. sample # 1342
5	W061		1955	EN	151	25 31.81	164 59.76							
END → GO TO LOGBOOK (2)														

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

Shot 6060 - Touched Bottom - kink in cable, not unspooled

Reterminated cable to middle

Repaired winch Tension Readout

82

5 Oct

1350 Loc

Book (2) of 3

CRUISE
NUMBER

9403/1+2

DAILY LOG
INSTITUTE OF OCEAN SCIENCES
OCEAN PHYSICS

DATE

94-10-06 94-11-04

VESSEL

J.P. Tully

PROJECT

WOCE P15N
Leg 1 and 2

Captain: JOHN ANDERSON First Officer: _____
Second Officer: _____ Third Officer: PADY MURPHY

Cruise Participants / Agencies: _____

Scientific Personnel: Party Chief: JOHN GARRETT 4-8 A

Name	Watch	Cabin	Name	Watch	Cabin
<u>Dario Stucchi</u>	_____	<u>15</u>	<u>John Love</u>	<u>0-4</u>	<u>5</u>
<u>Frank Whitney</u>	<u>4-8</u>	<u>G</u>	<u>Bernard Minkley</u>	<u>8-12</u>	<u>E</u>
<u>Pavel Tishchenko</u>	<u>8-12</u>	<u>H</u>	<u>Ron Bellegay</u>	<u>8-12</u>	<u>C</u>
<u>Ruslan Chichkin</u>	<u>4-8</u>	<u>H</u>	<u>Tim Soular</u>	<u>4-8</u>	<u>C</u>
<u>Leo Rebelo</u>	<u>0-4</u>	<u>E</u>	<u>Reg Bigham</u>	<u>0-4</u>	<u>I</u>
<u>Galina Pavlova</u>	_____	<u>D</u>	<u>Lovise Timmermans</u>	<u>0-4</u>	<u>F</u>
<u>Valerie Knight</u>	_____	<u>B</u>	<u>Mary Beth Beubé</u>	<u>8-12</u>	<u>up-fwd</u>
<u>Andreai Andreev</u>	_____	<u>G</u>	_____	_____	_____
<u>Linda White</u>	_____	<u>D</u>	_____	_____	_____
<u>Sarah Thornton</u>	_____	<u>F</u>	_____	_____	_____

Second leg of cruise: Party Chief: Howard Freeland

Name	Watch	Cabin	Name	Watch	Cabin
<u>Ron Perkins</u>	_____	<u>B</u>	<u>Tracey Feeney</u>	<u>8-12</u>	<u>G</u>
<u>Robin Brown</u>	<u>8-12</u>	<u>B</u>	<u>Rhianon Johnson</u>	_____	<u>H</u>
<u>John Love</u>	<u>12-4</u>	<u>5</u>	<u>Bob Wilson</u>	_____	<u>E</u>
<u>Bernard Minkley</u>	<u>8-12</u>	<u>E</u>	<u>Taimi Mulder</u>	<u>12-4</u>	<u>H</u>
<u>Kath Johnson</u>	_____	<u>E</u>	<u>Hugh Maclean</u>	<u>4-8</u>	<u>up-fwd</u>
<u>Marty Bevelaar</u>	_____	<u>D</u>	<u>Reg Bigham</u>	<u>4-8</u>	<u>I</u>
<u>Tanet - Bernell-Clarke</u>	_____	<u>F</u>	<u>Neil Sutcliffe</u>	<u>12-4</u>	<u>C</u>
<u>Mary - O'Brien</u>	_____	<u>F</u>	<u>Denny Swinton</u>	<u>8-12</u>	<u>C</u>
<u>Wendy Richardson</u>	_____	<u>15</u>	_____	_____	_____
<u>Carol Sclerit</u>	_____	<u>G</u>	_____	_____	_____

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.: _____
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: _____

Comments: _____

W063

line tension readout working but no line counter/speed.

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR		MONTH		SHIP		CRUISE		PAGE		OF				
1994		Oct.				9403/1								
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
5	W062	Loop	2353			25 00.320	164 59.912	GPS	4965		Loop W062		MIC	
5	W062	ROS	2354	BE	152	25 00.131	164 59.947	↓						Downcast
6	W062	ROS	01:00	BO	152	25°00.39	164 59.72							
6	W062	ROS	01:00	BE	153	25°00.39	164 59.72			5040	1365-1387	23		Upcast
6	W062	ROS	02:31	EN	153	25°00.91N	164 59.74							
6	W063	ROS	0651	BE	154	24 29.96	165 00.10		4906				Bm	Downcast
6	W063	Loop	07:12	BE		24 29.89	165.00 05	GPS					MSEB	
6	W063	ROS	0802	BO	154	24 30 03	165 00 04	GPS		4982				
6	W063	ROS	0803	BE	155	24 30 03	165 00 04	GPS			1388-1410	23		upcast
6	W063	ROS	0951	EN	155	24 30 327	164 59 182	GPS						
6	W064	ROS	1404	BE	156	23°59.70	164°59.81							Downcast
6	W064	Loop	1403			23 59.710	164 59.823	GPS	4349		Loop W064		MIC	
6	W064	ROS	1503	BO	156	23 59.29	164 59.92							
6	W064	ROS	1504	BE	157	23°59'30	164°59.94	GPS		4360	1411-1433	23		Upcast
6	W064	ROS	1656	EN	157	23°58.85	165°00.82	GPS						
6	W065	ROS	2008	BE	158	23 30.05	165 18.87		4077					
6	W065	Loop	2026	EN		23 30.29	165 19.06							
6	W065	ROS	21:10	BO	158	23 31 12	165 19 52							

CAST TYPE -

BOT -

bottle cast

ROS -

rosette

USW -

sea water loop

TIME CODE -

BE

beginning time of cast

DE

end time of cast

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

checked Lantec hydraulic oil filter, could see no reason for unit leaking. 7/8" cork gasket made
as backup to O-ring seal.
changed air filter.

W066 no temperature data for oxygen flask. Sensor failure.

Rosette "Top" removed and cleaned by John Lone.

W068 armed Rosette on deck and triggered bottles with CTD program. All bottles fired properly.

DAILY LOG

OCEAN PHYSICS

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1994		OCT		TULLY		9403								
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
6	W065	ROS	21:10	BE	159	23 31 13	165 19 53	GPS			1434-1456	23		
6	W065	ROS	23 00	EN	159	23 30 49	165 18 97	GPS						4.074 #16.
7	W066	ROS	03:13	BE	160	22 55.077	165 28.005		4740					Downcast
7	W066	Loop	0330	BE	—	22 55.02	165 27.79					1		
7	W066	ROS	04:17	BO	160	22 54.84	165 27.57			4809				
7	W066	ROS	04:17	BE	161	22 54.847	165 27.570				1457-1479	22		Marker #23 open.
7	W066	ROS	05:55	EN	161	22° 54.52	165 27.36							
7	W067	ROS	0848	BE	162	22 30 01	165 33 93		4664					
7	W067	Loop	0858	BE		22:30.04	165° 34.05					MEB		
7	W067	ROS	0951	BO	162	22 30 06	165 33 78			4718				
7	W067	ROS	0951	BE	163	22 30 06	165 33 78				1480-1502	23		
7	W067	ROS	11:59	EN	163	22 30 631	165 34 115							Upcast.
7	W068	ROS	1505	BE	164	21° 59' 209N	165° 42.190W		4624					Downcast
7	W068	Loop	1508	BE		21° 59' 209	165° 42.150W							
7	W068	ROS	1606	BO	164	21° 58.94	165° 41.90			4678				
7	W068	ROS	1606	BE	165	21° 58.94	165° 41.90			4678	1503-1522	20		Up cast
7	W068	ROS	1742	EN	165	21° 58.56	165° 41.36							3 b. 461 net trapped.
7	W069	ROS	20:22	BE	166	21° 30.00	165 49.75	V	4696					Downcast

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

Freeon cast.

Transmission reading of 400 - 1500 questionable.

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

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1994		OCT		TULLY		9403								
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
7	W069	ROS	21:25	BO	166	21° 30.50N	165° 50.34W	GPS	4696	4775				
7	W069	ROS	21:25	BE	167	21° 30.50N	165° 50.34W				1523 - 1545	23		Upcast
7	W069	ROS	23:16	EN	167	21° 31.11N	165° 50.97W							
8	W070	ROS	02:58	BE	168	20° 53.942	165° 58.642W	GPS	4841					Shallow Downcast
8	W070	ROS	03:06	BO	168	20° 53.874	165° 58.734			500				58483
8	W070	ROS	03:07	BE	169	20° 53.852	165° 58.752				1546 - 1556	11		Upcast (Shallow)
8	W070	ROS	03:23	EN	169	20° 53.88	165° 58.96							
8	W070	ROS	03:44	BE	170	20° 53.944	165° 58.672		4843					Deep Downcast
8	W070	ROS	04:48	BO	170	20° 53.978	165° 59.604			4925				run on weight.
8	W070	ROS	04:48	BE	171	20° 53.979	165° 59.613				1557 - 1579	23		Deep Upcast
8	W070	ROS	06:35	EN	171	20° 53.92	166° 00.42							
8	W070	Loop	4:57	EN	—	20° 53.951	165° 59.68	GPS						Loop
8	Freeon	ROS	1843	BE	172	20° 59.27	164° 01.77		4905					Downcast to 1500m
		ROS	1907	BO	172	20° 59.50	164° 01.98			1501				with 11 bottle rosette
		ROS	1907	BE	173	20° 59.51	164° 01.98				1580 - 1590			Upcast with 58483
		ROS	1933	EN	173	20° 59.63	164° 02.17							
		ROS	1952	BE	174	20° 59.81	164° 02.33							Downcast with 23 bottle ros
	Freeon	ROS	2014	BO	174	20° 59.93	164° 02.51			1507				+ W06E CTD

CAST TYPE -

BOT -

bottle cast
ctd
mooring

ROS -

rosette
net haul
drifter

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

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

[illegible]

OCT 15 CAST 'X' (NEWS) 1 MISS TRIA @ 100 m RETRIAPED BOTTLE WORKED FINE / 17 BOTTLES TRIGGERED WHEN ON DECK / CTD LOG WILL SHOW 18 TRIGGERED

17 OCT. Shallow Rosette. Changed transmissometer s/n 190 D to 180 D.

Tested Para-gum water meter	CR = .00554
	.00553
multi-Q	.00000
log meter	.01168
	.01168

18 OCT CAST W071 ABORTED @ 145 m C CELL READS 2.68 SAL - 78 PARTS BACK ON DECK @ 1540 UTC

16 OCT 12:45 underway to W072 (two casts) - small rosette in place - during 0182/0183 we had power failure to CTD when the CTD was near the surface - Ron P to inspect E/O connector.

START OF LEG 2

Next sample 1637

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR	MONTH		SHIP		CRUISE				PAGE		OF			
1994	October		SP Tully		9403/2									
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
16	X	ROS	0113	BE	180	21 11.09	158 32.28	GPS	2930					listed as NEWS
16		ROS	0159	BO	180	21 10.76	158 32.79	GPS	-					pressure at bottom = 2955 d bar.
16		ROS	0159	BE	181	21 10.77	158 32.79	GPS		2955	1637-1653	17	RMB	up cast at stn X DEEP SAMPLE = 1637 SHALLOW = 1653
16		ROS	0304	EN	181	21 10.48	158 33.23	GPS						
16		LOOP	0219	EN	-	21 10.696	158 32.882	GPS						salinity, nutrients and chl.
18	W071	ROS	16:06	BE	182	20 30.265	166 05.181	GPS	4886				HM	1 ST CAST ABORTED single profile with BIG R.
18		LOOP	16:26	BE	-	20 30.531	166 05.166	GPS						SALIN, NUTS, CHL
18		ROS	17:15	BO	182	20 31.50	166 05.12	GPS		4924			11.11	DOWNCAST
18		ROS	17:15	BO	183	20 31.51	166 05.12	GPS			1654-1676	23		UPCAST rain squall - wind.
18		ROS	19:17	EN	183	20 31.80	166 04.91	GPS						23 bottle drops confirmed Bottle Count Correct (at 2750) no sample
	W072	ROS	23:38	BE	184	20 00.27	166 12.02	GPS	5094					Down cast
	W072	ROS	23:57	BO	184	20 00.74	166 12.02	GPS						
19	W072	LOOP	00:35			20 00.002	166 11.356	GPS						
18	W072	ROS	23:57	BE	185	20 00.74	166 12.05	GPS			1677-1687	11		
19	W072	ROS	00:32	EN	185	20 00.98	166 11.34	GPS						
19	W072	ROS	0114	BE	186	20 01.02	166 11.87	GPS						
19	W072	ROS	0223	BO	186	20 01.537	166 11.827	GPS		5142				
	W072	ROS	0223	BE	187	20 01.52	166 11.83	GPS			1688-1705	18		Deep upcast

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

Oct 13 1994

Start of second leg of WOCE 94

(9403/2)

Oct 12 - installed new wires on heave compensation system - 6X36 Constr.

they appear to be 12-18" shorter than the original pair, which will reduce the compensation by the same amount.

Oct 13 - replaced the top hose clamps on the outboard nitrocan bottles - deep wetsette.

- checked the wire on the small electric winch - OK.

- 17:55 UTC - shut down SAIL recording system - logging on TULLY SAILOR

LOGICAL cruise ID was TUL9424901

- reset PC clock eg. PC System Clock.

Oct 13

18:40:00

UTC

17:58:30

PC system clock was 46.5 minutes fast.

- backed up TUL24401 and TUL24901 files to floppies.

(notes: both sets gave DATA ERROR reading C2 so there may be some problems on the disk.)

- 21:30 UTC start up logging SAIL data on TULLY SAILOR 87% free.

(notes: CTF module output is not good. - Bernard and John have exchanged module and had no calibration constants, so they did not work about inputting calibration constants. RMB)

Oct 14/94 KKXX message generated from HBR files 94030099.402 -179

- Ron looked at HDR files and they are very clean - even SAIL profile is spiky

- *** HDR files have NREC = NREC for ACQ files so some programs will crash with arrays too large

- we used FRACFURE @ 2000 m to reset sec NREC. PISN.B.LIS

KKXX

- ran KKX from AUG file option (no disp. plot) with file list = ~~KKX2.HIS~~ output file = PISN.B.KKX
for stations: 94030097 → 94030172 35.0 N → 21.0 N.

October 15/94 KKXX messages upload to VAX (PISN.B.KKX) and emailed to JOE, RMBROWN, KEELIN, MENARD

OCT 19/94 0800 UTC ~~W073~~ target for diploteris cast 200 m for shallow cast.

W074 Deep rosette cast cancelled due to weather.

W075 -18° 30' N

W072 sample 1699 (METHANE) SAMPLE BOTTLE BROKEN
or Methane samples from this station were left in the lab - moved to cooler
OCT 21/94 19:52 UTC RMB

W075 ROS 2253 BE 1830.16 14634.89 cast started at 331. db.

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR		MONTH		SHIP		CRUISE		PAGE		OF				
1994		OCTOBER		J. P. TULLY		94-03 WOCE LEG 2								
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	W072	ROS	03:59	EN	187	20 03.19	166 13.35	GPS					Am.	ALL TRIALS COMPLETED
19	W073	ROS	0842	BE	188	19 30 07	166 19 78	"	5270				RMB	Shallow cast 50483
19	W073	ROS	0900	BD	188	19 30 06	166 19 60	"		1000				1706-1716
19	W073	ROS	0900	BE	189	19 30 06	166 19 61	"			1706-1716	11		
19	W073	ROS	0926	EN	189	19 30 00	166 19 28	"						
19	W073	ROS	0951	BE	190	19 30 14	166 19 08	"						Down cast (DEEP)
19	W073	Loop	0954	EN		19 30.13	166 19.03	"						
19	W073	ROS	11:00	BO	190	19 30 27	166 18 63	"						
19	W073	ROS	11:00	BE	191	19 30 26	166 18 63	"			1717-1736	20		UPcast
19	W073	ROS	13:04	EN	191	19 31 92	166 18 83	"		5354				
19	W074	ROS	17:39	BE	192	19 00.14	166 27.85		5466					DOWNCAST
19			17:57	BO	192	19 00.08	166 27.39			1000				
19			17:55	BE	193	19 00.08	166 27.39				1737-1747	11		UPCAST
19	W074	ROS	18:26	EN	193	19 00.08	166 26.67							ON DECK
19	W074	Loop	1849	EN		19 00.15	166 26.35							
19	W075	ROS	2308	BO	194	18 30.21	166 34.92							ABORT CAST @ 300m
19	W075	CTD	2335	BE	195	18 30 090	166 34 390							CTD ONLY CTD 6
20	W075	CTD	0041	EN	195	18 30 36	166 33 73							

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

W078 we had problems with the ping (sounder) signal so we stopped at 5300 dbar which was probably about 200 m off the bottom.
Trying to place a sample bottle in the salinity minimum @ ~ 450 m ship in sight!

Problems with wind operator headset during upcast.

Failed to put bottle in salinity minimum - we probably dropped below the actual minimum.

Oct 20 212 UTC After stn W078 we lowered the overboard block and removed the cables from the plate allowing the cable ends to rotate and relax, then re-fastened the cables, once the twist was relieved.

- There is a cooling water leak on the intake side of the heat exchanger. Engineers say they will fix it.
- After next cast will pull the diamond gear dog to check for wear.
- Leak fixed by 2nd Engineer (Red)

Oct 20
500 hrs
Local

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR		MONTH				SHIP				CRUISE				PAGE		OF	
1994		OCT								9403/2							
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	W075	CTD	0041	BE	196	18 30 37	166 33 72	GPS	5900	5000							
20	W075	CTD	1:42	EN	196	18 30 29	166 33 22	GPS									
20	W076	CTD	05:53	BE	197	18 00.02	166 42 789	GPS	5313	5000							
	W076	CTD	07:06	BO	197	18 00.22	166 41.33	GPS						CTD only - no bottle samples			
20	W076	CTD	07:06	BE	198	18 00 21	166 41 33	GPS		5000			RMB	CTD 350, above bottom. bottom of upcast.			
	W076	loop	07:14	BE	/	18 00.09	166 41.46	GPS									
20	W076	CTD	08:17	EN	198	17 59.60	166 41.54	GPS				0	RMB	upcast for W076 - no bottles CTD only			
20	W077	CTD	12:03	BE	200	17 29 717	166 50 983							CTD only			
20	W077	CTD	13:18	BO	200	17 28 924	166 50 519										
20	W077	CTD	13:19	BE	201	17 28 924	166 50 519							up cast.			
20	W077	CTD	14:17	EN	201	17 28 482	166 50 495										
20	W077	LOOP	1320	BE	/	17 28 778	166 50 587							loop ALK SAL CHLOR NUT TCO2			
20	W078	ROS	1758	BE	202	1659.82	166 58.25	GPS	5354				RMB	single 23 bottle slings 5300			
20	W078	ROS	1920	BO	202	1658.44	166 59.47			5290			RMB				
20	W078	LOOP	1937	BE	/	16:58.234	166 59.43	GPS					HOF	loop ALK SAL CHLOR NUT TCO2			
20	W078	ROS	1921	BE	203	1658.43	166 59.47				1748-1770	23	RMB	upcast for samples - 23 bottles			
20	W078	ROS	2133	EN	203	1658.80	166 58.75										
21	W079	ROS	00:58	BE	204	16 29 922	167 06 268		5390								

CAST TYPE -

BOT -

bottle cast

ROS -

rosette

LISW -

sea water loop

TIME CODE

BE

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				
1994		October				9403/2								
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
21	W079	ROS	0207	BO	204	1629.795	167 06.415	GPS		5342			f	
21	W079	Loop	0232			1629.687	167 06.490	GPS					f	Tco2 NOT MEAS SAG CHLOR
21	W079	ROS	0207	BE	205	1629.795	167 06.415	GPS			1771-1793	23		UPCAST
21	W079	ROS	0357	EN	205	16 28.94	167 06.66	GPS						END CAST
21	W080	ROS	0732	BE	206	15 59.69	167 13.23	GPS	4500				RUB	23 bottle riglets no freons
	W080	Loop	0812	EN		1559.58	167 13.69	GPS					RUB	
21	W080	ROS	0844	BO	206	15 59.60	167 14.01	GPS		4748			RUB	
21	W080	ROS	0844	BE	207	15 59.60	167 14.02	GPS			1794-1816	23	RUB	UPCAST - 23 bottles
21	W080	ROS	1025	EN	207	15 59.45	167 14.96	GPS					RUB	
21	W081	ROS	1332	BE	208	15 29.902	167 20.973	GPS	5100					
21	W081	ROS	1446	BO	208	15 29.474	167 21.967	GPS		5270				
21	W081	Loop	1350	BE		15 29.902	167 20.997	GPS						
21	W081	ROS	1446	BE	209	15 29.463	167 21.997	"			1817-1839	23		
21	W081	ROS	1651	EN	209	15 29.27	167 23.66	GPS						ENDCAST
21	W082	ROS	1959	BE	210	14 59.99	167 28.95	GPS	5200m					
	W082	Loop	2030	BE		14 59.93	167 29.79	GPS						
21	W082	ROS	2105	BO	210	14 59.93	167 29.79	GPS		5261				
21	W082	ROS	2105	BE	211	14 59.93	167 29.77	GPS			1840-1862	23		

CAST TYPE -

BOT -

bottle cast

ROS -

rosette

USW -

sea water loop

TIME CODE

BE

bottle

CAST TYPE -

BOT - bottle cast
CTD - ctd
MOR - mooringROS - 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 castDE - deployment time
MR - messenger release
RE - recover mooring

POSITION CODE -

RAD - RADAR
GPS - GLOBAL
LOR - LORAN

* ON CAST WØ 83 I TRIGGERED 5220th BOTTLE (#1) BEFORE I HIT ALT S THEREFORE 1st BOTTLE IS ON DOWNCAST
FILE AND #2 BOTTLE ON UPCAST IS #1 BOTTLE ON FILE - APPEARS ONLY 22 BOTTLES FIRED - NOT TRUE

W084- 1600 metres as we passed over plateau - I heard Paddy continue 1 mile south to find the
peak then return
still ~~increasing~~ decreasing slowly & 43.59.3 stopped. 1 n.m. south of p

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR		MONTH		SHIP		CRUISE		PAGE		OF				
1994		Oct.				9403/2								
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
21	W082	ROS	22:57	EN	211	15 00.15	167 30.76	GPS					RUB	mid up cast.
22	W083	ROS	02:15	BE	212	14 29 9.10	167 36 52	GPS	5137					changed computer date
22	W083	ROS	0322	BO	212	14 29.53	167 37.51	GPS		5221				* TRIGGERED BOTTOM BOTTLE EARLY
22	W083	LOOP	0240		—	14 29 6.48	167 36 9.84	GPS						
22	W083	ROS	0323	BE	213	14 29.51	167 37.53	GPS			1863-1885	23		upcast
22	W083	ROS	0502	EN	213	14 29.28	167 39 13	GPS						END CAST
22	W084	ROS	0818	BE	214	13 58.83	167 44.25		1581					
22	W084	LOOP	0911	BE	—	13 58.57	167 45.01	GPS		1573				
22	W084	ROS	0843	BO	214	13 58.70	167 44.61	GPS						
22	W084	ROS	0843	BE	215	13 58.70	167 44.61	GPS			1886-1901	16		upcast
22	W084	ROS	0923	EN	215	13 58.51	167 45.24	GPS						
22	W085	ROS	12:32	BE	216	13 29 57	167 52 22	GPS	5172					
22	W085	LOOP	12:53		—	13 29 58	167 52 27	GPS						SAL ALK CHLOR TCO2 C13 NUTS
22	W085	ROS	13:53	BO	216	13 29 30	167 52 73			5298				
22	W085	ROS	13:54	BE	217	13 29 30	167 52 73				1902-1924	23		upcast. Poor bottom did not get too close.
22	W085	ROS	15:48	EN	217	13 28.70	167 53.73							END CAST
22	W086	ROS	18:50	BE	218	13 00 01	167 59.16	GPS	5450					START CAST
22	W086	LOOP	19:18	BE	—	13 00.021N	167 58.97W	GPS						

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

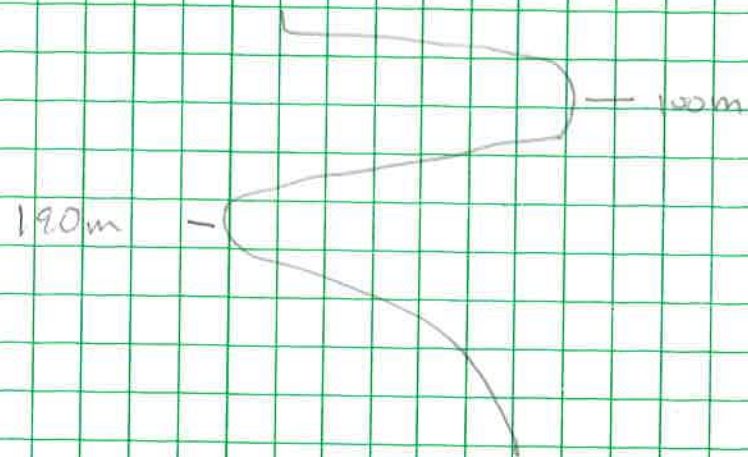
W086 - very weak bottom reflection from pinger and from sounds.
I think we got to about 50 miles from the bottom.

- crossover in CTD wire @ ~ 500 m - fix on the way down - next cast
- starboard swivel in heave comp. spun when load came off cable - DOES NOT spin under load.

W087 - Broken wires visible in Sbd. heave comp. wire. Possibly in port wire too.
BOTTLE 23 NOT CLOSED MISFIRE?

W088 - no sample 1970 (10 m) - bottle did not trip / close - no missing bottle is at depth.

SALINITY



- oil pressure / temp warning light on on ZANTEC wind - checked oil temp / LEVEL both are OK.

- stopped profile at 5400 metres → no trace from pinger reflection from the bottom was discernable

- some problems with bottle trips
 - 1 - current high but not confirmed
 - 1 - dud trip (no current).

W089 - MISFIRE ON BOTTLE # 11 (2000 m) DID NOT FIRE, CAME UP OPEN

PROBLEM WITH BOTTLES

2	DUD TRIPS (4500, 5000)
1	HIGH CURRENT BUT NO CONFIRM (200)

* new micro processor installed in RTL readout system Oct 23/94 01:00 LOCAL (12:00 UTC)

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR		MONTH		SHIP		CRUISE		PAGE		OF				
94		Oct.				9403/2								
DAY (UTC)	STATION ID	CAST TYPE	TIME (UTC)	TIME CODE	STD/HYDRO CONSEC #	LATITUDE N	LONGITUDE W	POSITION CODE	BOTTOM DEPTH (m)	MAX SAMPLING DEPTH (m)	CONSEC SAMPLE #	# OF BOTTLES	INIT	COMMENTS
22	W086	ROS	20:06	BO	218	12 59.91	167 59.15	GPS		5475				
22	W086	ROS	20:06	BE	219	12 59.91	167 59.16	GPS			1925-1947	23		
22	W086	ROS	21:51	EN	219	12 59.54	167 59.68	GPS					RM	
23	W087	ROS	01:08	BE	220	12 29.94	168 07.02	GPS						IN HEADER AS W086
23	W087	LOOP	01:20	BE	/	12 29.762	168 07.133	GPS						SAL, NUTS, CHL, ALK, TCO ₂ , CIB
23	W087	ROS	02:20	BO	220	12 29.49	168 07.07	GPS		5545				Crash over at 1000 going down.
23	W087	ROS	02:20	BE	221	12 29.35	168 07.30	GPS			1948-1969	22		UPCAST
23	W087	ROS	04:29	EN	221	12 28.56	168 08.12	GPS						no sample from 10m - END CAST
23	W088	ROS	07:27	BE	222	11 59.98	168 14.92	GPS	5420					
23	W088	LOOP	08:06	BE	/	11 59.765	168 15.013	GPS	116					
23	W088	ROS	08:43	BO	222	12 00.05	168 15.21	GPS		5400				end downcast
23	W088	ROS	08:44	BE	223	12 00.07	168 15.22	GPS			1970-1992	23		start upcast
23	W088	ROS	10:30	EN	223	12 01.03	168 15.38	GPS						end upcast
23	W089	ROS	13:43	BE	224	11 29.886	168 22.101	GPS	5109					
23	W089	ROS	14:47	BO	224	11 29.422	168 22.619			5174				
23	W089	LOOP	14:01	BE	/	11° 29.630'	168° 22.523'	GPS					TH	NUTS, CHL, SAL, TCO ₂ , CIB, ALK
23	W089	ROS	14:47	BE	225	11 29.42	168 22.62	GPS			1993-2015	23		Upcast
23	W089	ROS	16:47	EN	225	11 28.58	168 23.44	GPS						END UPGAST

CAST TYPE -

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

USW -

sea water loop

TIME CODE -

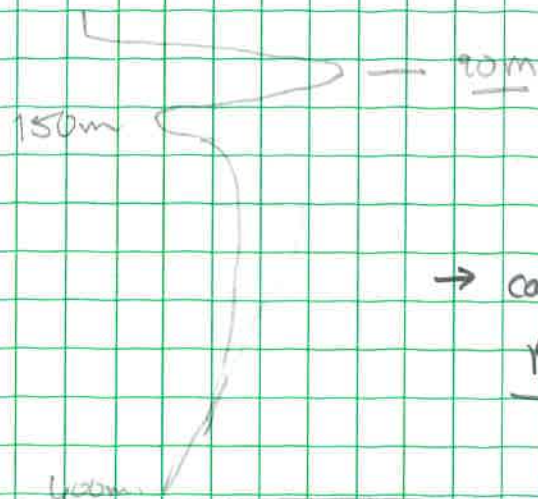
BE -
BO -
EN -beginning time of cast
bottom time of cast
end of castDE -
MR -
RE -deployment time
messenger release
recover mooring

POSITION CODE -

RAD -
GPS -
LOR -RADAR
GLOBAL
LORAN

W090 - tried to rescale T to 30 deg C and failed! set to 3000 deg C! -oops!

salinity trace:



- excellent bottom trace and pinger track on this st.

→ came up with 1 bottle not dropped (#23)
probable problem is deeper.

Bottle 2000 m (missed)

W091 - BOTTLE 23 DID NOT TRIGGER (ALL CONFIRMED, NO MISFIRES)
BOTTLE 17 (600m) NOT SEALED - DISCOVERED DURING FREON SAMPLING

- W092 - Drop TCO_2 samples in Teflon stoppers -
- move 50 bottle to 40 m to avoid glare
 - salinity VERY spiky from 50 m $\rightarrow$ 150 m
 - salinity minimum at 150 m.
 - Captain catches a squid on stn. (we were on station ... I guess the squid was too ... big mistake)
 - I watched bottle trips very closely - 2 false trips (no current, no trip confirm) were followed by correct trips - 25 trips listed in HJR file.
 - all bottles came up tripped and closed
-

King John and the Love Watch NEGLECTED to take methane samples at this station

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR	MONTH				SHIP				CRUISE				PAGE		OF
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	W090	ROS	19:48	BE	226	11 00.10	168 30.00	GPS	5420					2016-2038	
23	W090	ROS	20:56	BO	226	11 00.38	168 30.72	GPS		5498					
23	W090	ROS	20:56	BE	227	11 00.38	168 30.72	GPS			2016-2038	22		start up cast	
23	W090	LOOP	21:00	BE	—										
23	W090	ROS	22:40	EN	227	10 59.98	168 31.83	GPS						#23 top did not close.	
24	W091	ROS	01:46	BE	228	10 29.937	168 37.123	GPS	5399						
24	W091	LOOP	02:00	BE	—	10° 29.971'	168° 37.320'	GPS					TR	SAL, NUTS, CHL, TCO ₂ , CIB, ATR	
24	W091	ROS	03:04	BO	228	10 29.93	168 37.42	GPS		5480					
24	W091	ROS	03:04	BE	229	10 29.93	168 37.42	GPS			2039-2061	22,		UPCAST	
24	W091	ROS	04:48	EN	229	10 29.83	168 38.18	GPS						ENDCAST	
24	W092	ROS	08:00	BE	230	10 00.04	168 44.81	GPS	5230m	5300					
24	W092	LOOP	08:24	BE	—	10 00.41N	168 44.761	GPS						SAL, CHL, OIB, ATR, CIB, TCO ₂	
24	W092	ROS	09:06	BO	230	10 00.96	168 44.84	GPS							
24	W092	ROS	09:07	BE	231	10.00 97	168 44.84	GPS			2062-2084	23			
24	W092	ROS	10:48	EN	231	10.01 46	168 43.46	GPS							
24	W093	ROS	14:08	BE	232	09 29.82	168 44.924	GPS	5182						
24	W093	ROS	15:24	BO	232	09 29.275	168 45.35	GPS		5256					
24	W093	LOOP	1420	BE	—	09 29 652	168 44 944								

CAST TYPE -

BOT - bottle cast
CTD - ctd
MOR - mooringROS - 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 castDE - deployment time
MR - messenger release
RE - recover mooring

POSITION CODE -

RAD - RADAR
GPS - GLOBAL
LOR - LORAN

180 NEW = Y D:\9403\KKX*.HDD.

182 W071

186 W072 9403/

190 W073

192 W074 out put file should be

195 W075 P15N-C. KKX

197 W076

200 W077 P15N-C.FIL (input file file

202 W078

204 W079

206 W080 STEP 1: CLEAN (RESET NREC)

208 W081 ~~W081~~ W08 → CLN

210 W082 STEP 2: FRACTURE at 2000N.

212 W083 CLN → FR1, FR2

214 W084 0-2000 2000 - 19000

216 W085

218 W086 STEP 3: RESAC FROM MOR

220 W087

222 W088 lots of complaints about spikes

224 W089 in COND and SMINITY.

11°N 226 W090

same tolerance may be too high

P15N-C. KKX.

step 4 - Alternative.

KKX double from FR1 to .T

P15N-C. TST.

typical T & S tolerance .25.

17. FR2.

Sent

W093 - check location - should be $9^{\circ}30'N$ but comments / location give file as $10^{\circ}00'N$ RMB

* PROBLEM $\rightarrow$ GPS input routine screws up when there is only a single digit in degrees - eg 830.064 (any where south of $10^{\circ}N$). In the Acquisition program an error trap is set and the user must modify the ACTUAL POSN. string (insert a leading zero and input a trailing N).

every time the GPS updates the error occurs.

When the HDR file is written out, the LATITUDE2 field is incorrectly formatted

e.g. $92_9.12N$ $92\ 9.12N$
should be: $9\ 29.12N$

^{HDR}
The files need to be edited.

- W094 - before this station pinger was removed and replaced; rosette pylon connector removed, cleaned and re-greased
- bottom is irregular as we approach station.
 - METHANE samples that we forgotten at W092 collected here - relabelled and sequenced as W074 samples.
 - HASBERG drift bottle (originally labelled 12°N, but left off the list) was deployed @ 19:40 UTC
9° 00.9 N 168 44.98 W.

Conductivity Cell Maintenance

End of Leg 1 - acid wash

After 81 - acid wash
After 82 - acid wash

After 90 - turn off CTD

After cast 93 - soap + brush

Probe was turned off between casts, keeping the cell wet with Milli-Q water. By cast 81, probe had drifted so that it was reading high by .004 compared with the way it started.

The calibration returned to the original value. We started leaving the probe on between casts. The CTD started drifting low until, by Cast 90, it was .007 lower than it started. Stopped leaving the probe on. It began to slowly migrate back: .004 low by cast 93. John Dove brushed it out with soap. This seemed to move the CTD to a bit lower salinity (~.0015).

OCT 25 ~ 1900 - engineers changed pumps for SHIL - original pump seemed to be putting lots of air into the bulldozer into the loop & according to the Engineer, they switched to the UPPER pump from the LOWER pump

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR		MONTH		SHIP		CRUISE		PAGE		OF				
1994		Oct.				9403/2								
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
24	W093	ROS	1524	BE	233	09 29.276	168 45.35	GPS	5178		2085-2107	22		* check the header - station ID may be wrong UPCAST
24	W093	ROS	1705	EN	233	09 29.524	168 46.08	GPS						END CAST
24	W094	ROS	20.10	BE	234	08 59.95	168 44.98	GPS	4995		2108-2130			start downcast
24	W094	LOOP	20:20	BE	—	08 59.70	168 45.06	GPS						
24	W094	ROS	21.02	BO	234	08 59.72	168 45.24	GPS		5024				end downcast
24	W094	ROS	21:02	BE	235	08 59.71	168 45.25	GPS			2108-2130	23		start upcast
24	W094	ROS	22.42	EN	235	08 59.56	168 45.40	GPS					RMB	bottle tripping went well - rosette cable/connector cleaned prior to this cast
25	W095	ROS	0300	BE	236	08 30.07	168 45.14	GPS	4948					START Downcast
25	W095	LOOP	0318	BE	—	08 30.06	168 45.259	GPS						
25	W095	ROS	0407	BO	236	08 30.39	168 45.33	GPS		4956				END D.C.
25	W095	ROS	0408	BE	237	08 30.39	168 45.33	GPS			2131-2153	23		START U.C.
25	W095	ROS	0553	EN	237	08 30.40	168 45.85	GPS						END UPCAST
25	W096	ROS	0910	BE	238	08 00.11	168 44.74		5095				RMB	
	W096	Loop	09:34	BE	—	08 00.11	168 44.60	GPS						SAL CUL RUNS CO2 AIR OIB CB
25	W096	ROS	10:13	BO	238	08 00.27	168 44.19	GPS		5175				
25	W096	ROS	10:14	BE	239	08 00.279	168 44.19				2154-2174	21		
25	W096	ROS	1208	EN	239	08 00.663	168 43.306	GPS						
25	W096	DRF	09:01	DE	—	08 00.3	168 44.96	GPS						release BRINES drifter 8N

CAST TYPE -
BOT -
CTD -
MOR -

bottle cast
ctd
mooring

ROS -
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 cast

DE -
MR -
RE -

deployment time
messenger release
recover mooring

POSITION CODE -

RAD -
GPS -
LOR -

RADAR
GLOBAL
LORAN

Wp 93 - Bottle # 23 NOT TRIGGERED. ALL POWER SPIKES WITNESSED - 50m HAD POWER SPIKE BUT NOT CONFIRMED

Wp 96 Upcast bottle 22 and 23 not triggered all current and confirmation OK
SL

Rosette top plate removed, all trigger latches cleaned.

- 1/ Found some corrosion under bottle select mechanism. Reaction of stainless steel and aluminum housing. (Could be the problem.)
- 2/ Cleaned and reassembled rosette top plate.
- 3/ Set and fired all 23 bottles without problem.
Hope it works for you ! ! SLove.

Note All Wp 96 samples taken in heavy rain, may cause problems with samples.

- 22.11 Oct 85 - After W097, the termination was redone (Megadim - 150K-2). John Love also made two new cables from the rosette sample nylon. - shortened cable by 20-30 metres
- new termination = 50 M ohms
 - Station W096 ($\phi 242$) is first cast with new splice.

- 07.22 Oct 86 W099
- hard time picking up pinger bounce off bottom - 1st turned up at 150m, then faded in and out.
 - trawls / CAST mislabelled in log book. URCAST at W099 is $\phi 245$ not $\phi 246$ as Hugh outlined on log sheets - errors occur in Station W098
 - bottle 8 / 2780 too 4 dies on the 1st 3 dies the current went very high
 - I tripped bottle 12 on the fly at 1900 metres by mistake.
 - bottle #4 (nominally 4000m) pressure sensor indicates this sample taken at 3500m

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR		MONTH		SHIP		CRUISE		PAGE		OF				
1994		October				9403/2								
DAY (UTC)	STATION ID	CAST TYPE	TIME (UTC)	TIME CODE	STD/HYDRO CONSEC #	LATITUDE N	LONGITUDE W	POSITION CODE	BOTTOM DEPTH (m)	MAX SAMPLING DEPTH (m)	CONSEC SAMPLE #	# OF BOTTLES	INIT	COMMENTS
25	w097	ROS	1556	BE	240	07 29.85	168 44.60	GPS	5148					START DOWNCAST
25	w097	Loop	1612	BE		07 29.608	168 44.473	GPS						SALN/NUTS/CHL
25	w097	ROS	1659	BO	240	07 29.44	168 44.31	GPS		5240				END D.C.
25	w097	ROS	1700	BE	241	07 29.44	168 44.32	GPS			2177-2199	23		START U.C.
25	w097	ROS	1847	EN	241	07 29.15	168 44.05	GPS						END UPCAST
25	w097	DRF	1606	DE	-	07 29.731	168 44.483	GPS						HOREL DRIFTER
25	w098				242				5376					downcast after cable repair.
25	w098	DRF	2235	DE	-	07 00.21	168 44.96	GPS	5370					Phys McKinnon drifter
25	w098	DRF	2235	DE	-	07 00.21	168 44.46	GPS						Stephanie Liddle drifter
25	w098	DRF	2235	DE	-	07 00.21	168 44.46	GPS						Kristin Young drifter
25	w098	ROS	2310	BE	242	07 00.094	168 44.668	GPS	5369					consec # changed RMB
26	w098	ROS	00:30	BO	242	07 00.29	168 42.80	GPS		5306				0426/94 09:28 UTC
26	w098	ROS	0031	BE	243	07 00.29	168 42.80	GPS			2200-2222	23		UPCAST.
25	w098	Loop	2330	BE		07°00.167'N	168°43.837'W	GPS						NUTS, SAL, CHL, OIB, ALK, CO2
26	w098	ROS	0237	EN	243	06 59.611	168 41.36	GPS	* posn data updated from file	RMB				
26	w099	ROS	0605	BE	244	06 30.066	168 44.80	GPS	5400					
26	w099	Loop	0740	EN	-	06 30.21	168 43.57	GPS						SALN/NUTS/CHL
26	w099	ROS	0714	BO	244	06 30.177	168 43.80	GPS		5500				

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

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

WØ 97 - ROSSETE PIN WENT AROUND TO 0 (CTD POSITION) THEREFORE DOUBLE SAMPLE WAS TAKEN SOMEWHERE
AS ALL 23 BOTTLES TRIPPED. CHECK '2ND FIRINGS' DEPTHS

Changed splice. Cutoff approx 20m of wire and reterminated cable

Made a new cable for the Rosette (OLD one is OK),

Old splice had leakage approx 100K Ω . This should correct the
erratic Rosette tripping.

Current on the CTD deck unit after repair of splice is 100mA $\pm$ data bounce.

WB 99 see notes on previous page.

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR			MONTH			SHIP			CRUISE					PAGE		OF	
1994			OCTOBER			J.P. TULLY			94-03 PISN leg 2								
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	W099	ROS	0716	BE	245	06 30.18	168 43.80	GPS	5400	5306	2223-2245	23	RMD	upcast for sal			
26	W099	ROS	0908	EN	245	06 30.60	168 42.14	GPS						possible double trip - pointer indicate			
26	W100	ROS	1230	BE	246	06 00 046	168 44 916	GPS	5650								
26	W100	LOOP	1305	BE		06° 00.105'	168° 44.519'	GPS					TM	HUTS, SAL, CHL, C13, TCO ₂ , O18, ALK			
26	W100	ROS	1352	BO	246	06 00 209	168 44 222	GPS		5615							
26	W100	ROS	1352	BE	247	06 00 275	168 44 226	GPS									
26	W100	ROS	1555	EN	247	06 00.710	168 43.74	GPS			2246-2268	23		END UPCAST			
26	W101	ROS	1919	BE	248	05 29.978	168 44.82	GPS	5549					shallow cast - smt. rosette			
26	W101	ROS	1938	BO	248	05 29.798	168 44.64			1000							
26	W101	ROS	1938	BE	249	05 29.796	168 44.64										
26	W101	ROS	2007	EN	249	05 29.306	168 44.48				2292-2302	11		upcast			
26	W101	LOOP	2044	BE	—	05 28.68	168 44.36										
26	W101	ROS	2030	BE	250	05 28.894	168 44.38		5570								
26	W101	ROS	2148	BO	250	05 27.844	168 44.10			5695							
26	W101	ROS	2148	BE	251	05 27.839	168 44.10										
26	W101	ROS	2348	EN	251	05 26.441	168 43.47				2269-2291	22					
27	W102	ROS	0820	BE	252	04 59.90	168 44.87		5658					START DOWNCAST			
27	W102	LOOP	0841	BE	—	04 59.84	168 44.84	↓									

CAST TYPE -

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

USW - sea water loop

TIME CODE -

BE - beginning time of cast
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POSITION CODE -

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GPS - GLOBAL
LOR - LORAN

W100 BOTTLE # BLOODY 13 (1500m) DIDN'T BLOODY TRIP. ALL BOTTLES CONFIRMED ON PROGRAM. THE
ALMOST PERFECT BLOODY CAST - NEXT TIME FOR SURE

W101 - note: shallow cast (DONE FIRST) has bottles 2292 - 2302
deep cast (DONE SECOND) has bottles 2269 - 2291

after-W101 the CTD/Rosette were brought on deck and disassembled for inspection.
The Rosette pylon had some water in it (30-40mls?). The assembly was inspected and
reassembled.

When the rosette was separated from the metal frame (which also holds the CTD) it was noted
that current required to trip bottles was much lower.

The rosette pylon was reassembled and returned to the frame - problems with high current
during tripping and low confirmation remain.

Attempted to install CTD6 into rosette frame instead of WOCE CTD but there were cabling
problems. I also noted that the 24 bottle rosette deck unit has different Amphenol connectors
than the 12 bottle system.

Pending review of cabling requirements, installing CTD6 and the 24 bottle G.O. deck unit
are delayed. W102 done with WOCE CTD

W102 - stopped @ 5700 dbars (5670 m on sounder) could not see bottom - after
we started up, there was a faint bottom trace indicating that we were 70 m from
the bottom. Pinger reflection from the bottom was very weak.

All bottles appeared to have tripped correctly - pointer verified at position #23 on
completion. RMB

W103

shallow cast
deep cast.

- small rosette fired (advanced) but no red light came on.
- # 2343 (3750m?) - no sample - stopcock was open on retrieval.

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR		MONTH		SHIP		CRUISE		PAGE		OF				
1994		OCTOBER		J.P. Tully		94-03 Leg 2								
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
27	W102	ROS	0930	BO	252	04 59.67	168 44.67	GPS	5660	5701			RMB	very weak return from pinger off the bottom.
27	W102	ROS	0931	BE	253	04 56.67	168 44.68	↓			2303-2325	23	RMB	very heavy rainsqualls
27	W102	ROS	1139	EN	253	04 58.75	168 44.52	↓					RMB	end upcast.
27	W103	ROS	1443	BE	254	04 29.76	168 45.07	GPS						small rocket 50,483 to 1000m
27	W103	ROS	1455	BO	254	04 29.58	168 45.02	↓		1000.				
27	W103	ROS	1455	BE	255	04 29.58	168 45.01	↓			2326-2336	11		up cast 0-1000m
27	W103	ROS	1529	EN	255	04 29.27	168 44.99	GPS						END UP CAST
27	W103	LOOP	1450	BE		04°29.080	168°45.124	GPS	5000				TM	SAL, NUTS, CHL
27	W103	ROS	1611	BC	256	04 29.97	168 45.16	↓				21		DEEP CAST START
27	W103	ROS	1716	BO	256	04 29.67	168 45.09	↓		5005				END D.C.
27	W103	ROS	1716	BC	257	04 29.67	168 45.09	↓						START U.C.
27	W103	ROS	1848	EN	257	04 29.36	168 44.59	GPS		5005	2337-2357	21		END UP CAST
27	W104	ROS	2202	BE	258	04 00 16	168 44.80		5444.					
27	W104	LOOP	2320	BE		04° 00.426	168° 45.010	GPS					TM	SAL, CHL, NUTS, ALK, TCO2, C13, O18
27	W104	ROS	2301	BO	258	04 00 39S	168 44 94	GPS		5360				
27	W104	ROS	2301	BE	259	04 00 409	168 44 90	GPS			2358-2380	23		
28	W104	ROS	01:08	EN	259	04 00 796	168 45 140							

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

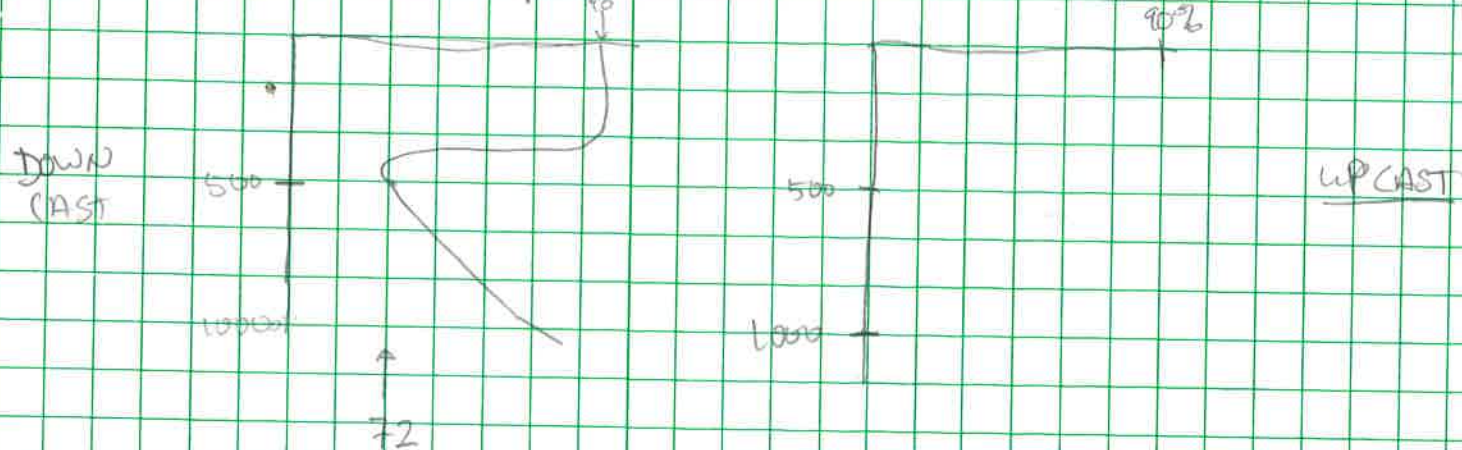
Cast 262: There was an "unloading event" at ~280m when the heave compensator hit the top of its travel. Cable should be examined.
W105

- W105:
- deep cast - pinged pickup up (weak) at B-400m but faded in and out
 - sequential file numbers need to be corrected / verified.
 - at end of cast a link was create in the end of the EIM cable - reterminator required
 - sequential cast # 262 NOT USED!
 - shark and squid around ship while on station.

Used New Termination Kit

Tom

W107 - transmissometer (s/n) suspect - I think it is measuring some function of internal temperature.



W107 - deep very weak ping signal. I think I stopped at 50m above the bottom.

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR		MONTH		SHIP		CRUISE						PAGE		OF	
1994		Oct.													
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	
28	W105	ROS	0435	BE	260	03 30.052	168 44.98	GPS	5450					START SHALLOW D CAST	
28	W105	ROS	0459	BO	260	03 29.96	168 44.96			798					
28	W105	ROS	0459	BE	261	03 29.96	168 44.96				2381-2391	11		START SHALLOW UPCAST	
28	W105	ROS	0526	EN	261	03 29.87	168 44.94	GPS						END SHALLOW CAST	
28	W105	ROS	0602	BE	263	03 29.78	168 44.87	GPS	5458					START DEEP DOWN CAST	
28	W105	Loop	0608	✓	—	03 29.790	168 44.856							SMLH/MLTS/CHL	
28	W105	ROS	0711	BO	263	03 29.63	168 44.79			5540			RMB		
28	W105	ROS	0711	BE	264	03 29.63	168 44.78						RMB	UPCAST from 5540 d Bar	
28	W105	ROS	0906	EN	264	03 29.72	168 45.00	GPS			2393-2414	23	RMB	2 bottles @ 1000m	
28	W106	ROS	1226	BE	265	03 00 066	168 45 124	GPS	5098				JL	START DEEP CAST	
28	W106	ROS	13:38	BO	265	03 00 452	168 45.746	GPS		5256					
28	W106	Loop	1306	BE		03° 00.251'	168° 45.535'	GPS						SAL, CHL, MLTS, ALK, CO2, O18, O13	
28	W106	ROS	13:38	BE	266	03 00 452	168 45 746	GPS			2415-2437	23		Up cast	
28	W106	ROS	15:37	EN	266	03 01 339	168 46.274	GPS					H re	END DEEP CAST	
28	W107	ROS	19:18	BE	267	02 30 141	168 45 00	GPS	5400				RMB	Start shallow cast	
28	W107	ROS	1933	BO	267	02 30 303	168 45 00			1000.			RMB	end shallow cast @ 1000m.	
28	W107	ROS	1934	BE	268	02 30 304	168 45 00				2438-2448	11	RMB	start upcast	
28	W107	ROS	20:07	EN	268	02 30 779	168 45 15						RMB	end upcast.	

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

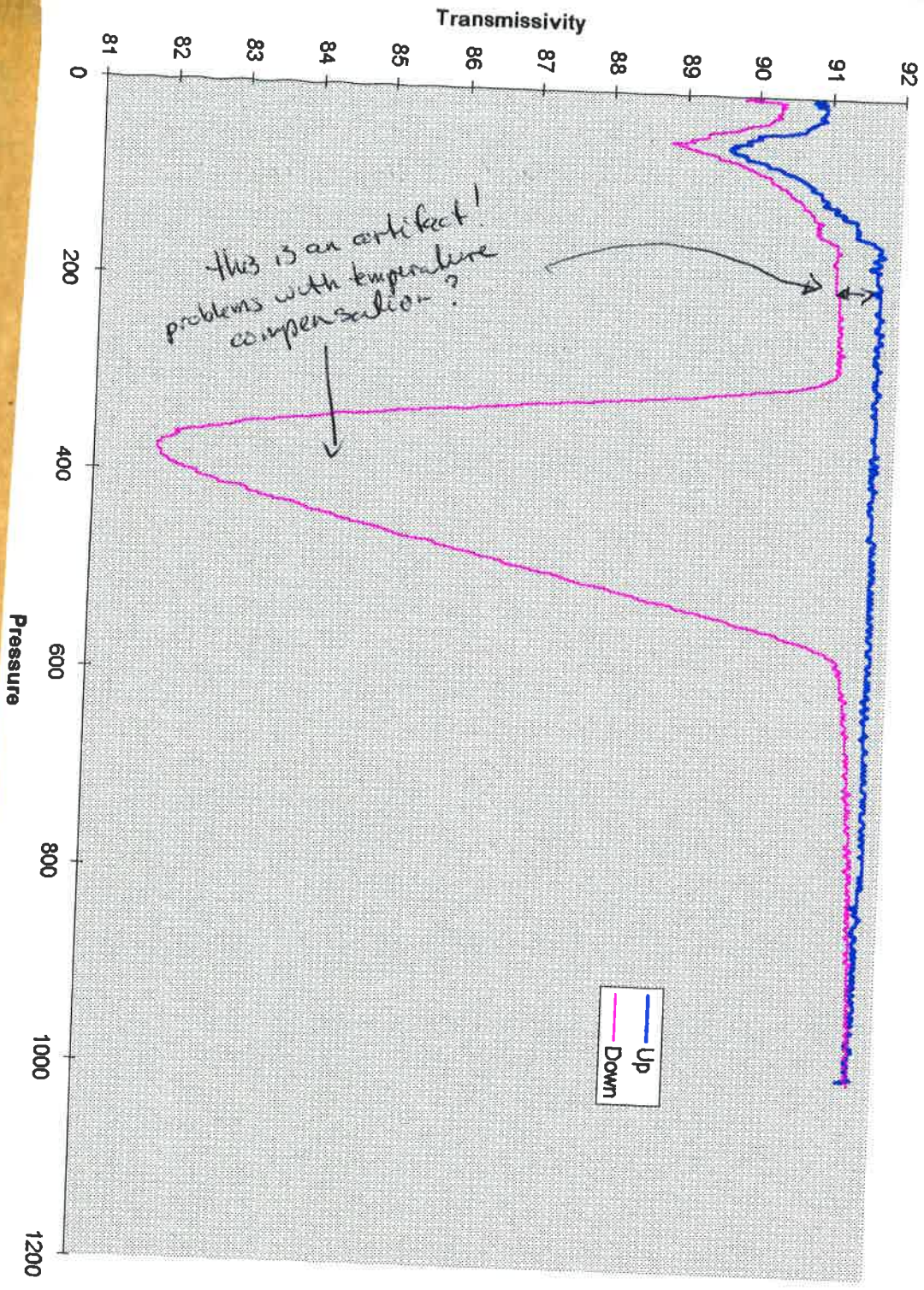
 DE - deployment time
 MR - messenger release
 RE - recover mooring

POSITION CODE -

 RAD - RADAR
 GPS - GLOBAL
 LOR - LORAN

xy what serial number is this?

Cast 261: Upcast Transmissivity at Stn. 103



Sta 107 Reversing Pressure Meter was taken off.

after W107

→ John removed rocket assembly refilled with oil, vacuum purged.

W108 1st attempt 271/272 Rocket triggering was extremely erratic.
- no confirmations (except 10+) on retrieval. only 13 + 13 were shipped.
inspected rocket; tested on deck (worked OK) did test cart to 200m -
everything worked fine -
no sensible explanation for this behaviour was advanced!
After test cast, all bottles with a normal current charging characteristics
were shipped, 26 bottles in all. No explanation exists for the erratic cast.

The WOCOR CTD deck unit was checked - the voltage fell from 144 to 138 while
triggering. The voltage regulator was boosted to 147V so that
the power supply delivered 140 volts when triggering. A high
current condition still occasionally resulted even though the
voltage was still "healthy". So the power supply regulation
was not related to the high current problem.
It was decided to switch to CTD6 and the 12 bottle GO deck unit in order
to separate CTD and pylon problems.

FILE 14030273 (downcast) 13 first file with CTD6

CTD 6 placed into 12 bottle rosette.

Because of problems with big rosette we are going to split the cast into two parts

Part A: Deep cast 5000 meters

Bottles	5000	—	1750	M
	1500	—	10	m

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR		MONTH		SHIP		CRUISE		PAGE		OF				
1994		OCTOBER		JP Tully		94-03 WOCE P15N Leg 2								
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
28	W107	ROS	20:34	BE	269	02 31.117	168 45.26	GPS	5401					start deep cast
28	W107	LOOP	20:55	BE	—	02 31.40	168 45.34	GPS						
28	W107	ROS	21:37	BO	269	02 31.743	168 45.48	GPS		5461				
28	W107	ROS	21:37	BE	270	02 31.743	168 45.48	GPS			2449-2469	22		Bottles 22+23 not closed.
28	W107	ROS	23:22	FN	270	02 32.599	168 45.83	GPS						
29	W108	ROS	03:17	BE	271	02 00.151	168 45.026	GPS		5404	2471-2493	23		START DEEP CAST
29	W108	ROS		BO	271									
29	W108	LOOP												
29	W108	ROS		BE	272									
29	W108	ROS		EN	272									
29	W108	ROS	09:14	BE	273	02 00.47	168 44.94		5419					changed to CTD6 on 23:511 rosette
29	W108	LOOP	09:31	BE	—	02:00.612	168 45.02	GPS						
29	W108	ROS	10:19	BO	273	02 00.81	168 45.31			5000				CTD6 limited to 5000m.
29	W108	ROS	10:23	BE	274	02 00.84	168 45.36							
29	W108	ROS	11:56	FN	274	02 01.32	168 46.05				2471-2493	0		no samples taken.
29	W108	ROS	12:55	BE	275	01 59.90	168 45.11	GPS						START DEEP CAST
29	W108	ROS	14:00	BO	275	02 00.33	168 45.652	GPS		5002.				Bottom
29	W108		14:00	BE	276	02 00.34	168 45.65				2471-2481	11		START UP CAST

CAST TYPE -

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

BOOK 3 → ↓ CTD

- W110
- problems shipping bottles at 5400, 5000, 4500, 4000 (4 bottles) no confirmation
 - other bottles shipped ok but rosette was 6 samples short → there are additional missing samples
 - 18 samples MISSED - please take these at W111 ~~Run~~
 - following W110 - Rosette disassemble for servicing **AGAIN!!!**

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR		MONTH		SHIP		CRUISE								PAGE	OF
1994		October													
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	
29	W108	ROS	1533	EN	276	0200.90	168 46.06	GPS						END DEEP CAST (5000-1750)	
29	W108	ROS	1649	BE	277	02 00 124	168 45.122	GPS	5390					START SHALLOW CAST	
29	W108	ROS	1713	BO	277	02 00.37	168 45.32	GPS		1498					
29	W108	ROS	1713	BE	278	02 00.38	168 45.32	GPS			2482-2492	11			
29	W108	ROS	1748	EN	278	02 00.65	168 45.47	GPS						END SHALLOW CAST	
29	W109	ROS	2107	BE	279	NO CAST: MOUNTED WORK CTD + REFURBISHED								shallow cast CTD / 11 BH route	
						PYLON ON 24 BOTTLE ROSETTE								DATA ERROR - ABORT	
29	W109	ROS	2244	BE	279	01 31.12	168 45.94		5373					WORK CTD on 23 bottle rosette.	
29	W109	LOOP	2258	BE	—	01 31.29	168 45.73	GPS							
29	W109	ROS	2345	BO	279	01 31 734	168 45942	GPS		5456					
29	W109	ROS	2345	BE	280	01 31 739	168 45 96	GPS			2494-2509	16		no sample 2510 & 2516	
30	W109	ROS	0141	EN	280	01 32 933	168 46 51	GPS						END CAST	
30	W110	ROS	0523	BE	281	01 00 082	168 45 040	GPS	5340					START DEEP CAST	
30	W110	LOOP	0639	—	—	01 00 563	168 45 192	GPS						SACK / NUTS / CHL	
30	W110	ROS	0630	BO	281	01 00.519	168 45.16	GPS		5443					
30	W110	ROS	0630	BE	282	01 00.522	168 45.16	GPS							
30	W110	ROS	0637	EN	282	01 01.034	168 45.63	GPS			2517-2539	17		6 bottles not dropped	
						— disassemble Rosette for servicing.									

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

W168 SHALLOW CAST - SALIN CELL WENT WOLLY A FEW TIMES - STOPPED DOWNCAST CAME UP 5m AND THIS SEEMED TO CLEAR THE PROBLEM

SHALLOW CAST - BOTTLE 10 DIDN'T TRIGGER - CENTER PIN IN POSITION #9 - BUT WAS SET CORRECTLY @ BEGINNING OF CAST (CTD POS.)

24:00 MVS Rosette repair Sunday 30th October.

1/ Use GO deck unit to fire pylon in lab at room temperature. works OK

2/ Place pylon in deep freeze to cool down test fire
Every 5 min Result. Pylon Temp °C

00:05	OK	28.6
00:10	OK	20.1
00:15	OK	16.9
00:20	OK	12.7
00:25	OK	8.9
00:30	OK	7.4
00:35	OK	5.3
00:40	OK	3.7
00:45	OK	1.9
00:50	OK	0.3
00:55	OK	-1.1
01:00	OK	-2.7
01:05	OK	-4.1
01:10	OK	-5.3
01:15	OK	-6.5
01:20	OK	-7.6

Thermocouple attached to pylon frame.
Not a good connection but OK for a rough check of Pylon temperature.

Removed from freezer when pylon body reached -8.6 °C.

Note Not a temperature Problem

Stepper motor cleaned no problem with it. Cannot hold with fingers when it steps.

Changed O-ring on latch bore seal. it was very tight and may have caused problem under pressure.

OCT 30 2030h

sent KKK files to MENARD; KEELEY; RMBROWN; JOE
W091 (10°30'N) → W108 (02°00'N) sig # 228 - 271.

- processing steps:
- ① CLEAN HDR files
 - ② FRACTURE at 2000 m
 - ③ PLOT (lots of spikes)
 - ④ DESPIKE
 - ⑤ PLOT - some spikes remain
 - ⑥ EDIT - some cleaning; mostly Filter Block (5 → 7 points)
 - ⑦ convert to KKK.

typically SNL and TEMP tolerances were increased to 0.3 to get 20 points in 2000 m.

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR		MONTH				SHIP				CRUISE				PAGE		OF	
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		
30	W111	ROS	1532	BE	283		00 29.84	168 45.24	GPS	5460					START DOWN CAST		
30	W111	ROS	1642	BO	283		00 29.34	168 45.65									
30	W111	ROS	1642	BE	284		00 29.34	168 45.65				2540-2562	23				
30	W111	LOOP	1652		—		00 29.340	168 45.642							SALN/NOTS/CHL		
30	W111	ROS	1841	EN	284		00 28.76	168 46.33									
30	W111	DRF	1830	DRF			00° 29.812'	168° 45.233'	GPS						GERBER DRIFTER OVER		
30	—	XBT	2010				00 12.6	168 45.6		among other types entered...					XBT #19 30.6		
30	W112	ROS	2141	BE	285		00 00.78	168 44.97		5550		2563-2585			2551 rosette deployed at the equator.		
30	W112	LOOP	2158	BE	—		00 00.187N	168 45.04	GPS						SAL NOTS/ALK TCO2 C13		
30	W112	ROS	2245	BO	285		00 00.54S	168 45 34W	GPS		5642						
30	W112	ROS	2246	BE	286		00 00.58S	168 45 33W	GPS		5642						
31	W112	ROS	00:33	EN	286		00 01 33S	168 45 73W	GPS			2563-2585	23				
31	W113	ROS	1550	BE	287		00 30.35	168 45 25	GPS						Shallow Cast + 1000m		
31	W113	ROS	1611	BO	287		00 30.66	168 45 44	GPS		1000.						
31	W113	ROS	1611	BE	288		00 30.67	168 45 44	GPS			2586-2596	11				
31	W113	ROS	1641	EN	289		00 31.04	168 45.47	GPS						END SHALLOW CAST		
31	W113	ROS	1724	BE	289		00 30.17 S	168 45.06	GPS			2597-2618	22		START DEEP CAST		
31	W113	LOOP	1745	—	—		00 30 65	168 45 15	GPS						SALN/NOTS/CHL		

CAST TYPE -

BOT -

bottle cast

ROS -

rosette

USW -

sea water loop

TIME CODE -

BE -

beginning time of cast

DE -

depth

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				
1994		October/Nov				9403/2								
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
31	W113	ROS	1833	BO	289	00 31.016 S	168 45.398	GPS	5440	5530	2397-2618	22		
31	W113	ROS	1834	BE	290	00 31.055	168 45.37	GPS	5550					
31	W113	ROS	2019	EN	290	00 31.99 S	168 45.86	GPS						END DEEP CAST
31		XBT	2136	BE		00 45.45	168 45.33		4780					XBT #20 R ₂₀ 30.6
31		XBT	2142	BE		00 45.43	168 45.28							XBT #21 29.74
31	W114	ROS	2311	BE	291	01 00 028	168 44 993	GPS	5774					CTD ON 5 MIN BEFORE CAST
1	W114	ROS	0019	BO	291	01 00 551	168 44 960			5889				
1	W114	ROS	0020	BE	292	01 00 551	168 44 960				2620-2642	23		
1	W114	WOP	0105	BE		01 00.710'S	168° 44.873'	GPS						NUTS, SAL, ALK, CHL, C13, CO2
1	W114	ROS	0229	EN	292	01 01 505	168 44 893							END CAST
1	W115	ROS	0521	BE	293	01 30.27	168 45.01	GPS	6040		2643-2665	23		START DEEP CAST
1	W115	LOOP	0537	BG		01 30.411	168 45.041	GPS						SALN/NUTS/CHL
1	W115	ROS	0635	BO	293	01 30.91	168 45.11	GPS		6000				
1	W115	ROS	0836	EN	293	01 31.85	168 45.19							
1	W115				294	not used		GPS						upcast on # 293,
1	W115	ROS	0901	BE	295	01 32.341	168 45.143	GPS						begin downcast
1	W115	ROS	0916	BO	295	01 32.55	168 45.11	GPS		1001				2nd bottle trip was not a true 200 by mistake
1	W115	ROS	0919	BE	296	01 32.60	168 45.13	GPS			2666-2676	11		

CAST TYPE -

BOT -
CTD -
MOR -bottle cast
ctd
mooringROS -
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 castDE -
MR -
RE -deployment time
messenger release
recover mooring

POSITION CODE -

RAD -
GPS -
LOR -RADAR
GLOBAL
LORAN

Bottom shallowed very fast from 6000 to 3000m

Will adjust bottles for Deep Sampling

Noted a salinity shift at 730m

- W117 - Bernard Minkley serviced (greased) LANTEC winch.

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR		MONTH		SHIP		CRUISE		PAGE		OF				
1994		November		J.P. Tully		94-03 Leg 2								
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
01	W115	ROS	0950	EN	296	01 33.07	168 45.23				2666-2676			
01	W116	ROS	12.43	BE	297	02 00 19.3	168 44 77.2	GPS	3255					Depth up from 6000m to 3300m in 1km.
	W116	ROS	13 34	BO	297	02 00 63.1	168 44 59.1	GPS		3313				Very sharp peak
	W116	LOOP	1330	BE	—	02° 00.124'S	168° 44.574'	GPS			NUTS, CHL, SAL, ALK, C13, TCO2			Note effect in salinity at 732M
	W116	ROS	1335	BE	298	02 00 63.7	168 44 59.5	GPS			2677-2699			
01	W116	ROS	1449	EN	298	02 01.30	168 44.73	GPS						END CAST
01	W117	ROS	1749	BE	299	02 30.16	168 44.76	GPS		1000				START SHALLOW CAST
01	W117	ROS	1808	BO	299	02 30.42	168 44.61	↓						
01	W117	ROS	1808	BE	300	02 30.42	168 44.61	↓			2700-2710	11		
01	W117	ROS	1836	EN	300	02 30.70	168 44.57	GPS						END SHALLOW CAST
01	W117	ROS	1906	BE	301	02 30.36	168 44.03	GPS	5320					START DEEP CAST
01	W117	LOOP	1923	BE	—	02 30.41	168 44.96	GPS						SAL CHL NUTS TCO2 ALK.
01	W117	ROS	2016	BO	301	02 30.73	168 44.90	GPS		5420m	2711-2733	23		go to within 10m of the bottom.
01	W117	ROS	2016	BE	302	02 30.72	168 44.88	GPS						
01	W117	ROS	2201	EN	302	02 31.33	168 44.84	GPS						sample 2716 lost - Niskin did not trip properly.
02	W118	ROS	0058	BE	303	03 00 05.2	168 45 11.2	GPS	5350					
02	W118	ROS	0202	BO	303	03 00 36.9	168 45 51.9			5455				
02	W118	LOOP	0130		—	03° 00.190'S	168° 45.419'	GPS						NUTS, CHL, SAL, TCO2, C13, ALK

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

ROS - rosette
NET - net haul
DRF - drifter

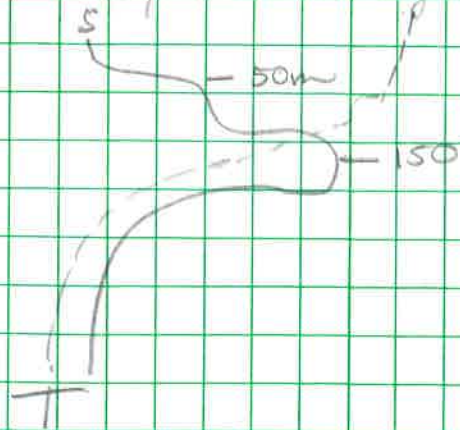
USW - sea water loop

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

W119 - heavy rain squall at beginning of rest



DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR 1994			MONTH November			SHIP JP Tully			CRUISE 94-03					PAGE OF	
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	
02	W118	ROS	0202	BE	304	0300 3.64	168 45 53.8	GPS			2734-2756	22			
02	W118	ROS	0359	EN	304	03 00.84	168 46.13	GPS							
02	W119	ROS	0710	BE	305	03 30 02.9S	168 45 05W	GPS	4990	1000 dBar					END CAST
02	W119	ROS	0724	BO	305	03 30 01.3S	168 44 92	GPS		1000			RMB		Shallow cast to 1000m down
02	W119	ROS	0725	BE	306	03 30 00.4S	168 44 92	GPS					RMB		
02	W119	ROS	0758	EN	306	03 29 8.33S	168 44 71	GPS			2757-2767	11	RMB		shallow upcast - shallow
02	W119	ROS	0821	BE	307	03 29 7.95S	168 44 56	GPS	4990				RMB		end upcast - shallow CO2 samples not collected
02	W119	Loop	0829	BE	—	03 29.78	168 44 47	GPS					RMB		begin downcast - deep
02	W119	ROS	0920	BO	307	03 29 8.16S	168 44 09	GPS		5077			RMB		Chl, Sal, Nuts.
02	W119	ROS	0921	BE	308	03 29 8.27S	168 44 10	GPS			2768 - 2790	23	RMB		
02	W119	ROS	1110	EN	308	03 30 18.3S	168 44 11	GPS					RMB		add CO2 samples
02	W120	ROS	1423	BE	309	03 59 9.62	168 45 05.4	GPS	5065						
02	W120	ROS	1535	BO	309	03 59.65	168 45.50	GPS		5140					START DEEP CAST
02	W120	ROS	1535	BE	310	03 59.65	168 45.50	GPS							
02	W120	ROS	1727	EN	310	03 59.16	168 45.10	GPS			2791-2813	23			END DEEP CAST
02	W120	Loop	1455	BE	—	03° 59.865'S	168° 45.294'	GPS							ALK, SAL, NUTS, CO2, C13, CHL
02	W121	ROS	2053	BE	311	04 29.73S	168 44.96								shallow routine cast
02	W121	ROS	2108	BO	311	04 29.80	168 44.96			302					

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

W121 - shallow corer to 1000m, with bottle samples at high resolution from 300m $\rightarrow$ up

Removed pump/stirrer unit from "Ocean Chemistry" portasal to replace worn unit
in Physics Salinometer (SN 58879)

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR		MONTH		SHIP		CRUISE		PAGE		OF				
1994		November		J.P. Tully		94-03 Leg 2								
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
02	W121	ROS	21:08	DE	312	04 29.78	168 44.96	GPS						
02	W121	ROS	21:42	EN	312	04 29.61	168 44.75				2814-2824	11		high res bottle selection 0-300m
02	W121	ROS	22:04	BE	313	04 29.41	168 44.58		5246					start deep CTD cast down
02	W121	ROS	23:03	BO	313	04 29.31	168 44.40			5356				end deep CTD cast (down)
02	W121	LOOP	22:19	EN	—	04 29.35 S	168 44.53							SAL CHL WIND TPO2 ALK
02	W121	ROS	23:04	BE	314	04 29 316 S	168 44 407							deep cast - start up
03	W121	ROS	00:49	EN	314	04 29 07 0 S	168 44 557				2825-2847	23		end deep cast (upward)
03	W122	ROS	04:33	BE	315	05 00.011	168 45.066		5556					START DEEP CAST
03	W122	ROS	05:40	BO	315	05 00.265	168 45.168			5655				
03	W122	LOOP	05:43	LOP	—	05 00 282	168 45.166							SALIN/NUTS/CHL
03	W122	ROS	05:40	BE	316	05 00.265	168 45.168				2848-2870	23		
03	W122	ROS	07:35	EN	316	05 00.89	168 45.06			Leaking	bottle #16	see Free in Log		
03	W123	ROS	10:41	BE	317	05 30 044 S	168 44 96		5322					start shallow cast
03	W123	ROS	10:55	BO	317	05 30 085 S	168 45 15			1000.				
03	W123	ROS	10:55	BE	318	05 30 087 S	168 45 15 W	GPS			2871-2881	11		
03	W123	ROS	11:23	EN	318	05 30 228	168 45 308							
03	W123	LOOP	11:20	—	—	05 30.228	168 45.308	GPS						ALK, TCO ₂ , SAL, NUTS, CHL
03	W123	ROS	11:49	BE	319	05 30 876 S	168 45 087	✓						

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

326 EN 0316 06 30,33 168 45.15

327 BE 0316
EN 0405 06 30,51 168 45.24

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR			MONTH		SHIP		CRUISE				PAGE		OF	
			November				5403/2							
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
03	W123	ROS	13:08	BO	319	05 30 268 S	168 45 586	GPS	5400	5398				
03	W123	ROS	13:08	BE	320	05 30 268 S	168 45 586	GPS			2882-2904	23		
03	W123	ROS	14:53	EN	320	05 30 888 S	168 45 756	GPS						
03	W124	ROS	17:45	BE	321	06 00.11 S	168 45.45	GPS	5630					START DEEP CAST
03	W124	ROS	18:57	BO	321	06 00.985 S	168 45.45			5652			RMB	no pinger reflection seen
03	W124	ROS	18:58	BE	322	06 00.99 S	168 45.46						RMB	
03	W124	ROS	20:48	EN	322	06 01.43 S	168 45.88				2905-2927	23	RMB	
03	W124	LOOP	19:31	BE	322	06 01.08 S	168 45.55						RMB	LOOP TCO2, ALK, CHL, OIB
03	W125	ROS	23:47	BE	323	06 30 068 S	168 45 130	GPS	5523					
04	W125		00 09	BO	323	06 30 270 S	168 45 383							
04	W125	LOOP	00:35	BE		06° 30.729	168° 45.355						TH	ALK, NUTS, CHL, TCO2, SAL
04	W125	ROS	00:09	BE	324	06 30 264	168 45 368				2928-2938	11		Shallow up cast
04	W125	ROS	00:36	EN	324	06 30 408	168 45 811							
04	W125	ROS	00:58	BE	325	06 30 104 S	168 45 045							
04	W125	ROS	02:07	BO	325	06 30 327	168 45 144			5631				
04	W125	ROS	02:09	BE	326	06 30 306	168 45 139				2939-2961	23		Deep upcast
04	W125	ROS	04:05	EN	326/327	06 30.509	168 45.24	GPS						END CAST

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

W125 Hit ALT S INSTEAD OF ALT B @ 2500 m $\therefore$ 2500 m $\rightarrow$ 0m is ON CAST 327

#326	samples	2939 - 2951	13
#327	samples	2952 - 2961	10

W12C - set NOISE margin to 60 dB - picking up the signal at 3000 m off the bottom.

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR		MONTH				SHIP				CRUISE					PAGE	OF
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		
04	W126	ROS	0700	BE	328	07 00.204 S	168 45.004	GPS	5580							
04	W126	LOOP	0744	BE	—	07 00.778 S	168 44.761	GPS							SAL CHL NUTS ALK TC02 C14	
04	W126	ROS	0812	BO	328	07 00.984 S	168 44.71			5782				end downcast 25-30m off bottom		
04	W126	ROS	0812	BE	329	07 00.89 S	168 44.71				2962-2984	23		start upcast.		
04	W126	ROS	0858	EN	329	07 02.21 S	168 44.92							sampling interrupted during heavy rain		
04	W127	ROS	1254	BE	330	07 30 135 S	168 44 838		5260					Shallow down cast		
04	W127	ROS	1316	BO	330	07 30 229 S	168 44 607			1005				Very heavy rain		
04	W127	ROS	1317	BE	331	07 30 229 S	168 44 607				2985-2995	11				
04	W127	ROS	1344	EN	331	07 30 378 S	168 44 556									
04	W127	Loop	1412		—	07 30 029 S	168 44 866							SAL TC02 ALK NUT CHLOR		
04	W127	ROS	14:08	BE	332	07 29 940 S	168 44 938 N		5250					NOTE: NAMED INCORRECT		
04	W127	ROS	15:22	BO	332	07 30.469 S	168 44.42			5370				W126 is data file		
04	W127	ROS	15:22	BE	333	07 30.472 S	168 44.42				2996-3018	23		Deep Cast up		
04	W127	ROS	1717	EN	333	07 31.814 S	168 43.15							END CAST		
04	W128	ROS	2018	BE	334	08 00 203 S	168 45 00 W		4690					Raining		
04	W128	LOOP	2035		—	08 00.5 S	168 44.83 W							CO2 ALK OIB C13 CHL SAL NUTS		
04	W128	ROS	21:25	BO	334	08 01 001 S	168 44 73			4998						
04	W128	ROS	21:26	BE	335	08 01 01 S	168 44 74	✓			3019-3041			Start 30m off the bottom		

CAST TYPE -

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net haul
drifter

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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

04 W128 ROS 2200 EN 335 08 02 515 S 168 44 35 W

Book ③ of 3

CRUISE
NUMBER

94-03/2

DAILY LOG
INSTITUTE OF OCEAN SCIENCES
OCEAN PHYSICS

DATE

94-11-04

VESSEL

J.P. Tully

PROJECT

WOCE PISN Legs 2 and 3

First Officer: Dave Parfetti
Third Officer: Rodde Mergle

Cruise Participants / Agencies:

Scientific Personnel: Howard Oakland

[illegible]

Second leg of cruise: Party Chief:

[illegible]

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.:

Temperature sensor

model:

serial no.:

coefficients: slope:

Offset:

Conductivity sensor

model:

serial no.:

coefficients: slope:

offset:

Pressure sensor range:

isi

serial no.:

coefficients: FSP:

3

offset.

Transmissometer

model:

serial no. :

coefficients: slope:

Offset.

Comments:

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR		MONTH		SHIP		CRUISE		PAGE		OF				
1994		Nov		J.P. Tully		94-03								
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
05	W129	ROS	01:50	BE	336	08 30.070	168 44.920	GPS	5090					Deep down cast
05	W129	ROS	02:59	BO	336	08 30.307	168 44.01	GPS		5215				Header label W128 please edit
05	W129	Loop	02:42			08° 30.208'	168° 44.826'	GPS						SAL, NUTS, CHL
05	W129	ROS	03:00	BE	337	08 30.324	168 44.82	GPS			3042-3064	23		Deep upcast
05	W129	ROS	04:45	EN	337	08 31.764	168 45.29	GPS						END CAST
05	W130	ROS	07:45	BE	338	09 00.053 S	169 00.02	GPS	4610		3065 - 3087			START DEEP CAST
05	W130	Loop	07:59	BE		09 00.214 S	169 00.013							SAL NUT CHL TCO2 ALK
05	W130	ROS	08:48	BO	338	09 00.798 S	169 00.02			4769				estimate approach within 25m of the bottom
05	W130	ROS	08:49	BE	339	09 00.797 S	169 00.03							
05	W130	ROS	10:26	EN	339	09 01.639 S	169 59.85							
05	W131	ROS	13:29	BE	340	09 30.109	168 59.982		5262					
05	W131	ROS	14:43	BO	340	09 30.471	169 00.078			5412				
05	W131	Loop	14:00	BE		09° 30.436'	169° 00.252							SAL, CHL, NUTS.
05	W131	ROS	14:44	BE	341	09 30.471	169 00.078				3088-3110	23		Upcast Deep.
05	W131	ROS	16:34	EN	341	09 31.213 S	169 00.25							END DEEP CAST
05	W132	ROS	20:36	BE	342	10 00.10 S	169 29.97		5226					START DOWNCAST
05	W132	Loop	20:54	BE		10 00.14 S	169 30.081							SAL NUTS CHL ALK TCO2 OR CIB
05	W132	ROS	21:45	BO	342	10 00.02 S	169 30.35	✓		5371				

CAST TYPE -

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ctd
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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

W131 - BOTTLE # 16 EMPTY - BOTTOM CAP HUNG UP (LING NICO PRESS ON HOSE CLAMP)

Lantec winch died. Gear box problems. Bits of metal and gear box Teeth inside housing. Engineers took apart but could not repair.

Changed over to the spare 329 winch for the remainder of the cruise.

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR		MONTH			SHIP		CRUISE					PAGE		OF	
1999		Nov			J.P. Tully		941-03								
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	
05	W132	ROS	21:45	BE	343	10 00 02 S	169 30 35	GPS			3111-3/33	23		Heavy overcast & Rain	
05	W132	ROS	23 40	EN	343	09 59 779 S	168 31 051 S							Food scraps over side when rosette at 50m	
06	SG01	CTD	0532	BE	344	10 00.22 S	168 29.89		4100m					CTD ONLY	
06	SG01	CTD	06:24	BO	344	10 00.10 S	168 29.99			4335m					
06	SG01	CTD	0625	BE	345	10 00.10 S	168 29.9 W								
06	SG01	CTD	0718	EN	345	10 00.09 S	168 30.51 W								
06	SG02	CTD	1009	BE	346	09 59.777	168 59.889 W		4300m					CTD ONLY DOWNCAST 20m off bot	
06	SG02	CTD	11:01	BO	346	09 59 524 S	168 59 980			4522.					
06	SG02	CTD	11:00	BE	347	09 59 506	168 59 987								
06	SG02	CTD	11:48	EN	347	09 59 07.1	169 00 130								
06	SG03	CTD	1728	BE	348	10 00 048	170 00.040		4925					CTD ONLY DOWNCAST	
06	SG03	CTD	1828	BO	348	09 59.69	170 00.62			5070					
06	SG03	CTD	1828	BE	349	09 59.69	170 00.63							LANTEC DIED!	
06	SG03	CTD	1919	EN	349	09 59.42	170 00.98							END CAST	
07	SG04	CTD	0132	BE	350	10 00 100	170 29.949		4494					New wheel spare 329	
07	SG04	CTD	0232	BO	350	10 00 00 S	170 30 037			3822					
07	SG04	CTD	0233	BE	351	10 00 01 S	170 30.03								
07	SG04	CTD	0322	EN	351	10 00.16 S	170 30.19							END CAST	

CAST TYPE -

BOT - bottle cast
CTD - ctd
MOR - mooringROS - 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 castDE - deployment time
MR - messenger release
RE - recover mooring

POSITION CODE -

RAD - RADAR
GPS - GLOBAL
LOR - LORAN

after 5605 - return power to box, rosette under A frame - connect WOCE CTD to Rosette

- W134 - something wrong with load cell or cabling - O tension recorded during the cast
- stopped at ~ 75 m on downcast to put winch into high gear
 - started bottom upcast in low gear - 0.9 m/sec.
 - winch moved to high speed at 2750 m

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR			MONTH			SHIP			CRUISE					PAGE	OF
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	
07	SG05	CTD	0635	BE	352	10 00.17S	171 00.00W	GPS	3870			0	RMB	CTD CAST Down	
07	SG05	CTD	0730	BO	352	10 00.25S	171 00.40W	↑		3660				(3675 meters of wire out)	
07	SG05	CTD	0731	BE	353	10 00.284	171 00.373	↓		3660					
07	SG05	CTD	0829	EN	353	10 00.48S	171 01.04	GPS						CTD CAST on DECK	
07	W133	ROS	1556	BE	354	10 29.93	170 00 31	GPS	4018					DEEP ROSSETTE (3500m)	
07	W133	Loop	1625	Loop	—	10 29.893	170 00 931	GPS						SALIN/NUTS/CHL	
07	W133	ROS	1658	BO	354	10 29.95	170 01 35	GPS		3500					
07	W133	ROS	1658	BE	355	10 29.93	170 01 37	GPS			3134-3156	23			
07	W133	ROS	1831	EN	355	10 30.18	170 02 65	GPS						END CAST	
07	W134	ROS	2138	BE	356	11 00.079	169 59.870	GPS	5060					begin downward to 3500m	
07	W134	Loop	2154	BE	—	11 00.262	169 59.842	GPS						SAL, NUTS, CHL, TCO2, ALK	
07	W134	ROS	2223	BO	356	10 59 83S	169 59 78	GPS		3507					
07	W134	ROS	2225	BE	357	10 59 82S	169 59 78W	GPS			3157-3179	23			
07	W134	ROS	2351	EN	357	10 59 464S	170 00 073W	GPS						Reset computer clock	
08	W135	ROS	0327	BE	358	11 30 234	170 00 147	GPS	4997					to GPS clock	
08	W135	Loop	0345	Loop	—	11 30 387	169 59 999	GPS						SALIN/NUTS/CHL	
08	W135	ROS	0430	BO	358	11 30 50	169 59 81	GPS		3502					
08	W135	ROS	0430	BE	359	11 30 50	169 59 81	GPS			3180 3202	23			

CAST TYPE -

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

USW -

sea water loop

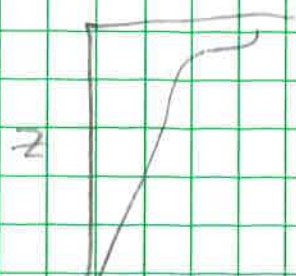
TIME CODE -

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

W139 - load cell not connected and data channel not turned off - LOGO CEL / XMS channel output shows "structure"



this is probably a complete artifact of internal temperature and op-amp function - additional data channels should be checked to determine T sensitivity.

- stopped at 2000m then lowered again to adjust spooling gear

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR				MONTH			SHIP			CRUISE				PAGE	OF
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	
08	W135	ROS	0602	EN	359	11 30 56	169 59 35	GPS				23		END CAST	
09	W136	ROS	0913	BE	360	11 59.923	169 59.910	GPS	4980						
09	W136	LOOP	0930	BE	—	11 59.935	169 59.646	GPS						SAL NUTS CUL TCO2 AIR OIB CIB	
08	W136	ROS	10:07	BO	360	11 59 88 S	169 59 27	GPS		3500					
08	W136	ROS	10 08	BE	361	11 59 87 S	169 59 28	GPS			3203-3225	22			
08	W136	ROS	1132	FN	361	12 00 10 S	169 58 06	GPS						Bottle 23 no trip	
8	W137	CTD	1956	BE	362	12 30.17	167 59.79	GPS	4946					Swells too large for	
8		Loop	2021	EN		12 30.23	167 59.49	A						Rosette cast.	
8		CTD	2042	BO	362	123014	167 59.26			3508					
8		CTD	2043	BE	363	12 30.14	167 59.26								
8	W137	CTD	2129	EN	363	12 30 24	167 58 66								
09	W138	CTD	0120	BE	364	13 00 93	169 59 51							oops!! Please Change to # W138	
09	W138	CTD	0224	BO	364	13 01 04 05	169 59 383			3821					
09	W138	LOOP	0230	Loop	—	13 01 138 S	169 59 306W							ALK CHLO C14 TCO2 NUT	
09	W138	CTD	0224	BE	365	13 01 040 S	169 59 383W								
09	W138	CTD	0339	EN	365	13 01 56	169 58 54							END CAST	
09	W139	CTD	0653	BE	366	13 29.98 S	169 59.46	V	4824					CTD CAST	
09	W139	LOOP	0711	BE	—	13 29.925	169 59.720	GPS						SAL NUTS CUL	

CAST TYPE -

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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

W139 - CTD ~~went~~ went off at surface;

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR		MONTH		SHIP		CRUISE		PAGE		OF				
1994		November		J.R. Tully		940312								
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
09	W139	CTD	0740	BO	366	13 30.11 S	169 59.87	GPS		3512		0	END	
09	W139	CTD	0741	BE	367	13 30.114 S	169 59.464	GPS						
09	W139	CTD	0715	EN	367	13 30.66 S	169 58.72W	GPS						STIPPED AT 2000m on upcast lowered to 3200 meters data halted at by - CTD shutdown due to terminator problems
09	W140	CTD	1234	BE	369	14 00 273	169 59 780	GPS						Redid the splice TC
09	W140	CTD	1332	BO	369	14 00 647	169 59 857		2690	2726				> Broken Ground wire <
09	W140	LOOP	1244			14 00 928 S	169 59 729 W	GPS						TCO2 ALK NUT SAL CHLOR
09	W140	CTD	1332	BE	370	14 00 647	169 59 857	GPS						
09	W140	CTD	1400	EN	370	14 00 660	169 59 999	GPS						
09	W141	CTD	1713	BE	371	14 29 99	170 00 03	GPS	970m	950m				CTD to 1000 m
09	W141	CTD	1734	BO	371	14 29 89	169 59 95	GPS						
09	W141	LOOP	1741	Loop	—	14 29 854	169 59.901	GPS						SALIN / NUT / CHL
09	W141	CTD	1734	BE	372	14 29 89	169 59.95	GPS						
09	W141	CTD	1747	EN	372	14 29 84	169 59.86	GPS						END CAST
09	W142	CTD	2115	BE	373	15 00 03 S	170 00 04 W	GPS	4757					START DOWNCAST LAST STATION!
09	W142	LOOP	2127	BE	—	15 00.079	169 59.970	GPS						NUTS SAL CHL TCO2 ALK
09	W142	CTD	2214	BO	373	15 00.14 S	169 59.82	GPS	376	3765				
09	W142	CTD	2216	BE	374	15 00.148	169 59.803	GPS						Lubricate wire on upcast

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sea water loop

TIME CODE -

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

POSITION CODE -

RAD -
GPS -
LOR -RADAR
GLOBAL
LORAN

