

CRN

95-07

DAILY LOG

INSTITUTE OF OCEAN SCIENCES
OCEAN PHYSICS

DATE APRIL 27/95 - 5 May

VESSEL J.P. TULLY

PROJECT LaP/JGOFs

Captain: J. Anderson

First Officer: R. Walker

Second Officer: P. Murphy

Third Officer: B. Doherty

Cruise Participants/Agencies: I.O.S.

Scientific Personnel: Party Chief: Tom Juhasz

Name	Watch	Cabin	Name	Day	A
A. Pena		B	T. Mitchell		G
N. Claxon		C	M. Gladman		G
D. Yelland		D	B. Bornhold		H
R. Forbes		E	J. Love		#5
B. Minkley		F	R. Bigham		#11

Second leg of cruise: Party Chief: /

Third leg of cruise: Party Chief: /

Data logging system: Unit number: _____

Program version: _____

CTD deck unit make: #6

model: _____

serial no.: _____

Computer make: Dell 450 DE

model: _____

serial no.: _____

Monitor make: _____

model: _____

serial no.: _____

Printer make: _____

model: _____

serial no.: _____

1st CTD make: Gouldline

model: WOCE

serial no.: 59,901

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: _____

2nd CTD make: Gouldline model: 8715 serial no.: 58,483
 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: serial no.:

WINCHES:

CTD	make:	model:	serial no.:
counter	make:	model:	serial no.:
HYDRO	make:	model:	serial no.:
counter	make:	model:	serial no.:
Spooling	make:	model:	serial no.:
Drag	make:	model:	serial no.:
Other	make:	model:	serial no.:

Salinometer make: model: serial no.:

SAIL System:

Program version: Time zone:
 Sampling interval: sec.
 CTF module no.: serial no.:
 Remote temperature model: serial no.:
 Flow sensor model: serial no.:
 Other sensors: (special for this cruise)
 Name: module I.D.: serial no.:
 Name: module I.D.: serial no.:

Comments:

ADCP Setup:

Program version: 2.48 number of depth bins: 128
 Time zone: UTC bin length (2"): 2
 Sampling interval: 120 sec. pulse length: 4 m
 Blank beyond transmit: 4.0 pings per ensemble: 1
 Pulse cycle time: 1.00
 Percent pings good threshold: 25

Comments:

27 APR 95

Started up 1748 UTC - Logging to E3

Cruise 9507

Date

Time (local)

Apr. 27

1000

- depart I.O.S.
- set up equipment.
- Ken Morgan did not sail.

1403

- near station CRD5-G
- rubber boat takes D. Gantley to Victoria after repairing radar.
- Mike + Tyler along for ride.

1410

- stopped on station
- ranges 128, 134, 134, 135. on 8kHz release marked responding on 10kHz but seems to work on 8kHz 100m.

1412

- sent release code ABEH
- not right response from deck units
- released 2 times mooring not on surface.
- switched from Command Trans #3785025 to 5382044
- moved over mooring location again.

1425

- listened with pinger receiver mooring in place both pingers strong signal.
- range 156 m. on 8kHz no 10kHz
103 m.
137 m.
- when I release the XPND button the range meter stops 172m

1431

1437

- moving closer to site again.
- on station again
- 138 m 154 m

1439

- sent ABEH. no release response
- range 138 m. no more ranges
- sent release.

Date Time (local) ?

- Apr. 27 1446 - move back on station and trying long dunking transducer.
- 1450 - stopped again up drift of mooring.
 131 m. on 10 kHz
 122 m "
 117 m
- 1452 - sent release
 - positive response
- 1453 - on surface
- something is wrong with connection to hull transducer thru impedance matching box.
 - we are ch.

Found that patch panel connection to ram was not routed through to LAB.
 Reconnect to RAM transducer.

- mooring onboard without problem except :
 - heavy growth on components
 - S4 not swivelling on central shaft.

- 1539 - move onto CRD1-G site off Macauley Pt. to locate and release mooring while deck cleared of CRD5-G

- 1548 - on station
 - sent XPNL no response
 - sent BDH for XPD ON
 - sent XPNL 66 m on 10 kHz
 69 m on 10 kHz
 78 m
 drifting off for safe range to release
 79 m
 97 m. 96 m
 103 m

- 1552 - sent release BCDH - positive response
 - 158 m. on surface

Date Time (local)

Apr. 27 1630 - proceed to D11A for CTD/D02 station out bound Juan de Fuca.

2230 - station D11A - unconfirmed trip @ 150m bottle, tripped a 2nd & confirmed.

- Surface (0m) bottle unconfirmed, tripped 2nd & confirmed

- 12 bottles closed (wanted 11) therefore took O₂ from all bottles. Will sort out which is duplicate from O₂ data.

2400 - after D15A Proceed to mooring G-T-2 app. 14 hr. run toward Brooke's

Apr. 28 21400 - on station G-T-2
- 1400 - app 1500 completed boat drill and fire drill on station.

1302 - on station
- range 569m manoeuvring to stop.
- range 581m 587m

1506 - sent ABCD received positive response
- sent ABCD received positive response
- range 552m.

1509 - on surface.

1627 - mooring cleanup complete
- complete Rosette CTD/D02/Nutrient cast "G" to 500m, also taking filter water to prepare sediment trap. for redeployment.
- Bouge at G.

YEAR	95	MONTH	04	TIME ZONE	UTC						CRUISE	9507	PAGE	1 OF
DAY	STATION IDENTIFICATION	DEPTH SOUNDING (m)	SHIP STOP/START TIME	LATITUDE/ LONGITUDE	STD CONSEC. #	STD TIME	HYDRO CONSEC. #	MESSENGER TIME	HYDRO SALINITY #	OXYGEN #	SURFACE TEMPERATURE/ SALINITY	LOOP SALINITY #	NOTES	
28	D11A	161		48 14.05 123 30.06	1	0057								
28	D12A	172	0210	48 15.21 123 44.95	2	0215							down cast	
28	D12A			48 15.21 123 44.95	3	0219			1/10		1		upcast #1134-1143	
28	D13A	180		48 17.80 124 00.56	4	0346							downcast only - 1 error reported	
28	D14A	194	0457	48 21.89 124 15.27	5	0459							downcast - 2 errors at start	
28	D14A	206		48 21.85 124 15.38	6	0505	6		11/22		2		2 unconfirmed 12 bottles close (out of 11) i.e. extra C ₂ taken, sort out which is dupe later	
28	D15A	235	0640	48 25.82 124 29.89	7	0649							CTD only	
28	G	544		49 38.73 127 38.26	8	2328							CTD	
28	"G"	544		49 38.66 127 38.16	9	2338	9		23/40				pacific water, 1122 nutrients 3 bottles @ 400m, 2 for trap water, BODCO	
29	LBP1	54	0320	50 04.76 127 52.89	10	0327							downcast no salinity	
29	LBP1	54		50 04.76 127 52.90	11	0329	11.		41/46				upcast by water no salinity	
29	LBP2	96	0400	50 02.99 127 54.11	12	0401			48/				downcast no salinity	

28/4/95 Local Time

2140 - Noticed tube still on cond cell (after 2 stations!) I know, I know, I fucked up! Who started putting that fucking thing on anyway!?? ~~But~~ Did CTD @ LBP3, returning for quick CTD's @ LBP1 + LBP2. Sorry.

LBP4.

0850 UTC

Bottle #41. Up cast

Calibration Sample

@ 1157 m

34.626

salinity probe

Bottle #42

34.564

@ 1000 m

LBP7

cal @ 2118Jb

34.8114

7

34.8113

1.746

Date Time (local)

Apr 29

0800

- proceeding to mooring G-U
- ETA 0830 for deployment.

- prep mooring on deck.

0830

- on station

- mooring assembly continues

1029

- launch mooring G-U.

at 49° 38.819

127° 38.162

in 549 m water corrected for draft.

1040

- proceed to mooring O-T for recovery app 3 hr. steam.

1344

- on station mooring O-T

- sent XPOND - no response

- sent XFD ON ABF

- sent XPOND range 2412 m.

2508 m

distance = 405.5 m.

1351

- range 2514

- sent AFGH release code - positive response

sent AFGH again

- positive response.

1354

- range - not receiving any

1355

- on surface.

- range 2150.

1427

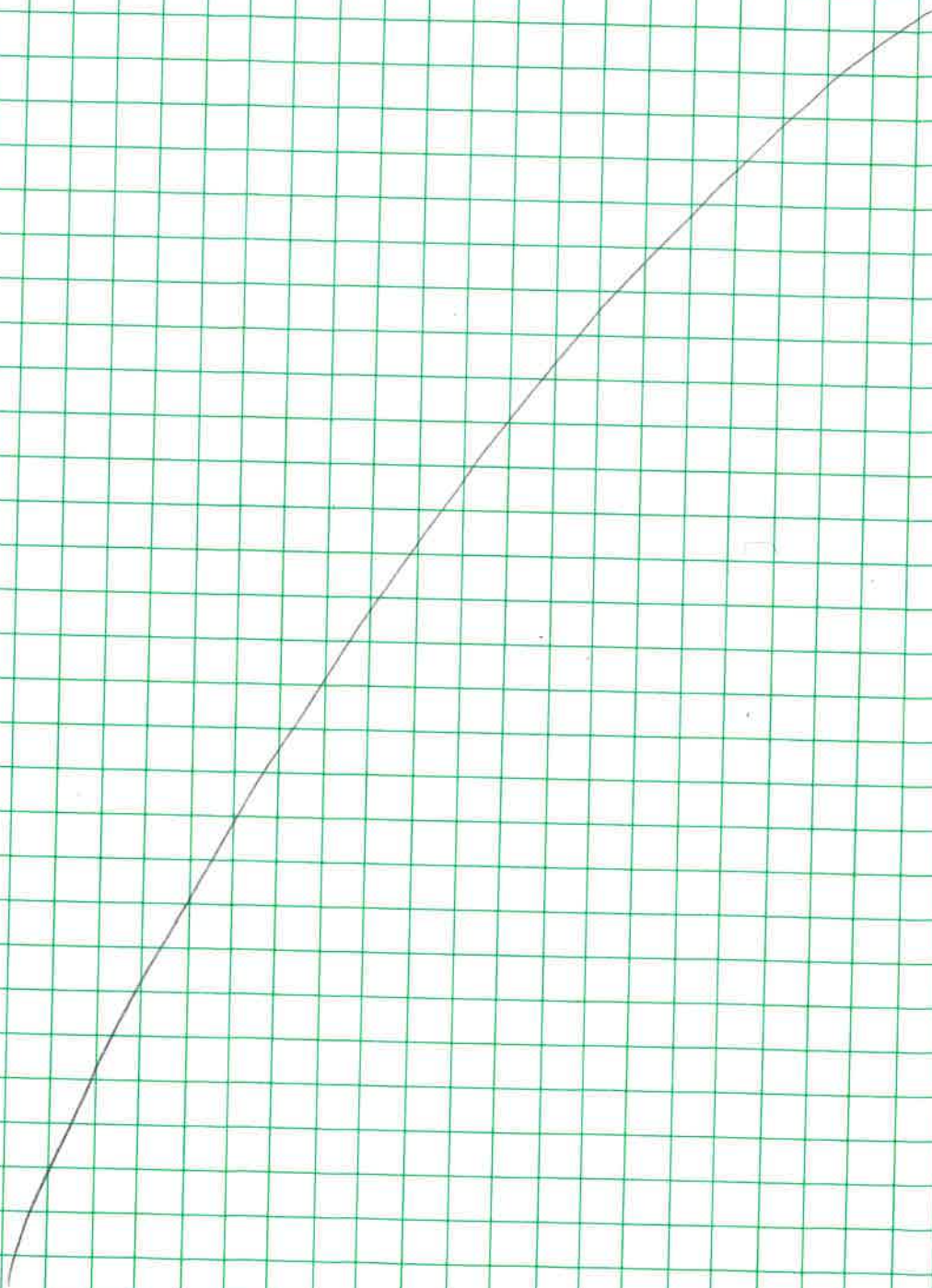
- bottom glass balls surface.

YEAR 95	MONTH Apr	TIME ZONE UTC					CRUISE 9507	PAGE 2 OF					
DAY	STATION IDENTIFICATION	DEPTH SOUNDING (m)	SHIP STOP/START TIME	LATITUDE/ LONGITUDE	STD CONSEC #	STD TIME	HYDRO CONSEC #	MESSENGER TIME	HYDRO SALINITY #	OXYGEN #	SURFACE TEMPERATURE/ SALINITY	LOOP SALINITY #	NOTES
29	LBP2	96	50 0410 0415 127 54 28	13		13			42/ 53				Upcast for water no salinity
29	LBP3	160	0438 50 0327 0447 127 55 22	14	0439								crd only
29	LBP1	52	0507 50 04 01 127 57 89	15	0508								- returned for salinity (see notes)
29	LBP2	98	0523 50 04 06 0530 127 54 38	16	0524								- ditto
29	LBP4	985	0600 50 01 42 127 58 46	17	0601								- downcast to 1014m
29	LBP4		50 01 57 127 58 58	18	0627	18			54/ 71		3		- upcast for water - % noisy @ 900m
29	LBP5	1203	49 59 829 128 00 204	19	0825								
29	LBP5		50 00 00 128 00 00	20	0848	20		41 42			calibration		upcast calib CAL 1157M an 1000m
29	LBP6	730	49 56 227 128 05 350	21	0959								
29	LBP6	700	49 56 02 128 05 15	22	1014	22			72/ 88				all nutrient tubes are labelled 20, LBP6 NOT 22 and LBP6 upcast
29	LBP7	2177	49 52.40 128 11.32	23	1144						4.		
29	LBP7		49 52.43 1255 128 11.42	24	1215			43/ 145					upcast

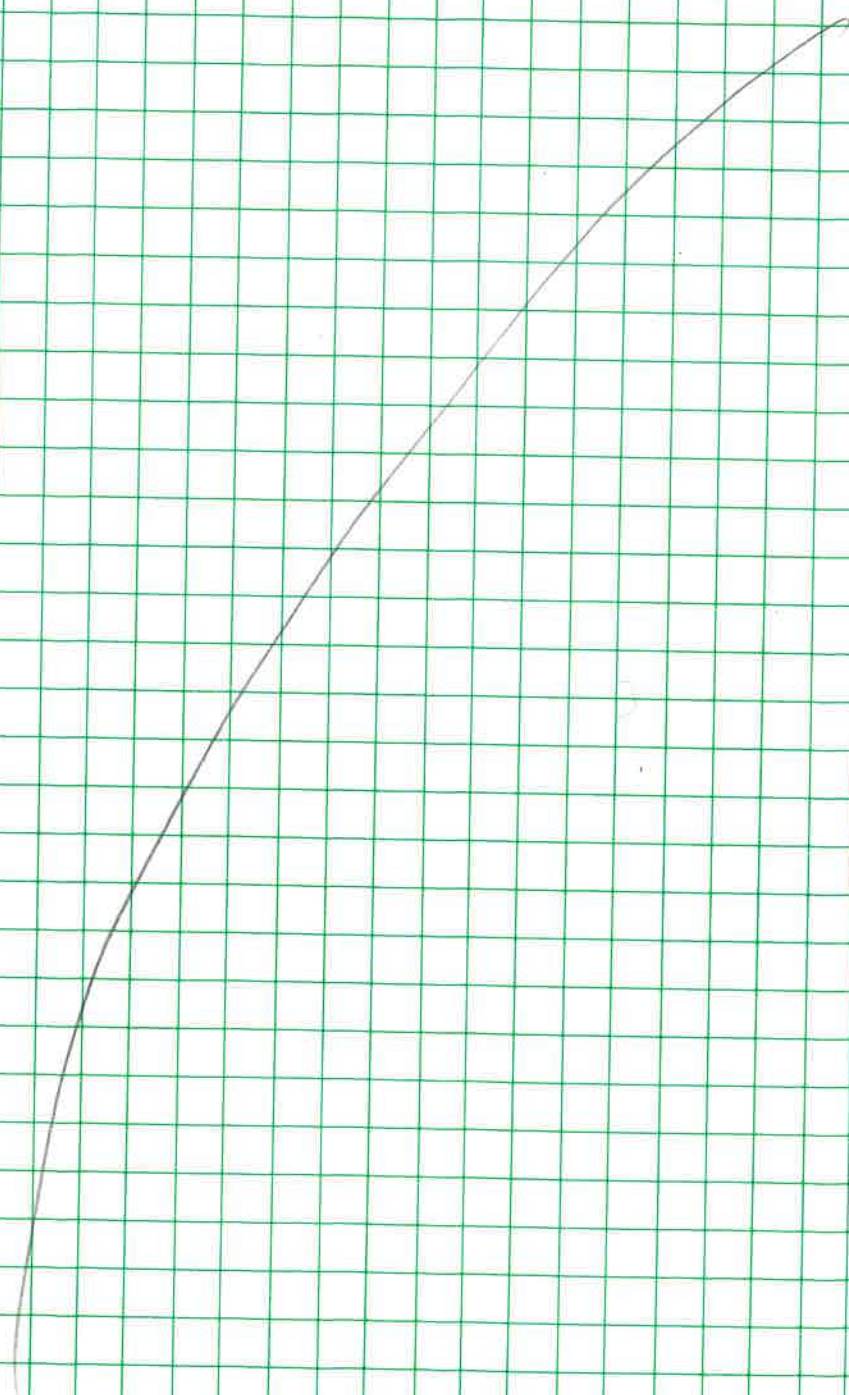
Date Time

Apr. 29 1600

- all on board
- move into position for Bongo on station 'O'



Note: Changed Header of cast #34
to read L505 CAST WAS STARTED
USING L504 HEADER INFO



YEAR	95	MONTH	4	TIME ZONE		CRUISE	9507	PAGE	OF				
DAY	STATION IDENTIFICATION	DEPTH SOUNDING (m)	SHIP STOP/START TIME	LATITUDE/ LONGITUDE	STD CONSEC. #	STD TIME	HYDRO CONSEC. #	MESSENGER TIME	HYDRO SALINITY #	OXYGEN #	SURFACE TEMPERATURE/ SALINITY	LOOP SALINITY #	NOTES
29	"O"	2496	0020		25	2343							
29				49 07.16 127 44.02	26	2351							upcast
30	LJ01	60	0445	49 44.41 127 02.52	27	0459							Downcast
				49 44.47	28	0502	28			1087 1097			upcast
30	LJ02	81	0540	49 42.69 127 05.14	29	0541							Downcast
					30	0543	30			1100 1105			Upcast
30	LJ03	125	0635	49 39.11 127 11.12	31	0636							CTD only
30	LJ04	160	0719	49 35.55 127 16.72	32	0730							
	LJ04				33	0734	33			46/ 1106 155 1121		5	UPCAST
30	LJ05	1061		49 31.62 127 22.38	34	0839							Down Cast See Note
30	LJ05	1070		49 31.74 127 22.38	35	0904							UPcast
30	LJ06	1016		49 27.87 127 28.47	36	10.12						6	Downcast

0608 break off J line & get & mooring site "0" by 0800

Date Time

Apr. 30 0800 - on station to deploy O-U mooring
- entered density profile in sounder to get corrected depths.

0915 - ready to deploy, move to launch pos.

0934 - start deployment.

1040:25 - launched mooring O-U
at: Lab GPS $49^{\circ}07.534$
 $127^{\circ}44.132$

Bridge GPS $49^{\circ}07.518$
 $127^{\circ}43.160$

submerged time = 1055:19

submerged pos = $49^{\circ}07.502$
Bridge GPS $127^{\circ}43.352$

1057 - depart for mooring site S-T

1311 - on station S-T
- sent XPD no reply
- sent ABD XPD ON
- 2372 m, 2308 m.

1316 - sent ABCD received positive response

1318 - sighted on surface

1352 - glass balls surface.

- prepare mooring on deck for redeployment.

[illegible]

Date Time

Apr. 30

1645

- ready for deployment
- break for supper.

1730

- crew on deck move into deployment position.

1751

- deployment starts.

1901

- launch mooring S-U at:

48° 47.039 Lab. GPS
127° 58.626

in 2507m water corrected depth

48° 47.06 Bridge GPS.
127° 58.65

1919 = submerged time

- submerged position

48° 46.970 Bridge GPS.
127° 57.749

1930

- complete Rosette/CTD and Bongo app. 1/2 mile off mooring position.

(app.) 2030

- proceed to offshore end of LG Line. sta. LG 8. for work overnight.

LG 08

CALIBRATION BOTTLE #4.

SEE FILE 42.

FIRE

1

2

3

4

Depth 2062 m

SOUNDING 2063

Probe Temp

T₁

T₂

TEMP THERMOMETER

Probe 25m off bottom.

1.775

1.831

1.829

1.805 #T557

= 1.832

UPcast and down cast same file #42 SAL# 75

LG07

Calibration

bottle

at 1800 m

FILE # 44

SAL # 76

THERMOMETER # T557

 $2.148 = 2.175$ Date Time

May 1.

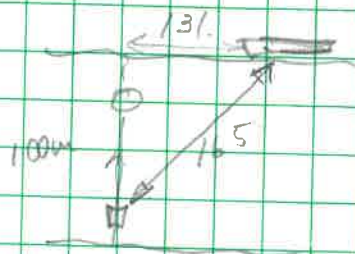
0807

- on station E01-T

- range 159 m

163 m

165 m



0815

- sent ACGH release
response positive.

- range 148 m

141 m

0816

- on surface.

0945

- ready on deck for deployment
- move to deployment start
position

1002

- start deployment E01-U.

1012

- 0912 PST launched E01-U.
in 100 m water depth (corrected)
at position: $49^{\circ} 16.938$
 $126^{\circ} 35.630$

- proceed to complete LG Line.

1148

- completed last station start
to Rogue Wave mooring sites for
recovery

1238 - power outage in lab.

- SAIL not interrupted
- ADCP interrupted
but auto reboots

Date

Time

May 1

1525

- on station Wavec. for recovery.

1554

- Wavec recovered mooring parted i.e. buoy pulled out of termination + plaited safety line broke approx 2 m below buoy

- chaff marks on safety line

- next time pick up bridle on Wavec should be 1" nylon.

1630

- tried to recover Direc mooring with marker buoy on

- mooring parted at top end of buoy which was pulled through the termination

1638

- on site RW1-T - sent range no response

1641

- sent CDF XPN ON

- range 354, 360 m

1647

- sent ACDF - positive response

- did not surface

- sent ACDF again - positive response

- unreliable ranging - shallow water + noise

- move closer to site.

1703

- on site

- 55 m range, 52 m range

- strong pinger signal

- range 294 312

ship breaks for supper

YEAR 1995		MONTH 5		TIME ZONE UTC		CRUISE 9507		PAGE OF					
DAY	STATION IDENTIFICATION	DEPTH SOUNDING (m)	SHIP STOP/START TIME	LATITUDE/ LONGITUDE	STD CONSEC #	STD TIME	HYDRO CONSEC #	MESSENGER TIME	HYDRO SALINITY #	OXYGEN #	SURFACE TEMPERATURE/ SALINITY	LOOP SALINITY #	NOTES
1	LG04	144	49 11.31	126 49.47	49	1326						8	CTD 8 129.
	LG04		49 11.26	126 49.37	50	1329	50	1/1152					only 6 bottles closed should have been 9.
	LG03	117	49 15.03	126 43.79	51	1424							
	LG03		49 15.02	126 43.78	52	1427							
	LG02	99	1732 49 18.65	126 58.21	53	1744							Downcast
	LG02	99	1758		54	1747	54	1087					Upcast
	LG01	55	1825 49 20.48	126 35.04	55	1825							Downcast
	LG01		1835 49 20.42	126 35.04	56	1827	56	1101					Upcast
	LG00		1848 49 21.82	126 34.23	57	1849							CTD only 6 26 db
2	LD01	33	0457 49 00.10	125 45.94	58	0500		CHANGE TO 58483 CTD PROBE					downcast
	LD01				59	59		1134					upcast
	LD02	45	0534 48 58.20	125 47.01	60	0535		1137					downcast

Date Time

May 1

1727

- RWI could.
- waiting for supper to end
497 m range.
405 m
361 m
318 m. } streaming back to site.

1738

- back on station. app. .8 cable off
- range 153 m
174 m 171 m.
- sent ACDF got positive response
good conditions very clear

range 216 223 226

1743

- ranges 357 m
- sent release code again
positive response

1806.

- setting up for drag.
- range 426 m
- pinger + ranges confirm mooring
still in place.

on position 66 m range.

1815

- moving away to start drag.
ranges 254, 261.
- sent release again - positive response.
- range 202 198 185 199 177 183
186 170 175 167 161
moving closer.

- on station 40 m ranges } its still in
66 m } place on
71 m } station.

1829

- drag array on bottom in 35 m

1847

- begin hauling in. - set up Telonius Argo receiver *
- drag line + heave compensator gear
tangled i.e. drag line worked its
way into latch (aft) and got caught.
- drag line also damaged safety line
to CTD block

1949

- ended tow unsuccessful
49 01.666 125 47.813

Date Time

- range 441 m
- sent release code no response
- range receive audio but counters not stopped (counter at app. 500 when audio received)
- sent release again got positive response
- pinger heard very faintly

1959 - moving back to original

NB - the Telonics receiver has been set up during drag programmed to receive 3735 only because the Conv. Waverider is also transmitting by Argos and being received on board.

- no signal received from 3735 to this time

2008 - back on deployment position to listen.
- pinger signal strong ~~the~~
stronger than at drag end position
275 278 272 = 270 m distance
bridge says we are app 300 yards away

- seems mooring hasn't moved
- moving into position for second drag with app. 1 hr. daylight left

2020 - start second drag

2036 - hauling in.

- sent several releases, rearms, XPND ON
- received positive release responses
- too much noise for reliable ranges while ship moving.

2100 - drag completed without success

- nothing sighted on surface

- Telonics receives 3936 consistently.

2103 - back on station listening. app. 70 yds off

- pinger signal strong

- release sent received positive response.

Date Time

2106 - on station RW1

- ranges 287 m 266 m
274 m 268 m
~~323 m~~ 270 m
275 m

- checked pinger again still strong signal

- range 285 m 295 m 304 m

49° 01.86 } 4
125° 47.87 }

- received 16227 and 3936 on Telonics
only

2112 - sent CDFG to release

- ranged 3x no response

- sent CDF

ranged 370 m 384 m

49° 01.814

125° 47.785

- sent CDFG

- ranged x 3
- no response

2117 - proceeding to LD1 for CTD/Rosette

Changed CTD to 58483 and manual
Rosette deck unit.

Woce CTD Needs work and calibration

Rosette pylon needs to be checked to make
sure that confirm switch is OK.

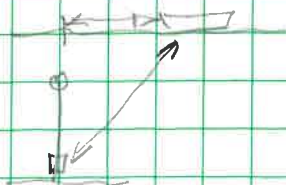
First file with 58483 probe is 95070058.HDR

YEAR	95	MONTH	5	TIME ZONE							CRUISE	9507	PAGE	OF
DAY	STATION IDENTIFICATION	DEPTH SOUNDING (m)	SHIP STOP/START TIME	LATITUDE/ LONGITUDE	STD CONSEC. #	STD TIME	HYDRO CONSEC. #	MESSENGER TIME	HYDRO SALINITY #	OXYGEN #	SURFACE TEMPERATURE/ SALINITY	LOOP SALINITY #	NOTES	
2	LD02				61	0537	61		1138 1142				Upcast	
2	LD03	0620	48 56.56 125 50.43	62	0623									
2	LD04		48 53.01 125 56.75	63	0708	63			1143/ 1150				Cast to 60 metres down and up	
2	LD05		48 49.65 126 03.43	64	0839								Down Cast	
2	LD05		48 49.61 126 03.44	65	0841								Upcast	
2	LD06		48 46.11 126 10.43	66	0927								Downcast	
2	LD06		48 46.06 126 10.50	67	0931	67			1151 1160				upcast	
2	LD07		48 42.63 126 17.04	68	1029								downcast upcast not logged.	
2	LD08	769	1152 48 39.22 126 23.38	69	1157							9		
2	LD08	1067	48 39.01 126 23.38	70	1210	70			1166 118 2013					
2	LD09	1067	48 35.62 126 30.09	71	1326								calibration bottle	
2.	LD09		48 35.49 126 30.09	72	1341			1.					CTD @ 1045 = 34.4053	

Date Time

May 2 0814

- on station A1-T for recovery
- range 598 = 328 distance.
- 535 m ship maneuvering
- 658 m } 492 m
- 668 }



0822 - moving closer.

0828 - back on station range 473
481
484
485
492

0832 - 489 501 503

0834 - sent ABDH received positive response

0836 - on surface.

1045 - ready on deck to redeploy A1-U.

1100 - deployment starts

1125 - launch anchor in 500 m
water corrected depth.

at: $48^{\circ} 32.072''$, lab. GPS
 $126^{\circ} 12.505'$

1130 - proceed to offshore end of LC Line

See note about change of CTD

File # 58.

LC 12[#]Calibration samples taken from
bottles 1, 2, 3, 4. SalinityTemperature on Bottle #4
Very stable water both salinity temp.

CTD Temp	CTD Sal	Bottle	Thermometer #557
2499.0	1.752	34.6254	1.730 = 1.757
496.5	1.755	34.6252	
495.2	1.754	34.6261	
493.4	1.754	34.6263	

Date. Time

May 3 0700

- ④ Bernard tells me we are out of Alkaline Iodide chemical.
 ② Bridge calls to say they received 3rd hand info that a yellow sphere was sighted near mooring position AT.
 I call Argos 301-925-4411 (Landover)

-asked for all PIT's esp.
3735 and 7068

-3735 no reports since 1994

-7068 is up

0420 Z 03/25 48 31.80 126 11.1

0436 Z 48 30.72 126 11.1

1115 Z 48 30.42 126 11.2

1255 Z 48 30.42 126 11.88

1000 - proceeding with Effingham station.

EFF1 49° 04.07' 125° 09.13' 118m

EFF2 49° 02.56' 125° 09.06' 202m

EFF3 48° 59.85' 125° 11.15' 101m.

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

[illegible]

Date Time

May 3

0800-1000

- multiple calls to Bamfield
Biological Stu.

728-3301

John Boom

- finally successful - will give
us 500 ml NaOH NaI

* *

- send back a PR package
to them for their help.

- called back to I.O.S. to
cancel having chemical brought
out - earlier conversations
resulted in following

- charter flight would have
cost \$542.00

- nobody wanted to
pay this

- asked I.O.S. to be prepared
to send truck with chemical
to Bamfield - this was in
progress when I called
it off.

1020

- bridge calls to says fishing vessel
"Hope Bay" has some of mooring on
board

- communications too poor
to get details

- will try again in open sea.

1047

- completed Effingham stations

- head for Bamfield.

1100

- "Hope Bay" contacted - has

2 steel balls 3 RCM's - details sketchy
at present looks like the 222 m
line was cut

- Hope Bay = bottom trawler

- " " heading into Uclulet to sell
fish - we will meet and cross load.

Date Time

May 3

1200

- launch dispatched to Bamfield to pick up chemical

1300

- launch returns with chemical
- dispatched to Uclulet to meet "Hope Bay"
- tully also enroute to Uclulet.

1342

- launch returns with A1-U equipment
- got back everything down to app. $\frac{2}{3}$ of the 222 m line from top.
- the line got cut by app. $\frac{1}{2}$ " - $\frac{3}{4}$ " diameter wire rope which slide up mooring and stopped at one of the mid line zincs

* *

- send PR package + letter of thanks to captain of "Hope Bay"
(asked bridge to get address)

- proceed to LBI line inshore end to start CTD lines out bound.

YEAR		95		MONTH		5		TIME ZONE				CRUISE		PAGE		OF	
DAY	STATION IDENTIFICATION	DEPTH SOUNDING (m)	SHIP STOP/START TIME	LATITUDE/ LONGITUDE	STD CONSEC. #	STD TIME	HYDRO CONSEC. #	MESSANGER TIME	HYDRO SALINITY #	OXYGEN #	SURFACE TEMPERATURE/ SALINITY	LOOP SALINITY #	NOTES				
3	LC05 85	65	49 39 49 12547 35	85	0849								CTD ONLY BONGO				
3	LC04	167	4843.45 12540 79	86	0948								CTD down cast				
3	LC04	168	4843.52 12540 75	87	0952	87	/	N/A	1166 2002		11		CTD upcast O ₂				
3	B3	52	4851.07 12539.14		1104								BONGO STN				
3	LC03	135	1148 4846.87 1202 12534.37	88	1152								CTD ONLY 130db.				
3	LC02	110	1224 4848.72 12530.88	89	1228						12		CTD 100db.				
3	LC01	96.	1258 4850.49 12527.81	90	1300												
3	LC01		4850.50 12527.77	91	1303												
3	EFF1	118	1605 49 04.10 12509.22	92	1607								Downcast				
3	EFF1		1618	93	1609	93		1/9	2014 2028				Upcast				
3	EFF2		1641 49 02.60 12509.14	94	1644								Downcast				
3	EFF2		1659	95	1648	95		1/11	2032 1097		13		Upcast				

YEAR	MONTH	TIME ZONE											CRUISE	PAGE	OF
DAY	STATION IDENTIFICATION	DEPTH SOUNDING (m)	SHIP STOP/START TIME	LATITUDE/ LONGITUDE	STD CONSEC. #	STD TIME	HYDRO CONSEC. #	MESSENGER TIME	HYDRO SALINITY #	OXYGEN #	SURFACE TEMPERATURE/ SALINITY	LOOP SALINITY #	NOTES		
3	EFF3	98	1731	48 59.81	96	1732									
				125 11.25											
3	EFF3			48 59.84	97	1737	97								
			1741	125 11.22								13			
4	LB01	37		4840.35	98	0107									
				12459.22											
4	LB01			4840.32	99	0109	99		1134						CTD 6 33 db.
				12457.19					1138						
4	LB02	56		4839.00	100	0138									
				12502.41											
4	LB02				101	0140	101		1140						
									1146						
4	LB03	93	0206	4837.28	102	0212									CTD only to 88 db.
				12505.60							14.				
4	LB04	111		4835.65	103	0241									
				12508.77											
4	LB04			4835.60					1148						
			0254	12508.67	104	0243	104		1155						
4	LB05		0318	48 33.97	105	0320	105								CTD only
				12511.75											
4	LB06		0352	48 32.17	106	0351									Downcast
				12515.45											
4	LB06			4832.14	107	0354	107		1156						Upcast
			0404	12515.48					1165			15			

YEAR	95	MONTH	MAY	TIME ZONE	UTC	CRUISE	9507	PAGE	OF				
DAY	STATION IDENTIFICATION	DEPTH SOUNDING (m)	SHIP STOP/START TIME	LATITUDE/ LONGITUDE	STD CONSEC #	STD TIME	HYDRO CONSEC #	MESSENGER TIME	HYDRO SALINITY #	OXYGEN #	SURFACE TEMPERATURE/ SALINITY	LOOP SALINITY #	NOTES
4	B8	135	0513	48 35.46	108	0516							CTD/Bongo #12
				125 30.01									
4	B7	78	0607	48 32.08	109	0608							CTD/Bongo #13
			0630	125 35.53									
4	LB07	157		48 28.69	110	0736							CTD ONLY
				125 22.00									
4	LB08	150		48 25.32	111	0828							DOWNCAST
				125 28.66									
4	LB08	149		48 25.30	112	0832	112		1166/				UPCAST
				125 28.73					2001				
4	LB09	150		48 22.04	113	0919					16		Down Cast
				125 34.79									
4	LB09	150		48 22.11	114	0923	114		2002/				Upcast
				125 34.81					2014				BOTTLES
4	LB10	156		48 18.64	115	1015							CTD ONLY
				125 41.55									
4	LB11	202	1057	48 15.35	116	1103					17		
				125 47.76									
4	LB11			48 15.33	117	1106	117		2015				
				125 47.78					2035				
4	LB12	498		48 13.02	118/	1150					18.		#118 & 120 make up down cast.
				125 51.89	120								
4	LB12			48 12.85	121	121			1109				
				125 51.75					1132				

Date Time

May 4

0800

- on station AI-U
- range no response
- sent CDF to XPND ON
- range 535 m. = 190 m away.
517 m.
- received strange pinger signal
- range 505 m - drifting right over position.
- range 511 m

0808

- sent BEFG positive response
- | | | |
|-----------|-----|-----|
| range 423 | 332 | 223 |
| 414 | 326 | 208 |
| 404 | 297 | 201 |
| 394 | 228 | 199 |

0812

- on surface.

0828

- all on board - little damage.
- app. 30m of the 222m line cut off and discarded.

1025

- ready to redeploy.

1040.

- launch AI-U-2 at

48° 32.005 126° 12.510 Lab GPS
in 498 m.

- several fishing vessels visible in area were notified & old Not. Ship cancelled & new Not. Ship issued.

1049

- proceed to LB16 to complete LB Line in bound.

LB 15 #125 calibration at 1000 bottle
#4 Temp + Salinity

LA 10 #130 cal file
P T S Bottle
9/6. 3.595 34.3559

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

[illegible]

YEAR	95	MONTH	May	TIME ZONE	UTC						CRUISE	9507	PAGE	OF
DAY	STATION IDENTIFICATION	DEPTH SOUNDING (m)	SHIP STOP/START TIME	LATITUDE/ LONGITUDE	STD CONSEC. #	STD TIME	HYDRO CONSEC. #	MESSENGER TIME	HYDRO SALINITY #	OXYGEN #	SURFACE TEMPERATURE/ SALINITY	LOOP SALINITY #	NOTES	
5	LA08	139	2341	48 05.81 125 30.42	134	0629	134		1134 1142				Upcast	
5	LA07	113		48 09.21 125 24.15	135	0717							CTD ONLY	
5	LA06	111		48 12.70 125 17.29	136	0804							CTD + OXY.	
5	LA06	109	0822	48 12.74 125 17.32	137	0807	137		1143 1151					
5	LA05			48 16.12 125 10.84	138	0909							CTD ONLY	
5	PLC3	122		48 23.49 125 21.05	139	1029							Bongo / CTD	
5	PLC1	152		48 28.93 125 15.39	140	1158							CTD & Bongo	
5	PLC2	117		48 25.23 125 07.89	141	1310							CTD & 105. Bongo	
5	LA04	194		48 19.22 125 03.89	142	1415							CTD & 02	
5	LA04				143		143		1152 1163					
5	LA3	111	1508	48 22.84 125 57.65	144	1518							CTD only	
5	LA02	304	1604	48 26.13 124 51.51	145	1608							downcast	

[illegible]

Date

Time

May 5

1043

- completed LAOI & head in
Juan de Fuca Str. for
Macaulay Pt. to deploy CRDI-H.

1300

- asked John Green to service
heave compensator

- 1) grease lines
- 2) undo bottom terminations
(to tri block) and allow
torque to spin out of cables.
- 3) the tangle with the drag
line had caused the
actuating lever on the shaft
between the hooks (latch)
to rotate out of position.
- John was to reset this
so that hooks hung
vertical as required.

1618

- deployed CRDI-H in 62.8m
water at $48^{\circ}23.935'$ $123^{\circ}24.137'$

1800

- all stations complete.
- leave CRD project stations
for Victoria.