CRUISE NUMBER 9914

DAILY LOG

INSTITUTE OF OCEAN SCIENCES

OCEAN PHYSICS

DATE June 17/99 –

VESSEL W.E. Ricker

PROJECT High Seas Salmon Project

Captain: SIMON SCHWARZ First Officer: CECIL CHANG

Second Officer: MICHAEL SHUCKBURGH Third Officer: _____

Cruise Participants / Agencies: PGC / IOS

Scientific Personnel: Party Chief: John Morris

Name	Watch	Cabin	Name	Watch	Cabin
Sheila Toews	0600 - 1800				
Dougie Anderson	1800 - 0600				

Second leg of cruise: Party Chief: _____

Name	Watch	Cabin	Name	Watch	Cabin

Data logging system: Unit no.: _____

Program Name: _____ Program version: _____

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

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

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

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: Sea-Tech serial no.: 197

coefficients: slope: _____ offset: _____

Comments: Sea-Bird CTD 0506

Primary Cond. 2280

Primary Temp. 2710

Secondary Cond. 1763

Secondary Temp. 2449

X NOTES CTD

JUNE 18 - CAST # 9 - at the bottom of the cast the primary temp + salinity went out (temp. out by 0.20, salinity by ~0.1) The bottom depth was 328 m, I went to 319 m. I examined the CTD - it didn't look like it hit bottom, there was no debris in the cells etc. I checked the connections + flushed out the cells well with Triton. Everything looks O.K. S.T.

CAST # 10 - Everything looks normal. S.T.
(all readings are back on track)

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DAY (UTC)	STATION ID	CAST TYPE	TIME (UTC)	TIME CODE	STD/HYDRO CONSEC #	LATITUDE	LONGITUDE	POSITION CODE	BOTTOM DEPTH (m)	MAX SAMPLING DEPTH (m)	CONSEC SAMPLE #	# OF BOTTLES	INIT	COMMENTS
18	—	—	03:04	UTC —	#1	51 05.82	128 00.55		129 m		#1			LOOP SAMPLE #1
18			06:59		#2	51 30.85	128 37.56		157		#2			" "
18			14 58		#3	52° 28.16	129° 44.29		105		#3			Loop
18			19 00		#4	52.52.64	130° 28.57		120		#4			Loop
18	X-1	CTD	21.57	BE	#5	53°01.52	130° 43.63	CNV			5			CTD {T-10.4 S-31.57 TS} {T-10.51 S-31.38
18	X-1	CTD	22:01	Bo	#5	53°01.53	130° 43.62.	B-up	127					- these casts are not on a predetermined transect line; we are just testing the equipment. John Morris designated these stations as X-1, 2 etc. Loop
18	X-1	CTD	22 04	EN	#5	53°01.54	130° 43.62.	AVG		116				
19	Loop	Loop	3:06		#6	53 47 50	131 09.01		43		6			
19	Loop	Loop	6:59		#7	54 14.96	131 25.82		36		7			Loop
19	D01	CTD	12 36	BE	#8	54 34.81	132 19.71	CNV	251		8			
19	D01	CTD	12 42	Bo	#8	54 34.71	132 19.75	B-up		235				
19	D01	CTD	12N6	EN	#8	54 34.66	132 19.71	AVG	328					
19	D02	CTD	1454	BE	9	54°31.87	132° 32.59	CNV.		317	9			CTD {T 9.78 S-30.99 TS} {T 9.89 S 30.96
19	D02	CTD	1503	Bo	9	54'31.88	132° 32.66	B-up						at the bottom of the cast the prim. temp + salinity readings were out * See Note previous page
19	D02	CTD	1507	EN	9	54°31.89	132°32.67	AVG						
19	D03	CTD	1644	BE	10	54°28.71	132°46.11	CNV	367		10			CTD {T 9.86 S 31.02 TS T {9.95 S 31.02
19	D03	CTD	1653	Bo	10	54°28.62	132°46.36	AVG		356				* TEMP. & SALINITY
19	D3	CTD	1658	EN	10	54°28.262	132°46.55'	B-up						READINGS ARE BACK TO NORMAL, ET.

CAST TYPE - BOT - bottle cast; CTD - ctd; MOR - mooring; ROS - rosette; NET - net haul; DRF - drifter; USW - sea water loop

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

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

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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	D04	CTD	1828	BE	11	54°25.77	132°58.20	CNV	117-160		11			CTD {T 9.89, S 30.93} TS {T °C N/A, S}
19	D04	CTD	1833	Bo	11	54°25.85	132°58.24	B-up		101				-on a shelf; being
19	D04	CTD	1835	EN	11	54°25.87	132°58.27	AVG						conservative with depth
19	D05	CTD	2025	BE	12	54°22.30	133°11.85	CNV.	455	445	12			CTD {T S 10.35 31.05} TS {T S N/A}
19	D05	CTD	2036	Bo	12	54°22.35	133°12.00	B-up						
19	D05	CTD	2044	EN	12	54°22.43	133°12.20	AVG						CTD {T 9.83 S 32.27} TS {T 9.88 S 32.28}
19	D06	CTD	2233	BE	13	54°19.19	133°23.75	CNV.	421		13			
19	D06	CTD	2243	Bo	13	54°19.29	133°23.47	B-up		416				
19	D06	CTD	2251	EN	13	54°19.34	133°23.26	AVG						
20	D07	CTD	203	BE	14	54 13.26	133 41.31	CNV	265		14			CTD {9.243 32.490}
20	D07	CTD	209	Bo	14	54 13.31	133 41.33	B-up		253				TS {9.326 32.497}
20	D07	CTD	213	EN	14	54 13.34	133 41.34	AVG						
20	D08	CTD	301	BE	15	54 12.63	133 49 13	CNV	455		15			CTD {9.706 32.285}
20	D08	CTD	308	Bo	15	54 12.66	133 49.09	B-up		444				TS {9.757 32.286}
20	D08	CTD	315	EN	15	54 12.69	133 49.05	AVG						
20	D09	CTD	425	BE	16	54 09.57	134 02.27	CNV	1813		16			CTD {82.4952 9.1880}
20	D09	CTD	436	Bo	16	54 09.66	134 02.25	B-up		1000				TS {32.492 9.276}
20	D09	CTD	501	EN	16	54 09.66	134 02.34	AVG						winch counter failed (bongo)

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DAY (UTC)	STATION ID	CAST TYPE	TIME (UTC)	TIME CODE	STD/HYDRO CONSEC #	LATITUDE	LONGITUDE	POSITION CODE	BOTTOM DEPTH (m)	MAX SAMPLING DEPTH (m)	CONSEC SAMPLE #	# OF BOTTLES	INIT	COMMENTS
20	D10	CTD	06 11	BE	17	54 06.58	134 15.03	CNV	2600		17			CTD } 9.1327 32.5168
20	D10	CTD	0628	BO	17	54 06.66	134 14.98	B-up		1004				TS } 9.212 32.527
20	D10	CTD	0643	EN	17	54 06.75	134 14.86	AVG						
20	D11	CTD	0804	BE	18	54 02.9N	134 28.82	CNV	1181					CTD } 32.456 9.105
20	D11	CTD	0823	BO	18	54 02.81	134 28.10	B-up		1002	18			TS } 32.462 9.190
20	D11	CTD	0835	EN	18	54 02 68	134 27.90	AVG						
20	D12	CTD	0951	BE	19	53 59.94	134 40.84	CNV	? Deep					CTD } 32.370 9.321
20	D12	CTD	1010	BO	19	53 59.88	134 40.85	B-up		1014	19			TS } 32.401 9.404
20	D12	CTD	1027	EN	19	53 59.92	134 40.78	AVG						pri & sec sal difference holding reasonably steady at 0.01.
20	–	Loop	1915		20	54°12.87	133°47.69				20			
21	–	Loop	0034		21	54°29.36	133°16.27				21		only	Salinity taken - freezer broken; not allowed access. (heading back to R. Rupert)
21	–	Loop	0305		22	54 20.84	132 36.28				22			" "
22	–	Loop	07:14		23	54 04.35	130 32.60				23			Loop
22	–	Loop	11.04		24	53 41.44	130 50.15				24			Loop
22	–	Loop	13:00		25	53°23.43	130°47.79				25			Loop.
22	X02	CTD	1314	BE	26	53°23.30	130°47.82	CNV	155		26 (mapping Salinity)			CTD } T 10.26 S 31.01 TS } T 10.34 S 31.01
22	X02	CTD	1319	BO	26	53°23 32	130°47.85	B-up		148				X02: a little out on the
22	X02	CTD	1329	EN	26	53° 23.32	130°47.85	AVG						normal chosen transect

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Note:
→ Nuts + Salinity for # 27 + 28 not taken;
(miscommunication between PBS + myself
as to who was doing it, sr.)

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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
22	X03	CTD	1454	BE	27	53° 17.59	130° 40.09	CNV	155		~~27~~			CTD <S T 10.22 31.18
22	X03	CTD	1459	BO	27	53° 17.57	130° 40.08	B-up		149				TS <S T 10.25 31.17
22	X03	CTD	1502	EN	27	53° 17.57	130° 40.06	AVG						
22	X04	CTD	1627	BE	28	53° 12.00	130° 31.02	CNV.			~~28~~			CTD <S T 10.03 30.35
22	X04	CTD	1633	BO	28	53° 11.97	130° 31.01	B-up	175					TS <S T 10.14 30.34
22	X04	CTD	1636	EN	28	53° 11.98	130° 30.97	AVG		167				
22	X05	CTD	1802	BE	29	53° 06.90	130° 21.62	CNV.	202		29			
22	X05	CTD	1808	BO	29	53° 06.87	130° 21.59	B-up		190				
22	X05	CTD	1812	EN	29	53° 06.87	130° 21.55	AVG						CTD <S T 9.98 -31.67
22	X06	CTD	1936	BE	30	53 04.58	130° 08.79	CNV.	183		30			TS <S T 10.06 31.69
22	X06	CTD	1941	BO	30	53 04.55	130 08.78	B-up		171				CTD} 10.374 31.678 LOOPS TAKEN
22	X06	CTD	1944	EN	30	53 04.54	130 08.77	AVG.						TS} 10.451 31.701 (pri-sec obs = ~0.01 reasonably steady)
22	X07	CTD	2108	BE	31	52 59.92	130 00.89	CNV.	166		31			
22	X07	CTD	2111	BO	31	52 59.92	130 00.95	B-up		151				CTD} 31.824 10.185 LOOPS TAKEN
22	X07	CTD	2114	EN	31	52 59.91	130 01.00	AVG.						TS} 31.829 10.265
22	X08	CTD	2246	BE	32	52 54.62	129 52.64	CNV.	110		32			
22	X08	CTD	2248	BO	32	52 54 62	129 52 67	B-up		98				CTD} 32.846 10.945
22	X08	CTD		EN	32	52 54 63	129 52 72	AVG						TS} 32.038 10.760

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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
23	Loop	Loop	03:35		33	52 19.63	129 25.06		152m	0m	33			Loop
23	"	"	07:00		34	51 59.96	128 57.63		131 m	0m	34			"
23	"	"	10:59		35	51 35.55	128 23.90		164m	0m	35			"
23	TOB	CTD	1258	BE	36	51° 27.04	128°06.71	CNV.			36			TS < T 11.93 S 30.42
23	TOB	CTD	1303	Bo	36	51° 27.07	128°06.66	B-up	98	90				CTD < T 11.86 S 30.43
23	TOBI	CTD	1305	EN	36	51° 27.08	128°06.64	AVG						
23	TOA	CTD	1424	BE	37	51° 24.15	128° 14.96	CNV.			37	✓	✓	TS < T 11.87 S 30.15
23	TOA	CTD	1429	Bo	37	51° 24.21	128° 14.88	B-up	129					CTD < T 11.79 S 30.14
23	TOA	CTD	1431	EN	37	51°24.23	128°14.84	AVG		121				
23	T1	CTD	1601	BE	38	51°17.48	128° 19.50	Cnv.			38			
23	T1	CTD	1605	Bo	38	51° 17.53	128° 19.45	B-up	67					CTD < T 11.24 S 31.00
23	T1	CTD	1606.	EN	38	51° 17. 55	128° 19. 43	Avg.		60	"			TS < T 11.23 S 30.74
23	T2	CTD	1741	BE	39	51° 12.52	128° 28.18	CNV.			39			(temp + salinity stabilize at ~ 167m to 186m - interesting)
23	T2	CTD	1747	Bo	39	51°12.54	128°.28.12	B-up	193					CTD < T 11.00 S 29.76
23	T2	CTD	1750	EN	39	51° 12.55	128° 28.09	AVG.		185				TS < T 11.12 S 29.71
23	T3	CTD	1917	BE	40	51' 08.43	128° 36 26	CNV.			40			
23	T3	CTD	1922	Bo	40	51°08.43	128° 36.30	B-up	140					CTD T < 10.64 S 30.89
23	T3	CTD	1924	EN	40	51°08. 43	128° 36. 31	Avg		134				TS T < 10.91 S 30.85

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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
23	T4	CTD	20:47	BE	41	51° 04.95	128°43.81	GNV.	62		41			CTD $\frac{T\ 11.04}{S\ 31.01}$
23	T4	CTD	2052	BO	41	51° 04.96	128°43.92	B-up		46				TS $\frac{T\ 11.22}{S\ 31.01}$
23	T4	CTD	2053	EN	41	51°04.97	128°43.85	AVG						
23	T5	CTD	2215	BE	42	51°00.16	128° 52.28	CNV			42			CTD $\frac{T\ 10.38}{S\ 31.26}$
23	T5	CTD	2219	BO	42	51°00.22	128°52.31	B-up	64					TS $\frac{T\ 10.89}{S\ 31.23}$
23	T5	CTD	2220	EN	42	51°00.23	128°.52.31	AVG.		58				
23	T6	CTD	2356	BE	43	50°55.83	128°59.09	CNV.			43			CTD $\frac{T\ 10.54}{S\ 31.26}$
23	T6	CTD	0000	BO	43	50°55.86	129°00.02	B-up	60					TS $\frac{T\ 10.62}{S\ 31.26}$
23	T6	CTD	0001	EN	43	50°55.86	129°00.03	avg.		50				
24	T7	CTD	0203	BE	44	50 49.22	129 13.36		97		44			CTD $\frac{31.769}{11.251}$
24	T7	CTD	0205	BO	44	50 49.24	129 13.38			86				TS $\frac{31.760}{11.329}$
24	T7	CTD	0207	EN	44	50 49.26	129 13.38							
24	T8	CTD	0300	BE	45	50 45.68	129 19.84		212 (227)		45			CTD $\frac{31.504}{11.178}$
24	T8	CTD	0305	BO	45	50 45.75	129 19.88			203				TS $\frac{31.532}{11.254}$
24	T8	CTD	0308	EN	45	50 45.77	129 19.89							pump not on 1st 25-30 meters — downcast. DA.
24	T9	CTD	0408	BE	46	50 41.54	129 28.46		1900		46			CTD $\frac{31.856}{11.269}$
24	T9	CTD	0423	BO	46	50 41.65	129 28.50			1006				TS $\frac{31.839}{11.335}$
24	T9	CTD	0434	EN	46	50 41.72	129 28.56							

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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
24	T10	CTD	6:04	BE	47	50 35.03	129 41.56				47			CTD } 32.043 11.494
24	T10	CTD	6:18	BO	47	50 35.17	129 41.77		2000+					TS } 32.049 11.566
24	T10	CTD	6:29	EN	47	50 35.23	129 41.86			1000				
24	T11	CTD	8:19	BE	48	50 27.46	129 59.65		2000+		48			CTD } 31.876 11.512
24	T11	CTD	8:39	BO	48	50 27.41	130 00.06			1003				TS } 31.879 11.587
24	T11	CTD	8:55	EN	48	5027.26	130 00.13							Deck unit not recieving GPS. (Seems to have returned)
24	T12	CTD	9:50	BE	49	50 22.64	130 09.84		2000+		49 missing			CTD } 31.879 11.399
24	T12	CTD	10:08	BO	49	50 22.54	130 10.25			1002				TS } 31.883 11.473
24	T12	CTD	10:22	EN	49	50 22.54	130 10.63							
24	T13	CTD	11:16	BE	50	50 18.53	130 19.98		2000+		*50 salinity bottle broken			CTD } 31.913 11.337
24	T13	CTD	11:34	BO	50	50 18.37	130 43.93			1002				TS } 31.916 11.401
24	T13	CTD	11:47	EN	50	50 18.41	130 20.35							primary-sec. sal diff ≤ 0.014 see note : ⇒
25	Loop	Loop	0330	-	51	5015.89	128 20.38				✓ 51			Loop
25	Loop	Loop	0658	-	52	50.08.91	128 08.57		5417		✓ 52			Loop
25	Loop	Loop	0957	-	53	49 47 14	127 29.77		83		✓ 53			Loop
25	C1	CTD	1548	BE	54	49° 21.13	126° 31.63	CNV.			✓ 54			
25	C1	CTD	1552	BO	54	49° 21.12	126° 31.62	B-up	83					CTD $^{T}_{S}$ < $^{11.12}_{31.45}$
25	C1	CTD	1553	EN	54	49° 21.11	126° 31.62	AVG		28				TS $^{T}_{S}$ < $^{11.21}_{31.45}$

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Note for cast #24: Secondary conductivity cell S/N 1763 cal date 18-Aug-98
Secondary temperature sensor S/N 2449 cal date 08-May-98
Drift is likely due to these sensors, recommend they be recalibrated.

Doug Anderson 99/06/24

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25	C2	CTD	1659	BE	55	49°19.22	126°35.44	CNV.	73		55			CTD $<^{T}_{S}$ 11.98 30.85
25	C2	CTD	1704	BO	55	49°19.12	126°35.47	B-up		68				TS $<^{T}_{S}$ 12.04 30.84
25	C2	CTD	1705	EN	55	49°19.09	126°35.51	AVG						
25	C3	CTD	1830	BE	56	49°18.03	126°38.37	CNV.	98		56			CTD $<^{T}_{S}$ 11.95 31.04
25	C3	CTD	1835	BO	56	49°17.99	126°38.42	B-up		91				TS $<^{T}_{S}$ 12.03 31.04
25	C3	CTD	1836	EN	56	49°17.99	126°38.44	Avg.						
25	C4	CTD	2024	BE	57	49°16.14	126°42.00	CNV.	117		57			CTD $<^{T}_{S}$ 12.32 31.03
25	C4	CTD	2028	BO	57	49°16.14	126°41.99	B-up		112.				TS $<^{T}_{S}$ 12.39 31.03
25	C4	CTD	2030	EN	57	49°16.13	126°41.98	AVG						
25	C5	CTD	2208	BE	58	49°14.35	126°45.24	CNV.	122		58			CTD $<^{T}_{S}$ 12.28 31.37
25	C5	CTD	2213	BO	58	49°14.31	126°45.29	B-up		115				TS $<^{T}_{S}$ 12.37 31.36
25	C5	CTD	2215	EN	58	49°14.28	126°45.32	AVG						-
25	C6	CTD	2331	BE	59	49°12.59	126°48.15				59			
25	C6	CTD	2336	BO	59	49°12.54	126°48.19		132.					CTD $<^{T}_{S}$ 12.42 31.36
25	C6	CTD	2338	EN	59	49°12.51	126°48.21			125				TS $<^{T}_{S}$ 12.49 31.37
26	C7	CTD	0125	BE	60	49 11.29	126 51.72		152		60			
26	C7	CTD	0128	BO	60	49 11.26	126 51.79			142				CTD } 31.016 12.560
26	C7	CTD	0130	EN	60	49 11.23	126 51.82							TS } 31.336 12.562

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
1999	June	W.E. Ricker	9914	9	

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	C8	CTD	0153	BE	61	49 09.61	126 54.69		199		61			
26	C8	CTD	0157	BO	61	49 09.57	126 54.73			188				CTD} 31.761 12.267
26	C8	CTD	0200	EN	61	49 09.55	126 54.75							TS} 31.758 12.339
26	C9	CTD	0225	BE	62	49 07.72	126 58.30		432 m		62			
26	C9	CTD	0233	BO	62	49 07.66	126 58.33			423				CTD} 31.713 12.258
26	C9	CTD	0238	EN	62	49 07.63	126 58 32							TS} 31.733 12.363
26	C10	CTD	0259	BE	63	49 06.56	127 01.26		750m		63			
26	C10	CTD	0312	BO	63	49 06.46	127 01.27			733				CTD} 31.850 12.155
26	C10	CTD	0321	EN	63	49 06.44	127 01.23							TS} 31.863 12.263
26	C11	CTD	0345	BE	64	49 04.76	127 04.22		1000+		64			
26	C11	CTD	0359	BO	64	49 04.70	127 04.14			1003	641			CTD} 31.802 12.224 prisal - sec sal ≙ 0.014
26	C11	CTD	0410	EN	64	49 04.69	127 04.05							TS} 31.801 12.363
26	C12	CTD	0437	BE	65	49 03.05	127 07.82		1400		65			
26	C12	CTD	0451	BO	65	49 03.06	127 07.77			1003				CTD} 31.926 12.192
26	C12	CTD	0500	EN	65	49 03.06	127 07.88							TS} 31.923 12.261
26	C13	CTD	0528	BO	66	49 01.49	127 10.83		1500					
26	C13	CTD	0539	BO	66	49 01.52	127 10.75			1007	66			CTD} 31.931 12.217
26	C13	CTD	0550	EN	66	49 01.59	127 10.66							TS} 31.930 12.291

CAST TYPE - BOT - bottle cast; CTD - ctd; MOR - mooring; ROS - rosette; NET - net haul; DRF - drifter; USW - sea water loop

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

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR	MONTH	SHIP	CRUISE	PAGE OF
1999	June	Ricker	9914	

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	CIH	CTD	0623	BE	67	48 59.77	127 14.14		1500		67			pumps not on 1st 30 m ①
26	CIH	CTD	0634	BO	67	48 59.83	127 14.02			1003				CTD} 12.261 31.863
26	CIH	CTD	0644	EN	67	48 59.82	127 13.96							TS} 12.891 31.334
27	–	Loop	0248		68	48°42.59	125° 17.00				68			
27	–	"	1137		69	48 23 44	123 13.32				69			

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