CRUISE NUMBER 9805

DAILY LOG

INSTITUTE OF OCEAN SCIENCES

OCEAN PHYSICS

DATE Feb. 9 - Feb 13, 98

VESSEL Vector

PROJECT Georgia Strait.

Captain: Steward Aldridge First Officer:

Second Officer: Third Officer:

Cruise Participants / Agencies: IOS – FOC

Scientific Personnel: Party Chief: Tom Juhasz

Name	Watch	Cabin	Name	Watch	Cabin
Tom Juhasz					
Joe Linguanti					
Doug Anderson					
Mike Dempsey					
Mary O'Brien					
Melanie Quennville					
Dario Stucchi					

Second leg of cruise: Party Chief:

Name	Watch	Cabin	Name	Watch	Cabin

Data logging system: Unit no.: FS03

Program Name: CTD.EXE Program version: 1.45

CTD deck unit make: Guildline model: 87107 serial no.: 57,160

Computer make: Dell model: 433DE serial no.: 127X5

1st CTD make: Guildline model: 8715 serial no.: 58,482

Temperature sensor model: serial no.: 58,816

coefficients: slope: 0.9984798 offset: 0.0129419

Conductivity sensor model: serial no.: 43201 ?

coefficients: slope: 1.002725 offset: 0.0001191

Pressure sensor range: psi serial no.:

coefficients: FSP: 2000 dB offset:

Transmissometer model: serial no.: 136

coefficients: slope: ~2.0347 offset: 101.7348

Comments:

Date Time (PST)

Feb 10 0835 - depart 1.0S for surface marker deployment
- 2740 ft 3/8" cable on work winch
- gale warning issued - conditions deteriorating.

0955 - deployed surface buoy @
48° 40.490'
123° 31.351' in 91.9m water
corrected for depth

- headed for Boundary Passage stations

- enroute cancelled mooring recovery at GSCM1 and Rosette due to gale force conditions

- head for Indian Arm station

1700 - in Indian Arm approaching station
- conditions improved over the afternoon.
- plan to do this station then Howe Sound station and mooring recoveries

1805 - completed Rosette/CTD cast at IND 2.0
- water depth = 222 m
- pinger not coming in clear intending to stop at 210 m by CTD pressure
- Rosette on bottom at 147 m depth on CTD pressure
- winch counter was reading correct depth but assumed to be incorrect
- the CTD pressure full scale was wrong, set at 2000 psi, in the config file for this probe
- there was no damage to the probe or Rosette
- the difference between ocean bottom and the CTD depth at which the unit bottomed indicated the pressure full scale should be 3000 psi
- the correction was made in the config file and the cast repeated with the cable payout reader on the winch agreeing with the CTD depth - a rough check showing that 3000 psi is correct.

- winch #1233 has the High/Low gear shift sign marked wrong - tagged this for future fix by Phil

- proceed to Hou4 station.

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR 1998 | MONTH February | SHIP Vector | CRUISE 98-05 | 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
11	IND2.0	ROS	02:05	BE	1				220					Wrong pressure coeff
11	IND2.0	"		BO										Rosette on bottom-see
11	IND2.0	"		EN										notes!
11	IWD2.0	"	02:43	BE	2				220		1-11	11		down, repeat of 1
11	"	"	02 48	BO	2/3	49 23.62	122 52.60							
11	"	"	02:59	EN	3									
11	HOW4	"	08.02	BE	4	49°35.60	123 14.60		282		12	11		up
11	"	"	08.08	BO	4/5	49 35.54	123 14.69				12-22	11		
11	"	"	08:19	EN	5	49°35.57	123 14.76							
11	NI07	ROS	23.32	BE	7	49 22.55	123 32.73		59					Consecutive #6 omitted due to power hit bongos
	"	"	2334	BO	8	49 22.52	123 32.71				23-27	5		
	"	"		EN	8									
12	NI06	"	00:01	BE	9	49 21.36	123 35.03		167		~~28-37~~	~~10~~		
11	"	"		BO	10						28-37	10		
11	"	"		EN	10									
12	NI05	"	00:55	BE	11	49 19.62	123 38.67		266		~~38-48~~	~~11~~		
"		"	01:01	BO	12						38-48	11		
"		"	01:12	EN	12									

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

Date	Time (PST)	
Feb. 11	0752	- on station GSCM3 - sent XPND no response. - sent CDF.
dis = 1880	pos #1	- ranges of 1914, 1915, 1916 too far? - we have drifted but not that far? - moving closer
dis = 1798	pos #2	- on station. - 1838 - closer but still 1829 too far - yet 1828 we are on station.
		- mooring has been moved - we have to triangulate on it. - moved to southeast app 1.5 cables
dis = 1695	pos #3	- ranges 1737, 1732, 1729 - moving to closer position.
dis = 58m.	pos #4	- range 345 m 342 m Gotcha! - moving off to recover.
	0842	- app 1.5 cable off station mooring to stbd. - 482 m 487 m = 348 m distance.
	0843	- sending ACDF * NB: Mooring surfaced at 49° 05.918' N 123° 29.71' W.
	0845	- sighted on surface. - update all logs to show this. - cleaned up on deck - head off to GSCM4
	1049	- on station GSCM4. - range 410, 408, 403. - moving off app. 2 cables to release. - 415 m 416 417 420 - drifting away waiting for suitable distance to release too close - 451, 456 = 209 m distance.
	1104	- sent ABCF - received positive response.
	1150	- all onboard. - clean up
	1300	- head for recovery of W6 DND mooring.

11 February 1998

CFMETR wb mooring
deployed position -

N 49° 16.454
W 123° 47.816

position by range DGPS.

TIME (PST)

1326 on station
49 16.468 123 47.877
interrogate XPND.
no reply

1327 CAL - enable transponder
XPND - 416 m S.R. 416, 411.
114 m horizontal

1330 XPND 411 m S.R.
XMIT BCDH double ping

1331 XPND 334 S.R.
- mooring coming up.

1332 ss28 sighted 40m to port

1334 3 glass balls surface

1342 latch onto mooring

1354 all on deck.

1415 cleaned up and heading for NI07.
to complete NI line.

- gale warning issued. for Wed night Thurs morning.
- NI Line completed NI07 - NI02 (see CTD log.)
- conditions continue to deteriorate - gale upgraded to storm.
- science crew beginning to feel the weather
- Captain wishes to halt work and hide from storm.
- marginal recovery of Rosette at NI03 and NI02
- work halted. until Thurs. morning.

*Note1 Temperature sensor on previous deep casts was noisey at depth > 150m. Moved CTD down closer to sensors thus eliminating the sensor extension cables for Temp and Cond. Cleaned Temp + Cond connectors and remade them.

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR: 1998 | MONTH: February | SHIP: Vector | CRUISE: 98-05 | 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
12	NI04	ROS	02:29	DE	13	49 17.80	123 42.31		296			11		
"	"	"		BO	14						49-59	11		
"	"	"	02:46	EN	14									
	NI03	ROS	03:37	DE	15	49 15.93	123 45.96		409			10		*Temperature data noisy on upcast only
	"	"	03:45	BO	16						60-69	10		Attached Benthos Pinger on rosette. Works!
	"	"	03:58	EN	16									
DJS	at computer													
12	NI02	ROS	05:11	BE	17				300*	* poor reading		11		* See note 1
	"	"	05:18	BO	18						70-80			Upcast for samples
	"	"	05:33	EN		49 14.34	123 46.16							
														Further work cancelled due to weather - storm developing - ship goes to Howe Sound.
13	VI05	ROS	00:28	BE	19	49 11.54	123 17.81		50		81-85	5		
"	"	"		BO	20									
"	"	"		EN	20									
13	VI04	ROS	01:10	BE	21	49 8.86	123 23.39		188			11		
"	"	"		BO	22						86-96	11		
"	"	"		EN	22									

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

Date	Time (PST)	
Feb 12	0730	- still in Howe Sound - storm warning continues in Georgia Str. due to subside in the afternoon - setting up GSCM3-G in anticipation of deployment when weather allows - the present system is to be followed by another SE gale - we need to be on site when the hole in the weather materializes - in consultation with Cap decide to head out for noon to explore possibilities. This will put us on station appr. 1400
	1100	- mooring ready on deck and lashed down for travel - we leave after lunch
	1200	- depart Howe Sound 20-25 knot winds, 1 m seas - workable.
	1455	- deployed GSCM3-G at 49° 6.092 123° 29.728 in 348 m corrected for draft - in calm conditions - mooring submerged - standing by 10 min. no components surface.
	1505	- depart for VI05 to complete VI line

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR 1998 | MONTH February | SHIP Vector | CRUISE 98-05 | 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	GI02	ROS	02:12	BE	23	49 02.619	123 23.261		268		[illegible]	11		
"	"	"		BO	24						97-107	11		
"	"	"		EN	24									
13	VI03	ROS	03:09	BE	25	49 6.02	123 29.01		342		[illegible]	[illegible]		
"	VI03	"	0316	BO	26						108-118	11		
"	"	"		EN	26									
13	VI02	ROS	04:09	BE	27	49 4.48	123 32.12		265		[illegible]	[illegible]		
"	"	"	0416	BO	28						119-129	11		
13	VI01	ROS	05:00	BE	29	49 2.92	123 35.32		124		[illegible]	[illegible]		
"	"	"	0503	BO	30	490288	123 3527				130-136	7		
13	GI03	ROS	05:59	BE	31	49 10.35	123 33.64		375		[illegible]	[illegible]		
"	"	"	0607	BO	32						137-147	11		
13	GI04	ROS	07:03	BE	33	49 12.07	123 40.27		388		[illegible]	[illegible]		
"	"	"	0711	BO	34	4912.59	12340.11				148-158	11		
13	WI01	ROS	08:16	BE	35	49 13.35	123 51.34		113		[illegible]	[illegible]		
"	"	"	0820	BO	36	4913.37	123 5133				159-165	7		

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

Date	Time (PST)	
Feb 13	0735	- on station GSCM1 for recovery.
		- sent XPND — no reply
		- sent CDF XPND ON
		- range 178, 182, 197
	0740	- sent BDFH + received positive response
	0741	- sighted on surface.
	0911	- on station GSCM2 for recovery.
		- sent XPND — no reply.
	0913	- sent ABF 236 m, 238 m. = 112m dis.
	0914	- sent AFGH - got positive response
	0915	- on surface
	0930	- head off to finish last 4 Rosettes and CTD's on MI + SI lines.
		- excellent conditions
		- traffic results in 2-3 hr delay during above sampling. crossing traffic lanes on MI + SI lines
		- at one time we have vessels around us at MI 05
		- delays result in cancellation of intended CTD's D6A and D8A - fortunately we have completed Rosette at D7A earlier.
		- cruise ends 2345 with the completion of SI line.
		- we are steaming around for the night and coming in to IOS for 0700 Feb 14
		- offloading will be on Monday.

* 23:30 UTC, Station MIO3, Cast # 43
- Roosette did not confirm trip at first bottle, therefore a second trip was initiated. After completion of cast there was one more bottle tripped than planned, therefore first bottle had tripped but did not confirm. Same thing happened at the next station, SIO3, but it didn't trip a second bottle this time. At the end of the cast the proper number of bottles had tripped.

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR 1998 | MONTH FEB | SHIP VECTOR | CRUISE 9805 | 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	D7A	ROS	19:07	BE	038				163		166-174	9		Station ID on track = NEWS
		"	19:11		039									
		"	19:19	EN										
13	GI01	ROS	21:42	BE	40	48 58.56	123 16.46		165			9		
"	"	"	2146	BO	41	48 58.54	123 16.36				175-183	9		
13	MI03	ROS	22:29	BE	42	48 55.24	123 10.77		126			9		Double bottle trip at 110 metres
"	"	"		BO	43						184-192	9		
13	SI03	ROS	23:12	BE	44	48 51.85	123 5.09		158			9		
"	"	"	2316	BO	45	48 51.82	123 05.12				192-200	9		
14	MI01	CTD	00:01	BE	46	48 52.4	123 14.56		148					CTD with rosette bot no samples
"	"	"		EN	47									
14	MI02	CTD	00:30	BE	48	48 53.41	123 12.68		141					"
"	"	"		EN	49									
14	MI04	CTD	01:03	BE	50	48 56.14	123 09.53		118					"
"	"	"		EN	51									
14	MI05	CTD	01:26	BE	52	48 57 08	123 8.29		111					"
		"		EN	53									

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: 1998 | MONTH: Feb | SHIP: Vector | CRUISE: 98-05 | 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
14	MI06	CTD	01:45	BE	54	48 57.96	123 6.97		130					CTD with rossette but no samples
"	"	"		EN	55									
14	MI07	CTD	02:03	BE	56	48 58.82	123 5.83		46.9					"
"	"	"		EN	57									
14	SI08	CTD	02.58	BE	58	48 56.47	122 58.84		42					"
"	"	"		EN	59									
14	SI07	CTD	03:18	BE	60	48 55.56	123 0.10		120					"
"	"	"		EN	61									
14	SI06	CTD	03:37	BE	62	48 54.53	123 1.34		151					"
"	"	"		EN	63									
14	SI05	CTD	05:30	BE	64	48 53.71	123 2.56		162					"
"	"	"		EN	65									
14	SI04	CTD	05:56	BE	66	48 52.80	123 3.77		156					"
"	"	"		EN	67									
14	SI02	ROS	06:43	BE	68	48 50.49	123 6.88		218					Salinities
"	"	"		EW	69						201-202	2		
14	SI01	CTD	07:16	BE	70	48 49.18	123 8.75		112					CTD with Rossette but no samples
"	"	"		EN	71									

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