

CRN

9203

DAILY LOG

INSTITUTE OF OCEAN SCIENCES
OCEAN PHYSICS

DATE

FEB 27 1992

VESSEL

W. E. RICKER

PROJECT

9203 - HiSeas PBS

Captain: S. GULATI

First Officer: G^{iles} CAR RIG RE

Second Officer: M^{ike} MUENCH

Third Officer: D^{oug} Roberts

Cruise Participants/Agencies: PBS

Scientific Personnel: Party Chief: DAVID WELCH

Name	Watch	Cabin	Name	Watch	Cabin
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DARREN	TUELE				
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John	MORRIS				
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Ed	ELLIOT				
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Kate	MYERS				
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Second leg of cruise: Party Chief:

I WISH

Third leg of cruise: Party Chief:

DREAM ON

Data logging system: Unit number: Model 87107

Program version: 1.18

CTD deck unit make: Guildline

model:

serial no.:

Computer make: IBM

model:

serial no.:

Monitor make: DARIUS

model:

serial no.:

Printer make: Roland DG RR 1112

model:

serial no.:

1st CTD make: GUILDLINE

model: 8709

serial no.: 57743

Temperature sensor

model: 87401

serial no.: 57266

coefficients: slope:

offset:

Conductivity sensor

model: 87410

serial no.: 59039

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

Temperature sensor

coefficients: slope:

Conductivity sensor

coefficients: slope:

Pressure sensor range:

coefficients: FSP:

Transmissometer

coefficients: slope:

model:

model:

model:

model:

serial no.: 53977

serial no.:

offset:

serial no.:

offset:

serial no.:

offset:

serial no.:

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: 3.31

Time zone:

Sampling interval: 120 sec.

CTF module no.: 214 serial no.: 91094

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:

number of depth bins:

Time zone:

bin length (2^x):

Sampling interval: sec.

pulse length:

Blank beyond transmit:

pings per ensemble:

Pulse cycle time:

Percent pings good threshold:

Comments:

Friday
Feb 28/92

* CTD Cal. Bottle *

48 42 43
123 14 18

0440

NEWSTN

Cons # 0002

off Saturna Is. 212m

CTD - 183m

STOP/START
0440/0630

Oblique Bongo 212m

Oblique Bongo 50m

0700

enroute to PLC2

48 27 61 N

125 08 06 W

ETA 1600 local

* Cons # 0003

48 27 88

125 08 27

0228/0305
PLC2

150m

CTD to 100m. Large swell, started cast at 6-10 meters to miss hull of ship. Calibration bottle sent with fish. Bottle trip time 0237 - felt bottle close
Bongo haul to 150m

Digital therm 10.106 @ 100m
12083 = Aux 11.7 MAIN 11.5 off scale
12014 = 12.1 10.27

Cons # 0004

0405/0450

118

PLC3

CTD to 101 meters

SATURDAY Feb 29 1992

12 Cons 0005 CTD Bongo PLAZ

2:30 Cons 0006 CTD Bongo PLAZ

11:30 Cons 0007 - on stn 1130 48.26.24

127.35 64

Lots of Long in View Field are wrong. They show Cons #6 PLAZ - changed - 1430 - NET TOW #1

1630 Cons #0008 - CTD to 800m after net tow #2

* Sunday Mar 01 92

0000 - Cons # 9/10 CTD to 800m with cal. bottle. Data file done with AIT P command - #9 miss cast

0900 - Set tow #3

12083 - Aux 9.4 main - 0

12014 - Aux 9.5 main - 4.71

1035 CTD #11 - 800m

Digi - 3.930

1115 - left stn - change course from West to North

YEAR	92	MONTH	FEB	TIME ZONE	UTC	SHIP	W.E. RICKER	CRUISE	9203	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 #	BACK UP CTD	NOTES
Friday 28	NEWSTN	212	1245 48 50.50 1430 123 07.00	02	1257	/	/	/	/	/	/	/	/	CTD 182.2 BONGO - one oblique at 200m - one 50m oblique
28	NEWSTN PLC2	112	0228 48 27.88 0305 125 08.27	03	0232	/	0236	/	/	10.340 32.107	3	✓	✓	Coast Start 6.6m large swells Bottle trip 0237/Bongo 150m
28	NEWSTN PLC3	118	0405 48 23.76 0450 125 20.65	04	0414	/	/	/	/	10.483 32.421	4	✓	✓	CTD - 101m Bongo - 100m
SAT 29	NEWSTN PLA2	350	0824 48 22.73 0917 126 03.72	05	0824	/	/	/	/	10.422 32.43	5	✓	✓	CTD - 320 changed from 450! BONGO - 320
29	NEWSTN PLA3	960	1031 48 26.41 1255 126 15.72	06	1030	/	/	/	/	9.811 32.272	6	✓	✓	CTD - 800.1 Bongo -
29	NEWSTN	2800	1900 48 26.24 1930 127 35.64	07	1905	/	/	/	/	9.164 32.237	7	✓	✓	CTD - 799.2 Done after net tow #1 1130 am
29	NEWSTN	2300	0010 48 24.11 0055 128 27.80	08	0013	/	/	/	/	9.405 32.292	8	✓	✓	CTD - 800.5 Done after net tow #2 4:55 am
SUN 01	NEWSTN	2363	0810 48 24.92 1038 130 00.11	09 10	0825	/	0840	/	/	/	/	10	✓	CTD + Cal. bottle 12:00 am Att'P' 20845 Att'P' 20850 Att'S' 20852 3 AM
01	NEWSTN	2700	1835 48 21.73 1915 131 34.50	11	1840	/	/	/	/	9.130 32.310	11	✓	✓	CTD - 800.8 AFTER Tow #3 bottom 3.6°C 34.28 ‰/kg 11:55
01	NEWSTN	3252	0010 48 30.39 0045 132 11.81	12	0018	/	/	/	/	8.970 32.294	12	✓	✓	CTD 801.9m AFTER NET Tow #4 4:45
MON 02	NEWSTN	3400	1750 49 49.55 1815 134 59.48	13	1753	/	/	/	/	7.564 32.355	13	✓	✓	CTD - 800 AFTER NET Tow #5 bottom 3.3°C 34.34 ‰/kg 10:15
02		2800	0020 50 17.14 135 53	14	0030	/	1650	/	/	/	/	14		CTD 271 m 4:30 Att'P' Att'P' Att'S' NET SET #6

SUN March 01 1992 9203

- 1430 Set net, tow #4 48 37 58 132 05 83
1600 Pick up net
1610 CTD to 800m ^{CONS#12} done @ 4:45 - run till am then set net

Monday March 02

- 0815 - Set net #5 - tightened up CSail Senses - RT was -4.5° - Eng ran vib.
0950 - Pick up Net & Start CTD to 800m Cons#13
1015 - CTD Completed - cal to next Net STN
1500 - SET NET - Tow #6
1600 - Start recovery of net

- 1020 - Start CTD CAST - System crashed @ 271m Cons#14
took probe to 747m before noticed - out at lunch & evened out
AIT's to stop log. Then alt's to start new Cons#15

with cal data. Sent mess. @ 1650. Pumped up current to
MED ON Probe. Started cal File Cons#15 @ 1654 to 1658

°C = Digi = 3.468 12083 12014
Aux - 7.6 8.0
MN - 3.58 -0.28

- 1710 - left stn - head for Net #7
cleaned all CTD & winch connectors

Tuesday Mar 03

- 0800 Set net #7
0930 start pickup of #7 Deploy CTD#16 0950 to 800m Left STN 1015
Weather too bad to fish or CTD. heading more West
to ride out 236° from ~270°

0800 WED. MAR 04 - Set net #8 will do long tow ~2 hrs

1200 - Pick up Net #8 - NO FISH

1230 - Start CTD - 798m Cons#17

1305 - Leave STN - head to P

1800 - Deployed Gill net #9 net

1830 - CTD at 'P' with cal. bottle - East #18 - after gill net deployed
Cal done at 62m - Cal. File is Cons#19

700m bongo @ 'P'

Then @ 62m Cal #19

Digi - 5.956

12083

Aux 6.80

12014

Aux 6.9

MN 0/5

MN - 300

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OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR 92		MONTH MAR		TIME ZONE UTC		SHIP RICKER		CRUISE 9203		PAGE 2				
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 #	BACK UP ZIP	NOTES
MON									Surf.					
02	NWSTN		5017 02	15	0030		1650		7.612	32.746	CAL 15 ON bottom	✓		CTD C.W. @ 750 m mess @ 1650 File started at 1654/1658
03	Net tow #7	3564	0110 1740	51 42 01	16	1749			32.357	34.221	6.528	16	✓	CTD 803.1 0950
			1815	138 41 43						32.395				
04	Net Tow #8	4100	2020 502287	17	2020					5.707		17	✓	AFTER NET TOW #7 1015 CTD 798m 1230
			2105	144 05 74						32.471				
04	Gill net #9	4200	0230 50	18	0231					5.983		18	✓	AFTER NET TOW #8 1305 CTD - 800 AFTER Gillnet #9 630 STN 'P' with cal bottle
			145							32.448				
04	✓	✓		19			1911			5.967		19	✓	cal. file - ctd @ 62m 846 1230
			0446							32.460				
05	South of P.	4140	2030 49 36 02	20	2030					6.097		20	✓	CTD - 803m Loop
			2055	145 01 56						32.443				
05	Net Tow #10	4345	2314 49 42 81	21	2316					6.040		21	✓	CTD 800 314 after net tow #10 400
			0000	145 01						32.44				
06	49°	4000	0837 49° 00	22	0841					6.203		22	✓	CTD - 800m 1237 AM
			0910	144 59 47						32.473				
06	48°	4320	2122 48 00 00	23	2135		1356			6.413		23	✓	CTD 800m Loop # 23 Penwith Cal. bottle # 23
			2218	144 59 74										
08	46°	4230	1640 46 11 90	24	1645					7.730		24	✓	CTD 802.4m 845 918
			1718	144 59 58						32.722				
08	45°	4140	0226 45 00 00	25	0230					8.677		25	✓	CTD 800m 630 LOOP ✓
			0	145 00 00						32.701				
08	45°	30	0315	✓	26		1907					26	✓	CTD CAL - AT 30m Trip bottle @ 1907 715
			✓											

Local Time

Thursday March 5/92

0800 - Pick up gillnet

0930 - Finished pick up - 11 Sockeye / cal. Will proceed S down 145°

1230 - CTD Cons #20

1330 - Net Tow #10 49 36 63 145 02 57

1530 - CTD to 800m Cons #21. Weather picking up, brought CTD inside & unhooked cable.

Friday 6 - weather too bad to fish nets

0030 - CTD #22 to 800m @ $49^{\circ}00'00''$ N

230 - CTD #23 to 800m w/cal. bottle. @ 48° - error life on! mess. sent @ 1356

AIT P @ 13:55 to pause AIT P to open file @ 1402

AIT S to stop log @ 1405

bottle trip @ 790.3 m 34.257 $\frac{5}{100}$

CTD cal Sal #23 @ 790m

3.343 $^{\circ}\text{C}$

Therm. - Digi 3.344 $^{\circ}\text{C}$ 12014 = Aux = 9.6 mm = -.25

218 - leave STN - had to close up CTD rm. rough seas & winds

Saturday Mar 7

Winds 40-50 knots SW. Large seas no work. back up & proceed 22/23

SUNDAY 08

0840 - Wind down to 15 knots @ 240° CTD to 802.4m Cons 24

0918 - leave STN

1830 - CTD Cons #25 at 45° lat wind 30-40 SE

Did cal. bottle at 30m Cons #26. Bottle tripped at 1907

1950 - had to shut down main engines? 2 DIGI - 8.666

2100 - crunched data for Vertical Sections

MONDAY Mar 09

3^{AM} NO CTD 44° lat Wind 30-40 SW - No work TODAY

1130 $43^{\circ}43'$ 3 knots. lg swell wind 40

1420 Changed ships course to NE from SW - shit seas

1830 - CTD STN $43^{\circ}43'$ to 800m 30 kn SW 3600m

1850 - Left STN

Tues March 10

- 600 - CTD 800m Wind SE 20 25 lg Swell
- 300 - CTD 630m Wind SE 20 mod. Swell. Program crashed - Sal -
- 800 - Set Gill net #11
- 830 - CTD cons #31 to 800m
- 900 - CTD cal bottle at 30.1m mess 7 7:11:44 Cons #32

Digi 9.055

12083 aux = 9.5 MN = 9.09

12014 aux = 9.7 MN = -0.25

- 930 - CTD on board - tend net. Wind SW $\approx$ 5-10 kn mod. Swell

WED Mar 11

- 0800 - Pick up gillnet #11
- 0915 - Net in - 33 Dog Salmon - heading North to 8.2°
- 330 - CTD 800m/hdin NE 12kn SW
- 720 - CTD to 804m
- CTD cal bottle @ 801m mess @ 1942

DIGI 3.469

12083 aux = 8.8 MN = 3.60

- 0505 - LEFT STN

12014 aux = 9.1 MN = 0.15

THURSDAY MAR 12

- 0800 - Just sitting waiting for weather. Too windy to set gear. Sitting at $46^\circ 16'$ $140^\circ 17'$, net too far from CTD cons #34 & 35
- 0800 - Set long line 14 skates 1000 hooks
- 0900 - Pick up long line - 8 fish $\approx$ 15 birds 1 casualty
- 0730 - Set gillnet #13
- 0730 - Pick up #13 3 CHUM 1 Salmon check

FRIDAY 13

- 0900 - CTD + cal bottle 800m + cal @ 21m Cons #36 & 37 Wind 25 NW
- 0950 - Leave STN Digi - 8.963 12014 aux 9.7 MN 10.26
- Digi seems too low temp. could have tripped $\approx$ 100m?
- 300 - CTD to 325m Wind North 35 lg Swells
- rec'd call from TJ $\approx$ 1030. Fax from Kent also

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YEAR		MONTH		TIME ZONE		SHIP		CRUISE		PAGE		OF			
92		March				Ricker		9203		3		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 #	BACK UP ZIP	NOTES	Time local
9		3600	215 43 43 17 249 14 40 76	27	0219						27	✓	CTD 800m LOOP ✓		6:50pm 6:40
10		4400	0754 43 56 78 0825 14 30 9 29	28	0804					9.647 32.759	28	✓	CTD 800m LOOP ✓		
10		3000	1352 44 15 24 1430 14 20 2 75	29	1405					9.164 32.619	29	✓	CTD 800 LOOP ✓		6am 6:30
10			2055 44 35 05 2115 14 0 58 96	30	2058					9.164 32.614	30	✓	CTD 630m LOOP ✓		1300 13:15
10		2600	0230 45 18 54 140 55 31	31						9.067 32.123	31	✓	CTD 801 LOOP ✓ NET #11		630
10		30	0316 ✓ ✓ 0316 ✓ ✓	32			7.11			9.067 32.621	32	✓	CTD CAL @ 30.1 meters Trip time 7.11 + 15 sec.		
11		4100	2130 45 49 16 2158 14 03 2 32	33	2131					8.677 32.620	33	✓	CTD 801.4 LOOP Pick net #11		130 200
11		4500	0320 46 20 61 140 08 30	34	0322					8.548 32.539	34	✓	CTD 804m LOOP ✓		730
11		802	0405 ✓ ✓ 0405 ✓ ✓	35			1942			3.471 34.229	35	✓	Cal bottle Trip time 1948		
13		3000	1705 44 21 00 140 00 40	36	1708					10.258 32.639	36	✓	CTD 803m LOOP ✓	wind 20 kn. + NW	
13		21	1750 ✓ ✓ 1750 ✓ ✓	37			0938			10.253 32.641	37	✓	CAL. bottle 21.4m mess 0938		
13		3200	2100 43 51 51 2120 13 9 59 97	38	2104					10.319 32.672	38	✓	CTD 326m		1300

Fri March 13

- 1800 - CTD Core #41 to 300m Wind NW 40
- 1830 - Left STN
- 2140 - CTD 300m Core #42
- 2200 - Left STN

SATURDAY MARCH 14

- 0200 - CTD 300m Core #43
- 0220 - Left STN
- 0600 - CTD 300m Core #44
- 0615 - Left STN
- 1000 - CTD 300m Core #46 - 45 NFE
- 1020 - Left STN ** - 12 noon changed heading from 180° - 150°
- 1403 - CTD 800m w/cal bottle Core #47
- 1420 - CTD Cal @ 816m at 139°40 Core #48
Digi 3.809 12014 Aux = 11.3 MN = 8.81
12083 Aux = 11.3

- 1800 - CTD to 800m - Sub Arctic Front?
- 1820 - CTD on board - Set Gillnet #14

SUNDAY MAR 15

- 0800 - Pick up gillnet #14
- 1000 - lots of yellow fin + squid heading North on 140° long
- 1800 - Set gillnet #15
- 2030 - CTD to 900m - cleaned up wire mess Core #50
- CTD Cal at 800m Core #51
Digi 3.711 12083 Aux 11.6 - O/S
12014 Aux 11.9 - O/S
- 2100 - Finished CTD - Back up #44-51 & process data

MONDAY MAR 16

- 0815 - Pick up gillnet #15
- 0930 - 41°31'05" 139°57'16" Temp check net #15
Digi 11.911 CTD 11.719° 33.021 ‰
Salinity bottle #51b
- 1000 - Heading North on 140° line
- 2000 - Set gillnet #16
- 2030 - CTD #52 at 800m
- 2035 - CTD #53 cal @ 70m

YEAR	1992	MONTH	MAR	TIME ZONE	Local	SHIP	WE RICKER	CRUISE	9203	PAGE	4 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 #	ZIP UP	NOTES
13	4000	1500	43 36 09	39/40	1504					10.28	39/46	✓		CTD 302m Loop
		1520	140 —	40						32.67				Lg. Seas
13	4400	1810	43 11 02	41	1813					10.893	41	✓		Cons # mix up 39/40
		1825	140 00 54							32.805				CTD 300m
														Loop ✓
13	2740	2140	42 41 73	42	2143					11.38	42	✓		CTD 300m
		2200	140 00 00							32.93				Loop ✓
14	3200	0200	42 05 21	43	0205					11.966	43	✓		CTD 302m
		0220	139 59 99							33.073				Loop ✓
14	3200	0600	41 31 92	44	0604					11.283	44	✓		CTD 300m
		0615	140 01 97							32.95				Loop ✓
14	3700	10:00	40 54 55	46	1005					12.525	46	✓		CTD 412m
		10:20	140 00 05							33.184				Loop ✓
14	4320	14103	40 26 35	47	205					13.084	47	✓		CTD - 815m
			139 49 34							33.234				Loop ✓
14	4320	1435	"	48	2:20		14:21			3.804	48	✓		CTD CAL. 815m
			"							34.198				Calibration at 815m.
14	4200	1800	39 57 95	49	1801					13.536	49	✓		CTD 802m
		1820	139 50 39							33.475				
15	3244	20:30	41 30 52	50	20:36					11.909	50	✓		CTD 900
			139 59 32							33.053				UNSPooling line to fix X-over on depth.
15	200	2100	✓ ✓	51							51	✓		Cal at 200m
		2100	✓ ✓											
16	3960	2035	43 10 46	52	20:41					11.427	52	✓		CTD 806m
			140 00 25							32.936				WALNET SET #16

TUES. Mar. 17 1992

- 0800 - Pickup gillnet #16
0930 - All on board - had to cut net & pick up other end - wind picking up.
1000 - head North on 140° weather turning bad 5 knots
1130 - Weather North 30+ make decision about net after dinner
1200 - no net tonight, too much wind, will jog on spot - 44°10'

WEDNESDAY 18

- 0800 - wind still gust N 30+
1000 - staying put at site by swell
1600 - Wind & seas still up.

Thursday Mar 19

- 0400 - Set #17 gillnet
0500 - Set #18 longline
0550 - CTD cons #54 to 800m
0800 - Pick up long line #18 - NO FISH - Wind 5-10 North W
0900 - Pick up gillnet - no Fish heading NE toward JDF
0950 - CTD 800m cons #55
1100 - CTD 800m cons #56

FRIDAY MAR 20

- 0300 - CTD 800m cons #57 0900 CTD cons #58 800m
0450 - cons #59 CTD 800m
cons #60 CTD CALIBRATION @ 13.5m digital therm = 11.202
0400 - CTD 800m cons #61

Saturday Mar 21 92

- 0300 - CTD 800m cons #62 800m
CTD cal bottle cons #63 30.4m Digi 10.219
0900 CTD 800m cons #64 - Set net #19 gillnet
0500 Pick up gillnet #19
0745 - CTD to 800m cons #65 Net set #20

YEAR	1992	MONTH	Mar	TIME ZONE	local	SHIP	Ricker	CRUISE	9203	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
16	80	2109	4310 ¹¹ 140 "	53			2106		11.350 32.951	53	✓	CAL AT 70 M FOR GILNET SET #16	
19	3600	0550 0615	140 01 79 43 49 20	54					10.44 32.695	54	✓	GILNET SET #17 ADH LINE SET #18 TO 800 M ADD SAMPLING #54	
19	4200	1500 1525	44 00 00 139 36 41	55	1503				10.616 32.645	55	✓	CTD - 800m LOOP ✓	
19	4600	2100 2125	44 22 84 138 25 26	56	2101				9.994 32.599	56	✓	CTD 800 LOOP ✓	
20		0300 0321	44 45 67 137 09 13	57	0301				10.743 32.647	57	✓	CTD 800 LOOP ✓	
20		0855 0920	45 06 09 135 53 73	58	0855					58	✓	CTD 800 LOOP	
20	2340	1500	45 22 90 134 36 38	59	1503				11.204 32.490	59	✓	CTD 800 LOOP	
20	13.8	1526	" "	60			1522		11.202 32.480	60	✓	CTD CALIBRATION AT 13.8M	
20	2340	2100	45 53 58 133 15 52	61					11.130 32.510	61	✓	CTD 800 LOOP ✓	
21	3000	0300	46 15 77 132 57 35	62	0302				10.594 32.470	62	✓	CTD 800 LOOP	
21	30	0330		63	0322				10.231 32.439	63	✓	cal. bottle 30 meters	
21	2331	0900	46 37 23 130 45 21	64	0902 0913				10.052 32.392	64	✓	CTD 800 LOOP ✓	
													PROBE BEZEL SURFACE WHILE LOGGING, EDIT.

SUNDAY MAR 22

- 0800 - Pick up gillnet #20 47 04 26 131 27 51 28 ^{dog} 6 steel
1500 - CTD Cons #66 - 300m + loop
2100 - CTD Cons #67 - 300m + loop
2113 - CTD cal. bottle at 10m
2130 - Heading to J buoy - NE

Monday Mar 23

- 0800 - NE To J buoy
0900 - heading to spot North of Swiftsure for mid water trawl
1300 - Mid water trawl 48° 33 08 125° 05 32 140° ~~32 140~~ net #20
1400 - Picked up trawl - 7 baby Coho 1 spring 6 herring
1630 - LOOP Sample JF3 on the fly
1830 - LOOP Sample JF2 on the fly
2030 - LOOP Sample JF1 on the fly

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[illegible]