CRN: 9940

DAILY LOG

INSTITUTE OF OCEAN SCIENCES

OSAP

DATE: OCT 22 - 29, 1999

VESSEL: J.P. Tully

PROJECT: EFFINGHAM INLET

Captain: _____ First Officer: _____

Second Officer: _____ Third Officer: _____

Cruise Participants / Agencies: _____

Scientific Personnel: Party Chief: Rick Thompson

Name	Watch	Cabin	Name	Watch	Cabin

Second leg of cruise: Party Chief: _____

Name	Watch	Cabin	Name	Watch	Cabin

Data logging system: Unit no.: _____

Program Name: _____ Program version: _____

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

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

1st CTD make: _____ model: _____ serial no.: 0550

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: Primary Temp 2038

Primary Cond 1766

Secondary Temp 2374

Secondary Cond 2173

Transmissometer 192D

Oct. 23/99

PDT 0615 Dept Jos. walled for Rendezvous. Arriving from Vancouver via Montreal.

0630 PDT. ~~Status~~ JFB2, ~~#~~
Juan de Fuca JFB2: GPS Drift 20309 (with light)

Replaced 3 buoys along Line JB (B2, B3, B4). ATS was predicting SE gales & strong winds off entrance to Juan de Fuca. Hope to see reversals.

Salinity Calibrations for
cast 9, 10, 11, 21, 23, and 37

DAILY LOG — OCEAN PHYSICS — INSTITUTE OF OCEAN SCIENCES

YEAR 1999 | MONTH OCT. | SHIP Tully | CRUISE 9940 | PAGE 1 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	IOS	DEPART IOS @ 0015 PDT / 0715 UTC						FOR DRIFTER DEPLOYMENT STNS						LINE B, JdFuca
23	JFB2	DFT	1344 0644			48 15.890	123 35.452	Launch # 20309						
"	JFB3	DFT	1403			4873.728	123 35.325	" # 20310						
"	JFB4	DFT	1417			48 11.673	123 35.311	# 20307						
Proceed to EFFINGHAM INLET FOR Sounding lines in the inner & outer basins.														
1530 PDT arrive Barkley Sound. SE wind gusts to 40 knots.														
1700 — 2000: Run Sounding lines in Inner Basin, then Outer Basin														
Proceed to EFØ5 for CTD's/hydro														
24	EFØ5	2030 PDT	PRACTISE RUN WITH NEW winch man. NO SAMPLES.											
Proceed to EFØ1														
24	EFØ1	ROS	0410	BE	001	49° 5.53	125° 11.66		35	35	1-4	4		no sounder signal
			0417	END		49 5.53	125 11.67							
24	EFØ2	CTD	0445	BE	002	49 5.00	125 10.32		70	65	NO READOUT OF PARAMETERS			
			0452	END		49 5.00	125 10.34							
24	EF02	ROS	0458	BE	003	49 5.02	125 10.32		70		5-10	6.		
	2ND TRY		0508	END		49 5.03	10.33.							

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

Notes on 3.5 kHz Sounder lines

A → B
B → C } Mid Channel, Inner Basin

D → E
E → A
F → G } Zig 1, cross channel, Inner Basin

H → J
J → K } Zag 2, cross channel, Inner Basin

A → B Mid Channel, Outer Basin

C → D
D → E
E → F
F → C } Cross ties, Outer Basin

23 Jul 99

EFF Inner Basin

Way point	UT PDT Time	Latitude	Longitude	Depth (m)	
A → B	16:54	49° 04.109	125° 09.22	120	
A Change Course	16:58	04.35	09.64	114	
	16:59	04.31	09.695	110	
	17:04	04.642	09.978	76	
End.	17:07	04.828	10.185	72	
START CHART LINE A → B	17:25	49° 04.84	125° 10.22	70	
	17:30	04.63	09.99	85.6	
	17:36	04.42	09.69	110	
	17:40	04.30	09.44	117	
	17:41	04.26	09.39	118	FLAT PART
	17:42	04.20	09.32	120	
	17:45	04.10	09.23	119.6	interpolate 17:43
	17:48	03.97	09.13	116.	Rise 49°04.15, 125° 09.36
	17:50	03.86	09.07	92	
COC	17:51	03.79	09.04	78	
COC	17:55	03.78	09.02	73	
	18:00	04.07	09.16	120	
	18:05	04.20	09.56	115	
COC	18:06	04.24	09.61	≈112	
COC	18:10	04.29	09.51	118	
	18:12	04.22	09.47	119	
	18:15	04.180	09.51	118	
COC	18:17	04.18	09.50	114	
	18:20	04.21	09.58	114	
	18:25	04.27	09.24	116	
	18:30	04.27	09.26		-Turning around.
COC	18:34	04:17	09.26	118.	
END OF BASIN	18:37	04.06	09.38		

Way points	TIME	LAT	LONG	DEPTH	* Outer Basin.
B→A	18:55	49° 02.96	125° 08.89	108	
(B)	18:59	02.908	09.152		
	19:05	02.543	09.159	204	*
	19:10	02.270	09.140	199	
COC	19:13	02.126	09.122		
	19:15	02.128	09.123	188	
	19:20	02.302	08.836	160	
COC.	19:23	02.375	08.635	105	
	19:25	02.402	08.631		
	19:30	02.587	08.923	202	
	19:32	02.646	09.024	203	*
	19:35	02.740	09.204	197	*
	19:40	02.840	09.435	169	small disc.

Preferential inner basin sites.		49° 04.27	09.38	118 ?	# 1
		04.15	09.32	118 ?	2 INNER.
		04.20	09.42	118 ?	3
		04.18	09.34	118 ?	4
FC # 1 Taken	08:59	04.269	09.399	119	

Preferential Outer Basin site. 1		49° 02.646	125 09.024	203 m	site #1 OUTER.
site 2		49 02.543	125 09.159	204 m	
		04.218	09.429.		

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR 1999 | MONTH OCT. | SHIP Tully | CRUISE 9940 | PAGE 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
24	EF2A	CTD	0530	UTC	004	49° 4.45	125° 9.79		106	100		Problems with software		
						49 4.4_	125 9, →							
24	EF2A	ROS	0615	UTC	005	49 4.48	125 9.72		106		11-17	7		
			0625	UTC		49 4.48	125° 9,72							
24	EFØ3	ROS	0643	UTC	006	49° 4,26	125° 9.35		121		18-27	10.		INNER BASIN CENTRAL weak bottom reflection
			0654	UTC	11	49 4,27	125 9.38		1	116 m		HIT BOTTOM!		
			1703	UTC	11	49. 4,27	125 9.40							
24	EFF3A	ROS	0731	BE	7	49 03.79	125 09.05		83					
			0743	BO		49 03.71	125 09.06			93m	28-35	8		
			0752	EN		49 03.79	125 09.06							
24	EF04	ROS	0819	BE	8	49 03.08	125 08.58		62		36-41	6		HIT BOTTOM
				BO						58				
			0827	EN		49 03.06	125 08.56							
24	EF04A	ROS	0858	BE	9	49 02.91	125 09.20		196		42-53	12		
			0905	BO		49 02.90	125 09.19							
			0923	EN		49 02.89	125 09.18							
24	EF05	ROS	0951	BE	10	49 02.79	125 09.17		196		54-66	13		Sounder not working with pinger - soft bottom?!
			1001	BO		49 02.79	125 09.17							

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: 1999 | MONTH: Oct | SHIP: Tully | CRUISE: 9940 | 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
24	EF05	ROS	10:31	EN	10	49 02.49	125 09.17							
24	EF05A	ROS	10:45	BE	11	49 02.55	125 09.14		205		67-79	13		
24	EF05A	ROS	10:53	BO		49 02.55	125 09.13			200				
24	EF05A	ROS	11:06	EN		49 02.52	125 09.13							
24	FCSite1 (Site1) INNER	FC	1600	BO	01	49 04.269	125 09.399		119	Freeze Core.	CORE STATION #1 / INNER BASIN			
			1625	EN		Recover freeze core. Degassing on way up.								
24	BCSite 1		17:51	BO	02	04.277	09.334		118	Box core:	Core Stn. #1			
	INNER		1815			First box core set aside. Dry ice to freeze bottom.								
24	PCSite1		2223		03	49 04.275	125 09.359		119	Coring site #1				First Piston Core.
	INNER					INNER BASIN								
24	FCSite2		23:32		04	49°04.218	125°09.429		120	coring site #3		Laminae at top/turbidite layer followed by lamina		
	INNER													
25	Failed Box				05	49 04.215	125°09.426		119	Coring site #3				Box core no good/redo
25	BC02		0203		05	49 04 206	125 09 417		120m					Box core down

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 1999 | MONTH OCT | SHIP Tully | CRUISE 9940 | 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
25	EF06	ROS	0250	BE	12	49 1.78	125 9.18		148	145	80 - 88	9.		NO PINGER/SOUNDER
	"	"	0306	END	12	49 1,79	125 9,15							
25	EF07	ROS	0335	BE	13	49 1.24	125 9.42		118	115	89 - 96	8		NO PINGER/SOUNDER
	"	"	0350	END	13	49 1,23	125 9.41							" "
25	EF7A	ROS	0420	BE	14	49 0.89	125 9.83		136	132	97 - 105	9		NO PINGER/SOUNDER
	"	"	0435	END	14	49 0.89	125 9.83							97 - 105
25	EF08	ROS	0500	BE	15	49 0.64	125 10,27		86	82.	106 - 112	7.		106 - 112
	"	"	0513	END	15	" 0.64	" 10,28							NO PINGER/SOUNDER
25	EF09	ROS	0540	BE	16	49 0.10	125 10.87		59	54	113 - 118	6.		113 - 118
	"	"	0551	END	16.	" 0.09	" 10.87							Good PINGER TRACE !
25	EF10	ROS	0615	BE	17	48 59.84	125 11.25		198	92	119 - 126	8.		
		"	0633	END	17	48 59.83	125 11.23							Pinger worked.
25	EF11	ROS	0706	BE	18	48° 59 "	125° " 01		82					
				END	18	49 59 10	125 11 . 02			80	127 - 133	7		"
25	EF12	ROS	0752	BE	19	48 57 99	125 10.50		94					
			0759	BO	19	48 57 99	125 10.51			89	134 - 140	7		"
			0809	EN	19	48 58 00	125 10 50							

CAST TYPE - BOT - bottle cast; CTD - ctd; MOR - mooring; ROS - rosette; NET - net haul; DRF - dritter; 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

OUTER BASIN: 49° 02.543 204m
SITE #2 125 09.159

Phoned Tom Juhász ½ Coast Guard station at 1630 PDT Oct 25 requesting dry ice (200lbs) at same time as Reinhardt's luggage was being flown up.

DAILY LOG — OCEAN PHYSICS — INSTITUTE OF OCEAN SCIENCES

YEAR 1999 | MONTH Oct | SHIP Tully | CRUISE 9940 | PAGE OF

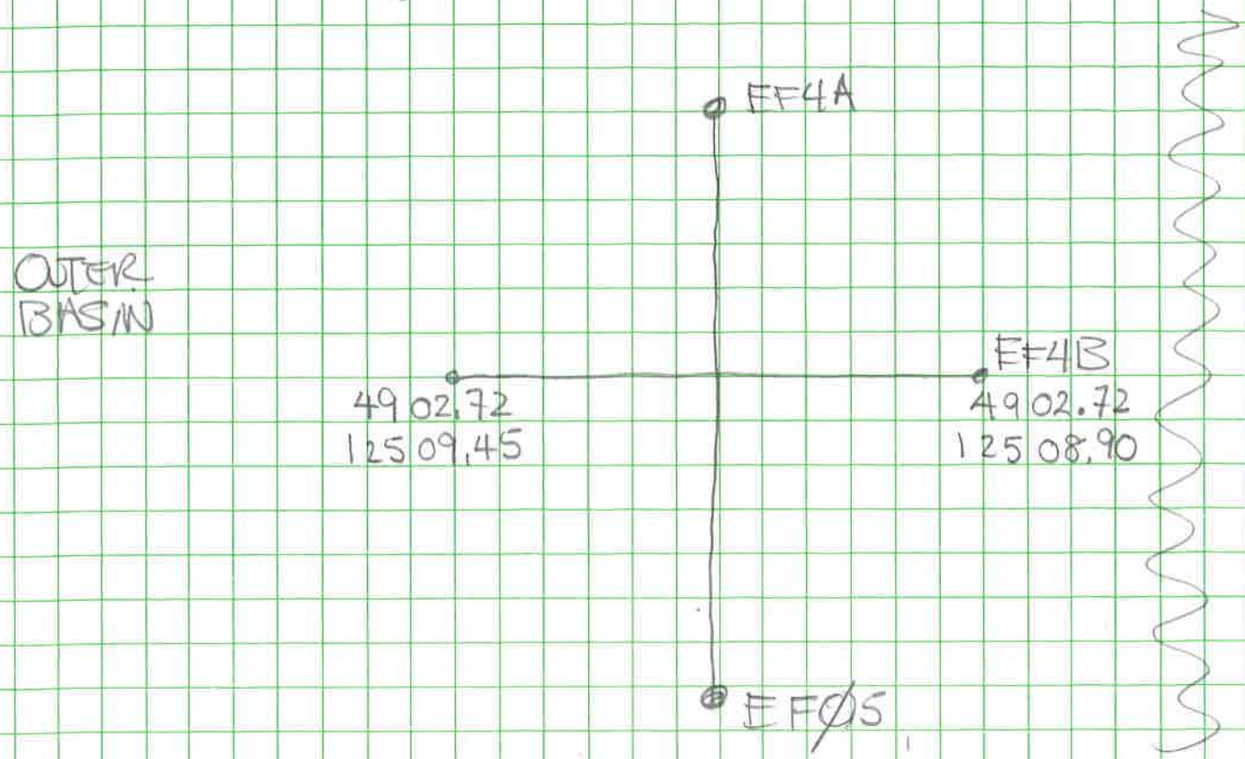
DAY (UTC)	STATION ID	CAST TYPE	TIME (UTC)	TIME CODE	STD/HYDRO CONSEC #	LATITUDE	LONGITUDE	POSITION CODE	BOTTOM DEPTH (m)	MAX SAMPLING DEPTH (m)	CONSEC SAMPLE #	# OF BOTTLES	INIT	COMMENTS
25	EF13	ROS	0845	BE	20	48 56.49	125 10.70	GPS	108					
			0850	BO		48 56.51	125 10.73			103	141-147	7		
			0857	EN		48 56.52	125 10.77							
25	INNER PCsite3	CORE	1603		06	49 04.188	125 09.398		121		TIME ON BOTTOM Stern on site EXACTLY			PISTON CORE AT SITE #3 1st Core at this site
	FCsite2		1729		07	4904.145	12509.327		121					
	INNER		1801		11	RECOVER FREEZE CORE (RAIN/Rain/Rain)								
25	Bcsite2		1930		08	49 04.145	125 09.279		122					BOX Core "keeper"
	INNER	JNB	ONBOARD AT 1945m. Stowed.											
25	Pcsite1		2015		09	49 04.271	125 09.415		122.					INNER BASIN
	INNER													
25	Fcsite1		2210		10	49 02.642	125 09.043		205					OUTER BASIN, Freeze
	OUTER		2242	Recovery of outer Basin Freeze Core #1.										CORE.
25	PCSITE1		2313		11	49 02.632	125 09.023		205					Outer Basin Piston Core
	OUTER		2324	Recovery of outer Basin piston core #1.										
26	Fcsite2		0114		12	49 02.528	125 09.199		203					outer Basin Freeze Core
	OUTER													Site #2 OUTER BASIN

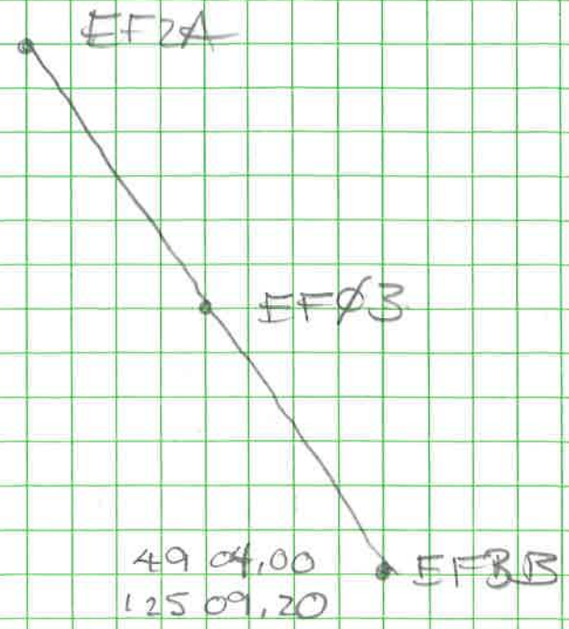
CAST TYPE - BOT - bottle cast; CTD - ctd; MOR - mooring; ROS - rosette; NET - net haul; DRF - dritter; USW - sea water loop

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

Oct 26/99 ITD/Hydro





DAILY LOG — OCEAN PHYSICS — INSTITUTE OF OCEAN SCIENCES

YEAR 1999 | MONTH OCTOBER | SHIP Tully | CRUISE 9940 | 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
26	EF05	ROS	0206	BE	21	49 02.54	125 09.15		201	201	148-167	20		
				BO	"	49 02.86	125 09.15							Caressed the bottom
			0244	EN	"	49 02.53	125 09.11							Hosed off CTD/ROS on deck
26	EFHC	ROS	0255	BE	22	49 02.72	125 09.45		186		168-183	16		
		"		BO	"	—	—							
		"	0326	EN	"	49 02.72	125 09.42							
26	EF4A	ROS	0342	BE	23	49 02.89	125 09.18		193		184-198	15		
			0350	BO	"	49 02.91	125 09.18			185				
			0409	EN	"	49 02.92	125 09.17							
26	EF4B	ROS	0429	BE	24	49 02.73	125 08.90		182		199-214	16		Sounder not working
			0437	BO	"	49 02.74	125 08.90			181				in passive mode. (teeth grinding)
			0458	EN	"	49 02.74	125 08.93							
26	ADCP TRANSECT FROM EF02 to EF13 at approx. 4 knots.													
	EF02	SHIP ADCP	0551	START		4905.057	12510.745							
26	BARKLEY SOUND CGRHD HELICOPTER DELIVERS Reinhadt's Luggage (single bag) 11:00 PDT.													
	Proceed to tide gauge mooring site for Foreman & Crawford. Sta 49 00.882 N 126 07.755 W in 70m.													
	Seas lumpy; 3 m swell. Clear & Sunny & Calm													

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

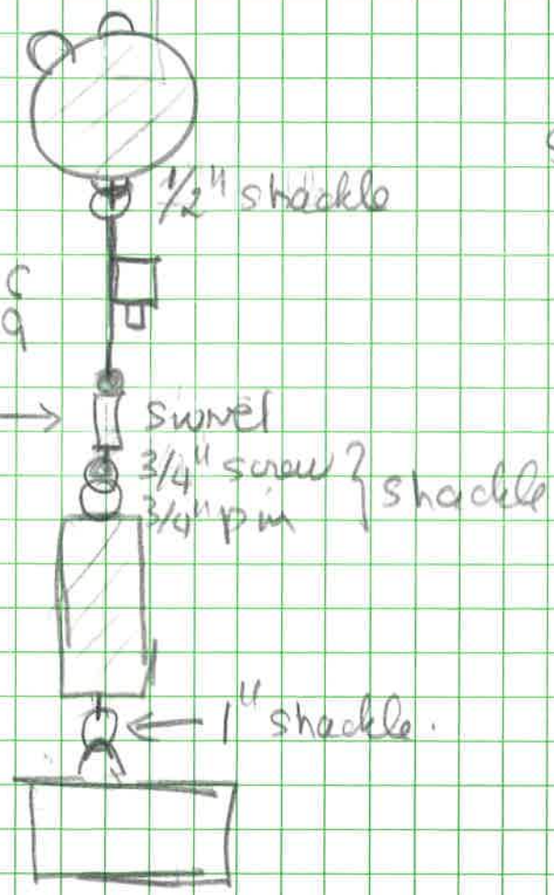
POSITION CODE - RAD - RADAR; GPS - GLOBAL; LOR - LORAN

TG 49 00.909
126 07.752
71.40 m/sounder
@ 15:21 PDT

15:23
49 00.928
126 07.801

#214

ON Bottom 15:23 PDT Oct. 26/99
@ 49° 00.928 N
126° 07.801 W
Sounder depth 71.75



97140026
19.0 V 10/99

AR.

Rel. CODE
ABFH
REARM CODE
CDFG

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR 1999 | MONTH OCTOBER | SHIP Tully | CRUISE 9940 | 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
26	TGTF	TG	2223	UTC	TG	49 00.928	126 07.801	GPS	71.75					ON BOTTOM.
									Sounder					
27	EF13	CTD	0250	BE	25	48 56.47	125 10.66		104					
			0255	BO	25	48 56.46	125 10.67			94				
			0256	EN	25	48 56.47	125 10.67							
27	EF12	CTD	0316	BE	26	48 58.01	125 10.50		96					Sounder = Badness ☹
			0320	BO	26	48 58.01	125 10.48			90				
			0321	EN	26	48 58.01	125 10.48							
27	EF11	CTD	0345	BE	27	48 59.10	125 11.05		82					Sounder = Goodness ☺
			0348	BO		48 59.09	125 11.05			75				
			0350	EN		48 59.09	125 11.05							
27	EF10	CTD	0407	BE	28	48 59.82	125 11.21		100					Sounder - Badness ☹
				BO		48 59.81	125 11.21			92				
				EN		48 59.81	125 11.20							
27	EF09	CTD	0428	BE	29	49 00.12	125 10.81		62					
			0431	BO		49 00.12	125 10.81			59				
			0433	EN		49 00.11	125 10.81							

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	October	Tully	9940	

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	EF08	CTD	0448	BE	30	49 00.68	125 10.23	GPS	85					Sounder ⇒ (24)
			0452	BO		49 00.68	125 10.25			82				
			0455	EN		49 00.69	125 10.28							
28	EF07A	CTD	0514	BE	31	49 00.90	125 09.83		135					
			0520	BO		49 00.91	125 09.81			132				
			0525	EN		49 00.91	125 09.81							
28	EF07	CTD	0541	BE	32	49 00.25	125 09.36		120					
			0544	BO		49 01.25	125 09.37			112				
			0548	EN		49 01.25	125 09.38							
28	EF06	CTD	0601	BE	33	49 01.76	125 09.20		149					
			0605	BO		49 01.76	125 09.19			143				
			0608	EN		49 01.76	125 09.18							
28	EF05	CTD	0627	BE	34	49 02.54	125 09.17		205					
			0633	BO		49 02.55	125 09.17			201				
			0637	EN		49 02.55	125 09.19							
28	EF04	CTD	0655	BE	35	49 03.08	125 08.59		65					
			0659	BO		49 03.07	125 08.60			65				
			0702	EN		49 03.07	125 08.61							

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 1999 | MONTH October | SHIP Tully | CRUISE 9940 | 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
27	EF03	ROS	0729	BE	36	49 04.25	125 09.40		120					
			0736	BO		49 04.25	125 09.40			120	215 - 227	13		Come close to bottom
			0749	EN		49 04.25	125 09.40							See coral off. - some git in cell.
27	SN3 Inner	Piston	1551			49 04.173	125 09.401		122			core at		2ND (duplicate) piston site 3 (INNER BASIN)
27	Site#2 outer	BOX	16:47			49 02.495	125 09.127		204	204		core at site #2 outer basin		
27	CANCELLED PISTON CORE @ Site#2 (outer basin) on Captain's request. Deepening storm (<960mb) nearing the coast with sustained winds > 50 knots. Underway @ 1030 PDT off Pachena Light at 1230 PDT													
27	JFE1	ROS	11:36	BE	37	48 27.20	124 14.97		31		228 - 229			
			11:38	BO		48 27.22	124 14.97			24				
			11:40	EN		48 27.26	124 14.98							
27	JFE2	ROS	12:10	BE	38	48 25.288	124 15.00		136	128				SEAS, WIND from EAST up to 50 knots
			12:14	BO	"	48 25.32	124 14.99							
			12:18	EN		48 25.33	124 14.96							
27	JFE3	ROS	12:46	BE	39	48° 23.21	124° 14.99		185					Sounder not working in passive mode.
			12:52	BO		48 23.20	124 14.87			177				
			12:54	EN		48 23.20	124 14.83							

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

Oct 28, 1999
0630 PDT. OFF Esquimalt for DAVE MOSHER'S SERIES of STANDARD 2-BARREL PISTON CORES

PREFERRED SEQUENCE: 1, 5, 2, 3, 4 TIME PERMITTING.

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR: 1999 | MONTH: Oct | SHIP: Tully | CRUISE: 9940 | 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
28	JFEH	CTD	01:19	BE	40	48 21.25	124 14.94	GPS	225					
			01:24	BO		48 21.28	124 14.94			224				
			01:27	EN		48 21.32	124 14.88							
28	JFE5	CTD	0155	BE	41	48 19.28	124 15.15		212		230-231	2		
			0159	BO		48 19.28	124 15.10			205				
			0203	EN		48 19.28	124 15.07							
28	JFE6	ROS	0226	BE	42	48 17.61	124 15.13		172					
			0231	BO		48 17.65	124 15.13			168	228-229	2		
			0234	EN		48 17.65	124 15.14				232-233			
28	JFE7	CTD	0256	BE	43	48 16.39	124 15.10		87					
			0300	BO		48 16.36	124 15.11			78				
				EN										
28	Esq-5	PC	16:32	BOT	45	48 25.176	123 25.778		34	EKPINS: PISTON CORER WAS Positioned over SITE				Standard 2-barrel PISTON CORES
11	Esq-1	PC	17:40	BOT	16	48 24.530	123 25.318		53	EKPINS: PC was a Ship width to the NE of the stanboard aft				launch location
11	Esq-2	PC	18:27	BOT	17	48 24.744	123 25.497		50	EKPINS: PC was 0.5 Shiplength NE				of Esq 2 location.
11	Esq-3	PC	19:49	BOT	18	48 24.922	123 25.635		45	EKPINS: PC was 0.5 Shipwidth to the North of the station Position				
11	Esq-4	PC	CANCELLED BY CAPTAIN Due to WIND											

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