

CRUISE
NUMBER

2000-34

DAILY LOG
INSTITUTE OF OCEAN SCIENCES
OCEAN PHYSICS

DATE

3 - 31 OCTOBER 2000

VESSEL

W. E. RICKER

PROJECT

HIGH SEAS SALMON

INSTITUTE OF OCEAN SCIENCES

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

ADCP LOG

2000-34

ADCP stopped sometime on the 6th (after being in deep water for prolonged period?)

Started up Oct 6 @ 2048 hrs.

ADCP	STOPPED	18:38	OCT 10, 2000	- GOING INTO	PORT HARDY
ADCP	STARTED	6:10	OCT 11, 2000	- GOING TO	T03
ADCP	STOPPED	APPROX 13:06	OCT 14, 2000	- GOING TO	PRINCE RUPERT
CDR	SANITY READING UNRELIABLE ON OCT 11, 2000 DUE TO				
	ENTRAINMENT OF AIR INTO SEA WATER LOG.				
ADCP	RESTARTED	19:41	OCT 16, 2000	- LEAVING	PRINCE RUPERT
ADCP	STOPPED	OCT 18	-	C: DRIVE FULL	
ADCP	R4 - STARTED	23:38	OCT 18, 2000		
ADCP	R4 - STARTED	12:30	OCT 25, 2000		
ADCP	R4 - STARTED	14:30	OCT 26, 2000		
ADCP	R4 - STARTED	14:45	OCT 27, 2000		
ADCP	R4 - STARTED	6:29	OCT 28, 2000		
ADCP	SHOT DOWN	10:55 (PST)	OCT 30, 2000		

YEAR		MONTH		SHIP		CRUISE		PAGE						
2000		OCTOBER		C.C.G.S. W.E. RICKER		H.S. 2000-34		(2) 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
7	KO-01	CTD	0457	Pdt	019	49° 55.510	127° 18.700	GPS	58	54	temp 12.65 sal 31.337	* see over		Bongo.
	KO-02	CTD	0717	Pdt.	020	49° 53.925	127° 21.666	GPS	67	64	temp 12.164 sal 31.606			Bongo
	KO-03	CTD	0855	Pdt	021	49° 50.594	127° 27.679	GPS	80	76	temp 12.395 sal 31.765			Bongo Wind 15-20 SE
	KO-04	CTD	1034	P.d.t	022	49° 46.897	127° 33.510	GPS	124	122	temp 12.2505 sal 31.8893			Bongo - Wind 25-30 SE
	KO-05	CTD	1231	Pdt	023	49° 43.304	127° 39.628	GPS	678	672	temp 13.111 sal 32.057			Bongo - Wind 30-35 SE
	KO-06	CTD	1451	Pdt.	024	49° 39.426	127° 45.688	GPS	974	899	temp 13.4218 sal 32.0257	$T_2 - T_1 = -0.0001$ $S_2 - S_1 = -0.003$		BONGO swell 5-6m Wind 30-35 SE
8	TI-15	CTD	0605	Pdt	025	50° 09.873	130° 40.911	GPS	approx. 2700m	1001	temp 14.6167 sal 32.2013	$T_2 - T_1 = -0.0005$ $S_2 - S_1 = -0.002$		0412 - CDAQ crash, reset 0425 H3015 bin BONGO rolling Wind 15-18 NW
	TI-14	CTD	0903	Pdt	026	50° 14.262	130° 30.462	GPS	2463	1011	temp 13.6251 sal 32.0396	CAL BOTTLE		CAL H ₂ O bottle let depth big rolls BONGO
	TI-13	CTD	11:53	Pdt	027	50° 18.469	130° 20.145	GPS	1979	478	temp 13.7127 sal 32.0561			BONGO big rolls; depth difficult to get cast terminated due to roll,
	TI-12	CTD	14:04	Pdt	028	50° 22.705	130° 09.524	GPS	2691	1001	temp 13.132 sal 32.0407	$T_2 - T_1 = -0.003$ $S_2 - S_1 = -0.0007$		BONGO transverse gyres swell & rolls
	TI-11	CTD	17:36	Pdt	029	50° 27.691	129° 53.365	GPS	2196	1004	temp 13.2210 sal 31.9863			BONGO swells & rolls
	TI-10	CTD	19:01	Pdt	030	50° 32.465	129° 49.205	GPS	2163	1005	temp 13.2475 sal 32.0226			1903 - CDAQ FAILS; re boot NO BONGO $T_2 - T_1 = -0.0004$ $S_2 - S_1 = -0.003$
	TI-09	CTD	20:38	Pdt	031	50° 37.239	129° 39.335	GPS	2030	1003	temp 13.1571 sal 32.0482			NO BONGO $T_2 - T_1 = -0.0004$ $S_2 - S_1 = -0.004$
	TI-08	CTD	22:14	Pdt	032	50° 42.116	129° 29.967	GPS	1910	1003	temp 13.1613 sal 32.0518			NO BONGO $T_2 - T_1 = -0.0003$ $S_2 - S_1 = -0.005$
9	TI-07	CTD	0013	Pdt	033	50° 49.074	129° 12.952	GPS	104	101	temp 12.889 sal 32.084			no bongo.
	TI-06	CTD	0147	Pdt.	034	50° 55.951	129° 00.048	GPS	63	59	temp 11.630 sal 32.0216			no bongo
	TI-05	CTD	0238	pdt	035	50° 59.836	128° 58.300	GPS	65	—	temp 11.119 sal 31.739			aborted cast.
	TI-05	CTD	0251	pdt	036	50° 59.788	128° 52.311	GPS	65	62	see above			no bongo.

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

KO-01 * S‰ values at the surface did not seem as stable as they have been previously - there was more motion than before so maybe the reason - Will keep checking.
 KO-02 S‰ stable again.

TI-15 Heavy rolling sea, spiking on transmitter downcast

TI-14: Thermo salinograph reading SSS = 22.5 or so! (?) rainwater???
 Kicks back in to normal looking reading after 09:19, then fluctuates substantially.

Salinity readings for all-stop on bottle cast:

1	3	4	.	5	9	9	7
2	3	4	.	6	0	0	2
3	3	4	.	6	0	0	0
4	3	4	.	6	0	0	2
5	3	4	.	5	9	9	9
6	3	4	.	3	6	0	0
7	3	4	.	3	6	0	1
8	3	4	.	3	6	0	3
9	3	4	.	3	6	1	2
10	3	4	.				

These sal readings taken at 2 min after messenger drop

These sal readings taken at 3 min after drop

Clock time for water bottle sample

↓	Depth	Salinity	Temp
0933	1008 m	34.3601	3.4890
	1010 m	34.3605	3.4835
	1010 m	34.3607	3.4861
	1011 m	34.3604	3.4815
	1011 m	34.3617	3.4897

These readings taken at 5 min after messenger drop

080400

1107 - TSG crash

WHAT HAPPENED ON
OCT 10?

PORT HARDY 1838

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR 2000		MONTH OCTOBER		SHIP RICKER		CRUISE Hs 2000-34		PAGE (3) OF						
DAY (UTR)	STATION ID	CAST TYPE	TIME (UTC)	TIME CODE	STD/HYDRO CONSEC #	LATITUDE	LONGITUDE	POSITION CODE	BOTTOM DEPTH (m)	MAX SAMPLING DEPTH (m)	CONSEC SAMPLES	# OF BOTTLES	INIT	COMMENTS
9	TI-04	CTD	0348	Pdt	037	51° 04.412	128° 44.059	GPS	64	59	Temp. 11.5900 Sal. 31.7877			Bongo.
11	TI-03	CTD	0620	Pdt	038	51° 08.506	128° 36.037	GPS	142	139	Temp. 9.82 Sal. 31.02			Bongo
"	TI-02	CTD	0837	Pdt	039	51° 12.563	128° 28.094	GPS	195	193	Temp. 9.978 Sal. 29.901			Bongo
"	TI-01	CTD	1034	Pdt	040	51° 16.490	128° 19.987	GPS	80	78	Temp. 10.186 Sal. 29.370			Bongo.
"	XO-01	CTD	1431	Pdt	041	51° 30.136	128° 11.804	GPS	91	87	Temp = 10.5022 Sal = 28.5435			NO BONGO
"	XO-02	CTD	1608	Pdt	042	51° 36.839	128° 13.478	GPS	104	102	Temp = 10.8184 Sal = 29.2100			NO BONGO
"	XO-03	CTD	1738	Pdt	043	51° 43.969	128° 15.423	GPS	117	114	Temp = 10.8207 Sal = 28.1356			NO BONGO
"	HS-01	CTD	2237	Pdt	044	52° 12.109	129° 10.587	GPS	165	162	Temp = 11.9413 Sal = 30.8776			NO BONGO
12	HS-02	CTD	0001	Pdt	045	52° 15.678	129° 26.162	GPS	186	181	Temp = 11.8430 Sal = 31.2047			NO BONGO
"	HS-03	CTD	0123	Pdt	046	52° 18.911	129° 41.758	GPS	214	212	Temp = 12.0230 Sal = 31.0444			NO BONGO
"	HS-04	CTD	1314	Pdt	047	52° 22.354	129° 57.361	GPS	213	205	Temp = 11.9834 Sal = 31.5900			NO Bongo depth is shoaling
"	HS-05	CTD	1524	Pdt	048	52° 25.506	130° 12.971	GPS	330	327	Temp = 11.8860 Sal = 31.7270			BONGO
"	HS-06	CTD	1738	Pdt	049	52° 28.134	130° 29.855	GPS	163	162	Temp = 11.4464 Sal = 31.7183			BONGO
13	XO-04	CTD	0701	Pdt	050	52° 42.801	132° 07.692	GPS	161	149	Temp = 12.3160 Sal = 32.1450			lots of roll - can't get close to bottom BONGO
	XO-05	CTD	0903	Pdt	051	52° 50.076	132° 18.439	GPS	674	250	Temp = 12.2190 Sal = 31.7781			BONGO same roll
	XO-06	CTD	1117	Pdt	052	52° 58.383	132° 24.953	GPS	460	251	Temp = 12.3600 Sal = 32.0816	CAL		water bottle attracted BONGO
	XO-07	CTD	1355	Pdt	053	53° 01.273	132° 40.268	GPS	176	166	Temp = 12.4999 Sal = 32.0427	CAL		water bottle @ surface; no rolls interior bottle for BONGO
	XO-08	CTD	1607	Pdt	054	53° 19.333	132° 50.190	GPS	165	156	Temp = 12.6704 Sal = 32.1404	CAL		bottle @ 3m BONGO

CAST TYPE -

BOT -

bottle cast

CTD -

ctd

MOR -

mooring

ROS -

rosette

NET -

net haul

DRF -

drifter

USW -

sea water loop

TIME CODE -

BE -

beginning time of cast

BO -

bottom time of cast

EN -

end of cast

DE -

deployment time

MR -

messenger release

RE -

recover mooring

POSITION CODE -

RAD -

GPS -

LOR -

RADAR

GLOBAL

LORAN

Oct 9 / 2000.

TI-04

After this str ship will steam to Port Hardy to pick up new bearing for inboard side of trawl winch. Part will be delivered in afternoon of the 10th.

Oct 10 - 2359 - Part was received, winch repaired, ship now heading to TI-03 to resume Triangle Island line. Should beat TI-03 by 0600.

Oct 11 - 0620 - CTD str TI-03 to 139 m. Bongo and trawl.

Oct 12 - 0123 - HS-03 - after completing Str HS03 it was determined that we wouldn't have enough time to do HS04 and get back to position by 0600, so HS04 was cancelled.

Oct 13 - 0701 CTD header file for XO-04 is incorrectly labelled QC-01. Need to be changed. Upcast + downcast look radically different. Substantially less roll on upcast - perhaps this should be used ???
* 2nd sensors look much better. me

Bot 00 -

X06	depth	sal	temp
	250	33.9172	6.2411
	248	33.9175	6.2486
	249	33.9170	6.2492
	248	33.9166	6.2515
	249	33.9167	6.2548
	249	33.9169	6.2400
	248	33.9179	6.2378
	248	33.9175	6.2376

felt messenger 11:25:35

bottle at = 248m

X-08	bottle @ 3m	1610
depth	sal	temp
2.2	32.1409	12.6685
2.1	32.1404	6698
3.5	1407	6905

X07

depth	sal	temp
2.6	32.0097	12.4878
3.0	32.0011	12.4863
2.3	32.0013	12.4865

bottle at surface

DAILY LOG

OCEAN PHYSICS

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YEAR	2000				MONTH	October		SHIP	Ricker			CRUISE	HS 2000-34			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			
13	XO-09	CTD	1818	Pdt	055	53° 28.481	133° 02.082	GPS	220	213	temp = 12.5711 sal = 32.1116	CAL		water bottle at 3m BONGO			
14	XO-10	CTD	0702	Pdt	056	54° 13.764	132° 50.663	GPS	204	199	temp = 10.5331 sal = 30.8876			BONGO			
"	XO-11	CTD	0849	Pdt	057	54° 11.011	132° 38.521	GPS	76	72	temp = 11.0314 sal = 31.8600			BONGO			
"	XO-12	CTD	1025	Pdt	058	54° 09.604	132° 25.025	GPS	97	94	temp = 11.2714 sal = 31.9341			BONGO	water deeper for 90m to 98m leader will say 90m		
"	XO-13	CTD	1157	Pdt	059	54° 10.283	132° 12.275	GPS	70	67	temp = 11.2252 sal = 31.7713			BONGO			
Correct GPS TIME ON COMPUTER WAS AHEAD BY 1 HR.																	
USE UTC TIME FROM NOW ON.																	
Thermosalinograph salinity fixed. 13:37, 17 OCT UTC																	
17	FI01	CTD	1433	BE	60	54° 47.50	133° 05.69		211					Tsurf = 10.4 } CTD LT = 0633 Ssurf = 31.4			
			1439	BO		54° 47.60	133° 05.96			200				Bongo to 150m			
			1444	EN		54° 47.69	133° 06.13							Surface water			
17	FI02	CTD	1536	BE	61	54° 46.64	133° 11.01		209					T _o = 10.54 } CTD LT = 0836 S _o = 31.78			
			1542	BO		54° 46.74	133° 11.21			196				Bongo to 150m			
			1546	EN		54° 46.80	133° 11.31							Surface water			
17	FI03	CTD	1719	BE	62	54° 45.83	133° 19.03		120					T _o = 10.84 } LT = 1019 S _o = 32.09			
			1724	BO		54° 45.87	133° 19.10		112	103				Bongo to 110m			
			1728	EN		54° 45.88	133° 19.12							Surface water			

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

13 Oct 00

X 0 - 0 a

Water sample taken at surface

<u>Depth</u>	<u>Sal</u>	<u>Temp</u>
18:20:10		
2.4	32.1111	12.5719
2.105	32.1116	12.5711
2.408	32.1119	12.5701
2.696	32.1116	12.5695
2.614	32.1120	12.5777

★ The EK500 sounder might be 9m off the other sounder reading — in shallows use EK500 - 20m as target depth to be safe

DAILY LOG

31

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR 2000			MONTH OCTOBER			SHIP W.E. RICKER				CRUISE 2000-34				PAGE 5	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	
17	FI-04	CTD	1903	BE	63	54 45.14	133 26.83	GPS	147	137				1203 LT BON60	surface bottle to 120m Niskin
			1909	BO	63	54 45.17	133 26.83	"	147					LT = LOCAL TIME for cast height	
				EN	63	54 45.18	133 26.83	"						temp = 10.4034 sal = 32.0807	
"	FI-06	CTD	2118	BE	064	54 43.707	133 42.496	GPS	225	209				temp = 11.9869 sal = 32.2166	surface bottle Niskin
			2125	BO	064	54 43.754	133 42.486	"	215					LT = 1498	
			2129	EN	064	54 43.732	133 42.572	"						BON60	
"	FI-08	CTD	2329	BE	065	54 42.284	133 58.139	GPS	210	196				temp = 11.8274 sal = 32.2156	surface bottle Niskin
			2336	BO	"	54 42.347	133 58.188	"	213					LT = 1629	
			2340	EN	"	54 42.400	133 58.200	"							
18	FI-09	CTD	0212	BE	066	54 41.517	134 06.058	GPS	227 218 bridge	215				temp = 11.6968 sal = 32.2862	surface Niskin
			0219	BO	"	54 41.572	134 06.108	"	228					LT = 1912	
			0223	EN	"	54 41.612	134 06.162	"	231					No BON60	
"	FI-10	CTD	0328	BE	067	54 39.958	134 21.752	GPS	2115m	1002				temp = 11.3257 sal = 32.3567	surface Niskin
			0351	BO	"	54 39.995	134 22.067	"	no reading					LT = 2028	descent rate at 1st 150m a bit fast
			0402	EN	"	54 40.070	134 22.433	"	"					No BON60	
"	FI-11	CTD	0511	BE	068	54 38.380	134 38.166	GPS	2359					temp = 11.3969 sal = 32.3521	surface Niskin
			0533	BO	"	54 38.535	134 38.457	"	2377	1003				LT = 2211	
			0552	EN	"	54 38.711	134 38.711	"	no reading					No BON60	

CAST TYPE - BOT - bottle cast
CTD - ctd
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TIME CODE - BE - beginning time of cast
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MR - messenger release
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POSITION CODE - RAD - RADAR
GPS - GLOBAL
LOR - LORAN

Re-boot computer between casts 70-71 to try solving ZIP drive problem.
Seems to work.

ⓐ CTD on sonde appears x 15m off bottom, which near EK500 sonde is reasonably accurate depth.

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR		MONTH		SHIP		CRUISE		PAGE		OF				
2000		October		W.E. Ricker		HS 2000-34		6 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
18	FI-12	CTD	0714	BE	069	54° 36.75	134° 54.16	GPS	2747?					Temp = 11.20 Sal = 32.48 Niskin @ surface
			0736 0743	BO	"	54° 36.89	134° 54.08	"	very unstable	1013	Nisk @ 1000m Nisk @ 0m	2		LT = 0014
			0759	EN	"	54° 37.16	134° 54.17	"						No BONGO Wait 6 min @ 1000m for messenger
18	FI 13	CTD	0911	BE	70	54° 34.93	135° 10.31		?		T ₂ -T ₁ = 0.00005 S ₂ -S ₁ = -0.004			T ₀ = 11.01 } CTD Local t: 0210 S ₀ = 32.46
			0932	BO		54° 35.01	135° 10.43			1010		1		Mixed Layer Depth ~ 50 m
			0950	EN		54° 34.94	135° 10.52							No Bongo Niskin @ surface
18	FI 14	CTD	1059	BE	71	54° 33.29	135° 26.60		?					T ₀ = 10.80 } CTD Local time: 0359 S ₀ = 32.40
			1119	BO		54° 33.19	135° 26.63			1009		1		MLD: 54 m No bongo
			1137	EN		54° 33.17	135° 26.65							Niskin @ surface (~3 m)
18	FI 15	CTD	1303	BE	72	54° 31.57	135° 42.80		?					T ₀ = 10.75 } CTD Local t: 0603 S ₀ = 32.28
			1324	BO		54° 31.61	135° 42.83			1007		1		MLD = 38 Bongo to 150 m
			1343	EN		54° 31.62	135° 42.80							Niskin @ 3 m
19	FI-07	CTD	0119	BE	073	54° 43.039	135° 51.620	GPS	230			1		Temp = 11.8749 Sal = 32.2254 Niskin surface
			0126	BO	"	54° 43.079	135° 51.610	"		211				MLD 61m LT = 1819
				EN	"	54° 43.103	135° 51.598	"	230					No BONGO
19	FI-05	CTD	0244	BE	074	54° 44.285	133° 34.729	GPS	199			1		Temp = 11.5542 Sal = 32.1849 Niskin surface
			0251	BO	"	54° 44.170	133° 34.689	"		190				MLD = 56m LT = 1944
			0256	EN	"	54° 44.129	133° 34.611	"	202					No BONGO upcast + downcast after

CAST TYPE -

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POSITION CODE -

RAD - RADAR
GPS - GLOBAL
LOR - LORAN

170500 @ 23:23

Thermohygraph restarted b/c of power failure.

DAILY LOG

OCEAN PHYSICS

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YEAR		MONTH		SHIP		CRUISE		PAGE		OF				
2000		October		RE. Ricker		HS-2000 - 34		7						
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	BI-01	CTD	1310	BE	075	56 17.97	134 54.49	GPS	65					To 9.95 LT: 0610
			1313	BO		56 17.96	134 54.52			60		1		Surface Niskin No bongo
			1314	EN		56 17.95	134 54.53							
19	BI02	CTD	1424	BE	76	56 15.27	135 01.65		152					To = 9.69 Lt 0724
			1430	BO		56 15.29	135 01.76			145		1		Surface Niskin Bongo
			1432	EN		56 15.27	135 01.80							
19	BI03	CTD	1611	BE	77	56 12.58	135 08.11		180					To 10.19 Lt 0911
			1617	BO		56 12.59	135 08.20			171		1		Surface Niskin Bongo
			1621	EN		56 12.60	135 08.21							
19	BI04	CTD	1750	BE	78	56 09.79	135 14.70		293					To = 10.57 Lt = 1050
			1758	BO		56 09.86	135 14.76			285		1		Surface Niskin Bongo
			1805	EN		56 09.89	135 14.71							
19	BI05	CTD	1929	BE	79	56 07.151	135 21.611	GPS	313			1		temp = 10.439 surface Niskin sal = 32.1816
			1938	BO	"	56 07.291	135 21.762	"	311	306				MLD = 54m LT=1229
			1944	EN	"	56 07.207	135 21.901	"	309					
19	BI-06	CTD	2111	BE	080	56 05.000	135 28.182	GPS	527			1		BONGO temp = 10.8463 surface Niskin sal = 32.3309
			2123	BO	"	56 05.170	135 28.103	"	512	501				MLD = 55m LT=1411
			2133	EN	"	56 05.224	135 28.071	"	505					BONGO

CAST TYPE -	BOT -	bottle cast	ROS -	rosette	USW -	sea water loop	TIME CODE	BE	bottom echosounder	BT	bottom thermometer	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, 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depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth	CTD	conductivity, temperature, depth
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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	
2000	October				W.E. Ricker				HS-2000-34				8			
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	BI-07	CTD	23:09	BE	081	56	01.676	135	34.484	GPS	806			1		temp = 10.8162 Niskin @ surface sal = 32.3499
			23:29	BO	"	56	01.???	135	34.481	"	794	780				MLD = 40m LT = 1609
			23:42	EN	"	56	02.102	135	34.887	"	785					Bongo large salinity b/w on way up PRIM. ca
20	BI-08	CTD	01:25	BE	082	55	59.271	135	41.707	GPS	1321					temp = 10.5402 Niskin @ surface sal = 32.3177
			01:47	BO	"	55	59.531	135	41.738	"	1343	1003		1		MLD = 40m LT = 1825
			02:04	EN	"	55	59.710	135	41.598	"						No Bongo
20	BI-09	CTD	03:21	BE	083	55	53.878	135	52.929	GPS	2307			ND bottle		temp = 10.2402 Niskin @ surface sal = 32.2496
			03:31	BO		55	54.065	135	53.083	"	2281	400				MLD = 44m LT = 2021
			03:39	EN		55	54.140	135	53.261	"	2272					No Bongo blank 40+ mow
20	X14	CTD	1323	BE	84	56	17.75	134	36.25		390					Chatham Strait
			1331	BO		56	17.70	134	36.34		347	331		1		To = 8.50 So = 30.95 LT = 0623
			1337	EN		56	17.66	134	36.34							MLD = 22 Niskin @ 3m Bongo
20	X15	CTD	1617	BE	85	56	32.33	134	35.91		480					To = 8.02 So = 30.64 LT = 0917
			1627	BO		56	32.11	134	35.97		477	464		1		Niskin @ 3m Bongo MLD ~ 90
			1636	EN		56	32.05	134	36.02							
20	X16	CTD	1908	BE	86	56	44.97	134	36.67	GPS	736			1		temp = 7.6658 Chatham ST. sal = 30.2150
			19:23	BO	"	56	44.85	134	36.54	"	732	726				MLD = 40m approx LT = 1208
			19:36	EN	"	56	44.85	134	36.54	"	724					Bongo @ 600m, silt layer???

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DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR		MONTH		SHIP		CRUISE		PAGE		OF				
2000		October		W.E. Ricker		HS - 2000 - 34		9		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
20	X018	CTD	0152	BE	087	57° 01.518	134° 21.222	GPS	337			1		temp = 7.3441 surface Niskin sal = 29.7954
			0202	BO	"	57° 01.461	134° 21.318	"	336	326				MLD = n/a LT = 1852
			0208	EN	"	57° 01.446	134° 21.361	"	336					no bongo
21	X017	CTD	0257	BE	088	56° 56.664	134° 30.073	GPS	236			1		temp = 7.3059 surface Niskin sal = 29.4601
			0304	BO	"	56° 56.635	134° 30.330	"	223	215				MLD = n/a LT = 1956
			0308	EN	"	56° 56.639	134° 30.388	"	218					no bongo
21	X019	CTD	1200	BE	089	57° 15.48	134° 44.50		840					T ₀ = 7.68 S ₀ = 29.44 Lt. = 0500
			1217	BO		57° 15.67	134° 44.45		813	806		1		Niskin @ 3m Bongo
			1231	EN		57° 15.88	134° 44.37							
21	X020	CTD	1516	BE	90	57° 30.29	134° 46.24		513					T ₀ = 7.74 S ₀ = 28.7 Lt. = 0816
			1527	BO		57° 30.31	134° 46.14			506		1		Niskin @ 3m Bongo MLD: 34m
			1536	EN		57° 30.32	134° 46.08							
21	X021	CTD	1800	BE	91	57° 43.67	134° 51.17		513			2		T ₀ = 7.5 S ₀ = 27.4 Lt. = 1100
			1812	BO		57° 43.68	134° 50.97			510				Niskin @ 3m Bongo MLD ~ 40
			1821	EN		57° 43.66	134° 50.87							
21	X022	CTD	2103	BE	092	57° 58.227	134° 52.025	GPS	501			1		temp = 7.5259 surface Niskin sal = 26.4318
			2116	BO		57° 58.199	134° 51.834	"	504	495				MLD = n/a LT = 1403
			2125	EN		57° 58.194	134° 51.715	"	520					BONGO VERY FRESH

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DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR	MONTH				SHIP	CRUISE						PAGE	OF	
2000	October				W. E. Ricker	HS-2000-34						10		
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	XO-23	CTD	2328	BE	093	58°07.681	134°52.194	GPS	464			1		temp = 7.8567 surface Niskin sal = 28.9798
			2339	BO	"	58°07.672	134°52.107	"	464	456				MLD = n/a LT = 1620
			2347	EN	"	58°07.663	134°52.222	"	464					BON60
			DECK UNIT LEFT ON FOR 14 HOURS!!!											
22	XO24	CTD	1542	BE	94	58°10.81	134°18.60		83					T ₀ = 6.9 S ₁ = 23.7 LT = 0842
			1546	BO		58°10.84	134°18.78			77		1		Niskin @ 3m Bongo
			1548	EN		58°10.85	134°18.85							Diff. between sensors ↑
22	XO25	CTD	1743	BE	95	58°16.61	134°41.24		102			1		T ₀ = 7.3 S ₁ = 26.4 LT = 1043
			1747	BO		58°16.69	134°41.29			96				Niskin @ 3m Bongo
			1749	EN		58°16.70	134°41.30							≠ between S ₁ , S ₂ on way up.
22	XO-26	CTD	22:01	BE	096	58°10.316	135°07.493	GPS	256			1		temp = 7.3643 Niskin @ surface sal = 24.9600
			22:07	BO	"	58°10.350	135°07.409	"	235	226				MLD = n/a LT = 1501
			22:12	EN	"	58°10.385	135°07.400	"	244					Bongo
23	XO28	CTD	1512	BE	097	58°18.06	136°21.45		284					temp = 7.36 sal = 28.88
			1518	BO	"	58°18.07	136°21.44			277		1		MLD = / LT = 0812
			1525	EN	"	58°18.08	136°21.41							XO27: NO CTD
														≠ between S ₁ , S ₂ ≠ between T ₁ , T ₂

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ctd
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sea water loop

TIME CODE -

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bottom time of cast
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MR -
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messenger release
recover mooring

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GPS -
LOR -RADAR
GLOBAL
LORAN

22 October 2000 - No CTD Taken at X-27, Ig Strait

58.18.33, 136.13.17, 23/10/00, 1635 UTC: $\approx$ 15 Pacific White Sided Dolphins

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR 2000			MONTH OCTOBER			SHIP W.E. RICKER				CRUISE 2000-34				PAGE 11	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	X029	CTD	1702	BE	98	58° 19.97	136° 07.49		142					T ₀ = 7.4 S ₀ = 29.2 Lt = 1002	
			1707	BO		58° 19.96	136° 07.32			136		1		Bongo - Niskin @ 3m	
			1710	EN		58° 19.96	136° 07.18								
23	X030	CTD	1859	BE	99	58° 15.456	136° 02.531	GPS	116					temp = 7.4323 sal = 30.0957 Niskin @ 3m	
			1903	BO	"	58° 15.436	136° 02.460	"	115	101		1		MLD = n/a LT = 1159	
			1905	EN	"	58° 15.434	136° 02.437	"	115					Bongo	
23	X0-31	CTD	21:09	BE	100	58° 19.308	135° 45.237	GPS	116					temp = 7.4898 sal = 26.4398 Niskin @ 3m	
			21:14	BO	"	58° 19.359	135° 45.536	"	114	105		1		MLD = n/a LT = 1400	
			21:17	EN	"	58° 19.411	135° 45.661	"	112					Bongo HydroLab (2), Dulliporine (12)	
23	X0-32	CTD	22:54	BE	101	58° 16.937	135° 45.229	GPS	140					Temp = 7.856 Sal = 27.4719 LT = 1554	
			22:59	BO	"	58° 16.980	135° 45.347	"	140	130		1		MLD = n/a surface Niskin	
			23:02	EN	"	58° 16.991	135° 45.382	"	140					Bongo	
24	X0-27	CTD	01:16	BE	102	58° 13.803	135° 33.367	GPS	106				1	temp = 7.6241 sal = 28.1548 SURFACE NISKIN BAD T ₀	
			01:20	BO	"	58° 13.829	135° 33.313	"	106	96				MLD = n/a LT = 1816	
			01:22	EN	"	58° 13.839	135° 33.286	"	106					BONGO redo of ported station	
25	NI-06	CTD	01:41	BE	103	55° 20.614	134° 35.629	GPS	197				1	temp = 10.8167 sal = 32.3459 LT = 1841	
			01:48	BO	"	55° 20.588	134° 35.748	"	196	186				MLD = 49m surface Niskin	
			01:52	EN	"	55° 20.565	134° 35.818	"	195					No BONGO	

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DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR			MONTH			SHIP			CRUISE			PAGE		OF	
2000			October			W.E. Ricker			HS-2000-34			12			
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	
25	NI-07	CTD	02:49	BE	104	55°19.332	134°47.344	GPS	930			1		temp = 10.4573 surface Niskin @ 3m sal = 32.3975	
			03:05	BD	"	55°19.228	134°47.603	"	957	942				MLD = 38m LT = 1949	
			03:22	EN	"	55°19.094	134°47.739	"	985					No BONGO	
25	NI-08	CTD	04:23	BE	105	55°18.152	134°59.776	GPS	1446			1		temp = 10.5800 surface Niskin @ 3m sal = 32.3803	
			04:43	BD	"	55°18.055	135°00.034	"	1445	1004				MLD = 37m LT = 21:23	
			05:00	EN	"	55°17.887	135°00.232	"	1444					No BONGO	
25	NI-09	CTD	06:05	BE	106	55°16.866	135°11.883	GPS	2338			1		temp = 10.2620 surface Niskin @ 3m sal = 32.4354	
			06:25	BD	"	55°17.018	135°12.079	"	2336	1002				MLD = 34m LT = 23:05	
			06:43	EN	"	55°17.110	135°12.050	"						No BONGO	
25	NI-10	CTD	0750	BE	107	55°15.73	135°24.08		>2500					T _o = 10.4 LT = 0050 S _o = 32.4	
			0811 ↓ 0818 ↑	BD	"	55°15.81	135°24.49			1024		2		Niskin @ 1020 Niskin @ 3m	
			0835	EN	"	55°15.78	135°24.53							MLD = 40m	
25	NI-11	CTD	0944	BE	108	55°14.53	135°36.24		>2500					T _o = 10.5 LT = 0244 S _o = 32.3	
			1004 ↓ 1011 ↑	BD		55°14.56	135°36.35			1011		2		Niskin @ 1011 Niskin @ 3m	
			1028	EN		55°14.59	135°36.19							MLD ~ 43m	
25	NI-05	CTD	22:19	BE	109	55°21.720	134°26.469	GPS	188			1		temp = 10.5531 Niskin @ 3m sal = 32.3499	
			22:26	BD	"	55°21.670	134°26.534	"	188	181				MLD = 38m LT = 1519	
			22:30	EN	"	55°21.651	134°26.583	"	189					BONGO	

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BOT -
CTD -
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GPS -
LOR -RADAR
GLOBAL
LORAN

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR			MONTH			SHIP				CRUISE				PAGE		OF	
2000			October			W.E. Ricker				HS-2000-34				13			
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			
25	NI-04	CTD	23:47	BE	110	55 22.362	134 18.845	GPS	177			1		temp = 10.2250 Niskin @ 3m sal = 31.8250			
			23:53	BO	"	55 22.332	134 18.991	"	177	166				MLD = ? very shallow? LT = 16:47			
			23:56	EN	"	55 22.291	134 19.043	"	178					No BONGO (done on previous day)			
26	NI-03	CTD	00:39	BE	111	55 23.487	134 09.971	GPS	124			1		temp = 10.1103 Niskin @ 3m sal = 31.7539			
			00:44	BO	"	55 23.476	134 10.042	"	126	116				MLD = n/a LT = 1739			
			00:46	EN	"	55 23.469	134 10.050	"	126					No BONGO (done on previous day)			
26	NI-02	CTD	01:28	BE	112	55 24.413	134 01.026	GPS	104			1		temp = 9.9534 Niskin @ 3m sal = 31.1683			
			01:33	BO	"	55 24.448	134 02.107	"	104	95				MLD = n/a LT = 1828			
			01:35	EN	"	55 24.466	134 02.142	"	104					No BONGO (done on previous day)			
26	NI-01	CTD	02:17	BE	113	55 25.283	133 52.268	GPS	84			1		temp = 10.0691 Niskin @ 3m sal = 31.4818			
			02:22	BO	"	55 25.304	133 52.364	"	84	75				MLD = n/a LT = 1917			
			02:23	EN	"	55 25.302	133 52.381	"	84					No BONGO (done on previous day)			
26	XO-33	CTD	1325	BE	114	56 02 23	132 46.27		369					T ₀ = 8.9 S ₀ = 28.5 LT = 0625			
			1335 1340	BO		56 02.20	132 46.40			360		2		Niskin @ 359-362 Bongo - Niskin @ 3m			
			1347	EN		56 02.15	132 46.55										
26	XO34	CTD	1602	BE	115	55 51.71	132 30.31		490					T ₀ = 9.0 S ₀ = 27.96 LT = 0902			
			1613	BO		55 51.73	132 30.35			484		1		Bongo Niskin @ 3m			
			1623	EN		55 51.77	132 30.20										

CAST TYPE -

BOT -

bottle cast

ROS -

rosette

USW -

sea water loop

TIME CODE -

BE -

beginning time of cast

DE -

deployment time

POSITION CODE -

RAD -

RADAR

CTD -

ctd

NET -

net haul

BO -

bottom time of cast

MR -

messenger release

GPS -

GLOBAL

MOR -

mooring

DRF -

drifter

EN -

end of cast

RE -

recover mooring

LOR -

LORAN

DAILY LOG

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YEAR			MONTH			SHIP			CRUISE					PAGE	
2000			OCTOBER			W.G. RICKER			2000-34					14 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	
26	X035	CTD	1840	BE	116	55° 38.96	132° 19.77		681					T _s = 9.2 S _σ = 27.4 Lt = 1140	
			1855	BO		55° 38.99	132° 19.78		675	671		1		Niskin @ 3m Bongo	
			1908	EN		55° 38.945	132° 19.750		682						
26	X036	CTD	21:28	BE	117	55° 28.899	132° 03.810	GPS	466			1		Temp = 9.0529 sal = 26.2687 Lt = 1428	
			21:40	BO	"	no position taken - had to retrieve	watching bottom + unit	"	472	451				MLD = NA Niskin @ 3m	
			21:49	EN	"	55° 28.901	132.03.421	"	473						
27	X037	CTD	01:46	BE	118	55° 10.852	131° 54.571	GPS	400			1		Bongo large eye herring; co-samples Temp = 9.2213 sal = 26.4841 Lt = 18:46	
			01:56	BO	"	55° 10.624	131° 54.499	"	397	386				MLD = 83m? Niskin @ 3m	
			02:04	EN	"	55° 10.559	131° 54.515	"	388					Bongo	
27	X038	CTD	1347	BE	119	54° 16.95	131° 02.63		120					T _s = 10.0 S _σ = 31.6 Lt = 0643	
			1351	BO		54° 17.04	131° 02.60		109	103		1		Bongo Niskin @ 3m	
			1353	EN		54° 17.05	131° 02.56								
27	X039	CTD	1606	BE	120	54° 04.94	131° 01.58		94					T _s = 10.2 S _σ = 31.5 Lt = 0906	
			1610	BO		54° 04.93	131° 01.55			88		1		Bongo Niskin @ 3m	
			1612	EN		54° 04.94	131° 01.55								
28	X043	CTD	00:21	BE	121	53° 37.494	130° 23.369	GPS	328			1		Temp = 9.2671 sal = 30.8895 Niskin @ 3m	
			00:30	BO	"	53° 37.470	130° 23.240	"	346	330				MLD = n/a Lt = 1721	
			00:36	EN	"	53° 37.423	130° 23.077	"	356					Bongo	

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 SCIENCE

YEAR			MONTH			SHIP			CRUISE			PAGE		OF	
2000			October			W.E. Ricker			HS-2000-34			15			
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	X044	CTD	1317	BE	122	53° 40.43	130° 41.86		131					T _o = 10.2 S _o = 31.5 Lt = 0617	
			1322	BO		53° 40.42	130° 41.81			126		1		Bongo Niskin @ 3m	
			1324	EN		53° 40.41	130° 41.77								
28	X045	CTD	1601	BE	123	53° 26.56	130° 40.45		123					T _o = 10.1 S _o = 31.6 Lt = 0901	
			1605	BO		53° 26.57	130° 40.50			117		1		Bongo Niskin @ 3m	
			1607	EN		53° 26.57	130° 40.51								
28	X046	CTD	1830	BE	124	53° 13.96	130° 33.42		163					T _o = 10.1 S _o = 31.7 Lt = 1130	
			1835	BO		53° 14.01	130° 33.54			159		1		Bongo Niskin @ 3m	
			1838	EN		53° 14.03	130° 33.56								
28	X047	CTD	2128	BE	125	53° 05.97	130° 14.50	GPS	198					Temp = 9.8950 Sal = 31.7478 LT = 1428	
			2135	BO		53° 05.978	130° 14.704	"	204	191				Niskin @ 3m MLD = N/A	
			2139	EN		53° 05.939	130° 14.791	"	206					Bongo	
29	X048	CTD	00:59	BE	126	52° 53.74	129° 58.12	GPS	242					Temp = 9.8204 Sal = 31.7477 LT = 1759	
			01:05	BO		52° 53.75	129° 58.11	"	241	236				Niskin = 3m	
			01:10	EN		52° 53.76	129° 58.07	"	240					Bongo	
29	X049	CTD	1408	BE	127	52° 10.67	127° 51.77		498					T _o = 9.0 S _o = 21.7 Lt = 0608	
			1419	BO		52° 10.62	127° 51.86			490		2		Bongo Niskin @ 220" AND 3m	
			1430	EN		52° 10.58	127° 51.98								

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 = 3min

20:52
23:52

185-

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR 2000		MONTH OCTOBER				SHIP W.E. RICKER				CRUISE 2000-34				PAGE 16	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	
29	X050	CTD	1607	BE	128	52° 02.37	127° 55.59		356					T _o = 9.1 S _o = 25.9 LT = 0807	
			1616	BO		52° 02.33	127° 55.59			347		1		Niskin @ 3m Bongo	
			1622	EN		52° 02.36	127° 55.64								
29	X051	CTD	1832	BE	129	51° 47.57	127° 58.27		381					T _o = 8.76 S _o = 26.4 LT = 1032	
			1841	BO		51° 47.52	127° 58.37			376		1		Niskin @ Bongo	
			1848	EN		51° 47.50	127° 58.34								
29	X0-52	CTD	2058	BE	130	51° 33.74	127° 52.42	GPS	211			1		T _o = 9.1117 S _o = 28.5128 Niskin @ 3m	
			21:05	BO	"	51° 33.74	127° 52.46	"	212	202				MLD = n/a LT = 1258	
			21:09	EN	"	51° 33.75	127° 52.33	"	212					Bongo	
30	RI-01	CTD	00:09	BE	131	51° 26.31	127° 38.33	GPS	324			2		T _o = 9.2800 S _o = 25.5123 LT = 1700	
			00:17	BO	"	51° 26.28	127° 38.49	"	324	316	Deep bottle @ 00:21 700:24			MLD = n/a Niskin @ 3m	
			00:27	EN	"	51° 26.29	127° 38.71	"	318					Bongo Sal bottle @ 180m	
30	RI-02	CTD	02:21	BE	132	51° 31.03	127° 33.94	GPS	318					T _o = 9.280 S _o = 21.1930 Niskin @ 3m	
			02:30	BO	"	51° 31.07	127° 33.87	"	320	310				MLD = 100m LT = 1821	
			02:36	EN	"	51° 31.06	127° 33.81	"	320					NO BONGO	
30	RI-03	CTD	03:17	BE	133	51° 36.01	127° 31.99	GPS	322					T _o = 9.2639 S _o = 26.1038 Niskin @ 3m	
			03:25	BO	"	51° 36.06	127° 31.95	"	321	311				MLD = 84m LT = 1917	
			03:31	EN	"	51° 36.07	127° 31.89	"	321					NO BONGO	

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
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INSTITUTE OF OCEAN SCIENCES

YEAR		MONTH				SHIP				CRUISE				PAGE		OF	
2000		October				WE Ricker				HS 2000-34				17		17	
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	RI-04	CTD	04:10	BE	134	51° 38.98	127° 27.11	GPS	295			1		temp = 9.5037 sal = 14.2495 MLD = 108m LT = 2010			
			04:18	BO	"	51° 38.97	127° 27.08	"	295	286							
			04:23	EN	"	51° 38.99	127° 27.10	"	295								
30	RI-05	CTD	05:04	BE	135	51° 40.98	127° 19.99	GPS	181			1		NO BONGOS temp = 2.999 sal = 21.0397 MLD = n/a LT = 21:04			
			05:10	BO	"	51° 40.98	127° 19.93	"	181	170							
			05:13	EN	"	51° 40.97	127° 19.89	"	182								
30	X0-53	CTD	0759	BE	136	51° 26.50	127° 47.41	GPS	141			1		NO BONGOS temp = 9.2 sal = 28.1 LT = 2359			
			0803	BO	"	51° 26.51	127° 47.39	"		136							
			0806	EN	"	51° 26.52	127° 47.39	"						BONGOS Earlier in Day			
30	X054	CTD	1542	BE	137	50° 43.06	127° 02.33		156					To = 86 So = 31.4 LT = 0742			
			1547	BO		50° 43.03	127° 02.37		160	156		1		Niskin @ 3m No Bongs			
			1550	EN		50° 43.02	127° 02.39										
30	X055	CTD	1708	BE	138	50° 41.72	126° 57.79		193					To = 8.6 So = 31.7 LT = 0908			
			1713	BO		50° 41.70	126° 57.76			188		1		Niskin @ 3m No Bongs			
			1717	EN		50° 41.67	126° 57.75										