

CCE-P0704 MOCNESS tows

Apr-07
1 m2 frame, 202- μ m mesh, SIO FrameCYCLE AVERAGE
T,S,rho Flr,Trans.

HAUL	CYCLE	TOW	DATE	Event No.	START TIME	END TIME	MAX DEPTH	DEPTH INTERVAL	FIXATIVE	COMMENTS		
1	1	1	4-Apr	54	15:39	16:55	457	50	Net 0 95% Ethanol Nets 1-9 Formalin		✓	✓
2	1	2	4-5 Apr	70	23:35	0:50	455				✓	✓
3	1	3	5-6 Apr	107	23:18	00:28	461				✓	✓
4	1	4	6-Apr	130	13:05	14:42	460				✓	✓
5	1	5	17-Apr	169	13:15	14:27	461				✓	✓
6	1	6	7-8 Apr	184	23:21	0:19	462	50	Net 0 95% Ethanol Nets 1-9 Formalin		✓	✓
7	2	1	9-Apr	212	14:10	15:25	460	50	Net 0 95% Ethanol Nets 1-9 Formalin		✓	✓
8	2	2	9-10 Apr	226	23:42	0:47	459	50	Net 0 95% Ethanol Nets 1-9 Formalin		✓	✓
9	2	3	11-Apr	280	13:07	14:12	461	50	Net 0 95% Ethanol Nets 1-9 Formalin		✓	✓
10	2	4	13-Apr	344	0:14	1:22	464	50	Net 0 95% Ethanol Nets 1-9 Formalin		✓	✓
11	3	1	14-15 Apr	369	23:05	0:10	461	50	Net 0 95% Ethanol Nets 1-9 Formalin		✓	✓
12	3	2	15-Apr	384	14:09	15:16	465	50	Net 0 95% Ethanol Nets 1-9 Formalin	See logbook. Cod end 3 equals net 3 and 4 in the data	✓	✓
13	4	1	17-Apr	447	13:56	15:01	463	50	Net 0 95% Ethanol Nets 1-9 Formalin		✓	✓
14	4	2	18-Apr	480	13:09	14:20	462	50	Net 0 95% Ethanol Nets 1-9 Formalin		✓	✓
15	4	3	20-Apr	534	0:57	1:59	462	50	Net 0 95% Ethanol Nets 1-9 Formalin		✓	✓

→ on data sheet as 454 (max.) and entered data

→ on T02-0704 as 456 (max.) (\$ 3 differing depths)!

MOCNESS_TOW_RECORD_P0704.xls

<u>MOCNESS</u>		Latitude	Longitude	Date-Time (GMT)	Tow	Interval
<u>HAUL</u>					Duration	betwn. Tows
				(h)	(d)	
1	start	34.2621	-120.8542	94.9443	1.25	
	stop	34.2859	-120.9110	94.9965		
2	start	34.2659	-120.8869	94.9824	1.25	0.04
	stop	34.2888	-120.9525	95.0345		
3	start	34.315	-120.9262	95.9708	1.16	0.99
	stop	34.3561	-120.9618	96.0191		
4	start	34.3411	-120.9822	96.5452	1.28	0.57
	stop	34.3914	-121.0149	96.5985		
5	start	34.3350	-121.0888	97.5532	1.19	1.01
	stop	34.3711	-121.1342	97.6026		
6	start	34.3087	-121.1291	97.9725	0.98	0.42
	stop	34.3433	-121.1465	98.0134		
7	start	33.6363	-123.1265	99.5913	1.23	1.62
	stop	33.6826	-123.1334	99.6427		
8	start	33.5588	-123.1469	99.9884	1.06	0.40
	stop	33.5917	-123.1623	100.0327		
9	start	33.3819	-123.3487	101.5460	1.10	1.56
	stop	33.4191	-123.3832	101.5918		
10	start	33.2701	-123.6211	103.0105	1.12	1.46
	stop	33.3159	-123.6442	103.0570		
11	start	34.2228	-120.6208	104.9608	1.12	1.95
	stop	34.2559	-120.6551	105.0073		
12	start	34.2113	-120.6486	105.5897	1.12	0.63
	stop	34.2421	-120.6824	105.6362		
13	start	33.8528	-121.1112	107.5800	1.10	1.99
	stop	33.8917	-121.1195	107.6258		
14	start	33.7767	-121.0712	108.5489	1.16	0.97
	stop	34.0015	-121.6199	108.5972		
15	start	33.7702	-120.7891	110.0397	1.05	1.49
	stop	33.7778	-120.8331	110.0832		

4/30/2007

Event # 54
Start: 1539

R/V Thompson

TRAWL #1

MOCNESS DATA SHEET					(TGT) Revised 10/94		
R/V Thompson							
CRUISE	STATION	Trawl (HAUL)	DATE (DST EST GMT)	MOCNESS TYPE			
CCE-P0704	Cycle 1 Tow 1	1	4 April 2007 PDT	1/4M	1M	10M	
	START	END		TIME	DEPTH	VOL FILTER	MESH SIZE
LATITUDE	34° 15.9'		NET 0 OPEN	15:39	0		1952
LONGITUDE	120° 51.5'		NET 1 OPEN	16:16	449	1952	301
DEPTH	824 m.		NET 2 OPEN	16:20	401	301	394
COMMENTS Surface: Temp Sal. Fluor. 0.0574 Trans. 3.1946 Angle: 31° Battery: 20.9 v.			NET 3 OPEN	16:25	349	394	270
			NET 4 OPEN	16:30	300	270	—
			NET 5 OPEN	16:34	245	279	279
			NET 6 OPEN	16:38	199	289	289
			NET 7 OPEN	16:42	150	296	296
			NET 8 OPEN	16:46	99	220	220
			NET 9 OPEN	16:50	50	354	354
			SURFACE	16:55	0		354

TOW PROFILE

(Trawls 1-15)
All NET 0s
 Samples preserved in 95% ETOH
NETS 1-9 preserved
 in 5% Formalin

rec by

File names: T01-0404.pro T01-0404.raw T01-0404.tab

Mat depth 454
Scanner broken X

* estimates flow
** incremental net manually

202-um
Fixative
5% ETOH
5% form.
5% form.
5% form.
5% form.
5% form.
5% form.
5% form.

Tow #1

M-03-001
31 March 2007
R/V Thompson

MOCNESS STATISTICAL SUMMARY

net#	pmin	pmax	pavg	tmin	tmax	tavg	thmin	thmax	thavg	smin	smax	savg
0	00.7	457.3	212.9	05.4	14.4	08.1	05.3	14.4	08.1	00.01	50.00	34.03
1	401.6	447.5	421.4	05.4	05.6	05.5	05.3	05.5	05.4	34.12	34.14	34.13
2	350.7	401.1	377.3	05.5	05.8	05.7	05.5	05.8	05.7	34.09	34.12	34.11
3	300.9	349.8	327.0	05.8	06.1	05.9	05.8	06.1	05.9	34.05	34.09	34.07
5	200.7	244.7	224.3	07.0	07.7	07.4	07.0	07.7	07.4	34.00	34.03	34.02
0	00.7	457.3	212.9	05.4	14.4	08.1	05.3	14.4	08.1	00.01	50.00	34.03
6	150.7	199.9	175.8	07.8	08.5	08.2	07.8	08.5	08.1	33.94	34.00	33.97
7	100.2	149.3	125.4	08.5	09.0	08.8	08.5	09.0	08.8	33.83	33.94	33.88
8	50.8	98.8	73.7	09.2	11.9	10.3	09.2	11.9	10.3	33.56	33.80	33.69

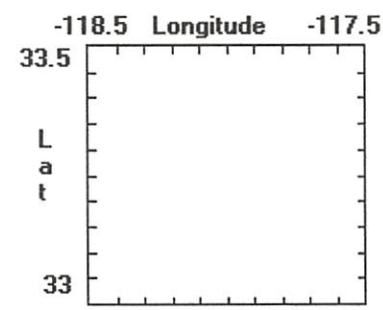
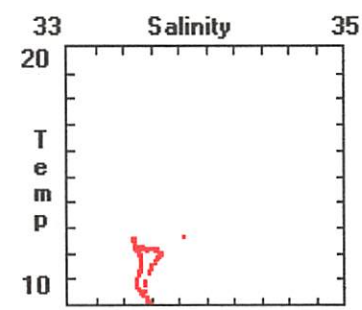
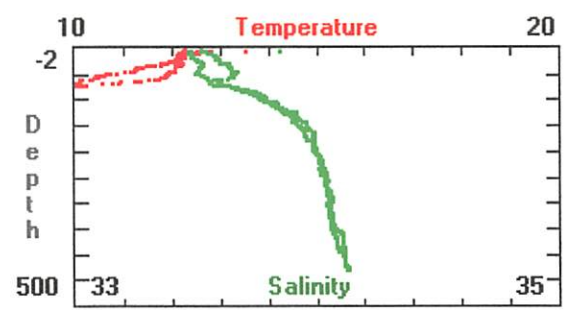
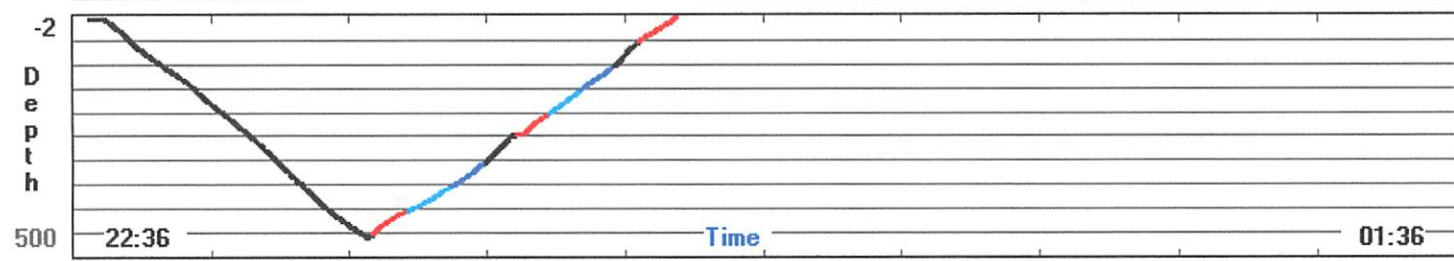
net#	simin	simax	siavg	cmin	cmax	cavg	fmin	fmax	favg	oxmin	oxmax	oxavg
0	-00.58	38.14	26.47	00.00	04.29	01.06	00.00	00.45	00.08	00.0	00.0	00.0
1	26.92	26.95	26.93	00.89	00.89	00.89	00.07	00.07	00.07	00.0	00.0	00.0
2	26.86	26.92	26.90	00.89	00.89	00.89	00.07	00.07	00.07	00.0	00.0	00.0
3	26.79	26.86	26.83	00.89	00.89	00.89	00.07	00.08	00.07	00.0	00.0	00.0
5	26.53	26.65	26.59	00.89	00.90	00.89	00.06	00.07	00.07	00.0	00.0	00.0
0	-00.58	38.14	26.47	00.00	04.29	01.06	00.00	00.45	00.08	00.0	00.0	00.0
6	26.37	26.52	26.45	00.89	00.90	00.89	00.06	00.07	00.07	00.0	00.0	00.0
7	26.20	26.36	26.28	00.90	00.91	00.90	00.06	00.07	00.07	00.0	00.0	00.0
8	25.57	26.15	25.88	00.90	01.00	00.93	00.07	00.12	00.08	00.0	00.0	00.0

net#	amin	amax	aavg	spmin	spmax	spavg	armin	armax	aravg	#obs	vol
0	00.0	53.0	37.8	00.0	02.0	01.3	-17.0	11.1	-11.8	00577	01972
1	34.0	41.0	37.9	02.0	02.3	02.3	06.4	16.7	10.9	00067	00301
2	38.0	42.0	39.4	02.3	02.6	02.3	05.8	11.9	08.9	00084	00394
3	37.0	40.0	38.0	02.3	02.6	02.4	08.2	14.0	11.2	00065	00306
5	36.0	40.0	37.6	01.7	02.6	02.2	-00.8	16.9	10.1	00061	00279
0	00.0	53.0	37.8	00.0	02.0	01.3	-17.0	11.1	-11.8	00577	01972
6	35.0	40.0	37.2	02.3	02.6	02.3	09.5	13.0	11.6	00063	00289
7	36.0	40.0	37.7	02.3	02.6	02.4	09.3	14.0	11.8	00063	00296
8	33.0	42.0	38.1	02.3	02.8	02.6	12.2	18.4	16.1	00046	00221

Environmental Parameters Net Operation Net - Ship Position Program Settings

Time	23:55:03	Net_Num	9	Latitude	34N 17.1524	Reset
Pressure	-0.8 m	OpenTime	5.1 min	Longitude	120W 54.65	Baud Rate
Temp	12.3 C	Vol_Filtered	357.3 m3	Net_Dist	393.4 m	Sample Rate
Salinity	18.09 o/oo	Angle	44 deg	Total_Dist	5860.8 m	Printer
Density	13.446	Flow_Counts	80	Processed File Name	C:\MOCNESS\MOCDATA\CCE-P0~1\T01-0704.PRI	
Oxygen		Hor_Vel	2.0 kts	Raw File Name	C:\MOCNESS\MOCDATA\CCE-P0~1\T01-0704.raw	
Fluoresc.	0.0580 V	Vert_Vel	6.4 m/min	Acquisition Ended. trys = 0		
LightXmis	1.2668 /m	Battery	20.4 V			

Step Net Increment Net# **Pause Acqui** End Acqui



60817 # 40

TRAWL # 2

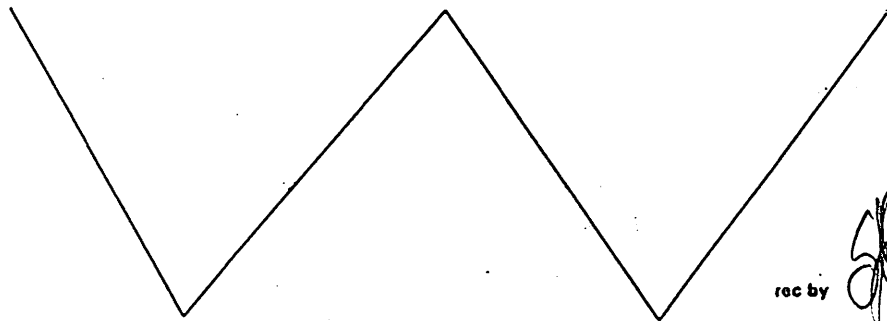
START 23:35

MOCNESS DATA SHEET (FGT) Revised 10/94
R/V THOMPSON

CRUISE	STATION	HAUL	DATE (DST EST GMT)	MOCNESS TYPE
002-04704	Cycle 1 TOW 2	2	4 April 2004 907	1/4M (1M) 10M

	START	END		TIME	DEPTH	VOL FILTER	MESH SIZE
LATITUDE	34 16.0	*	NET 0 OPEN	23:35	0	2203	
LONGITUDE	120 53.4		NET 1 OPEN	00:14	440	300	
DEPTH	861	**	NET 2 OPEN	00:19	400	424	
COMMENTS SALINITY 12.12 TEMP SAL. 32.49 FLUOR 1.2244 TRANS 9664 ANGLE 43 BATTERY 20.4			NET 3 OPEN	00:24	347	252	
			NET 4 OPEN	00:28	300	249	1
			NET 5 OPEN	00:31	279	263	
			NET 6 OPEN	00:35	201	288	
			NET 7 OPEN	00:39	150	266	
			NET 8 OPEN	00:43	99	230	
			NET 9 OPEN	00:46	50	265	
				SURFACE	00:50	0	

TOW PROFILE



File names: 702-04704 .pro 702-04704 .raw 702 04704 .tab

max depth 454

** Net manually increasing 3

Screen capture X

Tow #2

M-03-001
 31 March 2007
 R/V Thompson

MOCNESS STATISTICAL SUMMARY

net#	pmin	pmax	pavg	tmin	tmax	tavg	thmin	thmax	thavg	smin	smax	savg
1	400.3	439.2	415.9	05.7	05.9	05.8	05.7	05.8	05.8	34.08	34.11	34.09
0	00.2	455.7	242.2	05.7	12.7	07.9	05.6	12.7	07.8	00.21	34.13	33.45
3	300.9	346.4	324.1	06.1	06.6	06.4	06.1	06.6	06.3	34.05	34.06	34.06
0	00.2	455.7	242.2	05.7	12.7	07.9	05.6	12.7	07.8	00.21	34.13	33.45
4	250.3	299.1	274.3	06.6	07.2	06.9	06.6	07.2	06.9	34.03	34.05	34.05
5	201.7	248.6	224.5	07.3	07.7	07.5	07.2	07.6	07.4	34.01	34.04	34.02
6	151.1	200.6	176.3	07.7	08.4	08.0	07.7	08.3	08.0	33.97	34.01	33.99
7	99.8	149.3	126.4	08.4	09.4	08.7	08.3	09.4	08.7	33.75	33.98	33.90
8	51.3	97.9	73.6	09.4	11.9	10.2	09.4	11.9	10.2	33.56	33.74	33.66

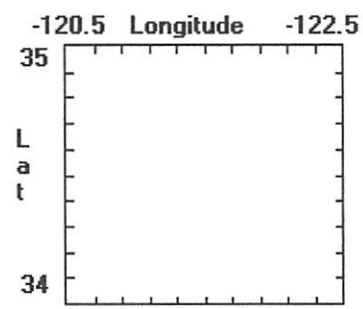
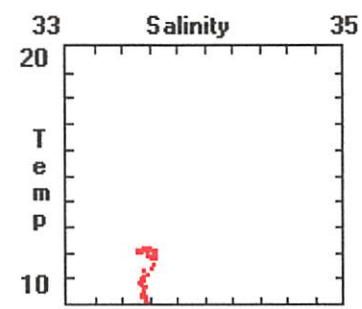
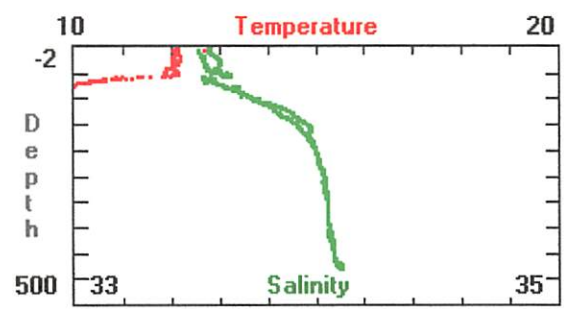
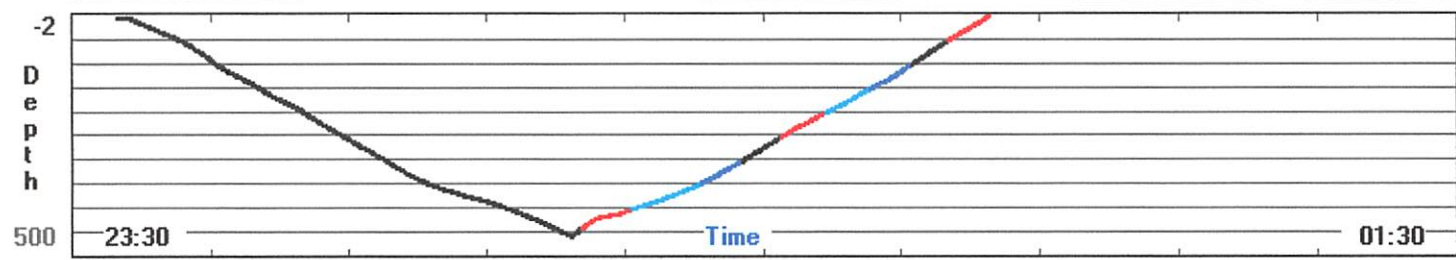
net#	simin	simax	siavg	cmin	cmax	cavg	fmin	fmax	favg	oxmin	oxmax	oxavg
1	26.85	26.89	26.86	00.81	00.83	00.81	00.07	00.07	00.07	00.0	00.0	00.0
0	-00.42	26.91	26.06	00.00	07.08	00.88	00.00	00.23	00.08	00.0	00.0	00.0
3	26.73	26.80	26.76	00.81	00.81	00.81	00.07	00.07	00.07	00.0	00.0	00.0
0	-00.42	26.91	26.06	00.00	07.08	00.88	00.00	00.23	00.08	00.0	00.0	00.0
4	26.63	26.73	26.68	00.81	00.81	00.81	00.07	00.07	00.07	00.0	00.0	00.0
5	26.55	26.63	26.59	00.81	00.81	00.81	00.07	00.07	00.07	00.0	00.0	00.0
6	26.42	26.55	26.49	00.81	00.81	00.81	00.07	00.07	00.07	00.0	00.0	00.0
7	26.07	26.42	26.30	00.81	00.82	00.82	00.06	00.07	00.07	00.0	00.0	00.0
8	25.56	26.07	25.87	00.82	00.91	00.84	00.06	00.11	00.07	00.0	00.0	00.0

net#	amin	amax	aavg	spmin	spmax	spavg	armin	armax	aravg	#obs	vol
1	36.0	46.0	41.0	02.3	02.6	02.4	01.2	19.3	09.8	00065	00300
0	22.0	56.0	39.3	00.3	02.3	01.4	-18.9	19.3	-11.1	00604	02204
3	42.0	46.0	43.8	02.6	02.8	02.8	11.5	15.0	13.2	00052	00252
0	22.0	56.0	39.3	00.3	02.3	01.4	-18.9	19.3	-11.1	00604	02204
4	42.0	47.0	43.9	02.6	02.8	02.8	13.6	16.1	14.5	00051	00248
5	42.0	49.0	45.6	02.6	02.8	02.8	11.1	15.2	13.2	00055	00264
6	45.0	50.0	47.4	02.8	03.1	03.0	10.7	15.7	12.9	00058	00288
7	44.0	49.0	46.8	02.8	03.1	03.0	11.7	17.7	14.2	00052	00266
8	43.0	49.0	46.8	02.8	03.4	03.1	12.8	17.7	15.9	00046	00230

Environmental Parameters Net Operation Net - Ship Position Program Settings

Time	00:49:44	Net_Num	9	Latitude	34N 17.3294	Reset
Pressure	-1.0 m	OpenTime	3.6 min	Longitude	120W 57.15	Baud Rate
Temp	12.17 C	Vol_Filtered	265.3 m3	Net_Dist	310.0 m	Sample Rate
Salinity	23.99 o/oo	Angle	43 deg	Total_Dist	6563.2 m	Printer
Density	18.024	Flow_Counts	65	Processed File Name	C:\MOCNESS\MOCDATA\CCE-P0~1\T02-0704.PR0	
Oxygen		Hor_Vel	2.3 kts	Raw File Name	C:\MOCNESS\MOCDATA\CCE-P0~1\T02-0704.raw	
Fluoresc.	0.2388 V	Vert_Vel	12.4 m/min	Acquisition Ended. trys = 0		
LightXmis	4.9058 /m	Battery	20.1 V			

Step Net Increment Net# **Pause Acqui** End Acqui



SUSAN # 107
 START 23:18

TRAWL # 3

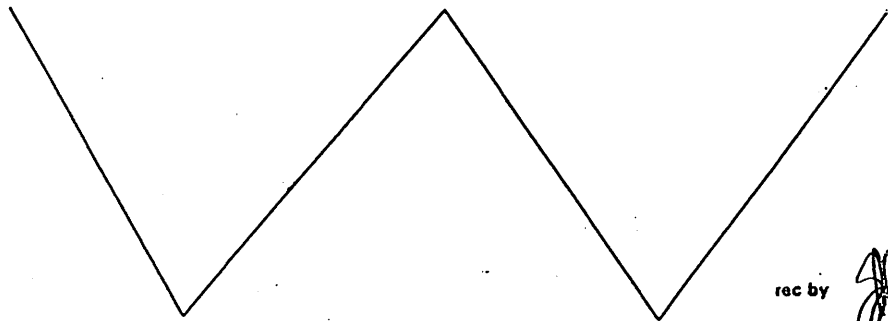
Revised 10/94

MOCNESS DATA SHEET

CRUISE	STATION	HAUL	DATE (DST EST GMT)	MOCNESS TYPE
CCF90409	Cycle 1 Tow 3	3	5/APRIL/2007 POT	1/4M (1M) 10M

	START	END		TIME	DEPTH	VOL FILTER	MESH SIZE
LATITUDE	34.315		NET 0 OPEN	23:18	0	1498	
LONGITUDE	120.926		NET 1 OPEN	23:52	446	224	
DEPTH	1000		NET 2 OPEN	23:56	398	321	
COMMENTS SURFACE Temp 12.54 SAL 31.81 FLUOR 0.199 TRANS 0.8762 ANGLE 24 BATHY 20.3			NET 3 OPEN	00:01	351	270	
			NET 4 OPEN	00:05	301	244	
			NET 5 OPEN	00:08	250	255	
			NET 6 OPEN	00:12	200	303	
			NET 7 OPEN	00:16	148	229	
			NET 8 OPEN	00:20	101	244	
			NET 9 OPEN	00:23	56	260	
			SURFACE	00:28	0		

TOW PROFILE



rec by *[Signature]*

File names: T03-0404 .pro T03-0404 .raw T03-0404 .tab

max depth 461
 SCANN CAPTURE X

** manually incremented
 this net
 * Hold @ surface

Tow #3

M-03-001
31 March 2007
R/V Thompson

MOCNESS STATISTICAL SUMMARY

net#	pmin	pmax	pavg	tmin	tmax	tavg	thmin	thmax	thavg	smin	smax	savg
0	-00.3	461.0	192.4	05.6	12.5	08.7	05.6	12.5	08.6	00.02	50.00	34.31
2	350.9	396.7	376.3	05.9	06.3	06.1	05.8	06.3	06.0	34.05	34.08	34.06
0	-00.3	461.0	192.4	05.6	12.5	08.7	05.6	12.5	08.6	00.02	50.00	34.31
3	301.1	349.8	327.3	06.4	06.8	06.5	06.3	06.8	06.5	34.04	34.06	34.05
4	250.4	299.6	275.1	06.8	07.4	07.1	06.8	07.4	07.1	34.02	34.05	34.04
5	200.3	248.1	224.3	07.5	08.0	07.8	07.5	08.0	07.7	33.99	34.02	34.00
6	148.6	198.8	172.4	08.0	08.6	08.3	08.0	08.6	08.3	33.92	33.99	33.96
7	101.1	147.3	123.8	08.6	09.3	08.9	08.6	09.3	08.9	33.77	33.92	33.85
8	50.5	99.4	74.5	09.3	10.4	09.8	09.3	10.4	09.8	33.56	33.76	33.66

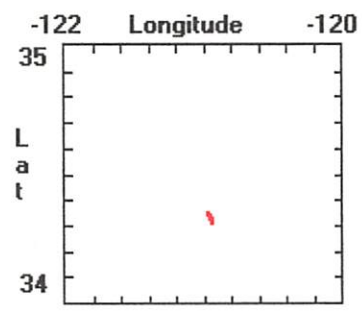
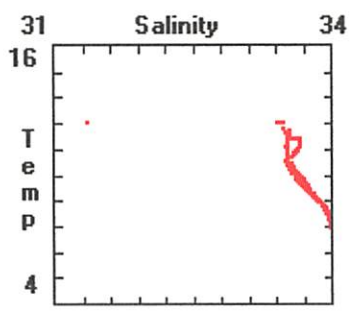
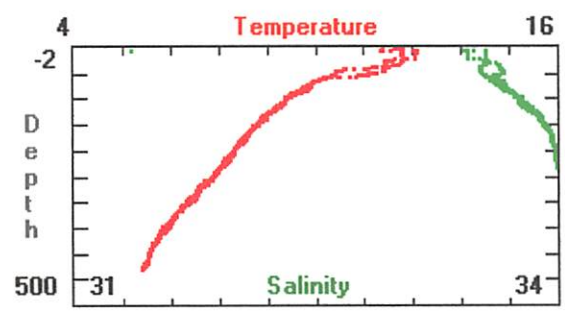
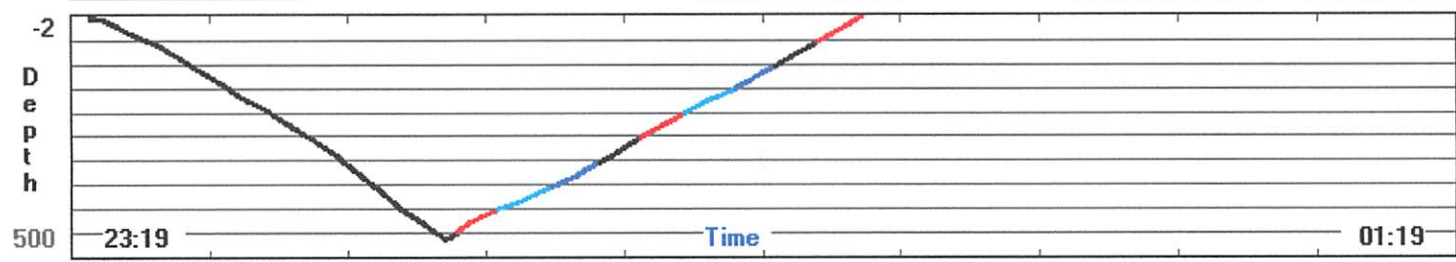
net#	simin	simax	siavg	cmin	cmax	cavg	fmin	fmax	favg	oxmin	oxmax	oxavg
0	-00.44	38.37	26.61	00.00	08.22	01.02	00.00	00.19	00.08	00.0	00.0	00.0
2	26.77	26.84	26.81	00.75	00.76	00.75	00.07	00.07	00.07	00.0	00.0	00.0
0	-00.44	38.37	26.61	00.00	08.22	01.02	00.00	00.19	00.08	00.0	00.0	00.0
3	26.70	26.76	26.74	00.75	00.76	00.75	00.07	00.07	00.07	00.0	00.0	00.0
4	26.59	26.70	26.65	00.75	00.78	00.75	00.07	00.07	00.07	00.0	00.0	00.0
5	26.48	26.58	26.53	00.75	00.76	00.75	00.06	00.07	00.07	00.0	00.0	00.0
6	26.34	26.48	26.42	00.75	00.76	00.76	00.06	00.07	00.07	00.0	00.0	00.0
7	26.11	26.34	26.23	00.76	00.77	00.76	00.06	00.07	00.07	00.0	00.0	00.0
8	25.76	26.10	25.95	00.76	00.77	00.77	00.06	00.07	00.07	00.0	00.0	00.0

net#	amin	amax	aavg	spmin	spmax	spavg	armin	armax	aravg	#obs	vol
0	00.0	57.0	39.3	00.0	04.0	01.3	-23.0	18.7	-12.8	00529	01798
2	37.0	43.0	38.7	02.0	02.8	02.3	06.4	14.4	10.2	00069	00321
0	00.0	57.0	39.3	00.0	04.0	01.3	-23.0	18.7	-12.8	00529	01798
3	38.0	44.0	39.7	02.3	02.8	02.4	08.9	16.3	12.4	00059	00271
4	38.0	42.0	39.9	02.3	02.8	02.5	12.2	16.5	14.2	00053	00248
5	38.0	43.0	39.7	02.3	02.6	02.5	11.5	14.8	13.3	00055	00255
6	37.0	45.0	39.8	02.3	02.8	02.4	05.6	15.3	11.8	00065	00303
7	34.0	39.0	36.7	02.3	02.6	02.3	12.0	15.9	13.8	00051	00229
8	35.0	41.0	37.7	02.3	02.6	02.4	10.7	15.7	13.7	00054	00244

Environmental Parameters Net Operation Net - Ship Position Program Settings

Time	00:27:41	Net_Num	9	Latitude	34N 21.3720	Reset
Pressure	-1.0 m	OpenTime	3.8 min	Longitude	120W 57.71	Baud Rate
Temp	11.98 C	Vol_Filtered	260.4 m3	Net_Dist	289.9 m	Sample Rate
Salinity	10.63 o/oo	Angle	46 deg	Total_Dist	5810.0 m	Printer
Density	7.738	Flow_Counts	59	Processed File Name	C:\MOCNESS\MOCDATA\CCE-P0~1\T03-0704.PR0	
Oxygen		Hor_Vel	2.3 kts	Raw File Name	C:\MOCNESS\MOCDATA\CCE-P0~1\T03-0704.raw	
Fluoresc.	0.1676 V	Vert_Vel	10.1 m/min	Acquisition Ended. trys = 0		
LightXmis	3.0819 /m	Battery	19.9 V			

Step Net Increment Net# **Pause Acqui** End Acqui



SOGAT # 130
 Start 13:05

haul # 4

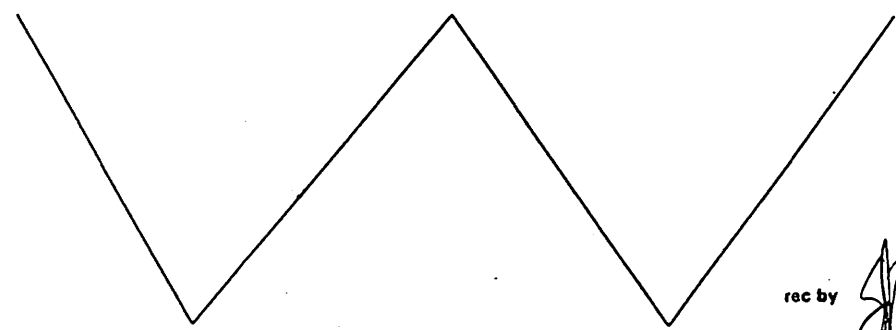
Revised 10/94

MOCNESS DATA SHEET

CRUISE	STATION	HAUL	DATE (DST EST GMT)	MOCNESS TYPE
P0704	cycle 1	4	6 April 2007 PDT	1/4M (1M) 10M

	START	END	TIME	DEPTH	VOL FILTER	MESH SIZE
LATITUDE	34,20.50		NET 0 OPEN	13:05	0	1789
LONGITUDE	120.58.76		NET 1 OPEN	13:42	147	274
DEPTH	1135		NET 2 OPEN	13:44	401	300
COMMENTS <u>Surge</u> : Temp: 12.4' Sal: 35.05 * Fluor: 0.0640 Angle: 30 Battery: 20.1			NET 3 OPEN	13:51	348	282
			NET 4 OPEN	13:56	200	256
			NET 5 OPEN	13:59	249	219
			NET 6 OPEN	14:03	260	260
			NET 7 OPEN	14:07	169	275
			NET 8 OPEN	14:11	902	196
			NET 9 OPEN	14:14	49	485
			SURFACE	14:12	0	

TOW PROFILE



rec by

File names: 704-0704 .pro 704-0704 .raw 704-0704 .tab

max depth 461
 * returns at the surface but cond probe was out of the water
 ** manually incremented net

Tow #4

M-03-001
 31 March 2007
 R/V Thompson

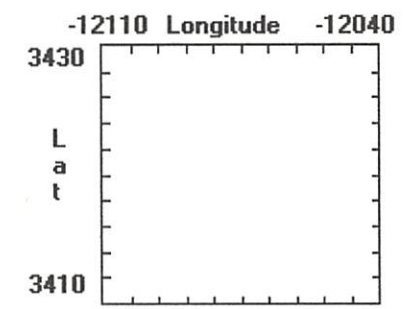
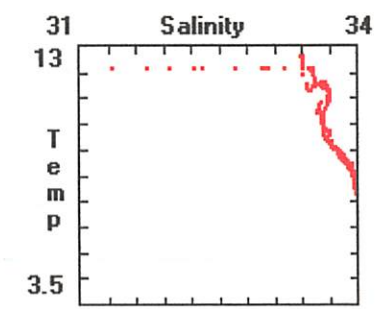
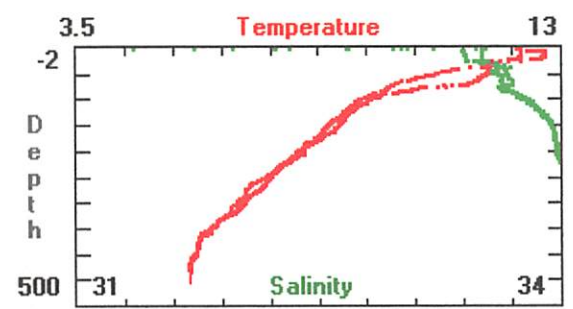
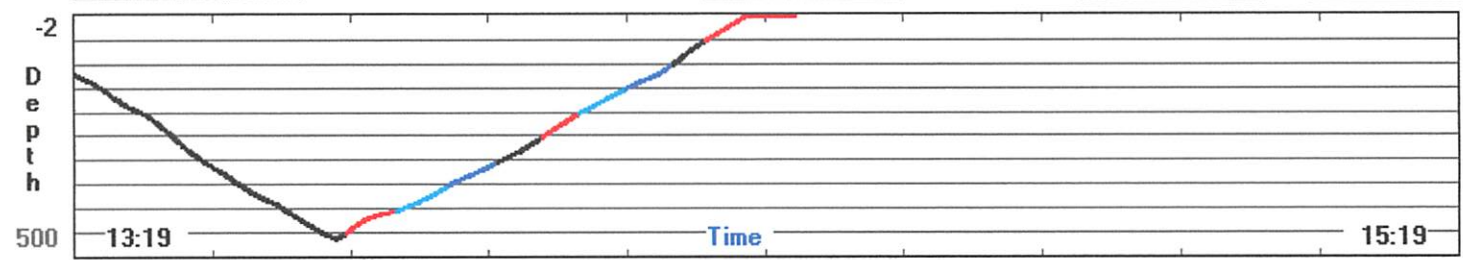
MOCNESS STATISTICAL SUMMARY

net#	pmin	pmax	pavg	tmin	tmax	tavg	thmin	thmax	thavg	smin	smax	savg
0	-00.1	460.1	202.9	05.7	13.6	08.6	05.6	13.6	08.6	00.28	50.00	31.73
1	402.0	445.9	418.6	05.7	05.8	05.8	05.7	05.8	05.7	34.08	34.12	34.11
3	301.1	346.9	324.3	06.2	06.6	06.4	06.1	06.6	06.4	34.05	34.06	34.06
0	-00.1	460.1	202.9	05.7	13.6	08.6	05.6	13.6	08.6	00.28	50.00	31.73
4	250.1	299.2	276.1	06.7	07.2	06.9	06.6	07.2	06.8	34.03	34.06	34.05
5	200.4	248.4	224.3	07.2	08.0	07.6	07.2	08.0	07.6	33.98	34.04	34.01
6	150.0	199.4	174.3	08.0	08.4	08.2	08.0	08.4	08.2	33.95	33.98	33.97
7	99.2	147.5	125.9	08.5	09.0	08.7	08.4	09.0	08.7	33.82	33.95	33.89
8	50.0	96.5	72.1	09.1	10.4	09.7	09.1	10.4	09.7	33.64	33.81	33.69

net#	simin	simax	siavg	cmin	cmax	cavg	fmin	fmax	favg	oxmin	oxmax	oxavg
0	-00.32	37.99	24.62	00.00	09.07	00.92	00.00	00.24	00.08	00.0	00.0	00.0
1	26.85	26.90	26.88	00.61	00.63	00.62	00.07	00.07	00.07	00.0	00.0	00.0
3	26.72	26.79	26.76	00.62	00.62	00.62	00.07	00.07	00.07	00.0	00.0	00.0
0	-00.32	37.99	24.62	00.00	09.07	00.92	00.00	00.24	00.08	00.0	00.0	00.0
4	26.63	26.72	26.69	00.61	00.64	00.62	00.07	00.07	00.07	00.0	00.0	00.0
5	26.48	26.63	26.56	00.62	00.62	00.62	00.07	00.07	00.07	00.0	00.0	00.0
6	26.38	26.48	26.44	00.62	00.63	00.62	00.06	00.07	00.07	00.0	00.0	00.0
7	26.19	26.38	26.30	00.62	00.63	00.63	00.06	00.07	00.07	00.0	00.0	00.0
8	25.81	26.18	25.98	00.63	00.66	00.64	00.06	00.08	00.07	00.0	00.0	00.0

net#	amin	amax	aavg	spmin	spmax	spavg	armin	armax	aravg	#obs	vol
0	00.0	52.0	37.8	00.0	02.0	01.2	-23.2	13.2	-11.9	00570	01789
1	34.0	44.0	38.4	02.0	02.3	02.2	03.5	19.9	11.2	00064	00274
3	39.0	45.0	41.7	02.3	02.6	02.5	08.9	14.8	11.3	00062	00282
0	00.0	52.0	37.8	00.0	02.0	01.2	-23.2	13.2	-11.9	00570	01789
4	38.0	43.0	40.5	02.3	02.6	02.5	10.9	16.1	13.2	00056	00256
5	38.0	47.0	41.1	02.3	02.8	02.6	14.0	16.9	15.5	00047	00219
6	40.0	47.0	43.0	02.6	02.8	02.6	10.7	14.6	12.7	00060	00280
7	38.0	45.0	40.7	02.3	02.8	02.5	09.7	17.5	12.4	00059	00275
8	38.0	44.0	41.9	02.6	02.8	02.8	14.4	20.6	17.7	00041	00196

Environmental Parameters		Net Operation		Net - Ship Position		Program Settings	
Time	14:21:49	Net_Num	9	Latitude	34N 23.4820	Reset	
Pressure	-1.1 m	OpenTime	7.9 min	Longitude	121W .8948	Baud Rate	2400
Temp	12.15 C	Vol_Filtered	484.9 m3	Net_Dist	674.8 m	Sample Rate	4.0 sec
Salinity	5.56 o/oo	Angle	52 deg	Total_Dist	6386.7 m	Printer	Off
Density	3.799	Flow_Counts	108	Processed File Name	C:\MOCNESS\MOCDATA\CCE-P0~1\T04-0704.PRC		
Oxygen		Hor_Vel	1.7 kts	Raw File Name	C:\MOCNESS\MOCDATA\CCE-P0~1\T04-0704.raw		
Fluoresc.	0.0578 V	Vert_Vel	0.4 m/min	Acquisition Ended. trys = 0			
LightXmis	3.1452 /m	Battery	19.7 V				



Survey # 169
 START 13:15

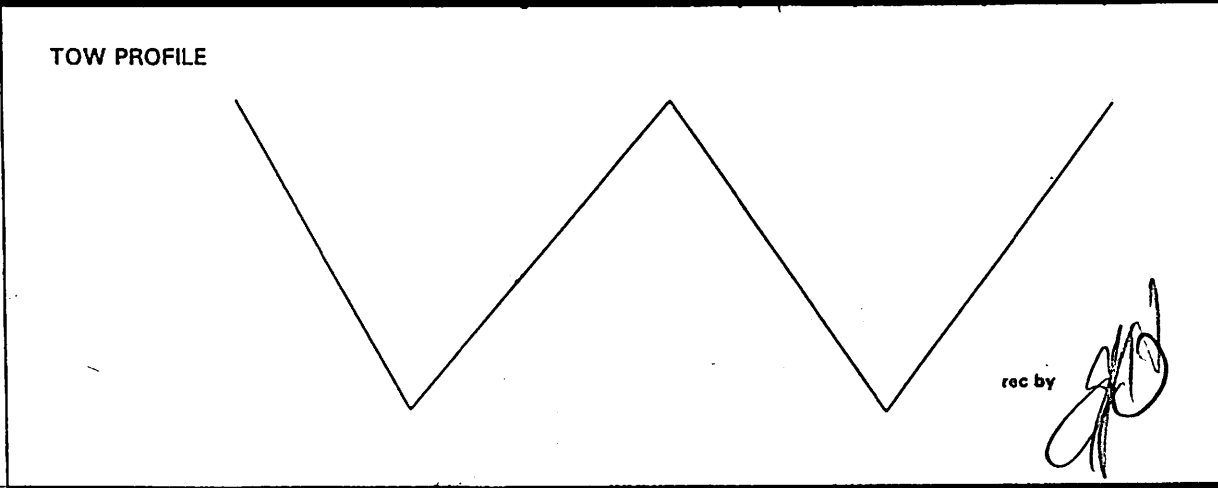
Trawl # 5 ✓

Revised 10/94

MOCNESS DATA SHEET

CRUISE	STATION	HAUL	DATE (DST EST GMT)	MOCNESS TYPE
P0404	Cycle 1	5	7 APR 11 2004 PDT	114M (1M) 10M

	START	END	TIME	DEPTH	VOL FILTER	MESH SIZE
LATITUDE	34 20.15	34 22.28	NET 0 OPEN	13:15	0	238
LONGITUDE	-121 05.45	-121 08.09	NET 1 OPEN	13:51	450	348
DEPTH	13:65	14:46	NET 2 OPEN	13:56	400	331
COMMENTS Temp: 12.41 Sal: 33.36 Fluor: 0.0964 Range: 30 Battery 20.0			NET 3 OPEN	14:01	349	251
			NET 4 OPEN	14:04	300	232
			NET 5 OPEN	14:07	248	215
			NET 6 OPEN	14:11	198	224
			NET 7 OPEN	14:14	150	240
			NET 8 OPEN	14:17	99	235
			NET 9 OPEN	14:20	50	454
			SURFACE	14:24	0	/



File names: T05-0404 .pro T05-0404 .raw T05-0404 .tab

max depth: 460
 Screen capture x

Tow #5

M-03-001
 31 March 2007
 R/V Thompson

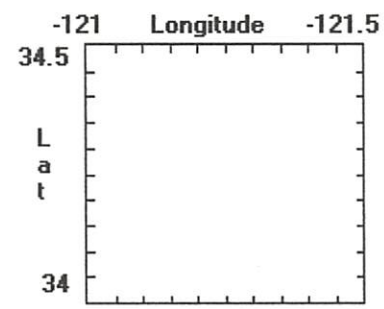
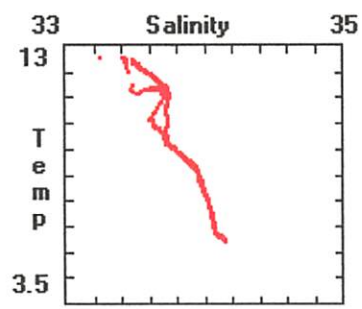
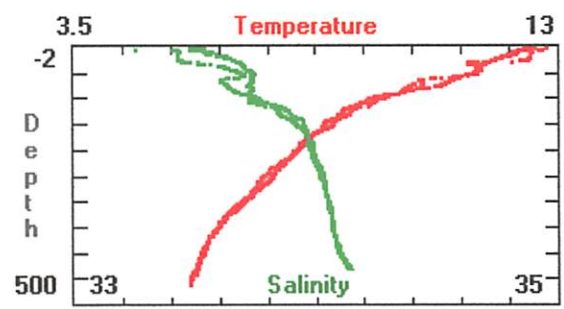
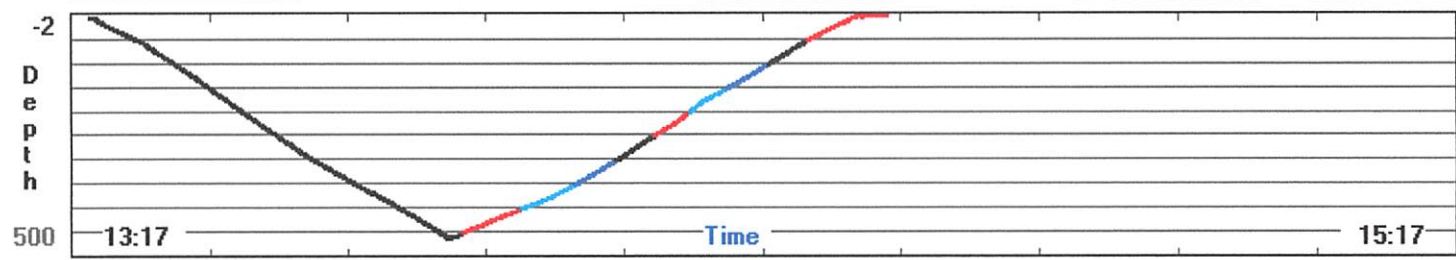
MOCNESS STATISTICAL SUMMARY

net#	pmin	pmax	pavg	tmin	tmax	tavg	thmin	thmax	thavg	smin	smax	savg
0	00.0	461.3	228.1	05.8	15.3	08.3	05.8	15.3	08.2	04.51	50.00	34.33
1	400.9	450.1	425.6	05.8	06.0	05.9	05.8	06.0	05.9	34.11	34.16	34.14
2	349.9	400.0	377.3	06.1	06.3	06.2	06.0	06.3	06.1	34.07	34.10	34.09
3	300.5	348.8	325.3	06.3	06.8	06.5	06.3	06.8	06.5	34.06	34.08	34.07
4	249.2	298.5	273.8	06.8	07.2	07.0	06.8	07.2	07.0	34.04	34.06	34.05
5	200.2	247.4	225.0	07.3	07.9	07.5	07.2	07.9	07.5	33.99	34.04	34.01
6	150.8	197.7	172.3	07.9	08.6	08.2	07.9	08.6	08.2	33.93	33.99	33.97
7	100.0	148.9	125.4	08.6	09.5	09.0	08.6	09.5	08.9	33.73	33.93	33.85
8	51.1	97.6	74.0	09.5	11.2	10.5	09.5	11.2	10.4	33.72	33.75	33.74

net#	simin	simax	siavg	cmin	cmax	cavg	fmin	fmax	favg	oxmin	oxmax	oxavg
0	02.84	37.84	26.68	00.00	03.57	00.69	00.00	00.19	00.08	00.0	00.0	00.0
1	26.84	26.92	26.89	00.59	00.60	00.59	00.07	00.07	00.07	00.0	00.0	00.0
2	26.78	26.84	26.82	00.59	00.60	00.59	00.07	00.07	00.07	00.0	00.0	00.0
3	26.71	26.78	26.75	00.59	00.60	00.59	00.07	00.07	00.07	00.0	00.0	00.0
4	26.63	26.70	26.66	00.58	00.59	00.59	00.07	00.07	00.07	00.0	00.0	00.0
5	26.50	26.63	26.57	00.58	00.59	00.59	00.07	00.07	00.07	00.0	00.0	00.0
6	26.35	26.50	26.44	00.59	00.60	00.59	00.06	00.07	00.07	00.0	00.0	00.0
7	26.05	26.35	26.23	00.59	00.60	00.60	00.06	00.07	00.07	00.0	00.0	00.0
8	25.77	26.05	25.89	00.61	00.74	00.65	00.07	00.14	00.09	00.0	00.0	00.0

net#	amin	amax	aavg	spmin	spmax	spavg	armin	armax	aravg	#obs	vol
0	00.0	60.0	39.5	00.3	11.9	01.5	-19.5	10.5	-13.4	00509	02138
1	35.0	41.0	38.7	02.0	02.6	02.3	06.2	13.0	09.9	00075	00348
2	39.0	44.0	41.9	02.3	02.8	02.6	07.8	15.2	10.8	00069	00332
3	39.0	42.0	40.6	02.6	02.8	02.6	11.5	16.1	13.9	00052	00251
4	38.0	42.0	39.7	02.6	02.8	02.6	14.4	17.1	15.5	00049	00233
5	37.0	41.0	38.8	02.3	02.8	02.6	13.2	19.0	15.7	00045	00215
6	37.0	40.0	38.6	02.3	02.8	02.5	11.1	19.0	15.4	00048	00224
7	35.0	40.0	37.4	02.3	02.6	02.4	11.7	17.1	14.6	00051	00240
8	38.0	44.0	40.7	02.6	02.8	02.6	12.8	16.5	14.9	00049	00235

Environmental Parameters		Net Operation		Net - Ship Position		Program Settings	
Time	14:27:47	Net_Num	9	Latitude	34N 22.2674	Reset	
Pressure	-1.0 m	OpenTime	6.8 min	Longitude	121W 8.049	Baud Rate	2400
Temp	13.42 C	Vol_Filtered	453.9 m3	Net_Dist	577.5 m	Sample Rate	4.0 sec
Salinity	0.36 o/oo	Angle	36 deg	Total_Dist	5866.1 m	Printer	Off
Density	-0.395	Flow_Counts	102	Processed File Name	C:\MOCNESS\MOCDATA\CCE-P0~1\T05-0704.PR		
Oxygen		Hor_Vel	1.7 kts	Raw File Name	C:\MOCNESS\MOCDATA\CCE-P0~1\T05-0704.raw		
Fluoresc.	0.0582 V	Vert_Vel	0.8 m/min	Acquisition Ended. trys = 0			
LightXmis	4.0413 /m	Battery	19.6 V				



EVENT# 184
 START 23:21

RAW#6 ✓

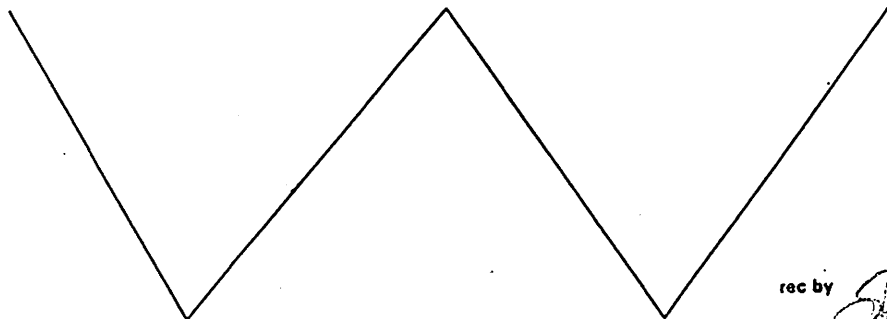
Revised 10/94

MOCNESS DATA SHEET

CRUISE	STATION	HAUL	DATE (DST EST GMT)	MOCNESS TYPE
P0704	CUCLE1	C	APR 14 th 2007 PDT	1/4M (1M) 10M

	START	END		TIME	DEPTH	VOL FILTER	MESH SIZE
LATITUDE	24 18.55		NET 0 OPEN	23:31	0	1049	
LONGITUDE	121 07.70		NET 1 OPEN	23:46	450	1049	
DEPTH	1642		NET 2 OPEN	23:49	400	145	
COMMENTS SURFACE TEMP 12.69 SAL 33.44 FLUOR 0.15 ANGLE 42 BATHY 19.8			NET 3 OPEN	23:52	345	170	
			NET 4 OPEN	23:55	299	248	
			NET 5 OPEN	23:58	251	298	
			NET 6 OPEN	00:03	201	308	
			NET 7 OPEN	00:07	151	297	
			NET 8 OPEN	00:11	101	220	
			NET 9 OPEN	00:14	50	347	
			SURFACE	00:19	0		

TOW PROFILE



rec by *[Signature]*

File names: T06-0704 .pro T06-0704 .raw T060704 .tab

max depth: 462
 SCREEN CAPTURE X

Tow #6

M-03-001
31 March 2007
R/V Thompson

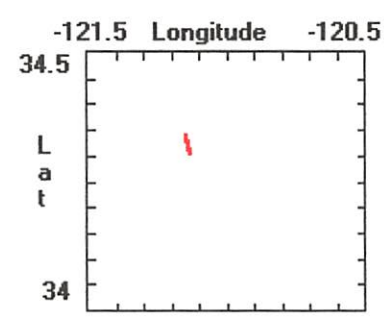
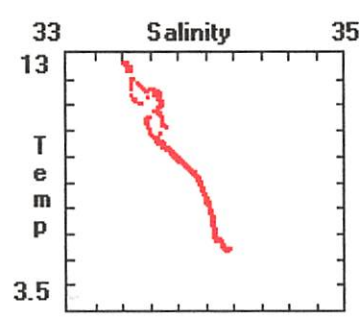
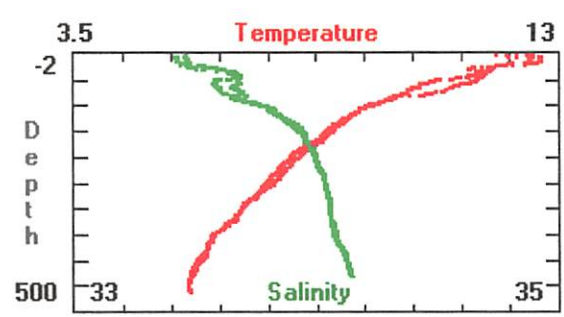
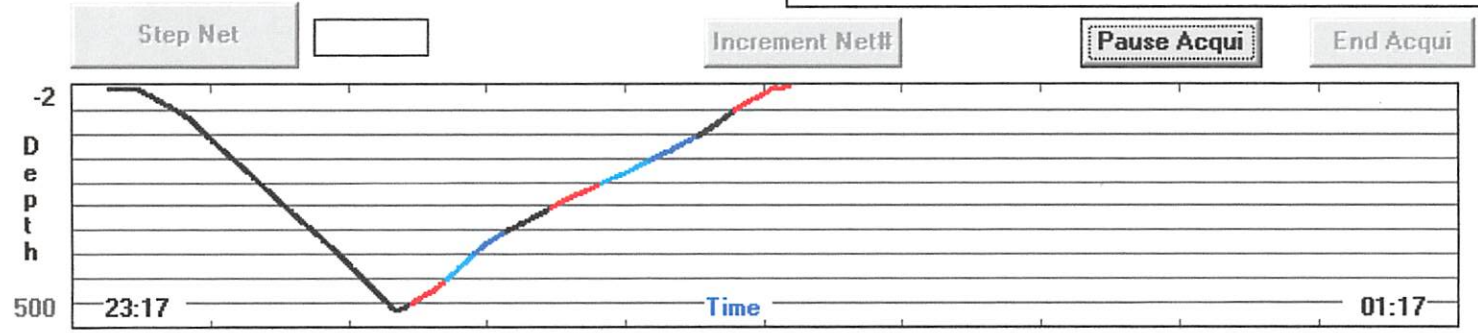
MOCNESS STATISTICAL SUMMARY

net#	pmin	pmax	pavg	tmin	tmax	tavg	thmin	thmax	thavg	smin	smax	savg
0	00.3	462.2	206.4	05.7	12.7	08.5	05.7	12.7	08.5	25.00	50.00	33.94
1	400.2	448.0	426.1	05.8	05.9	05.8	05.7	05.9	05.8	34.13	34.16	34.15
2	346.4	396.9	371.9	06.0	06.3	06.1	05.9	06.2	06.1	34.07	34.13	34.10
3	299.3	344.0	319.9	06.3	06.8	06.6	06.3	06.8	06.6	34.06	34.08	34.06
4	251.2	297.3	274.3	06.8	07.3	07.0	06.8	07.2	07.0	34.04	34.06	34.05
5	201.4	249.0	224.5	07.3	07.7	07.5	07.3	07.7	07.5	34.00	34.04	34.02
6	151.2	199.9	176.1	07.8	08.4	08.1	07.7	08.4	08.1	33.95	34.01	33.98
7	100.6	149.3	125.8	08.4	09.1	08.8	08.4	09.1	08.8	33.80	33.95	33.89
8	49.5	98.6	74.6	09.2	11.3	10.3	09.2	11.3	10.2	33.66	33.79	33.70

net#	simin	simax	siavg	cmin	cmax	cavg	fmin	fmax	favg	oxmin	oxmax	oxavg
0	18.73	38.28	26.34	00.00	05.76	00.63	00.00	00.18	00.09	00.0	00.0	00.0
1	26.88	26.93	26.91	00.57	00.58	00.57	00.07	00.07	00.07	00.0	00.0	00.0
2	26.79	26.87	26.83	00.57	00.58	00.57	00.07	00.07	00.07	00.0	00.0	00.0
3	26.71	26.78	26.74	00.57	00.58	00.57	00.07	00.07	00.07	00.0	00.0	00.0
4	26.63	26.71	26.67	00.57	00.58	00.57	00.07	00.07	00.07	00.0	00.0	00.0
5	26.53	26.63	26.58	00.57	00.57	00.57	00.06	00.07	00.07	00.0	00.0	00.0
6	26.39	26.53	26.47	00.57	00.58	00.57	00.06	00.07	00.07	00.0	00.0	00.0
7	26.16	26.39	26.28	00.57	00.58	00.58	00.06	00.07	00.07	00.0	00.0	00.0
8	25.69	26.14	25.89	00.58	00.67	00.61	00.06	00.12	00.08	00.0	00.0	00.0

net#	amin	amax	aavg	spmin	spmax	spavg	armin	armax	aravg	#obs	vol
0	00.0	78.0	36.5	00.3	03.1	00.9	-27.1	13.8	-17.3	00392	01049
1	16.0	26.0	20.4	01.1	01.7	01.5	11.3	22.2	15.5	00046	00174
2	25.0	31.0	26.3	01.7	02.0	01.9	19.9	23.2	21.3	00036	00146
3	27.0	35.0	29.4	01.7	02.3	02.0	13.2	22.8	17.5	00041	00170
4	33.0	39.0	36.4	02.0	02.6	02.2	09.1	16.3	12.7	00056	00248
5	37.0	42.0	39.2	02.3	02.8	02.5	09.1	15.4	11.7	00063	00298
6	40.0	45.0	42.0	02.6	02.8	02.6	09.3	14.0	11.6	00063	00307
7	41.0	46.0	43.6	02.6	02.8	02.7	09.7	14.6	12.2	00061	00297
8	38.0	45.0	41.7	02.6	03.1	02.8	13.0	19.0	16.5	00045	00220

Environmental Parameters		Net Operation		Net - Ship Position		Program Settings	
Time	00:19:26	Net_Num	9	Latitude	34N 20.598	<input type="button" value="Reset"/>	
Pressure	-1.1 m	OpenTime	4.9 min	Longitude	121W 8.792	Baud Rate	2400
Temp	11.83 C	Vol_Filtered	347.0 m3	Net_Dist	393.8 m	Sample Rate	4.0 sec
Salinity	50.0 o/oo	Angle	37 deg	Total_Dist	4181.7 m	Printer	Off
Density	38.327	Flow_Counts	85	Processed File Name	C:\MOCNESS\MOCDATA\CCE-P0~1\T06-0704.PRC		
Oxygen		Hor_Vel	1.4 kts	Raw File Name	C:\MOCNESS\MOCDATA\CCE-P0~1\T06-0704.raw		
Fluoresc.	0.0604 V	Vert_Vel	1.8 m/min	Acquisition Ended. trys = 0			
LightXmis	3.7736 /m	Battery	19.5 V				



SUNAT# 2212
 Start time = 14:10

haul #

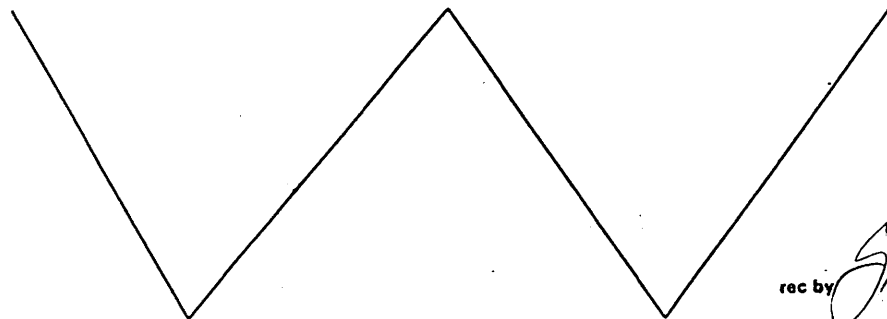
Revised 10/94

MOCNESS DATA SHEET

CRUISE	STATION	HAUL	DATE (DST EST GMT)	MOCNESS TYPE
P0704	Cycle 2	7	9 April 2007	1/4M (1M) 10M

	START	END	TIME	DEPTH	VOL FILTER	MESH SIZE
LATITUDE	33, 38.25		14:10	0	2340	
LONGITUDE	-123, 09.62		14:50	450	368	
DEPTH	4240		14:55	399	336	
COMMENTS TRAWL = 0.5510 TSPD = 14.24 SPT = 23.28 FLOW = 7.7 0.125 ANGL = 31 VEL/DIR = 199			14:59	349	262	
			15:03	300	229	
			15:06	247	256	
			15:10	200	274	
			15:13	149	220	
			15:17	99	243	
			15:20	49	348	
			15:25	0	✓	

TOW PROFILE



rec by *[Signature]*

File names: 707-0704.pro 707-0704.raw 707-0704.tab

max Depth = 461
 SENS A CAPTURE 2x

Tow #7

M-03-001
 31 March 2007
 R/V Thompson

MOCNESS STATISTICAL SUMMARY

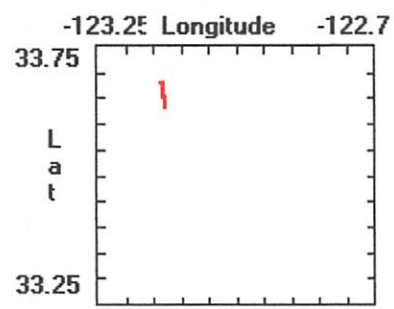
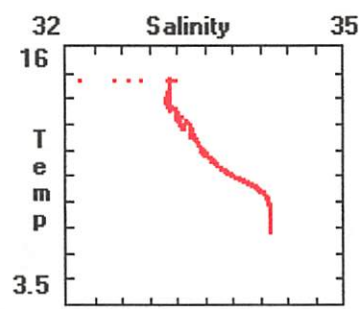
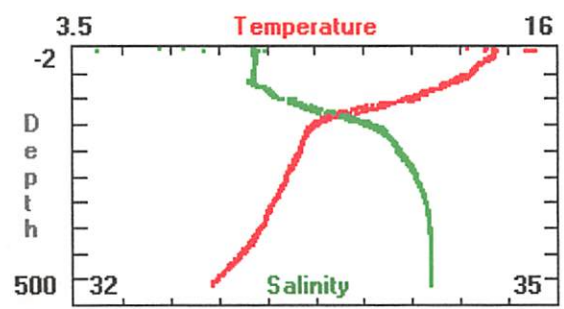
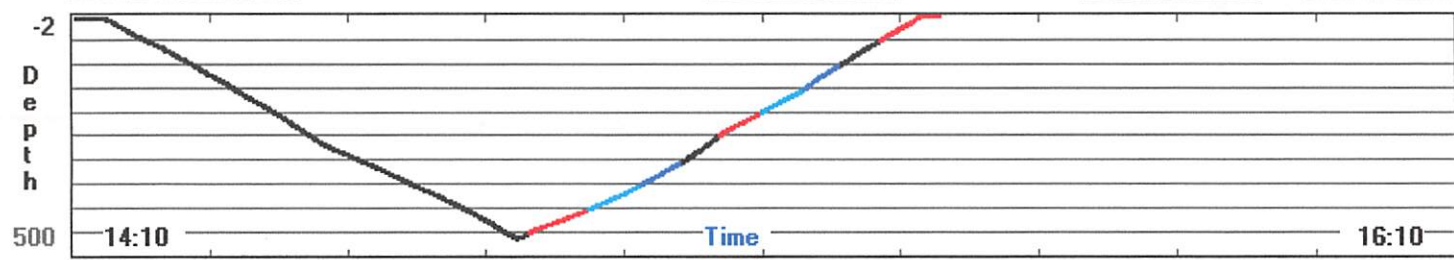
net#	pmin	pmax	pavg	tmin	tmax	tavg	thmin	thmax	thavg	smin	smax	savg
0	00.8	460.5	224.6	07.1	15.9	10.1	07.0	15.9	10.1	03.67	50.00	34.18
1	401.0	448.5	425.3	07.2	07.9	07.5	07.2	07.8	07.5	34.22	34.23	34.22
2	350.8	399.5	376.2	07.9	08.4	08.1	07.8	08.3	08.1	34.21	34.23	34.22
3	301.1	349.1	325.1	08.4	08.7	08.5	08.3	08.6	08.5	34.20	34.22	34.21
4	248.9	299.3	274.7	08.7	09.0	08.9	08.7	09.0	08.8	34.13	34.19	34.17
5	200.3	246.3	222.6	09.0	09.4	09.2	09.0	09.4	09.2	34.02	34.12	34.07
6	150.4	198.8	174.8	09.4	09.6	09.5	09.4	09.6	09.5	33.88	34.01	33.97
7	100.4	148.1	123.2	09.7	12.0	10.5	09.6	12.0	10.5	33.38	33.88	33.62
8	49.8	98.4	73.2	12.0	13.7	13.0	12.0	13.7	13.0	33.09	33.38	33.18

net#	simin	simax	siavg	cmin	cmax	cavg	fmin	fmax	favg	oxmin	oxmax	oxavg
0	01.88	37.53	26.26	00.00	08.75	00.73	00.00	04.94	00.12	00.0	00.0	00.0
1	26.69	26.77	26.73	00.59	00.60	00.59	00.07	00.07	00.07	00.0	00.0	00.0
2	26.61	26.69	26.65	00.59	00.59	00.59	00.07	00.07	00.07	00.0	00.0	00.0
3	26.55	26.61	26.58	00.58	00.59	00.59	00.06	00.07	00.07	00.0	00.0	00.0
4	26.43	26.54	26.49	00.58	00.59	00.58	00.06	00.07	00.07	00.0	00.0	00.0
5	26.29	26.43	26.36	00.58	00.59	00.59	00.06	00.07	00.07	00.0	00.0	00.0
6	26.14	26.29	26.24	00.59	00.59	00.59	00.06	00.07	00.07	00.0	00.0	00.0
7	25.34	26.13	25.78	00.57	00.59	00.59	00.06	00.07	00.07	00.0	00.0	00.0
8	24.80	25.32	24.98	00.56	00.67	00.61	00.07	00.21	00.14	00.0	00.0	00.0

net#	amin	amax	aavg	spmin	spmax	spavg	armin	armax	aravg	#obs	vol
0	20.0	53.0	41.9	00.0	06.0	01.6	-17.6	12.1	-11.4	00596	02340
1	38.0	49.0	44.3	02.3	03.1	02.7	07.2	13.8	09.8	00075	00368
2	46.0	49.0	47.5	02.8	03.1	03.0	08.9	14.0	11.0	00067	00337
3	44.0	50.0	45.9	02.8	03.1	02.9	11.7	15.2	13.7	00053	00262
4	42.0	48.0	44.7	02.8	03.1	03.0	13.6	18.5	16.5	00046	00229
5	40.0	45.0	42.5	02.6	03.1	02.7	10.9	18.7	13.5	00054	00256
6	40.0	44.0	41.9	02.6	02.8	02.7	10.5	15.7	12.9	00056	00274
7	39.0	46.0	42.7	02.6	02.8	02.8	13.6	19.0	16.5	00045	00221
8	41.0	46.0	43.8	02.6	03.1	02.8	12.6	16.5	14.9	00050	00244

Environmental Parameters Net Operation Net - Ship Position Program Settings

Time	15:25:29	Net_Num	9	Latitude	33N 40.958	<input type="button" value="Reset"/>	
Pressure	-1.2 m	OpenTime	5.2 min	Longitude	123W 8.003	Baud Rate	2400
Temp	13.68 C	Vol_Filtered	347.8 m3	Net_Dist	353.9 m	Sample Rate	4.0 sec
Salinity	1.7 o/oo	Angle	33 deg	Total_Dist	5369.3 m	Printer	Off
Density	0.606	Flow_Counts	79	Processed File Name	C:\MOCNESS\MOCDATA\CCE-P0~1\T07-0704.PR0		
Oxygen		Hor_Vel	1.7 kts	Raw File Name	C:\MOCNESS\MOCDATA\CCE-P0~1\T07-0704.raw		
Fluoresc.	0.0582 V	Vert_Vel	1.6 m/min	Acquisition Ended. trys = 0			
LightXmis	2.7056 /m	Battery	19.4 V				



run # 226

frail # 8

Start time = 23:42

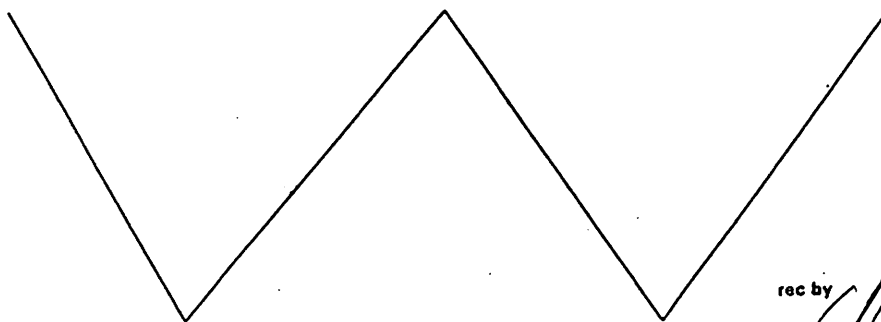
Revised 10/94

MOCNESS DATA SHEET

CRUISE	STATION	TOW HAUL	DATE (DST EST GMT)	MOCNESS TYPE
CCF-80707	Cycl92	2	APR 11 9 th 2007 PDT	1/4M (1M) 10M

	START	END		TIME	DEPTH	VOL FILTER	MESH SIZE
LATITUDE	33 33.59	33 35.50	NET 0 OPEN	23:42	0	2418	
LONGITUDE	-123 08.85	-123 09.76	NET 1 OPEN	00:13	451	176	
DEPTH	4214	4243	NET 2 OPEN	00:16	401	229	
COMMENTS TEMP = 12.33 SA = 33 FLUOR = 0.09 TRAS = 0.9988 ANGLE = 53 BATTAY = 19.5			NET 3 OPEN	00:19	344	253	
			NET 4 OPEN	00:23	299	200	
			NET 5 OPEN	00:27	250	277	
			NET 6 OPEN	00:31	200	123	
			NET 7 OPEN	00:34	150	284	
			NET 8 OPEN	00:37	121	184	
			NET 9 OPEN	00:40	49	384	
			SURFACE	00:42	0		

TOW PROFILE



rec by *[Signature]*

File names: 708-0707 .pro 708-0707 .raw 708-0707 .tab

max depth = 460

set manually incremented depth

Screen Capture

Tow#8

M-03-001
 31 March 2007
 R/V Thompson

MOCNESS STATISTICAL SUMMARY

net#	pmin	pmax	pavg	tmin	tmax	tavg	thmin	thmax	thavg	smin	smax	savg
0	00.2	459.6	218.9	07.1	50.0	10.3	07.1	50.0	10.3	00.03	50.00	33.15
1	401.1	448.9	422.8	07.2	07.8	07.5	07.1	07.8	07.5	34.21	34.22	34.22
3	300.9	342.5	324.2	08.4	08.8	08.6	08.4	08.7	08.5	34.18	34.22	34.20
3	300.9	342.5	324.2	08.4	08.8	08.6	08.4	08.7	08.5	34.18	34.22	34.20
4	251.1	298.6	275.4	08.8	09.0	08.9	08.7	09.0	08.9	34.14	34.18	34.16
5	201.4	249.9	228.5	09.0	09.3	09.2	09.0	09.3	09.1	34.04	34.13	34.09
6	150.6	198.0	173.0	09.3	09.7	09.5	09.3	09.6	09.5	33.89	34.04	33.96
7	103.0	147.8	128.6	09.7	11.7	10.1	09.7	11.7	10.1	33.39	33.88	33.72
8	50.5	100.3	78.6	12.0	13.7	12.6	11.9	13.7	12.6	33.11	33.36	33.23

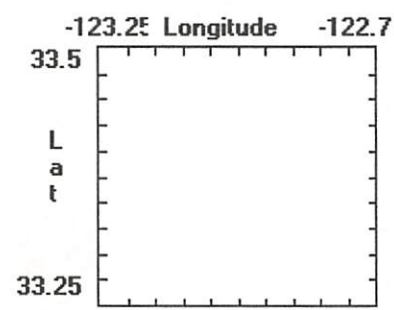
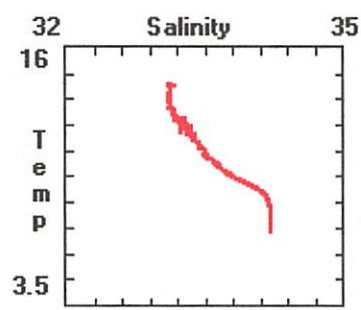
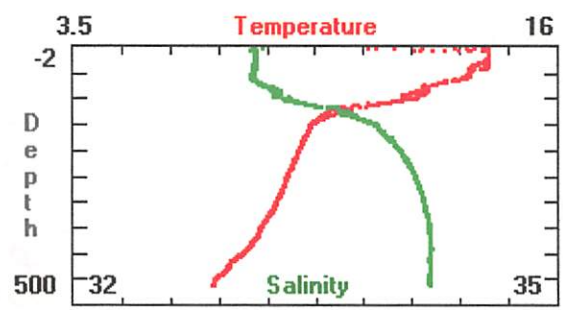
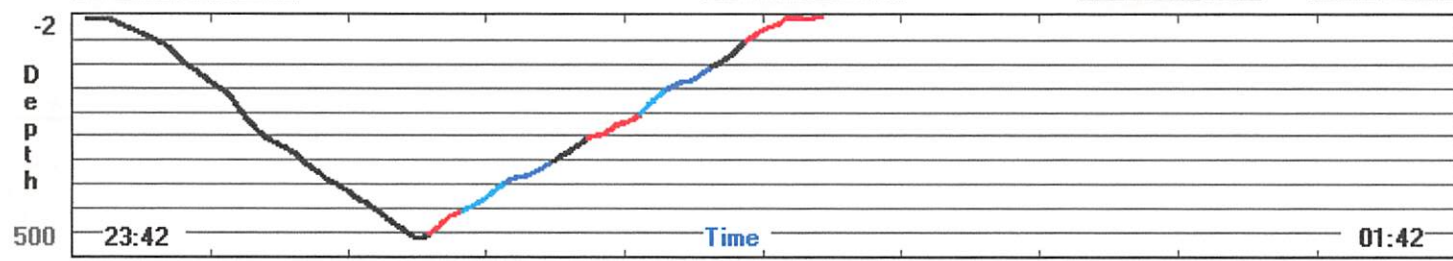
net#	simin	simax	siavg	cmin	cmax	cavg	fmin	fmax	favg	oxmin	oxmax	oxavg
0	-00.52	26.79	25.42	00.00	06.70	00.67	00.00	00.21	00.08	00.0	00.0	00.0
1	26.69	26.78	26.73	00.57	00.57	00.57	00.07	00.07	00.07	00.0	00.0	00.0
3	26.52	26.60	26.56	00.56	00.58	00.56	00.06	00.07	00.07	00.0	00.0	00.0
3	26.52	26.60	26.56	00.56	00.58	00.56	00.06	00.07	00.07	00.0	00.0	00.0
4	26.44	26.52	26.48	00.56	00.56	00.56	00.06	00.07	00.07	00.0	00.0	00.0
5	26.32	26.44	26.39	00.56	00.56	00.56	00.06	00.18	00.07	00.0	00.0	00.0
6	26.15	26.31	26.22	00.56	00.56	00.56	00.06	00.07	00.07	00.0	00.0	00.0
7	25.40	26.14	25.93	00.56	00.57	00.56	00.06	00.36	00.07	00.0	00.0	00.0
8	24.79	25.33	25.09	00.55	00.67	00.58	00.07	00.21	00.11	00.0	00.0	00.0

net#	amin	amax	aavg	spmin	spmax	spavg	armin	armax	aravg	#obs	vol
0	22.0	78.0	42.0	00.6	45.8	02.0	-36.6	10.3	-15.3	00447	02418
1	32.0	40.0	34.8	01.7	02.3	02.1	07.4	24.3	17.0	00044	00177
3	38.0	51.0	41.4	02.0	02.6	02.3	03.1	19.7	10.9	00060	00253
3	38.0	51.0	41.4	02.0	02.6	02.3	03.1	19.7	10.9	00060	00253
4	39.0	46.0	41.2	02.3	02.8	02.5	13.0	19.1	16.0	00045	00199
5	33.0	48.0	40.6	02.0	02.6	02.2	00.6	19.1	10.6	00068	00277
6	31.0	37.0	33.5	02.0	02.6	02.3	18.1	26.6	22.9	00033	00134
7	33.0	41.0	36.3	01.7	02.3	02.1	04.3	21.2	12.3	00057	00238
8	32.0	39.0	35.1	02.0	02.6	02.3	10.5	24.7	17.4	00043	00184

Environmental Parameters Net Operation Net - Ship Position Program Settings

Time	00:47:08	Net_Num	9	Latitude	33N 35.503	Reset
Pressure	-1.2 m	OpenTime	6.5 min	Longitude	123W 9.736	Baud Rate
Temp	11.12 C	Vol_Filtered	387.4 m3	Net_Dist	419.0 m	Sample Rate
Salinity	0.62 o/oo	Angle	25 deg	Total_Dist	3949.1 m	Printer
Density	0.08	Flow_Counts	89	Processed File Name	C:\MOCNESS\MOCDATA\CCE-P0~1\T08-0704.PRO	
Oxygen		Hor_Vel	0.9 kts	Raw File Name	C:\MOCNESS\MOCDATA\CCE-P0~1\T08-0704.raw	
Fluoresc.	0.0606 V	Vert_Vel	0.8 m/min	Acquisition Ended. trys = 0		
LightXmis	2.0008 /m	Battery	19.3 V			

Step Net Increment Net# **Pause Acqui** End Acqui



SUNY # 280

TRAWL #9 ✓

Start = 13:07

MOCNESS DATA SHEET							Revised 10/94		
CRUISE	STATION	HAUL	DATE	(DST EST GMT)	MOCNESS TYPE				
09-0704	Cycle 2	3	April 11th 2007	(POT)	1/4M (1M) 10M				
	START	END		TIME	DEPTH	VOL FILTER	MESH SIZE		
LATITUDE	33 22.95	33 25.14	NET 0 OPEN	13:07	0	2057			
LONGITUDE	123 20.96	123 23.07	NET 1 OPEN	13:38	448	258			
DEPTH	4227	4287	NET 2 OPEN	13:42	399	289			
COMMENTS TEMP 13.72 SAL 33.14 Fluor 0.0568 TRANS 0.8703 ANGEL 39 BATHY 19.5			NET 3 OPEN	13:46	349	227			
			NET 4 OPEN	13:50	301	196			
			NET 5 OPEN	13:53	250	229			
			NET 6 OPEN	13:56	201	217			
			NET 7 OPEN	14:00	150	225			
			NET 8 OPEN	14:03	102	242			
			NET 9 OPEN	14:07	51	352			
			SURFACE	14:12	0	/			
	TOW PROFILE								
<p style="text-align: right;">rec by </p>									
File names: 709-0704 .pro 709-0704 .raw 709-0704 .tab									

max Depth: 461

** manually incremented det

Screen Capture ✗

M-03-001
31 March 2007
R/V Thompson

Tow #9

MOCNESS STATISTICAL SUMMARY

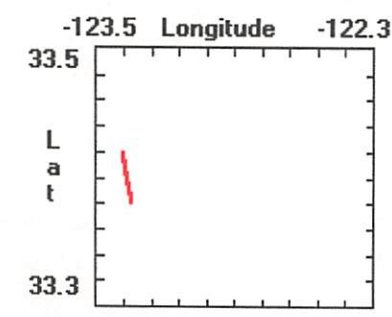
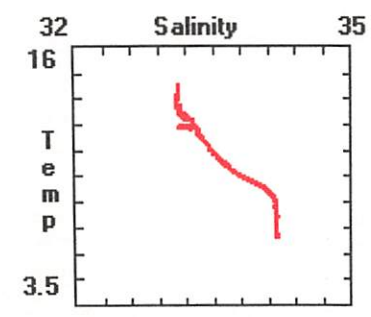
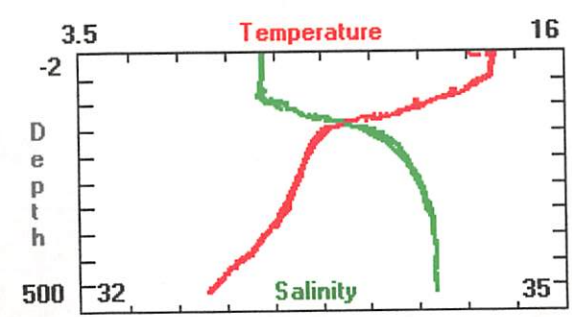
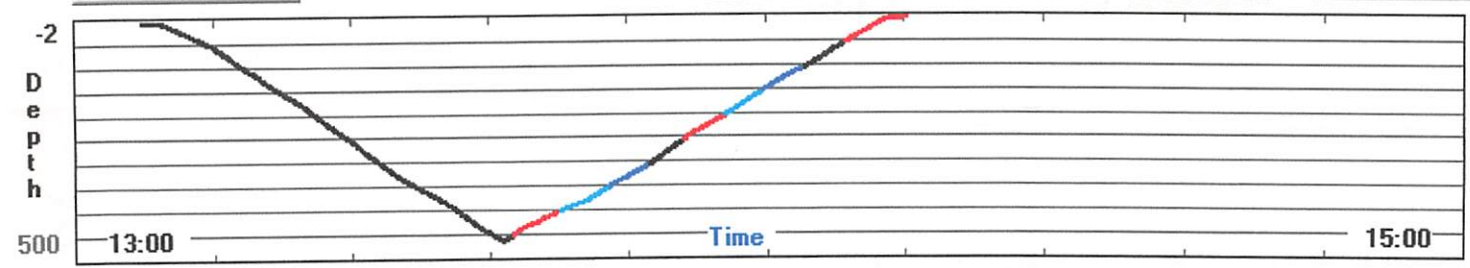
net#	pmin	pmax	pavg	tmin	tmax	tavg	thmin	thmax	thavg	smin	smax	savg
0	00.2	460.7	218.8	06.8	16.5	10.2	06.8	16.5	10.2	00.01	34.21	33.03
2	348.4	396.8	375.3	07.7	08.3	08.0	07.6	08.2	07.9	34.19	34.21	34.20
3	302.6	346.8	324.5	08.3	08.7	08.5	08.3	08.7	08.5	34.18	34.20	34.19
0	00.2	460.7	218.8	06.8	16.5	10.2	06.8	16.5	10.2	00.01	34.21	33.03
4	251.1	300.1	275.8	08.7	09.0	08.9	08.7	09.0	08.9	34.12	34.17	34.15
5	201.5	249.1	224.7	09.1	09.3	09.2	09.0	09.3	09.2	34.03	34.12	34.07
6	150.4	199.7	175.4	09.3	09.7	09.5	09.3	09.7	09.5	33.86	34.03	33.96
7	102.1	149.5	124.7	09.8	12.2	10.9	09.8	12.2	10.9	33.23	33.84	33.55
8	51.4	100.7	76.5	12.2	13.8	13.1	12.1	13.8	13.1	33.11	33.24	33.15

net#	simin	simax	siavg	cmin	cmax	cavg	fmin	fmax	favg	oxmin	oxmax	oxavg
0	-01.08	26.83	25.36	00.56	16.85	00.69	00.05	04.94	00.09	00.0	00.0	00.0
2	26.60	26.70	26.66	00.55	00.56	00.55	00.07	00.07	00.07	00.0	00.0	00.0
3	26.53	26.60	26.56	00.55	00.56	00.55	00.06	00.07	00.07	00.0	00.0	00.0
0	-01.08	26.83	25.36	00.56	16.85	00.69	00.05	04.94	00.09	00.0	00.0	00.0
4	26.43	26.52	26.47	00.55	00.55	00.55	00.06	00.07	00.07	00.0	00.0	00.0
5	26.31	26.42	26.36	00.55	00.55	00.55	00.06	00.07	00.07	00.0	00.0	00.0
6	26.11	26.30	26.22	00.55	00.56	00.55	00.06	00.07	00.07	00.0	00.0	00.0
7	25.19	26.08	25.67	00.54	00.56	00.55	00.06	00.08	00.07	00.0	00.0	00.0
8	24.79	25.18	24.94	00.55	00.65	00.60	00.08	00.22	00.15	00.0	00.0	00.0

net#	amin	amax	aavg	spmin	spmax	spavg	armin	armax	aravg	#obs	vol
0	28.0	61.0	42.2	00.3	20.2	01.7	-22.3	14.4	-14.1	00484	02058
2	40.0	49.0	43.1	02.3	02.8	02.5	05.8	15.8	11.5	00063	00282
3	40.0	46.0	42.2	02.3	02.8	02.5	08.6	17.3	13.5	00051	00227
0	28.0	61.0	42.2	00.3	20.2	01.7	-22.3	14.4	-14.1	00484	02058
4	37.0	42.0	39.3	02.3	02.8	02.5	13.4	19.1	16.7	00044	00196
5	36.0	42.0	38.7	02.0	02.6	02.3	10.9	20.2	14.3	00052	00229
6	36.0	41.0	37.9	02.3	02.6	02.4	11.9	19.4	15.4	00048	00217
7	37.0	43.0	39.7	02.3	02.6	02.4	11.1	17.5	14.3	00051	00225
8	36.0	44.0	40.1	02.3	02.6	02.5	10.7	17.3	14.4	00052	00242

Environmental Parameters	Net Operation	Net - Ship Position	Program Settings
Time: 14:12:12	Net_Num: 9	Latitude: 33N 25.146	Reset
Pressure: -1.1 m	OpenTime: 5.3 min	Longitude: 123W 22.99	Baud Rate: 2400
Temp: 13.6 C	Vol_Filtered: 352.0 m3	Net_Dist: 417.5 m	Sample Rate: 4.0 sec
Salinity: 3.18 o/oo	Angle: 36 deg	Total_Dist: 5297.3 m	Printer: Off
Density: 1.766	Flow_Counts: 82	Processed File Name: C:\MOCNESS\MOCDATA\CCE-P0~1\T09-0704.PRI	
Oxygen:	Hor_Vel: 1.7 kts	Raw File Name: C:\MOCNESS\MOCDATA\CCE-P0~1\T09-0704.raw	
Fluoresc.: 0.0582 V	Vert_Vel: 2.8 m/min	Acquisition Ended. trys = 0	
LightXmis: 2.7646 /m	Battery: 19.2 V		

Step Net Increment Net# Pause Acqui End Acqui



50904-344

Trawl # 10

00:14

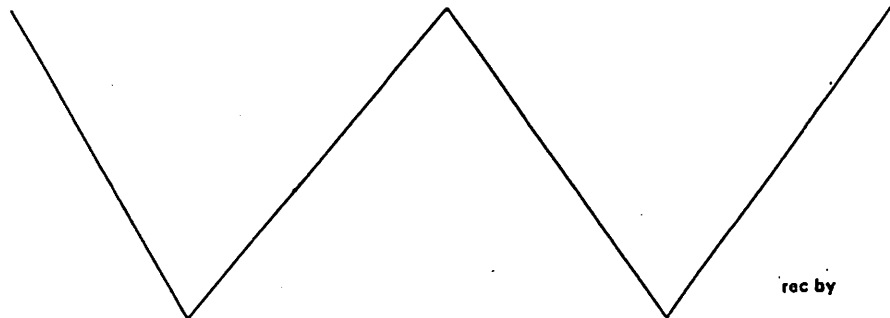
Revised 10/94

MOCNESS DATA SHEET

CRUISE	STATION	HAUL	DATE (DST EST GMT)	MOCNESS TYPE
CCE-0704	Cycle 2	4	13 April 2007 (pdt)	1/4M (1M) 10M

	START	END		TIME	DEPTH	VOL FILTER	MESH SIZE
LATITUDE	33 16.28	33 14.01	NET 0 OPEN	00:14	0	4242	
LONGITUDE	123 37.52	123 38.69	NET 1 OPEN	00:47	446	185	
DEPTH	4233	4389	NET 2 OPEN	00:51	402	250	?
COMMENTS Temp 13.04 Sal 31.3 Fluor 0.0652 TRANS 1.6244 ANGSI 35 BATHY 9.1			NET 3 OPEN	00:55	353	240	
			NET 4 OPEN	00:59	302	155	
			NET 5 OPEN	1:02	249	250	
			NET 6 OPEN	1:06	200	180	
			NET 7 OPEN	1:09	149	240	
			NET 8 OPEN	1:12	102	201	
			NET 9 OPEN	1:16	50	334	
			SURFACE	1:22	0		

TOW PROFILE



File names: T10-0704 .pro T10-0704 .raw T10-0704 .tab

max depth 463
 CAPTURA SCREEN X
 net # 0: * note Flow count 492 SURFACE
 AT SURFACE 2721.9 M3
 ** manually incremented

Tow #10

M-03-001
31 March 2007
R/V Thompson

MOCNESS STATISTICAL SUMMARY

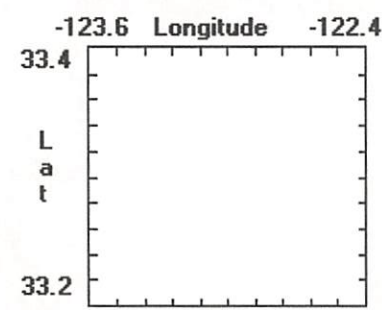
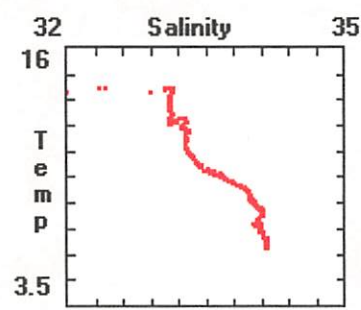
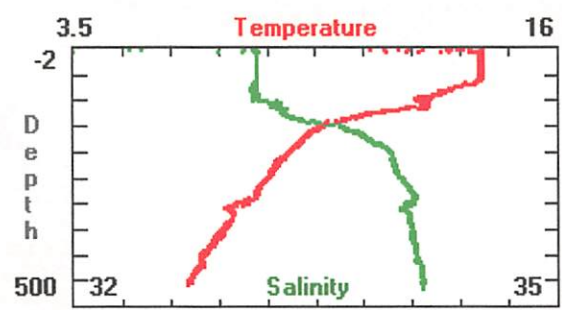
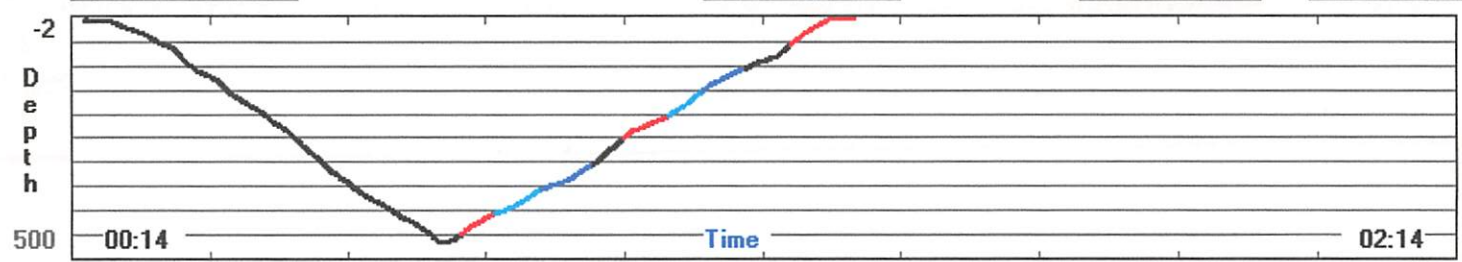
net#	pmin	pmax	pavg	tmin	tmax	tavg	thmin	thmax	thavg	smin	smax	savg
1	403.0	445.7	422.6	06.6	06.9	06.7	06.5	06.8	06.7	34.14	34.18	34.16
1	403.0	445.7	422.6	06.6	06.9	06.7	06.5	06.8	06.7	34.14	34.18	34.16
2	352.8	402.0	380.7	06.8	07.3	07.0	06.8	07.3	07.0	34.10	34.14	34.12
3	302.8	352.6	330.8	07.3	07.7	07.5	07.3	07.7	07.5	34.03	34.11	34.09
4	250.2	299.5	274.9	08.0	08.5	08.3	07.9	08.5	08.2	34.04	34.13	34.09
5	202.1	247.8	222.2	08.6	09.1	08.8	08.6	09.0	08.8	33.98	34.03	34.00
6	149.9	200.3	175.7	09.1	09.8	09.4	09.0	09.8	09.4	33.68	33.98	33.86
7	102.6	147.6	122.8	09.8	12.7	11.3	09.8	12.6	11.2	33.23	33.67	33.36
8	53.8	101.3	80.8	12.3	14.1	13.1	12.3	14.1	13.0	33.10	33.29	33.14

net#	simin	simax	siavg	cmin	cmax	cavg	fmin	fmax	favg	oxmin	oxmax	oxavg
1	26.77	26.83	26.80	00.54	00.55	00.55	00.07	00.07	00.07	00.0	00.0	00.0
1	26.77	26.83	26.80	00.54	00.55	00.55	00.07	00.07	00.07	00.0	00.0	00.0
2	26.68	26.77	26.73	00.54	00.57	00.54	00.06	00.07	00.07	00.0	00.0	00.0
3	26.59	26.68	26.64	00.54	00.55	00.54	00.06	00.07	00.07	00.0	00.0	00.0
4	26.44	26.60	26.52	00.54	00.54	00.54	00.06	00.07	00.07	00.0	00.0	00.0
5	26.32	26.42	26.37	00.54	00.54	00.54	00.06	00.07	00.07	00.0	00.0	00.0
6	25.96	26.31	26.17	00.54	00.54	00.54	00.06	00.07	00.07	00.0	00.0	00.0
7	25.14	25.95	25.45	00.52	00.54	00.53	00.06	00.08	00.07	00.0	00.0	00.0
8	24.73	25.14	24.94	00.52	00.62	00.56	00.08	00.17	00.11	00.0	00.0	00.0

net#	amin	amax	aavg	spmin	spmax	spavg	armin	armax	aravg	#obs	vol
1	35.0	45.0	39.5	02.3	02.6	02.3	11.1	19.5	15.0	00045	00185
1	35.0	45.0	39.5	02.3	02.6	02.3	11.1	19.5	15.0	00045	00185
2	38.0	63.0	41.9	02.0	02.8	02.3	06.2	21.0	12.5	00058	00250
3	39.0	55.0	43.9	02.0	02.8	02.3	03.5	20.2	11.3	00066	00273
4	37.0	45.0	40.2	02.3	02.6	02.5	15.8	25.7	20.6	00037	00156
5	38.0	47.0	41.7	02.0	02.6	02.3	06.8	20.6	12.3	00059	00250
6	38.0	48.0	41.2	02.3	02.8	02.5	10.5	23.1	17.3	00043	00188
7	40.0	49.0	42.7	02.3	02.8	02.5	08.0	19.4	13.3	00054	00241
8	36.0	51.0	42.0	02.0	02.8	02.5	04.7	22.7	11.9	00058	00261

Environmental Parameters		Net Operation		Net - Ship Position		Program Settings	
Time	01:22:07	Net_Num	9	Latitude	33N 18.956	Reset	
Pressure	-1.4 m	OpenTime	5.5 min	Longitude	123W 38.65	Baud Rate	2400
Temp	11.19 C	Vol_Filtered	334.6 m3	Net_Dist	535.4 m	Sample Rate	4.0 sec
Salinity	0.48 o/oo	Angle	26 deg	Total_Dist	5544.4 m	Printer	Off
Density	-0.034	Flow_Counts	87	Processed File Name	C:\MOCNESS\MOCDATA\CCE-P0~1\T10-0704.PRC		
Oxygen		Hor_Vel	0.0 kts	Raw File Name	C:\MOCNESS\MOCDATA\CCE-P0~1\T10-0704.raw		
Fluoresc.	0.0594 V	Vert_Vel	0.0 m/min	Acquisition Ended. trys = 0			
LightXmis	2.5911 /m	Battery	19.0 V				

Step Net Increment Net# Pause Acqui End Acqui



Trawl #10

SUSAN # 369

trans # 11

Start 23:05

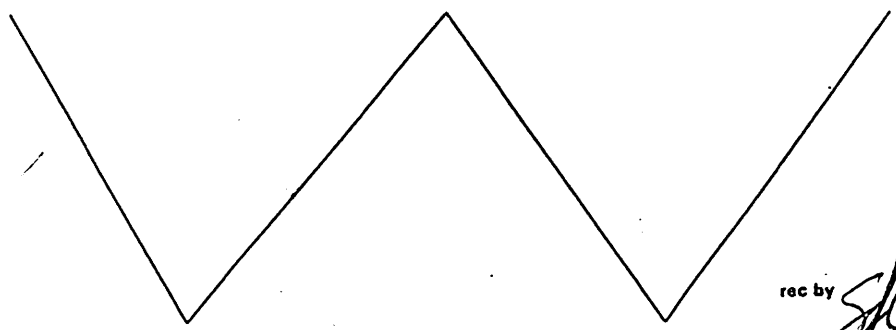
Revised 10/94

MOCNESS DATA SHEET

CRUISE	STATION	HAUL	DATE (DST EST GMT)	MOCNESS TYPE
CG-0404	C9C93	1	APRIL 14 th 2004 205	1/4M (TM) 10M

	START	END		TIME	DEPTH	VOL FILTER	MESH SIZE
LATITUDE	34 3.41		NET 0 OPEN	23:05	0	1582	
LONGITUDE	120 37.31		NET 1 OPEN	23:32	452	266	
DEPTH	601		NET 2 OPEN	23:37	378	154	
COMMENTS 11.85 33.64 0.1862 0.7359 57 21			NET 3 OPEN	23:39	351	229	
			NET 4 OPEN	23:43	360	316	
			NET 5 OPEN	23:48	251	259	
			NET 6 OPEN	23:53	198	134	
			NET 7 OPEN	23:55	150	248	
			NET 8 OPEN	23:59	100	222	
			NET 9 OPEN	00:02	50	535	
			SURFACE	00:10	0		

TOW PROFILE



rec by *[Signature]*

File names: T11-0404 .pro T11 0404 .raw T11 0404 .tab

max depth 601

** manually increased net

Screen capture

wind over 30 knots ship had hard time maintaining speed

Tow #11

M-03-001
 31 March 2007
 R/V Thompson

MOCNESS STATISTICAL SUMMARY

net#	pmin	pmax	pavg	tmin	tmax	tavg	thmin	thmax	thavg	smin	smax	savg
0	03.6	461.2	239.4	06.6	11.9	08.5	06.6	11.9	08.5	02.78	34.24	34.01
1	399.6	453.3	429.9	06.8	07.4	07.0	06.7	07.3	06.9	34.22	34.23	34.22
3	299.8	349.4	332.1	07.7	08.0	07.8	07.7	08.0	07.8	34.20	34.22	34.21
0	03.6	461.2	239.4	06.6	11.9	08.5	06.6	11.9	08.5	02.78	34.24	34.01
4	252.3	297.2	265.6	08.0	08.3	08.2	08.0	08.2	08.2	34.20	34.20	34.20
6	151.3	194.2	172.0	08.8	09.0	08.9	08.7	08.9	08.9	34.11	34.16	34.14
0	03.6	461.2	239.4	06.6	11.9	08.5	06.6	11.9	08.5	02.78	34.24	34.01
7	101.3	148.3	127.1	08.8	09.0	09.0	08.8	09.0	09.0	33.89	34.11	34.04
8	50.8	98.8	73.2	09.1	09.8	09.4	09.0	09.8	09.4	33.67	33.88	33.78

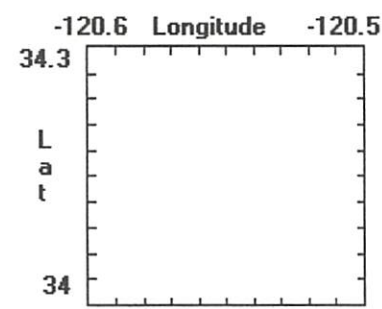
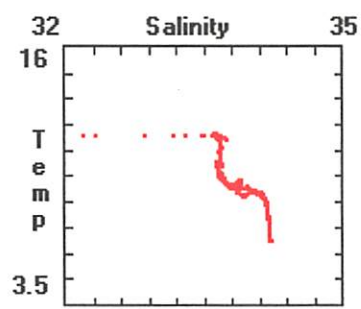
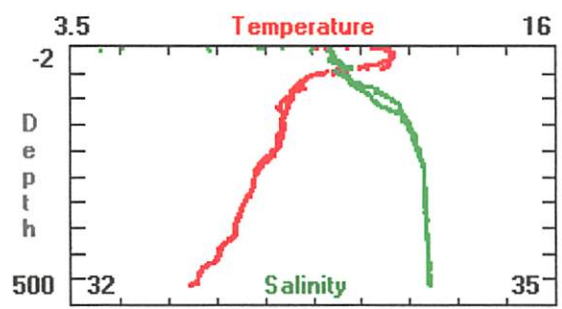
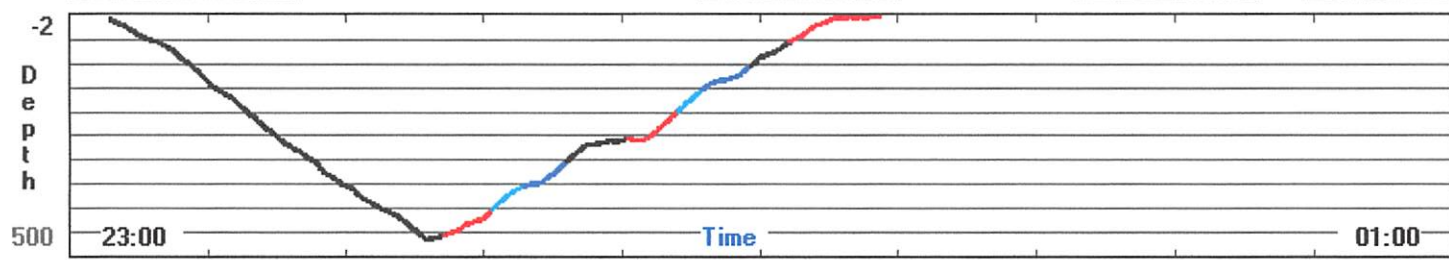
net#	simin	simax	siavg	cmin	cmax	cavg	fmin	fmax	favg	oxmin	oxmax	oxavg
0	01.70	26.87	26.41	00.00	00.75	00.58	00.00	00.21	00.08	00.0	00.0	00.0
1	26.76	26.84	26.82	00.55	00.57	00.56	00.07	00.07	00.07	00.0	00.0	00.0
3	26.65	26.70	26.69	00.54	00.56	00.54	00.07	00.07	00.07	00.0	00.0	00.0
0	01.70	26.87	26.41	00.00	00.75	00.58	00.00	00.21	00.08	00.0	00.0	00.0
4	26.61	26.65	26.62	00.54	00.55	00.54	00.07	00.07	00.07	00.0	00.0	00.0
6	26.43	26.50	26.46	00.55	00.56	00.55	00.06	00.07	00.07	00.0	00.0	00.0
0	01.70	26.87	26.41	00.00	00.75	00.58	00.00	00.21	00.08	00.0	00.0	00.0
7	26.25	26.43	26.37	00.54	00.55	00.55	00.06	00.27	00.07	00.0	00.0	00.0
8	25.95	26.23	26.10	00.55	00.56	00.55	00.06	00.07	00.07	00.0	00.0	00.0

net#	amin	amax	aavg	spmin	spmax	spavg	armin	armax	aravg	#obs	vol
0	31.0	68.0	42.3	00.6	16.8	01.5	-29.3	10.1	-15.6	00437	01582
1	34.0	48.0	39.0	01.7	02.8	02.1	02.5	25.3	11.7	00063	00266
3	36.0	46.0	39.7	01.7	02.8	02.2	-02.0	24.5	13.2	00054	00229
0	31.0	68.0	42.3	00.6	16.8	01.5	-29.3	10.1	-15.6	00437	01582
4	37.0	51.0	40.8	01.7	02.8	02.2	-04.7	23.9	09.6	00078	00316
6	33.0	41.0	35.8	02.3	02.6	02.3	16.9	25.8	21.1	00033	00136
0	31.0	68.0	42.3	00.6	16.8	01.5	-29.3	10.1	-15.6	00437	01582
7	32.0	48.0	37.2	01.7	02.3	02.1	01.6	22.1	11.9	00061	00249
8	35.0	46.0	38.6	02.0	03.1	02.4	06.0	25.6	15.4	00049	00222

Environmental Parameters Net Operation Net - Ship Position Program Settings

Time	00:10:29	Net_Num	9	Latitude	34N 15.354	Reset	
Pressure	-0.8 m	OpenTime	7.7 min	Longitude	120W 39.30	Baud Rate	2400
Temp	9.86 C	Vol_Filtered	535.5 m3	Net_Dist	602.4 m	Sample Rate	4.0 sec
Salinity	1.06 o/oo	Angle	38 deg	Total_Dist	4856.1 m	Printer	Off
Density	0.549	Flow_Counts	134	Processed File Name	C:\MOCNESS\MOCDATA\CCE-P0~1\T11-0704.PRC		
Oxygen		Hor_Vel	1.4 kts	Raw File Name	C:\MOCNESS\MOCDATA\CCE-P0~1\T11-0704.raw		
Fluoresc.	0.0606 V	Vert_Vel	0.0 m/min	Acquisition Ended. trys = 0			
LightXmis	2.6491 /m	Battery	20.5 V				

Step Net Increment Net# **Pause Acqui** End Acqui



50504 # 384

trawl # 12

Start time 1409

MOCNESS DATA SHEET						Revised 10/94	
CRUISE	STATION	HAUL	DATE	(DST EST GMT)	MOCNESS TYPE		
09-20404	C4C153	2	April 15 2007	PT	1/4M	1M 10M	
	START	END	DATA	TIME	DEPTH	VOL FILTER MESH SIZE	
LATITUDE	31 12:41	34 14:54	NET 0 OPEN	14:09	0	1773 Nst 0	
LONGITUDE	120 38.05	120 40.94	NET 1 OPEN	14:39	450	187 Nst 1	
DEPTH	629	637	NET 2 OPEN	14:42	400	188 Nst 2	
COMMENTS Temp 11:41 Sal 30.92 Fluor 0.1192 Trans 7643 Angle 48 Bathym 70.16			NET 3 OPEN	14:46	347	222 Nst 3	
			NET 4 OPEN	14:50	303	288 Nst 4	
			NET 5 OPEN	14:53	247	202 Nst 5	
			NET 6 OPEN	14:58	200	197 Nst 6	
			NET 7 OPEN	15:01	147	223 Nst 7	
			NET 8 OPEN	15:05	100	271 Nst 8	
			NET 9 OPEN	15:09	51	357 Nst 9	
			SURFACE	15:16	0		
	TOW PROFILE						
File names: 712-0704.pro 712-0704.raw 712-0704.tab							

cod ends

max depth = 465 * manually increased Nst
 *** in the data net 3 is
 Nst 3, net 5 = actual net 4 etc...

Tow # 12

M-03-001
31 March 2007
R/V Thompson

MOCNESS STATISTICAL SUMMARY

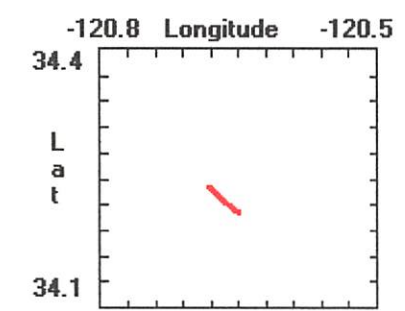
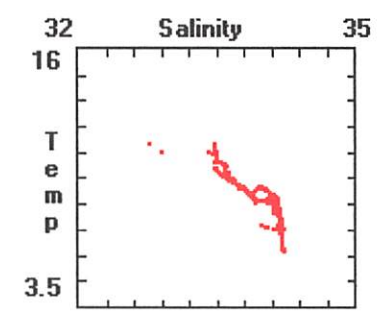
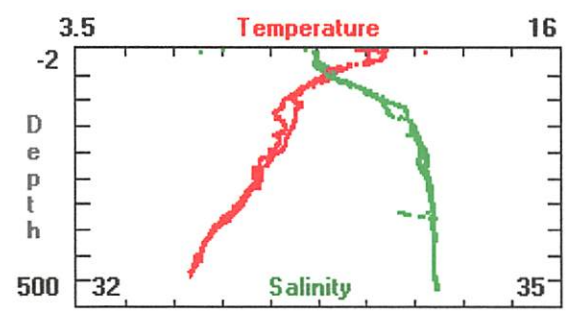
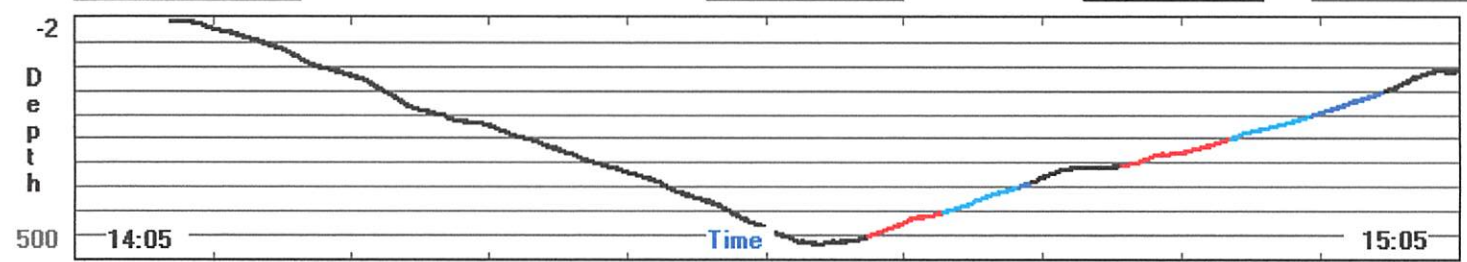
net#	pmin	pmax	pavg	tmin	tmax	tavg	thmin	thmax	thavg	smin	smax	savg
0	00.2	465.4	240.6	06.3	12.6	08.3	06.3	12.6	08.3	00.32	34.25	33.81
1	399.8	449.0	421.4	06.3	06.6	06.5	06.3	06.6	06.5	34.22	34.23	34.22
3	337.4	344.8	341.8	07.1	07.1	07.1	07.0	07.1	07.1	34.20	34.22	34.21
0	00.2	465.4	240.6	06.3	12.6	08.3	06.3	12.6	08.3	00.32	34.25	33.81
4	301.4	335.3	311.2	07.2	07.6	07.5	07.2	07.6	07.5	34.01	34.23	34.20
5	247.2	302.0	275.2	07.7	08.2	07.9	07.6	08.2	07.9	34.17	34.22	34.20
6	200.9	244.8	222.4	08.1	08.6	08.3	08.1	08.5	08.2	34.12	34.17	34.14
7	149.5	199.2	174.4	08.5	09.0	08.7	08.5	08.9	08.7	34.06	34.16	34.12
8	101.8	146.8	116.4	08.6	08.9	08.8	08.6	08.9	08.8	33.91	34.10	33.96
9	51.1	100.5	77.9	08.9	09.9	09.3	08.9	09.9	09.3	33.59	33.91	33.79

net#	simin	simax	siavg	cmin	cmax	cavg	fmin	fmax	favg	oxmin	oxmax	oxavg
0	-00.32	26.92	26.29	00.00	10.36	00.58	00.00	00.12	00.07	00.0	00.0	00.0
1	26.86	26.91	26.88	00.48	00.54	00.48	00.07	00.07	00.07	00.0	00.0	00.0
3	26.78	26.80	26.79	00.48	00.48	00.48	00.07	00.07	00.07	00.0	00.0	00.0
0	-00.32	26.92	26.29	00.00	10.36	00.58	00.00	00.12	00.07	00.0	00.0	00.0
4	26.57	26.78	26.72	00.48	00.50	00.49	00.07	00.07	00.07	00.0	00.0	00.0
5	26.61	26.71	26.66	00.49	00.50	00.49	00.07	00.07	00.07	00.0	00.0	00.0
6	26.53	26.61	26.57	00.49	00.50	00.49	00.07	00.07	00.07	00.0	00.0	00.0
7	26.43	26.53	26.47	00.49	00.51	00.50	00.06	00.07	00.07	00.0	00.0	00.0
8	26.29	26.43	26.33	00.50	00.51	00.50	00.06	00.07	00.07	00.0	00.0	00.0
9	25.87	26.29	26.13	00.50	00.51	00.51	00.06	00.10	00.07	00.0	00.0	00.0

net#	amin	amax	aavg	spmin	spmax	spavg	armin	armax	aravg	#obs	vol
0	11.0	85.0	44.2	00.6	19.0	01.4	-33.5	15.6	-15.0	00453	01773
1	34.0	75.0	40.2	01.7	02.6	02.1	02.5	24.5	15.6	00048	00187
3	36.0	40.0	37.9	02.3	02.3	02.3	13.4	18.5	15.8	00007	00029
0	11.0	85.0	44.2	00.6	19.0	01.4	-33.5	15.6	-15.0	00453	01773
4	36.0	49.0	40.0	01.7	02.6	02.1	-02.7	23.9	10.0	00057	00223
5	36.0	51.0	40.0	01.7	02.6	02.2	00.4	18.7	11.3	00070	00289
6	36.0	51.0	39.6	02.0	02.6	02.2	08.0	20.6	13.5	00050	00202
7	34.0	45.0	37.3	02.0	02.3	02.3	13.4	19.2	16.0	00047	00197
8	34.0	45.0	39.2	01.7	02.6	02.3	-04.7	25.8	13.7	00053	00224
9	34.0	45.0	38.7	02.0	02.6	02.2	05.6	19.8	11.8	00063	00272

Environmental Parameters		Net Operation		Net - Ship Position		Program Settings	
Time	15:16:08	Net_Num	10	Latitude	34N 14.5271	Reset	
Pressure	-0.7 m	OpenTime	6.4 min	Longitude	120W 40.94	Baud Rate	2400
Temp	11.3 C	Vol_Filtered	357.2 m3	Net_Dist	464.9 m	Sample Rate	4.0 sec
Salinity	3.14 o/oo	Angle	43 deg	Total_Dist	4636.3 m	Printer	Off
Density	2.027	Flow_Counts	81	Processed File Name	C:\MOCNESS\MOCDATA\CCE-P0~1\T12-0704.PRO		
Oxygen		Hor_Vel	0.0 kts	Raw File Name	C:\MOCNESS\MOCDATA\CCE-P0~1\T12-0704.raw		
Fluoresc.	0.0580 V	Vert_Vel	0.2 m/min	Acquisition Ended. trys = 0			
LightXmis	2.2935 /m	Battery	20.2 V				

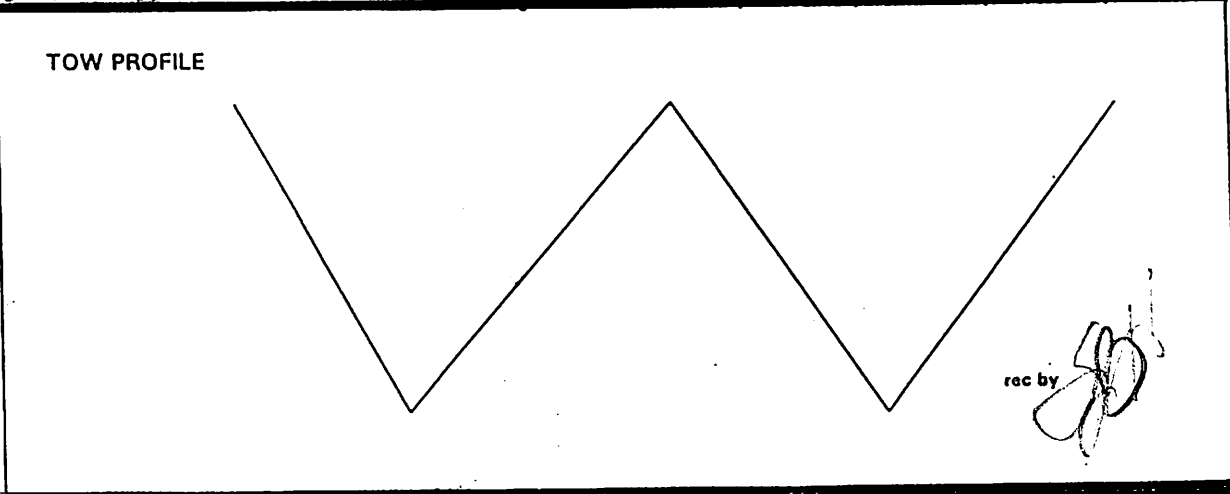
Step Net Increment Net# Pause Acqui End Acqui



Event = 447
 Start time = 13.56

Trawl # 13

MOCNESS DATA SHEET								Revised 10/94
CRUISE	STATION	TOW HAUL	DATE	(DST EST GMT)	MOCNESS TYPE			
CC-40304	CUC59	1	APR 17 2007	PDT	1/4M (1M) 10M			
	START	END		TIME	DEPTH	VOL FILTER	MESH SIZE	
LATITUDE	33 51.24		NET 0 OPEN	13:56	0	1471		
LONGITUDE	121.00		NET 1 OPEN	14:23	450	293		
DEPTH	265		NET 2 OPEN	14:28	400	247		
COMMENTS temp = 12.16 sal = 33.56 T ₀₀₅ = 0.0940 TRANS = 0.8313 Area = 51 Volt = 203			NET 3 OPEN	14:33	349	196		
			NET 4 OPEN	14:36	301	246		
			NET 5 OPEN	14:40	298	248		
			NET 6 OPEN	14:45	200	165		
			NET 7 OPEN	14:48	148	205		
			NET 8 OPEN	14:52	101	290		
			NET 9 OPEN	14:56	50	315		
			SURFACE	15:01	0			



File names: 713-0304 .pro 713-0304 .raw 713-0304 .tab

max depth - 463

**manually increased net

Screen capture *[Signature]*

Tow #13

M-03-001

31 March 2007

R/V Thompson

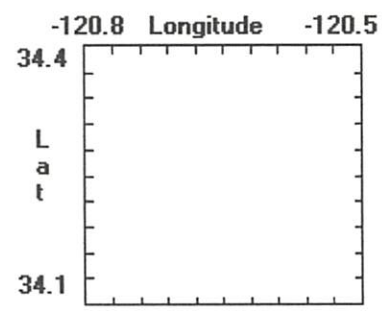
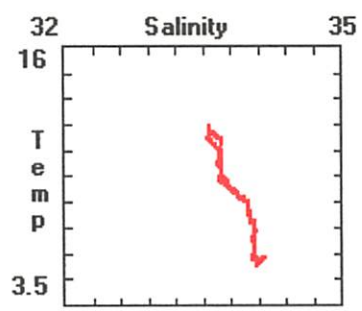
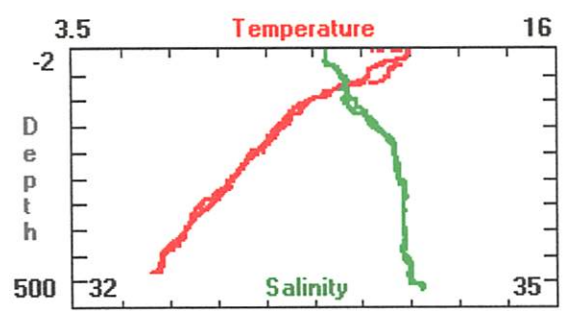
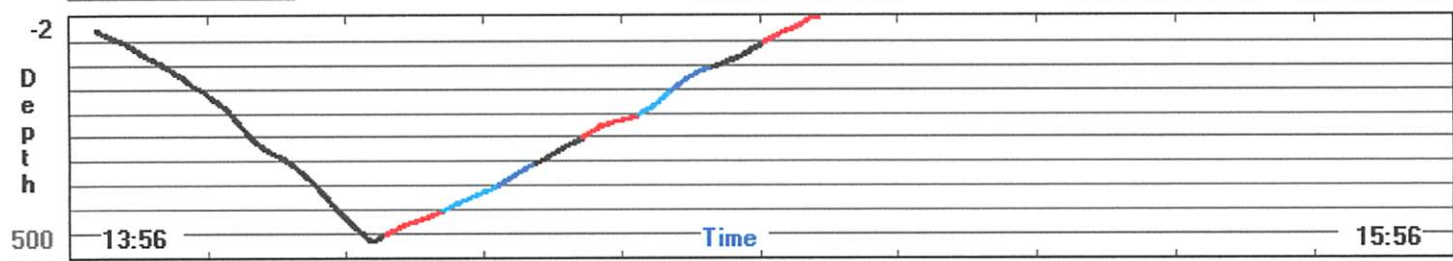
MOCNESS STATISTICAL SUMMARY

net#	pmin	pmax	pavg	tmin	tmax	tavg	thmin	thmax	thavg	smin	smax	savg
0	00.1	463.0	206.0	05.5	13.5	08.7	05.5	13.5	08.6	00.32	50.00	33.59
2	348.7	398.8	372.9	05.8	06.4	06.1	05.8	06.4	06.1	34.05	34.07	34.06
3	300.9	346.1	323.0	06.4	06.8	06.6	06.4	06.7	06.6	34.05	34.06	34.06
0	00.1	463.0	206.0	05.5	13.5	08.7	05.5	13.5	08.6	00.32	50.00	33.59
5	200.8	247.7	220.4	07.6	08.1	07.9	07.6	08.1	07.9	34.00	34.03	34.01
0	00.1	463.0	206.0	05.5	13.5	08.7	05.5	13.5	08.6	00.32	50.00	33.59
6	149.7	199.6	176.7	08.1	08.8	08.5	08.1	08.8	08.5	33.91	34.01	33.98
7	101.0	147.1	120.0	08.8	09.5	09.2	08.8	09.5	09.2	33.77	33.90	33.82
8	51.0	100.5	77.8	09.5	11.1	10.2	09.5	11.1	10.2	33.68	33.77	33.72

net#	simin	simax	siavg	cmin	cmax	cavg	fmin	fmax	favg	oxmin	oxmax	oxavg
0	-00.19	38.03	26.05	00.00	05.65	00.53	00.00	04.95	00.10	00.0	00.0	00.0
2	26.76	26.85	26.80	00.47	00.48	00.48	00.07	00.07	00.07	00.0	00.0	00.0
3	26.71	26.76	26.73	00.48	00.48	00.48	00.07	00.07	00.07	00.0	00.0	00.0
0	-00.19	38.03	26.05	00.00	05.65	00.53	00.00	04.95	00.10	00.0	00.0	00.0
5	26.48	26.57	26.51	00.49	00.49	00.49	00.06	00.53	00.07	00.0	00.0	00.0
0	-00.19	38.03	26.05	00.00	05.65	00.53	00.00	04.95	00.10	00.0	00.0	00.0
6	26.30	26.47	26.40	00.49	00.50	00.49	00.06	02.79	00.18	00.0	00.0	00.0
7	26.09	26.29	26.17	00.49	00.52	00.50	00.06	00.07	00.07	00.0	00.0	00.0
8	25.72	26.07	25.92	00.52	00.54	00.53	00.07	00.08	00.07	00.0	00.0	00.0

net#	amin	amax	aavg	spmin	spmax	spavg	armin	armax	aravg	#obs	vol
0	09.0	68.0	44.3	00.6	04.3	01.4	-31.2	15.0	-16.3	00418	01471
2	30.0	43.0	33.5	01.4	02.0	01.9	05.6	14.6	10.8	00071	00277
3	31.0	41.0	33.9	01.7	02.3	02.0	11.5	16.9	14.5	00048	00197
0	09.0	68.0	44.3	00.6	04.3	01.4	-31.2	15.0	-16.3	00418	01471
5	29.0	41.0	32.8	01.4	02.0	01.8	03.5	17.1	09.9	00072	00279
0	09.0	68.0	44.3	00.6	04.3	01.4	-31.2	15.0	-16.3	00418	01471
6	26.0	36.0	29.5	01.4	02.0	01.8	10.3	24.3	17.2	00043	00165
7	30.0	40.0	34.8	01.7	02.3	02.1	05.6	21.2	14.7	00051	00205
8	36.0	48.0	42.5	02.0	02.8	02.4	05.8	16.9	11.2	00064	00290

Environmental Parameters		Net Operation		Net - Ship Position		Program Settings	
Time	15:01:09	Net_Num	9	Latitude	33N 53.5011	<input type="button" value="Reset"/>	
Pressure	-1.0 m	OpenTime	4.8 min	Longitude	121W 7.167	Baud Rate	2400
Temp	11.84 C	Vol_Filtered	315.2 m3	Net_Dist	339.4 m	Sample Rate	4.0 sec
Salinity	9.23 o/oo	Angle	30 deg	Total_Dist	4419.2 m	Printer	Off
Density	6.675	Flow_Counts	78	Processed File Name	C:\MOCNESS\MOCDATA\CCE-P0~1\T13-0704.PR		
Oxygen		Hor_Vel	0.9 kts	Raw File Name	C:\MOCNESS\MOCDATA\CCE-P0~1\T13-0704.raw		
Fluoresc.	0.0580 V	Vert_Vel	0.8 m/min	Acquisition Ended. trys = 0			
LightXmis	3.8960 /m	Battery	19.9 V				



count # = 480
 Start time = 13:09

Trawl H ✓

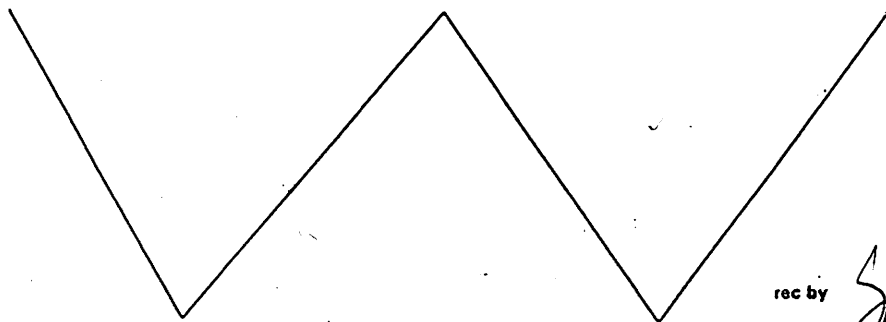
Revised 10/94

MOCNESS DATA SHEET

CRUISE	STATION	HAUL	DATE (DST EST GMT)	MOCNESS TYPE
TS-0404	Cude9	2	APRIL 18 2004 PST	1/4M (1M) 10M

	START	END	TIME	DEPTH	VOL FILTER	MESH SIZE
LATITUDE	33° 46.6'	33° 49.3'	13:09	0	1673	
LONGITUDE	121° 29'	121° 05.12'	13:34	452	233	
DEPTH	198	282	13:43	400	216	
COMMENTS Temp = 12.22 Sal = 33.54 Fluor = 0.1170 TRANS = 0.5823 Angle = 46 Battery = 20.1			13:47	351	270	
			13:51	300	247	
			13:56	251	327	
			14:00	202	231	
			14:04	152	234	
			14:08	102	268	
			14:12	50	355	
			14:20	0		

TOW PROFILE



rec by

[Signature]

File names: TH-0404 .pro TH-0404 .raw TH-0404 .tab

max depth = 462
 Screen Capture X

Tow #14

M-03-001
31 March 2007
R/V Thompson

MOCNESS STATISTICAL SUMMARY

net#	pmin	pmax	pavg	tmin	tmax	tavg	thmin	thmax	thavg	smin	smax	savg
0	00.7	462.1	240.0	06.0	13.4	08.4	06.0	13.4	08.4	01.00	34.23	33.81
1	400.2	452.0	429.5	06.0	06.4	06.2	06.0	06.3	06.1	34.09	34.23	34.17
2	351.5	400.1	371.3	06.0	06.4	06.3	06.0	06.4	06.2	34.05	34.09	34.06
3	302.5	350.1	321.7	06.4	07.0	06.7	06.4	07.0	06.7	34.05	34.07	34.06
4	252.0	300.9	275.9	07.1	07.7	07.3	07.1	07.6	07.3	34.03	34.07	34.05
5	201.2	250.0	225.4	07.7	08.3	07.9	07.7	08.3	07.9	34.00	34.05	34.02
6	152.1	201.1	178.9	08.3	09.0	08.6	08.3	09.0	08.6	33.86	34.00	33.95
7	102.5	149.6	122.4	09.1	10.1	09.6	09.1	10.1	09.6	33.71	33.85	33.76
8	51.9	100.6	81.4	10.2	11.7	11.2	10.2	11.7	11.2	33.65	33.73	33.69

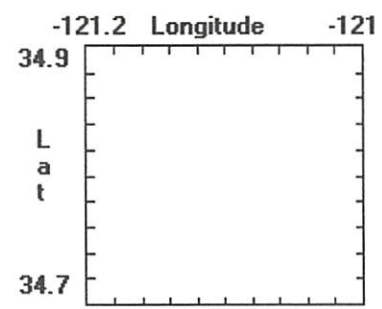
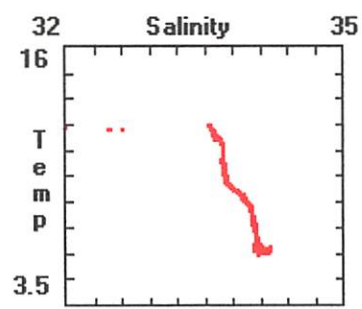
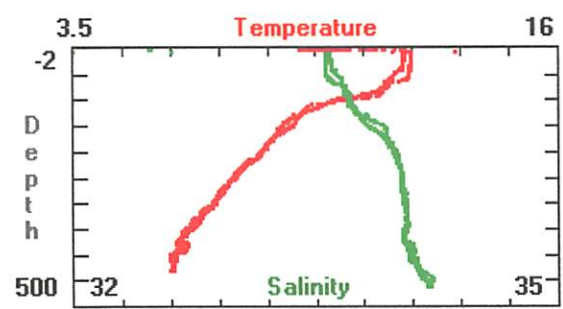
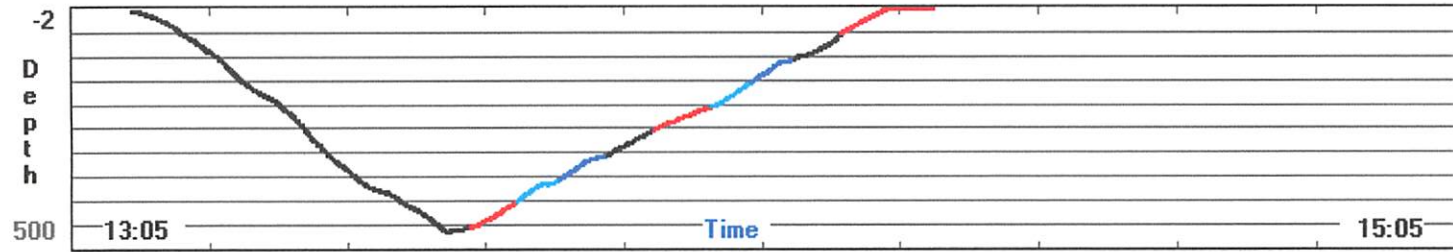
net#	simin	simax	siavg	cmin	cmax	cavg	fmin	fmax	favg	oxmin	oxmax	oxavg
0	00.11	26.92	26.25	00.00	01.93	00.47	00.00	00.15	00.08	00.0	00.0	00.0
1	26.83	26.92	26.88	00.44	00.45	00.44	00.07	00.07	00.07	00.0	00.0	00.0
2	26.76	26.84	26.78	00.44	00.52	00.45	00.07	00.07	00.07	00.0	00.0	00.0
3	26.68	26.76	26.72	00.45	00.45	00.45	00.07	00.07	00.07	00.0	00.0	00.0
4	26.58	26.67	26.63	00.45	00.50	00.45	00.07	00.07	00.07	00.0	00.0	00.0
5	26.45	26.58	26.52	00.45	00.51	00.46	00.07	00.07	00.07	00.0	00.0	00.0
6	26.22	26.44	26.36	00.46	00.48	00.46	00.06	00.07	00.07	00.0	00.0	00.0
7	25.94	26.20	26.06	00.47	00.50	00.49	00.07	00.08	00.07	00.0	00.0	00.0
8	25.59	25.91	25.72	00.50	00.55	00.53	00.07	01.63	00.12	00.0	00.0	00.0

net#	amin	amax	aavg	spmin	spmax	spavg	armin	armax	aravg	#obs	vol
0	24.0	89.0	42.0	00.6	19.9	01.5	-32.0	09.9	-15.5	00440	01673
1	32.0	55.0	35.9	01.4	02.3	01.9	02.5	21.0	12.4	00059	00234
2	33.0	45.0	36.8	01.4	02.3	02.0	-02.0	23.9	12.6	00057	00216
3	34.0	43.0	37.7	01.7	02.3	02.1	03.3	20.4	12.8	00059	00241
4	37.0	46.0	40.7	02.0	02.6	02.3	07.0	16.5	12.6	00058	00247
5	39.0	50.0	43.6	02.3	02.6	02.4	05.2	14.2	09.9	00075	00328
6	38.0	49.0	41.7	02.3	02.8	02.5	05.2	19.8	14.0	00052	00231
7	39.0	47.0	42.8	02.0	02.8	02.5	01.6	21.0	13.9	00054	00235
8	40.0	50.0	44.9	02.3	03.1	02.6	04.1	23.5	12.0	00059	00268

Environmental Parameters Net Operation Net - Ship Position Program Settings

Time	14:19:55	Net_Num	9	Latitude	33N 49.269	Reset
Pressure	-1.0 m	OpenTime	7.9 min	Longitude	121W 5.109	Baud Rate
Temp	9.92 C	Vol_Filtered	355.2 m3	Net_Dist	629.0 m	Sample Rate
Salinity	0.42 o/oo	Angle	18 deg	Total_Dist	5124.2 m	Printer
Density	0.037	Flow_Counts	91	Processed File Name	C:\MOCNESS\MOCDATA\CCE-P0~1\T14-0704.PRC	
Oxygen		Hor_Vel	0.0 kts	Raw File Name	C:\MOCNESS\MOCDATA\CCE-P0~1\T14-0704.raw	
Fluoresc.	0.0582 V	Vert_Vel	-0.2 m/min	Acquisition Ended. trys = 0		
LightXmis	5.3673 /m	Battery	19.8 V			

Step Net Increment Net# **Pause Acqui** End Acqui



EVSON = 534
 START TIME 00:54

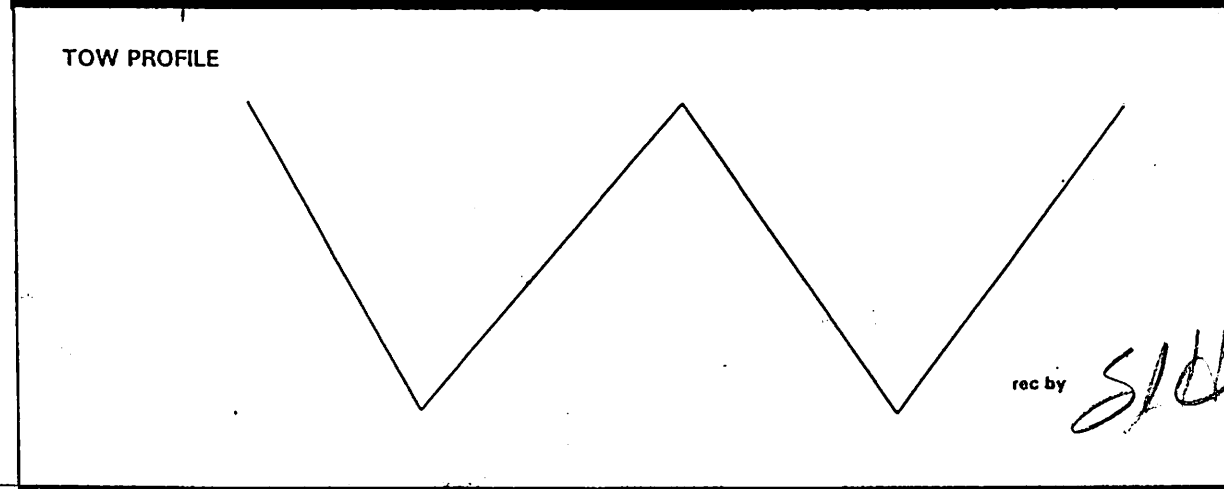
FRWL 15 ✓

Revised 10/94

MOCNESS DATA SHEET

CRUISE	STATION	HAUL	DATE (DST EST GMT)	MOCNESS TYPE
CGC/54	CGC/54	3	20 APRIL 2007 PDT	1/4M (M) 10M

	START	END		TIME	DEPTH	VOL FILTER	MESH SIZE
LATITUDE	33 46.2129	33 46.6797	NET 0 OPEN	00:57	0	1354	
LONGITUDE	-120 47.405	-120 50.0361	NET 1 OPEN	01:25	450	266	
DEPTH	2111.6	1996.6	NET 2 OPEN	01:29	401	249	
COMMENTS TEMP 12.61 SAL 33.34 FLUOR 0.1528 TRANS 0.3512 ANGS 48 BATHY 19.9			NET 3 OPEN	01:33	350	232	
			NET 4 OPEN	01:36	301	245	
			NET 5 OPEN	01:40	250	256	
			NET 6 OPEN	01:44	202	248	
			NET 7 OPEN	01:48	150	239	
			NET 8 OPEN	01:51	100	257	
			NET 9 OPEN	01:55	51	300	
			SURFACE	01:59	0	—	



File names: 715-0704 .pro 715-0704 .raw 715-0704 .tab

MAX Depth = 461
 screen capture x

Tow #15

M-03-001
 31 March 2007
 R/V Thompson

MOCNESS STATISTICAL SUMMARY

net#	pmin	pmax	pavg	tmin	tmax	tavg	thmin	thmax	thavg	smin	smax	savg
0	00.1	461.6	207.4	06.2	12.7	09.1	06.2	12.7	09.0	11.80	50.00	34.24
1	401.7	448.3	423.5	06.3	06.5	06.4	06.3	06.5	06.4	34.19	34.23	34.21
2	351.4	400.6	376.9	06.5	07.0	06.7	06.5	07.0	06.7	34.13	34.21	34.17
3	300.7	349.5	324.5	07.0	07.7	07.3	07.0	07.6	07.3	34.16	34.18	34.18
4	251.5	299.4	275.8	07.7	08.0	07.9	07.7	08.0	07.9	34.17	34.19	34.18
5	201.8	249.8	224.7	08.0	08.7	08.3	08.0	08.7	08.3	34.13	34.18	34.15
6	151.5	201.0	177.4	08.7	09.1	08.8	08.7	09.1	08.8	34.04	34.13	34.09
7	102.2	149.8	126.3	09.1	09.4	09.2	09.1	09.3	09.2	33.74	34.03	33.92
8	51.4	100.2	74.8	09.3	50.0	11.4	09.3	50.0	11.3	33.64	50.00	33.97

net#	simin	simax	siavg	cmin	cmax	cavg	fmin	fmax	favg	oxmin	oxmax	oxavg
0	08.59	38.25	26.50	00.00	01.79	00.26	00.00	00.17	00.08	00.0	00.0	00.0
1	26.85	26.91	26.88	00.23	00.23	00.23	00.07	00.07	00.07	00.0	00.0	00.0
2	26.77	26.85	26.81	00.23	00.23	00.23	00.07	00.07	00.07	00.0	00.0	00.0
3	26.68	26.77	26.72	00.23	00.23	00.23	00.06	00.07	00.07	00.0	00.0	00.0
4	26.62	26.68	26.65	00.23	00.24	00.23	00.07	00.07	00.07	00.0	00.0	00.0
5	26.50	26.62	26.56	00.23	00.24	00.23	00.06	00.07	00.07	00.0	00.0	00.0
6	26.36	26.49	26.43	00.23	00.24	00.24	00.06	00.07	00.07	00.0	00.0	00.0
7	26.08	26.35	26.24	00.24	00.27	00.24	00.06	00.07	00.07	00.0	00.0	00.0
8	24.69	26.07	25.78	00.24	00.30	00.27	00.06	00.10	00.08	00.0	00.0	00.0

net#	amin	amax	aavg	spmin	spmax	spavg	armin	armax	aravg	#obs	vol
0	15.0	53.0	38.3	00.0	02.0	01.2	-24.0	13.6	-15.5	00439	01354
1	24.0	35.0	29.7	01.7	02.0	01.9	11.3	18.5	14.5	00050	00206
2	32.0	37.0	33.7	01.7	02.3	02.0	09.9	15.2	12.8	00058	00249
3	32.0	38.0	34.7	02.0	02.3	02.1	10.9	15.8	13.6	00055	00233
4	33.0	37.0	35.6	02.0	02.3	02.2	11.5	14.8	13.1	00056	00245
5	35.0	42.0	38.5	02.3	02.6	02.4	08.9	16.1	12.8	00057	00256
6	36.0	40.0	37.9	02.3	02.6	02.3	09.3	16.1	13.4	00055	00249
7	37.0	41.0	39.0	02.3	02.6	02.4	11.1	15.9	13.9	00053	00239
8	37.0	43.0	39.6	02.3	02.8	02.5	10.9	15.9	13.4	00056	00257

Environmental Parameters Net Operation Net - Ship Position Program Settings

Time	01:59:52	Net_Num	9	Latitude	33N 46.667	Reset	
Pressure	-1.0 m	OpenTime	4.2 min	Longitude	120W 49.98	Baud Rate	2400
Temp	11.07 C	Vol_Filtered	299.9 m3	Net_Dist	268.8 m	Sample Rate	4.0 sec
Salinity	0.06 o/oo	Angle	38 deg	Total_Dist	4221.9 m	Printer	Off
Density	-0.356	Flow_Counts	72	Processed File Name	C:\MOCNESS\MOCDATA\CCE-P0~1\T15-0704.PRI		
Oxygen		Hor_Vel	1.7 kts	Raw File Name	C:\MOCNESS\MOCDATA\CCE-P0~1\T15-0704.raw		
Fluoresc.	0.0592 V	Vert_Vel	2.9 m/min	Acquisition Ended. trys = 4			
LightXmis	0.4628 /m	Battery	19.7 V				

Step Net Increment Net# **Pause Acqui** End Acqui

