

VESSEL NOAA RV MILLER FREEMAN		PROJECT & LEG MF09-04, leg 2				STATION DESIGNATION																									
CONSC CAST #		LATITUDE		LONGITUDE		DATE JD-2004 2004 Sept 09		TIME (GMT)		DRY BULB (°C)		WET BULB (°C)		PRESSURE (mb)		SEA STATE		VISIBILITY		WIND DIRN. (deg)		WIND SPD. (knts)		CLOUD (amt)		WEATHER		BOTTOM DEPTH (m)		STA. NAME/ID	
0015435.67N		16634.16W		24		1952		6.683		05		35022		398																	
CTD		TIMES		JD/TIME		DATA LOCATION		REMARKS																							
TYPE & SN 9+ S/N 2067		DATA ON				Tape/Diskette ID MF09-04, leg 2		File Name/Header etd test-dot																							
PRESS SN 2067		START DOWN																													
PRI COND SN 915		AT DEPTH																													
PRI TEMP SN 710		AT SURFACE																													
SEC COND SN 535																															
SEC TEMP SN 884																															
POS.		TRIP DEPTH																													
1		388																													
2																															
3																															
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															

PAR 4242
 WETSTAR 1036P
 Dissolved Oxygen 430904
 Dissolved Oxygen 430910
 Cleaned air bleed valve

CTD CONVERTED MONITOR VALUES

02
242

PRIOR TO 0935T-9A
 RECOVERY

MAX. DEPTH = 392 m

388

D.O. SENSORS ARE ON SEPARATE TIC SYSTEMS
 910 IS ON PRIMARY TIC SYSTEM
 904 IS ON SECONDARY TIC SYSTEM

VESSEL NOAA R/V MILLER FREEMAN		PROJECT & LEG MF09-04, leg 2				STATION DESIGNATION																									
CONSC CAST #		LATITUDE		LONGITUDE		DATE JD=268 MO YR		TIME (GMT)		DRY BULB (°C)		WET BULB (°C)		PRESSURE (mb)		SEA STATE		VISIBILITY		WIND DIRN. (deg)		WIND SPD. (knts)		CLOUD (amt)		WEATHER		BOTTOM DEPTH (m)		STA. NAME/ID	
0025639.90N		16353.04W		25		09		1411		6.3		.		07						30624								76			
CTD		TYPE & SN 9+ S/N 2067		TIMES DATA ON		JD/TIME		DATA LOCATION Tape/Diskette ID MF09-04, leg 2		File Name/Header CTD 002		REMARKS SOUTH SIDE OF SITE 2 BOX		MAX. DEPTH =		m															
PRESS SN 2067		START DOWN																													
PRI COND SN 915		AT DEPTH																													
PRI TEMP SN 710		AT SURFACE																													
SEC COND SN 535																															
SEC TEMP SN 884																															
POS.		TRIP DEPTH		PRESSURE		PRI. TEMP		SEC. TEMP.		PRI. SALINITY		SEC. SALINITY		SALINITY		SAL.		MORDY'S NUTR.		CHL.		WHIT'S NUTR.									
1		70												02		896.1		1													
2		50																2		.289											
3		40																3		.283											
4		30																4		.283											
5		20																5		.283											
6		10																6		.283											
7		0																7		.283											
8																															
9																															
10																															
11																															
12																															

PAR 4242
 WETSTAR 1036P
 Dissolved Oxygen 430904
 Dissolved Oxygen 430910

CTD CONVERTED MONITOR VALUES

Cleaned air bleed valve

VESSEL NOAA R/V MILLER FREEMAN		PROJECT & LEG MF09-04, leg 2				STATION DESIGNATION																									
CONSC CAST #		LATITUDE		LONGITUDE		DATE JD= 2168 25 Sept 09		TIME (GMT) 1655		DRY BULB (°C)		WET BULB (°C)		PRESSURE (mb)		SEA STATE		VISIBILITY		WIND DIRN. (deg)		WIND SPD. (knts)		CLOUD (amt)		WEATHER		BOTTOM DEPTH (m)		STA. NAME/ID	
0035651.56 N		16403.62 W		25 Sept 09		1655						09		290		20															
CTD		TIMES		JD/TIME		DATA LOCATION		Tape/Diskette ID		File Name/Header		REMARKS		10 min		PRIORITY TO SITE 2		MOORING RECOVERIES		CTD 1 OF 3		MAX. DEPTH = 68 m		64							
TYPE & SN		9+ S/N 2067		DATA ON				MF09-04, leg 2		CTD																					
PRESS SN		2067		START DOWN																											
PRI COND SN		915		AT DEPTH																											
PRI TEMP SN		710		AT SURFACE																											
SEC COND SN		535																													
SEC TEMP SN		884																													
POS.		TRIP DEPTH		PRESSURE		PRI. TEMP.		SEC. TEMP.		PRI. SALINITY		SEC. SALINITY		SALINITY		SAL.		MORDY'S NUTR.		CHL.		WHITS NUTR.									
1		61		297.8										8																	
2		61																													
3		61																													
4		61																													
5		57																													
6		57																													
7		57																													
8		50																9													
9		44																													
10		44																													
11		44																													
12																															

PAR 4242
 WETSTAR 1036P
 Dissolved Oxygen 430904
 Dissolved Oxygen 430910
 Cleaned air bleed valve

CTD CONVERTED MONITOR VALUES

CTD 1 OF 3
 MOORING RECOVERIES
 MAX. DEPTH = 68 m
 64
 232
 02
 1123

VESSEL: NOAA RV MILLER FREEMAN
 PROJECT & LEG: MF09-04, leg 2
 STATION DESIGNATION:

CONSC	LATITUDE	LONGITUDE	DATE	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN (deg)	WIND SPD (knts)	CLOUD (amt)	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
004151	51.86 N	164.04.44 W	2008 Sept 09	1729	6.47	7.10	9.9			272	224			72	

CTD TYPE & SN: 9+ S/N 2067
 PRESS SN: 2067
 PRI COND SN: 915
 PRI TEMP SN: 710
 SEC COND SN: 535
 SEC TEMP SN: 884

DATA ON: _____
 START DOWN: _____
 AT DEPTH: _____
 AT SURFACE: _____

DATA LOCATION: Tape/Diskette ID MF09-04, leg 2; File Name/Header CTD004

REMARKS: PRIOR TO SITE 2 MOORING RECOVERIES CTD 2 OF 3
 MAX. DEPTH = _____ m

PAR 4242
 WETSTAR 1036P
 Dissolved Oxygen 430904
 Dissolved Oxygen 430910
 Cleaned air bleed valve

POS.	TRIP DEPTH	PRESSURE	PRI. TEMP.	SEC. TEMP.	PRI. SALINITY	SEC. SALINITY	SALINITY	SAL.	MORDY'S NUTR.	CHL.	WHIT'S NUTR.
1	40								-13	0.283	
2	30								-14	0.283	
3	24.5									0.283	
4	24.5									0.287	
5	24.5									0.274	
6	19								0.15	0.285	
7	19									0.287	
8	19									0.288	
9	12.5									0.283	0.16
10	12.5									0.289	0.17
11	12.5									0.283	0.18
12											

3 @ 24.5m @ 19m

31
31
30
28
31
31
30

VESSEL NOAA RV MILLER FREEMAN		PROJECT & LEG MF09-04, leg 2				STATION DESIGNATION									
CONSC CAST #	LATITUDE DEG MIN	LONGITUDE DEG MIN	DATE JD= 268 MO YR	TIME (GMT) HR MIN	DRY BULB (°C)	REL HUM WET BULB (°C)	PRESSURE (mb)	SEA STATE *	VISIBILITY *	WIND DIRN (deg)	WIND SPD. (knts)	CLOUD (amt) TYPE	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
005	5652.08 N	16404.51 W	25 Sept 09	1358	6.372	8.09	27024							772	
CTD	TIMES		JD/TIME		DATA LOCATION				REMARKS						
TYPE & SN	9+ S/N 2067		DATA ON		Tape/Diskette ID				File Name/Header						
PRESS SN	2067		START DOWN		MF09-04, leg 2				CTD 005						
PRI COND SN	915		AT DEPTH												
PRI TEMP SN	710		AT SURFACE												
SEC COND SN	535														
SEC TEMP SN	884														
<input checked="" type="checkbox"/> PAR 4242 <input checked="" type="checkbox"/> METSTAR 1036P <input checked="" type="checkbox"/> Dissolved Oxygen 430904 <input checked="" type="checkbox"/> Dissolved Oxygen 430910 <input type="checkbox"/> CTD CONVERTED MONITOR VALUES <input type="checkbox"/> Cleaned air bleed valve															
POS.	TRIP DEPTH	PRESSURE		PRI. TEMP.	SEC. TEMP.	PRI. SALINITY	SEC. SALINITY	SALINITY	SAMPLE BOTTLE DATA	SAMPLE BOTTLE NUMBER		SAL.	MORDY's NUTR.	CHL.	WHIT's NUTR.
1	10												.19	.283	
2	0												.20	.283	
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															

02
69

VESSEL: NOAA RV MILLER FREEMAN
 PROJECT & LEG: MF09-04, leg 2
 STATION DESIGNATION:

CONSC	LATITUDE	LONGITUDE	DATE	JD=219	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (knts)	CLOUD (amt)	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
006	56 51.10 N	164 03.63 W	26	Sept 09	065133.7	3.7	3.1 90.6	12.48	039	127	73					

CTD TYPE & SN: 9+ S/N 2067
 PRESS SN: 2067
 PRI COND SN: 915
 PRI TEMP SN: 710
 SEC COND SN: 535
 SEC TEMP SN: 884

START DOWN: _____
 AT DEPTH: _____
 AT SURFACE: _____

Tape/Diskette ID: MF09-04, leg 2
 File Name/Header: CTD 006

REMARKS: AFTER SITE 2
 MORNING DEBRIS COUNTS
 CTD 1 OF 2
 MAX. DEPTH = 67 m

PAR 4242
 WETSTAR 1036P
 Dissolved Oxygen 430904
 Dissolved Oxygen 430910
 Cleaned air bleed valve

POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES					SAL.	MORDY'S NUTR.	CHL.	WHIT'S NUTR.
		PRESSURE	PRI. TEMP.	SEC. TEMP.	PRI. SALINITY	SEC. SALINITY				
1	67						.298	.1		
2	62								.6	
3	62								.7	
4	62								.8	
5	50								.2	
6	40								.3	
7	34									
8	34									
9	34									
10	30								.4	
11	20								.5	
12										

476
 478
 479
 480
 481
 482

VESSEL: NOAA RV MILLER FREEMAN
 PROJECT & LEG: MF09-04, leg 2
 STATION DESIGNATION:

CONSC	LATITUDE	LONGITUDE	DATE	JD=2169	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	3.0 9.0.8.1.	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN (deg)	WIND SPD. (knts)	CLOUD (amt)	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
007	5651.03 N	16403.30 W	26	2169	09	07	33	33	3.6				1248	027	157					73	

CTD TYPE & SN: 9+ S/N 2067
 PRESS SN: 2067
 PRI COND SN: 915
 PRI TEMP SN: 710
 SEC COND SN: 535
 SEC TEMP SN: 884
 DATA ON: _____
 START DOWN: _____
 AT DEPTH: _____
 AT SURFACE: _____
 DATA LOCATION: _____
 File Name/Header: CTD 007
 Tape/Diskette ID: MF09-04, leg 2
 REMARKS: AFTER SITE 2 MORNING DEBRIS NETS CTD 2 OF 2
 MAX. DEPTH = _____ m

PAR 4242 WETSTAR 1036P Dissolved Oxygen 430904 Dissolved Oxygen 430910
 Cleaned air bleed valve

CTD CONVERTED MONITOR VALUES

POS.	TRIP DEPTH	PRESSURE	PRI. TEMP.	SEC. TEMP.	PRI. SALINITY	SEC. SALINITY	SALINITY	SAL.	MORDY's NUTR.	CHL.	WHIT'S NUTR.
1	13										
2	13										
3	13										
4	10								.9		X 13
5	10								.10		X
6											
7											
8											
9											
10											
11											
12											

44
102
143
12

VESSEL NOAA RV MILLER FREEMAN		PROJECT & LEG MF09-04, leg 2				STATION DESIGNATION 3.6												
CONSC CAST #	56 56.76	LONGITUDE 164 50.22		DATE JD=269 MO=Sept YR=09	TIME (GMT) 0847	DRY BULB (°C) 4.2	WET BULB (°C) 3.6	PRESSURE (mb) 13	SEA STATE *	VISIBILITY *	WIND DIRN (deg) 031	WIND SPD. (knts) 12	CLOUD (amt) *	WEATHER TYPE *	BOTTOM DEPTH (m) 70	STA. NAME/ID		
CTD	008 5656.	DEG	MIN	DEG	MIN	DATE	TIME	DRY BULB	WET BULB	PRESSURE	SEA STATE	VISIBILITY	WIND DIRN	WIND SPD.	CLOUD (amt)	WEATHER	BOTTOM DEPTH	STA. NAME/ID
TYPE & SN	9+ S/N 2067	LONGITUDE		DATE	TIME	DRY BULB	WET BULB	PRESSURE	SEA STATE	VISIBILITY	WIND DIRN	WIND SPD.	CLOUD (amt)	WEATHER	BOTTOM DEPTH	STA. NAME/ID		
PRESS SN	2067	LONGITUDE		DATE	TIME	DRY BULB	WET BULB	PRESSURE	SEA STATE	VISIBILITY	WIND DIRN	WIND SPD.	CLOUD (amt)	WEATHER	BOTTOM DEPTH	STA. NAME/ID		
PRI COND SN	915	LONGITUDE		DATE	TIME	DRY BULB	WET BULB	PRESSURE	SEA STATE	VISIBILITY	WIND DIRN	WIND SPD.	CLOUD (amt)	WEATHER	BOTTOM DEPTH	STA. NAME/ID		
PRI TEMP SN	710	LONGITUDE		DATE	TIME	DRY BULB	WET BULB	PRESSURE	SEA STATE	VISIBILITY	WIND DIRN	WIND SPD.	CLOUD (amt)	WEATHER	BOTTOM DEPTH	STA. NAME/ID		
SEC COND SN	535	LONGITUDE		DATE	TIME	DRY BULB	WET BULB	PRESSURE	SEA STATE	VISIBILITY	WIND DIRN	WIND SPD.	CLOUD (amt)	WEATHER	BOTTOM DEPTH	STA. NAME/ID		
SEC TEMP SN	884	LONGITUDE		DATE	TIME	DRY BULB	WET BULB	PRESSURE	SEA STATE	VISIBILITY	WIND DIRN	WIND SPD.	CLOUD (amt)	WEATHER	BOTTOM DEPTH	STA. NAME/ID		
PAR 4242		WETSTAR 1036P		Dissolved Oxygen 430904		Dissolved Oxygen 430910		Cleaned air bleed valve										
CTD CONVERTED MONITOR VALUES																		
POS.	TRIP DEPTH	PRESSURE	PRI. TEMP.	SEC. TEMP.	PRI. SALINITY	SEC. SALINITY	SALINITY	SAL.	MORDY'S NUTR.	CHL.	WHIT'S NUTR.							
1	65							299	.14	.289								
2	50								.15	.283								
3	40								.16	.283								
4	30								.17	.283								
5	20								.18	.277								
6	10								.19	.288								
7	0								.20	.287								
8																		
9																		
10																		
11																		
12																		

REMARKS
EAST SIDE OF
SITE 2 BOX

MAX. DEPTH = m

VESSEL NOAA RV MILLER FREEMAN		PROJECT & LEG MF09-04, leg 2				STATION DESIGNATION 4.4																											
CONSC CAST #		LATITUDE		LONGITUDE		DATE JD= 269 MO YR		TIME (GMT) HR MIN		DRY BULB (°C)		WET BULB (°C)		PRESSURE (mb)		SEA STATE		VISIBILITY		WIND DIRN. (deg)		WIND SPD. (knts)		CLOUD (amt)		TYPE		WEATHER		BOTTOM DEPTH (m)		STA. NAME/ID	
009		57 00.88 N		161 12.69 W		26 Sept 09		1055		5.4		1.3		1.3		20		13		20		13											
CTD		TYPE & SN 9+ S/N 2067		TIMES		DATA ON		JD/TIME		DATA LOCATION												REMARKS											
		PRESS SN 2067				START DOWN				Tape/Diskette ID MF09-04, leg 2		File Name/Header CTD		NORTH SIDE OF SITE 2 BOX				MAX. DEPTH = 65 m															
		PRI COND SN 915				AT DEPTH																											
		PRI TEMP SN 710				AT SURFACE																											
		SEC COND SN 535																															
		SEC TEMP SN 884																															
POS.		TRIP DEPTH		PAR 4242		WETSTAR 1036P		Dissolved Oxygen 430904		Dissolved Oxygen 430910		Cleaned air bleed valve		CTD CONVERTED MONITOR VALUES																			
		PRESSURE		PRI. TEMP.		SEC. TEMP.		PRI. SALINITY		SEC. SALINITY		SALINITY		SAL. DATA		MORDY'S NUTR.		CHL.		WHIT'S NUTR.													
1		65										368		.21																			
2		50												.22		.289																	
3		40												.23		.283																	
4		30												.24		.283																	
5		20												.25		.277																	
6		10												.26		.288																	
7		0												.27		.287																	
8																																	
9																																	
10																																	
11																																	
12																																	

02
003

VESSEL NOAA R/V MILLER FREEMAN		PROJECT & LEG MF09-04, leg 2				STATION DESIGNATION 3.9																									
CONSC CAST #		LATITUDE		LONGITUDE		DATE JD= 269 DAY MO YR		TIME (GMT) HR MIN		DRY BULB (°C)		WET BULB (°C)		PRESSURE		SEA STATE		VISIBILITY		WIND DIRN.		WIND SPD. (knts)		CLOUD (amt)		WEATHER		BOTTOM DEPTH (m)		STA NAME/ID	
011		5648.15 N		16435.05 W		26 Sept 09		1428		6.1		.		15		332		21								74		70M3			
CTD		TYPE & SN 9+ S/N 2067		TIMES DATA ON		JD/TIME		DATA LOCATION										REMARKS													
		PRESS SN 2067		START DOWN				Tape/Diskette ID MF09-04, leg 2		File Name/Header CTD 011		70M3										MAX. DEPTH = 69 m									
		PRI COND SN 915		AT DEPTH																											
		PRI TEMP SN 710		AT SURFACE																											
		SEC COND SN 535																													
		SEC TEMP SN 884																													
POS.		TRIP DEPTH		PH PRESSURE		D/K PRI. TEMP.		DOC SEC. TEMP.		TDC PRI. SALINITY		SEC. SALINITY		SALINITY		SAL.		MORDY'S NUTR.		CHL.		WHIT'S NUTR.									
1		69		1		1		1		43						35		36		.289											
2		50														36		.289													
3		40														37		.283													
4		30		2		5		2		52						38		.283													
5		20														39		.277													
6		10														40		.288													
7		0		3		9		3		54						41		.287													
8																															
9																															
10																															
11																															
12																															

PAR 4242
 WETSTAR 1036P
 Dissolved Oxygen 430904
 Dissolved Oxygen 430910
 CTD CONVERTED MONITOR VALUES

Cleaned air bleed valve

02
 217

VESSEL: NOAA RV MILLER FREEMAN
 PROJECT & LEG: MF09-04, leg 2
 STATION DESIGNATION: 70m6

CONSC CAST # 014
 LATITUDE 56 59.68 N
 LONGITUDE 165 22.42 W
 DATE JD= 269
 MO= Sept 09
 YR= 1926
 HR= 15
 MIN= 17
 SEC= 21
 TIME (GMT)
 DRY BULB (°C)
 WET BULB (°C)
 PRESSURE (mb)
 SEA STATE
 VISIBILITY (deg)
 WIND DIRN (knts)
 WIND SPD (knts)
 CLOUD (amt)
 WEATHER
 BOTTOM DEPTH (m)
 STA. NAME/ID: 70m6

CTD TYPE & SN: 9+ S/N 2067
 PRESS SN: 2067
 PRI COND SN: 915
 PRI TEMP SN: 710
 SEC COND SN: 535
 SEC TEMP SN: 884
 DATA ON: _____
 START DOWN: _____
 AT DEPTH: _____
 AT SURFACE: _____
 TIMES: _____
 JD/TIME: _____
 DATA LOCATION: _____
 File Name/Header: CTD014
 Tape/Diskette ID: MF09-04, leg 2
 MAX. DEPTH = _____ m

CTD CONVERTED MONITOR VALUES
 PAR 4242
 WETSTAR 1036
 Dissolved Oxygen 430904
 Dissolved Oxygen 430910
 Cleaned air bleed valve

POS.	TRIP DEPTH	PH	SK	DOC	TOC	SEC. SALINITY	SALINITY	SAL.	MORBY'S NUTR.	CHL.	WHITS NUTR.
1	Bot								56		
2	50							302	57	289	
3	40								58	283	
4	30								59	283	
5	20								60	277	
6	10								61	288	
7	0								62	287	
8											
9											
10											
11											
12											

02
220

VESSEL NOAA R/V MILLER FREEMAN		PROJECT & LEG MF09-04, leg 2				STATION DESIGNATION																											
CONSC CAST #		LATITUDE		LONGITUDE		DATE JD= DAY MO YR		TIME (GMT)		DRY BULB (°C)		WET BULB (°C)		PRESSURE (mb)		SEA STATE *		VISIBILITY *		WIND DIRN. (deg)		WIND SPD. (knts)		CLOUD (amt) TYPE		WEATHER		BOTTOM DEPTH (m)		STA. NAME/ID			
0165715.62 N		16544.37 W		26 Sept 09		2029		5.081623		310		27		70		70m																	
CTD		TYPE & SN 9+ S/N 2067		TIMES DATA ON		JD/TIME		DATA LOCATION Tape/Diskette ID MF09-04, leg 2		File Name/Header CTD 016		REMARKS		MAX. DEPTH = 67 m																			
PRESS SN 2067		START DOWN																															
PRI COND SN 915		AT DEPTH																															
PRI TEMP SN 710		AT SURFACE																															
SEC COND SN 535																																	
SEC TEMP SN 884																																	
POS. TRIP DEPTH		PH		DH		DOC		TOC		SALINITY		SALINITY		SALINITY		SAL.		MORDY'S NUTR.		CHL.		WHIT'S NUTR.											
1 67 67		PH		DH		DOC		TOC		SALINITY		SALINITY		SALINITY		304		70															
2 50 50																																	
3 40 40																																	
4 30 30																																	
5 20 20																																	
6 10 10																																	
7 0 0																																	
8																																	
9																																	
10																																	
11																																	
12																																	

PAR 4242
 WETSTAR 1036P
 Dissolved Oxygen
 430904
 Dissolved Oxygen
 430910
 Cleaned air bleed valve

CTD CONVERTED MONITOR VALUES

SAMPLE BOTTLE DATA SAMPLE BOTTLE NUMBER

02
165

VESSEL NOAA R/V MILLER FREEMAN		PROJECT & LEG MF09-04, leg 2				STATION DESIGNATION																									
CONSC CAST #		LATITUDE		LONGITUDE		DATE JD= 270 MO YR		TIME (GMT)		DRY BULB (°C)		WET BULB (°C)		PRESSURE (mb)		SEA STATE		VISIBILITY		WIND DIRN (deg)		WIND SPD (knts)		CLOUD (amt)		WEATHER		BOTTOM DEPTH (m)		STA. NAME/ID	
01857		19.14 N		166.19.60 W		27 Sept 09		0158		6.168.526		3.1025		31025														7070m10			
CTD		TYPE & SN 9+ S/N 2067		TIMES DATA ON		JD/TIME		DATA LOCATION Tape/Diskette ID MF09-04, leg 2				File Name/Header CTD 018				REMARKS															
PRESS SN 2067		PRI COND SN 915		START DOWN AT DEPTH																											
PRI TEMP SN 710		SEC COND SN 535		AT SURFACE												MAX. DEPTH = 66 m															
SEC TEMP SN 884																															
POS.		TRIP DEPTH		PAR 4242		WETSTAR 1036P		Dissolved Oxygen 430904		Dissolved Oxygen 430910		Cleaned air bleed valve		CTD CONVERTED MONITOR VALUES																	
1		66												SAL. 306		MORDY'S NUTR. 84		CHL.		WHIT'S NUTR.											
2		50														85															
3		110														86															
4		30														87															
5		20														88															
6		10														89															
7		0														90															
8																															
9																															
10																															
11																															
12																															

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219

VESSEL		PROJECT & LEG				STATION DESIGNATION									
NOAA R/V MILLER FREEMAN		MF09-04, leg 2				20 MW 11									
CONSC CAST #	LATITUDE	LONGITUDE	DATE JD=	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (knts)	CLOUD (amt)	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
019	5724.10 N	16630.82 W	27 Sept 09	0328	6.0	.	275	8	3	11	21	6		69	20 MW 11
CTD	TIMES		JD/TIME		DATA LOCATION				REMARKS						
TYPE & SN	9+ S/N 2067		DATA ON		Tape/Diskette ID				File Name/Header						
PRESS SN	2067		START DOWN		MF09-04, leg 2				CTD 019						
PRI COND SN	915		AT DEPTH												
PRI TEMP SN	710		AT SURFACE												
SEC COND SN	535														
SEC TEMP SN	884														
POS. TRIP DEPTH		PAR 4242		WETSTAR 1036P		Dissolved Oxygen 430904		Dissolved Oxygen 430910		Cleaned air bleed valve					
CTD CONVERTED MONITOR VALUES															
PH	DIC	DOC	TDC	SAL	MORDY'S NUTR.	CHL.	WHIT'S NUTR.								
1	80.64	/	/	/	91										
2	50	/	/	/	92										
3	40	/	/	/	93										
4	30	/	/	/	94										
5	20	/	/	/	95										
6	10	/	/	/	96										
7	0	/	/	/	97										
8															
9															
10															
11															
12															

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VESSEL NOAA RV MILLER FREEMAN		PROJECT & LEG MF09-04, leg 2					STATION DESIGNATION 70M/2							
CONSC CAST #	LATITUDE	LONGITUDE	DATE JD= DAY MO YR	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE SEA STATE	VISIBILITY	WIND DIRN (deg)	WIND SPD. (knts)	CLOUD (amt) TYPE	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
0205725.711	N 16648.85	W 27	27 Sept 09	0514	5.6	.	2858	324	285				6970M/2	
CTD	TIMES		JD/TIME		DATA LOCATION					REMARKS				
TYPE & SN	9+ S/N 2067		DATA ON		Tape/Diskette ID					File Name/Header				
PRESS SN	2067		START DOWN		MF09-04, leg 2					CTD 020				
PRI COND SN	915		AT DEPTH											
PRI TEMP SN	710		AT SURFACE											
SEC COND SN	535													
SEC TEMP SN	884													
POS.		TRIP DEPTH		CTD CONVERTED MONITOR VALUES					SAMPLE BOTTLE DATA					
				<input checked="" type="checkbox"/> PAR 4242 <input checked="" type="checkbox"/> WETSTAR 1036P <input checked="" type="checkbox"/> Dissolved Oxygen 430904 <input checked="" type="checkbox"/> Dissolved Oxygen 430910 <input type="checkbox"/> Cleaned air bleed valve										
1	65	PRESSURE	PRI. TEMP.	SEC. TEMP.	PRI. SALINITY	SEC. SALINITY	SALINITY	SAL.	MORDY'S NUTR.	CHL.	WHITS NUTR.			
2	50							308	98					
3	40								100	x				
4	30								101	x				
5	20								102	x				
6	10								103	x				
7	0								104	x				
8														
9														
10														
11														
12														

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02

VESSEL: NOAA RV MILLER FREEMAN PROJECT & LEG: MF09-04, leg 2 STATION DESIGNATION: 70m13

CONSC CAST #	021	LATITUDE DEG	57	MIN	30	N	LONGITUDE DEG	167	MIN	02	DATE JD=	24	MO	27	YR	09	TIME (GMT)	07	HR	04	MIN	DRY BULB (°C)	5.0	WET BULB (°C)	3.5 28% 3.5	PRESSURE (mb)	3057	SEA STATE	2	WIND DIRN. (deg)	290	WIND SPD. (knts)	20	CLOUD (amt)	6	WEATHER	70	BOTTOM DEPTH (m)	70	STA. NAME/ID	
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CTD	TYPE & SN	9+ S/N 2067	DATA ON		JD/TIME		DATA LOCATION	Tape/Diskette ID	MF09-04, leg 2	File Name/Header	CTD 021	REMARKS	
	PRESS SN	2067	START DOWN										
	PRI COND SN	915	AT DEPTH										
	PRI TEMP SN	710	AT SURFACE										
	SEC COND SN	535											
	SEC TEMP SN	884											

PAR 4242 WETSTAR 1036P SEC Dissolved Oxygen 430904 PRI Dissolved Oxygen 430910 Cleaned air bleed valve

POS.	TRIP DEPTH	Ph	DK	DOC	TOC	SALINITY	SAMPLE BOTTLE DATA	SAMPLE BOTTLE NUMBER	SAMPLE BOTTLE NUMBER
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1	8.5	/	/	/	/	309		105				
2	5.0					106		106				
3	4.0					107		107				
4	3.0					108		108				
5	2.5					109		109				
6	1.0					110		110				
7	0	/	/	/	/	111		111				
8												
9												
10												
11												
12												

Second cast 21 in MOA
No data file created on first cast

VESSEL: NOAA R/V MILLER FREEMAN
 PROJECT & LEG: MF09-04, leg 2
 STATION DESIGNATION: 70M15

CONSC CAST #	LATITUDE	LONGITUDE	DATE JD=	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN (deg)	WIND SPD. (knts)	CLOUD (amt)	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
023	5730.02 N	16740.24 W	27 Sept 09	1034	5.8	.	32			280	7			72	

CTD TYPE & SN: 9+ S/N 2067
 PRESS SN: 2067
 PRI COND SN: 915
 PRI TEMP SN: 710
 SEC COND SN: 535
 SEC TEMP SN: 884

DATA ON: _____
 START DOWN: _____
 AT DEPTH: _____
 AT SURFACE: _____

DATA LOCATION: Tape/Diskette ID MF09-04, leg 2; File Name/Header CTD_023

REMARKS: MAX. DEPTH = 66 m

PAR 4242 WETSTAR 1036P SEC Dissolved Oxygen 430904 PRI Dissolved Oxygen 430910

CTD CONVERTED MONITOR VALUES

Cleaned air bleed valve

POS.	TRIP DEPTH	Ph	DK	DOC	TOC	SALINITY	SAL.	MORDY's NUTR.	CHL.	WHIT's NUTR.
1	Bot	1	1	1	1	311	119	120	289	
2	50							121	283	
3	40							122	283	
4	30			2				123	283	
5	20							124	283	
6	10			3				125	283	
7	0									
8										
9										
10										
11										
12										

02
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Date	CTD#	Bottle #	Reading 1	Reading 2	Reading 3	Rt Avg.	Salinity PSU	Remarks
29 Sept	52	335						
29 Sept	53	336						
29 Sept	54	337						
29 Sept	55	338						
30 Sept	56	339						
30 Sept	57	340						
30 Sept	58	341						
30 Sept	59	342						
30 Sept	60	343						
30 Sept	61	344						
30 Sept	62	345						
30 Sept	63	346						
30 Sept	64	347						
30 Sept	65	348						
30 Sept	66	349						
30 Sept	67	350						
30 Sept	68	351						
30 Sept	69	352						
30 Sept	70	353						
1 Oct	71	354						
1 Oct	72	355						
1 Oct	73	356						

VESSEL NOAA RV MILLER FREEMAN		PROJECT & LEG MF09-04, leg 2				STATION DESIGNATION 70M17																			
CONSC CAST #		LATITUDE DEG MIN		LONGITUDE DEG MIN		DATE JD= DAY MO YR		TIME (GMT)		DRY BULB BULB		PRESSURE SEA STATE		WIND DIRN.		WIND SPD.		CLOUD (amt)		WEATHER		BOTTOM DEPTH		STA. NAME/ID	
025		57 31.26 N		168 18.29 W		27 Sept 09		1338		6.1		31		180		08						72			
CTD		TYPE & SN 9+ S/N 2067		TIMES DATA ON		JD/TIME		DATA LOCATION		REMARKS															
PRESS SN 2067		PRI COND SN 915		START DOWN				Tape/Diskette ID MF09-04, leg 2		File Name/Header CTD															
PRI TEMP SN 710		SEC COND SN 535		AT DEPTH																					
SEC TEMP SN 884				AT SURFACE																				MAX. DEPTH = 66 m	
POS.		TRIP DEPTH		Ph		DK		DOC		TOC		SALINITY		SAL. BOTTLE DATA		SAL. BOTTLE NUMBER		MORDY's NUTR.		CHL.		WHIT's NUTR.			
1		Bot				/				/				313		133		134		289					
2		50														135		283							
3		40														136		283							
4		30														137		283							
5		20														138		283							
6		10														139		283							
7		0																							
8																									
9																									
10																									
11																									
12																									

PAR 4242
 WETSTAR 1036P
 SEC Dissolved Oxygen 430904
 PRI Dissolved Oxygen 430910
 Cleaned air bleed valve

CTD CONVERTED MONITOR VALUES

02

086

VESSEL: NOAA RV MILLER FREEMAN
 PROJECT & LEG: MF09-04, leg 2
 STATION DESIGNATION: _____

CONSC CAST #	LATITUDE	LONGITUDE	DATE	TIME (GMT)	DRY BULB (°C)	WET-BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (knts)	CLOUD (amt)	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
026	51 31.26 N	168 36.98 W	27 Sept 09	1509	6.5	79.2	30			145	11			72.10	M18

CTD TYPE & SN: 9+ S/N 2067
 PRESS SN: 2067
 PRI COND SN: 915
 PRI TEMP SN: 710
 SEC COND SN: 535
 SEC TEMP SN: 884

DATA ON: _____
 START DOWN: _____
 AT DEPTH: _____
 AT SURFACE: _____

DATA LOCATION: _____
 File Name/Header: MF09-04, leg 2
 CTD ID: 026

MAX. DEPTH = 65 m

PAR 4242
 WETSTAR 1036P
 SEC Dissolved Oxygen 430904
 PRI Dissolved Oxygen 430910
 Cleaned air bleed valve

CTD CONVERTED MONITOR VALUES

POS.	TRIP DEPTH	Ph	DK	DOC	TOC	SALINITY	SAL.	MORDY'S NUTR.	CHL.	WHIT'S NUTR.
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POS.	TRIP DEPTH	Ph	DK	DOC	TOC	SALINITY	SAL.	MORDY'S NUTR.	CHL.	WHIT'S NUTR.
1	0.2					140	140	.289		
2	20					142	142	.283		
3	40					143	143	.283		
4	60					144	144	.283		
5	80					145	145	.283		
6	100					146	146	.283		
7	120									
8										
9										
10										
11										
12										

02-205

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VESSEL NOAA R/V MILLER FREEMAN		PROJECT & LEG MF09-04, leg 2				STATION DESIGNATION										
CONSC CAST #	LATITUDE	LONGITUDE	DATE	JD	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE *	VISIBILITY *	WIND DIRN. (deg)	WIND SPD. (knts)	CLOUD (amt) *	WEATHER *	BOTTOM DEPTH (m)	STA. NAME/ID
027	51°25.90 N	168°42.45 W	27	09	1615	6.5	8.5	29			160	14			72	70M19
CTD		TIMES		JD/TIME		DATA LOCATION				REMARKS						
TYPE & SN		9+ S/N 2067		DATA ON		Tape/Diskette ID				File Name/Header						
PRESS SN		2067		START DOWN		MF09-04, leg 2				CTD 027						
PRI COND SN		915		AT DEPTH												
PRI TEMP SN		710		AT SURFACE												
SEC COND SN		535														
SEC TEMP SN		884														
		<input checked="" type="checkbox"/> PAR 4242		<input checked="" type="checkbox"/> WETSTAR 1036P		<input checked="" type="checkbox"/> SEC Dissolved Oxygen		430904		<input checked="" type="checkbox"/> PRI Dissolved Oxygen		430910		<input type="checkbox"/> Cleaned air bleed valve		
CTD CONVERTED MONITOR VALUES																
POS.	TRIP DEPTH	Ph	DK	DOC	TOC	SALINITY		SAL.		MORDY'S NUTR.		CHL.		WHIT'S NUTR.		
1	0 depth	1	21		7			147		148		.289				
2	50							147		149		.283				
3	40	2	22		27			147		150		.283				
4	30	3	25		34			147		151		.283				
5	20	4	26		41			147		152		.283				
6	10							147		153		.283				
7	0	5	30		57			147		154		.283				
8																
9																
10																
11																
12																

No Sample water miss hop up to 10 ft

SOUTH SITE 4 BOX

MAX. DEPTH = 65 m

VESSEL: NOAA R/V MILLER FREEMAN
 PROJECT & LEG: MF09-04, leg 2
 STATION DESIGNATION:

CONSC CAST #	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	(°C)	(°C)	(mb)	*	*	(deg)	(knts)	WIND DIRN.	WIND SPD.	CLOUD (amt)	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
028	51	13	N	16	27	Sept	09	18	29	6.0	.	27	.	.	170	17					71	90m21

CTD TYPE & SN: 9+ S/N 2067
 PRESS SN: 2067
 PRI COND SN: 915
 PRI TEMP SN: 710
 SEC COND SN: 535
 SEC TEMP SN: 884
 DATA ON: _____
 START DOWN: _____
 AT DEPTH: _____
 AT SURFACE: _____
 TIMES: _____
 JD/TIME: _____
 DATA LOCATION: _____
 Tape/Diskette ID: MF09-04, leg 2
 File Name/Header: CTD_028
 REMARKS: RAJOR TO OBTAINING MAX. DEPTH = m

PAR 4242
 METSTAR 1036P
 SEC Dissolved Oxygen 430904
 PRI Dissolved Oxygen 430910

CTD CONVERTED MONITOR VALUES

POS.	TRIP DEPTH	Pn	DK	DOC	TOC	SALINITY	SAL.	MORDY's NUTR.	CHL.	WHIT's NUTR.
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1	31	1	38	1	14		314	155	289	
2	40							156	283	
3	40							157	283	
4	30							158	283	
5	20							159	283	
6	10							160	283	
7	0									
8										
9										
10										
11										
12										

-02:17.2

CTD 0280 Cast 10m water sample

RAJOR TO OBTAINING

Cleaned air bleed valve

VESSEL NOAA R/V MILLER FREEMAN		PROJECT & LEG MF09-04, leg 2				STATION DESIGNATION																									
CONSC CAST #		LATITUDE		LONGITUDE		DATE JD= 271 DEG MIN DAY MO YR		TIME (GMT)		DRY BULB (°C)		WET BULB (°C)		PRESSURE (mb)		SEA STATE VISIBILITY		WIND DIRN. (deg)		WIND SPD. (knts)		CLOUD (amt) TYPE		WEATHER		BOTTOM DEPTH (m)		STA. NAME/ID			
029		5750.59 N		16851.84 W		28 Sept 09		0258		7.09		16.15		6150		28		8								17210m					
CTD		TYPE & SN 9+ S/N 2067		TIMES		JD/TIME		DATA LOCATION		Tape/Diskette ID		File Name/Header		REMARKS		MAX. DEPTH =		m													
PRESS SN 2067		START DOWN						MF09-04, leg 2		CTD029		AFTER DEPTH OF SITE 4 MOUNTINGS																			
PRI COND SN 915		AT DEPTH																													
PRI TEMP SN 710		AT SURFACE																													
SEC COND SN 535																															
SEC TEMP SN 884																															
POS.		TRIP DEPTH		PH		DK		DOC		TOC		SALINITY		SAMPLE BOTTLE DATA		SAMPLE BOTTLE NUMBER		SAL.		MORDY's NUTR.		CHL.		WHIT's NUTR.							
1		68 Depth																315		161											
2		50																162		163											
3		40																163		164											
4		30																164		165											
5		19																165													
6		19																													
7		19																													
8		19																													
9		9																													
10																															
11																															
12																															

20 19

VESSEL NOAA RV MILLER FREEMAN		PROJECT & LEG MF09-04, leg 2				STATION DESIGNATION m-4 East corner										
CONSC CAST #	LATITUDE	LONGITUDE	DATE	JD	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE *	VISIBILITY *	WIND DIRN. (deg)	WIND SPD. (knts)	CLOUD (amt) %	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
030	5746.47 N	16846.65 W	28	09	2442	7.5	9.5%	13.6	6	170	308	8			71	
CTD	TYPE & SN 9+ S/N 2067	DATA ON	TIMES	JD/TIME	DATA LOCATION	REMARKS										
	PRESS SN 2067	START DOWN			Tape/Diskette ID MF09-04, leg 2	File Name/Header CTD 030										
	PRI COND SN 915	AT DEPTH														
	PRI TEMP SN 710	AT SURFACE				MAX. DEPTH = 63 m										
	SEC COND SN 535															
	SEC TEMP SN 884															
<input checked="" type="checkbox"/> PAR 4242 <input checked="" type="checkbox"/> WET STAR 1036P <input type="checkbox"/> SEC Dissolved Oxygen 430904 <input checked="" type="checkbox"/> PRI Dissolved Oxygen 430910 <input type="checkbox"/> Cleaned air bleed valve																
CTD CONVERTED MONITOR VALUES																
POS.	TRIP DEPTH	PH	DK	DOC	TOC	SALINITY	SAMPLE BOTTLE DATA	SAMPLE BOTTLE NUMBER	SAL.	MORDY'S NUTR.	CHL.	WHIT'S NUTR.				
1	Rot 63								316	168						
2	50								169							
3	40								170							
4	30								171							
5	20								172							
6	10								173							
7	0								174							
8																
9																
10																
11																
12																

*Data started at 10
Back to 0 then down*

02
155

VESSEL NOAA R/V MILLER FREEMAN		PROJECT & LEG MF09-04, leg 2				STATION DESIGNATION M-4 North corner																									
CONSC CAST #		LATITUDE		LONGITUDE		DATE JD=271		TIME (GMT)		DRY BULB (°C)		WET BULB (°C)		PRESSURE (mb)		SEA STATE		VISIBILITY		WIND DIRN. (deg)		WIND SPD. (knts)		CLOUD (amt)		WEATHER		BOTTOM DEPTH (m)		STA. NAME/ID	
0315755		.30 N		16800.12 W		28 Sept 09		0703		7.4		.1		1166		170		23		8						70					
CTD		TYPE & SN		9+ S/N 2067		TIMES		DATA ON		JD/TIME		DATA LOCATION		Tape/Diskette ID		File Name/Header		REMARKS		MAX. DEPTH = 64 m											
PRESS SN		2067		START DOWN								MF09-04, leg 2		CTD 031																	
PRI COND SN		915		AT DEPTH																											
PRI TEMP SN		710		AT SURFACE																											
SEC COND SN		535																													
SEC TEMP SN		884																													
POS.		TRIP DEPTH		Ph		DK		DOC		TOC		SALINITY		SAL. 317		MORDY's NUTR. 175		CHL. 176		WHIT's NUTR. 177		178		179		180		181			
1		64																													
2		50																													
3		40																													
4		30																													
5		20																													
6		10																													
7		0																													
8																															
9																															
10																															
11																															
12																															

PAR 4242
 WETSTAR 1036P
 SEC Dissolved Oxygen 430904
 PRI Dissolved Oxygen 430910
 Cleaned air bleed valve

CTD CONVERTED MONITOR VALUES

CTD DATA
 SAMPLE BOTTLE DATA
 SAMPLE BOTTLE NUMBER

VESSEL: NOAA R/V MILLER FREEMAN
 PROJECT & LEG: MF09-04, leg 2
 STATION DESIGNATION: M-7 West corner

CONSC CAST #	LATITUDE	LONGITUDE	DATE	JD	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (knts)	CLOUD (amt)	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
432	5746.15 N	16912.16 W	28	09	0859	7.4	99.8	11			203	17			6370	M22

CTD	TYPE & SN	9+ S/N 2067	DATA ON	JD/TIME	DATA LOCATION	REMARKS
	PRESS SN	2067	START DOWN		Tape/Diskette ID	Surface Bottle
	PRI COND SN	915	AT DEPTH		MF09-04, leg 2	Leak
	PRI TEMP SN	710	AT SURFACE			
	SEC COND SN	535				
	SEC TEMP SN	884				MAX. DEPTH = 59 m

PAR 4242
 WETSTAR 1036P
 SEC Dissolved Oxygen 430904
 PRI Dissolved Oxygen 430910
 Cleaned air bleed valve

CTD CONVERTED MONITOR VALUES

POS.	TRIP DEPTH	Ph	DK	DOC	TOC	SALINITY	SAMPLE BOTTLE DATA	SAMPLE BOTTLE NUMBER	SAL.	MORDY's NUTR.	CHL.	WHIT's NUTR.
1	Bot								518	182		
2	50								183			
3	40								184			
4	30								185			
5	20								186			
6	10								01			
7	0								102			
8												
9												
10												
11												
12												

02
 222

VESSEL NOAA RV MILLER FREEMAN		PROJECT & LEG MF09-04, leg 2				STATION DESIGNATION 70M23									
CONSC CAST #	LATITUDE	LONGITUDE	DATE JD=	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (knts)	CLOUD (amt)	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
033	5754.27 N	16930.30 W	28 Sept 09	1058	7.0		1.6			246	13			7070M23	
CTD		TYPES	DATA ON	JD/TIME	DATA LOCATION				REMARKS						
TYPE & SN		9+ S/N 2067	DATA ON		Tape/Diskette ID				File Name/Header						
PRESS SN		2067	START DOWN		MF09-04, leg 2				CTD						
PRI COND SN		915	AT DEPTH												
PRI TEMP SN		710	AT SURFACE						MAX. DEPTH = 65 m						
SEC COND SN		535													
SEC TEMP SN		884													
		<input type="checkbox"/> PAR 4242	<input type="checkbox"/> WETSTAR 1036P	<input type="checkbox"/> SEC Dissolved Oxygen	430904	<input type="checkbox"/> PRI Dissolved Oxygen	430910	<input type="checkbox"/> Cleaned air bleed valve							
CTD CONVERTED MONITOR VALUES															
POS.	TRIP DEPTH	Ph	DK	DOC	TOC	SALINITY		SAL.	MORDY'S NUTR.	CHL.	WHIT'S NUTR.				
1	65	6	-	11	-	319		319	3	0.289					
2	50								2						
3	40								5	0.253					
4	30	7	-	12	-				6	0.283					
5	20								7	0.283					
6	10								8	0.283					
7	0	8	-	13	-				9	0.283					
8															
9															
10															
11															
12															

VESSEL NOAA RV MILLER FREEMAN		PROJECT & LEG MF09-04, leg 2		STATION DESIGNATION 70m24	
CONSC CAST #	LATITUDE DEG MIN	LONGITUDE DEG MIN	DATE JD = 221 DAY MO YR	TIME (GMT)	DRY BULB (°C)
034	58 02.72 N	169 40.19 W	28 Sept 09	12 24	6.3
				HR MIN	(°C)
				09	09
				WIND DIR. (deg)	WIND SPD. (knts)
				230	10
				CLOUD (amt)	WEATHER
				70	
				BOTTOM DEPTH (m)	STA. NAME/ID
				71	70 m 24
CTD		TIMES		DATA LOCATION	
TYPE & SN 9+ S/N 2067		DATA ON		Tape/Diskette ID	
PRESS SN 2067		START DOWN		MF09-04, leg 2	
PRI COND SN 915		AT DEPTH		CTD	
PRI TEMP SN 710		AT SURFACE		MAX. DEPTH = 65 m	
SEC COND SN 535					
SEC TEMP SN 884					
		<input checked="" type="checkbox"/> PAR 4242		<input checked="" type="checkbox"/> WETSTAR 1036P	
		<input checked="" type="checkbox"/> SEC Dissolved Oxygen		<input checked="" type="checkbox"/> PRI Dissolved Oxygen	
		430904		430910	
		<input type="checkbox"/> Cleaned air bleed valve			
CTD CONVERTED MONITOR VALUES		SAMPLE BOTTLE DATA		SAMPLE BOTTLE NUMBER	
POS.	TRIP DEPTH	Ph	DK	DOC	TOC
1	Bot				
2	50				
3	40				
4	30				
5	20				
6	10				
7	0				
8					
9					
10					
11					
12					
		SALINITY	SAL.	MORDY'S NUTR.	CHL.
			320	10	0.289
				11	0.283
				12	0.283
				13	0.283
				14	0.283
				15	0.283
				320	0.283

02
113

VESSEL NOAA RV MILLER FREEMAN		PROJECT & LEG MF09-04, leg 2				STATION DESIGNATION 701M 25															
CONSC CAST #	LATITUDE	LONGITUDE	DATE	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (knts)	CLOUD (amt)	WIND TYPE	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID					
035	58 08 . 78 N	169 55 . 18 W	28 Sept 09	1408	7.2	86.9	02			230	7				72	701M 25					
CTD		TIMES		DATA LOCATION		REMARKS															
TYPE & SN		9+ S/N 2067		DATA ON		Tape/Diskette ID		File Name/Header		67											
PRESS SN		2067		START DOWN		MF09-04, leg 2		CTD		MAX. DEPTH = 67 m											
PRI COND SN		915		AT DEPTH																	
PRI TEMP SN		710		AT SURFACE																	
SEC COND SN		535																			
SEC TEMP SN		884																			
POS.		TRIP DEPTH		CTD CONVERTED MONITOR VALUES		SAMPLE BOTTLE DATA		SAMPLE BOTTLE NUMBER													
1		67 Bot		Ph 9		DK /		DOC 14		TOC /		SALINITY		SAL. 321		MORDY'S NUTR. 17		CHL. 0.287		WHIT'S NUTR.	
2		50												18		0.287					
3		40												19		0.283					
4		30												20		0.283					
5		20												21		0.283					
6		16												22		1.287					
7		0												23		0.283					
8																					
9																					
10																					
11																					
12																					

PAR 4242
 WETSTAR 1036P
 SEC Dissolved Oxygen 430904
 PRI Dissolved Oxygen 430910
 Cleaned air bleed valve

VESSEL: NOAA RV MILLER FREEMAN
 PROJECT & LEG: MF09-04, leg 2
 STATION DESIGNATION: 70M 26

CONSC CAST #	LATITUDE	LONGITUDE	DATE	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (knts)	CLOUD (amt)	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
636	58 17.13 N	170 05.42 W	28 Sept 09	1527	7.29	1.60	7.2			186	09			72	

CTD TYPE & SN: 9+ S/N 2067
 PRESS SN: 2067
 PRI COND SN: 915
 PRI TEMP SN: 710
 SEC COND SN: 535
 SEC TEMP SN: 884

DATA ON: _____
 START DOWN: _____
 AT DEPTH: _____
 AT SURFACE: _____

DATA LOCATION: File Name/Header: _____
 Tape/Diskette ID: MF09-04, leg 2
 CTD 036

REMARKS: MAX. DEPTH = 72 m

PAR 4242 WETSTAR 1036P SEC Dissolved Oxygen 430904 PRI Dissolved Oxygen 430910 Cleaned air bleed valve

CTD CONVERTED MONITOR VALUES

POS.	TRIP DEPTH	Ph	DK	DOC	TOC	SALINITY	SAL.	MORDY's NUTR.	CHL.	WHIT's NUTR.
1	0					32.2	24			
2	50						25		0.289	
3	40						26		0.283	
4	30						27		0.283	
5	20						28		0.283	
6	10						29		0.283	
7	0						30		0.283	
8										
9										
10										
11										
12										

060

02

FOR DATA
✓ HDR

VESSEL NOAA RV MILLER FREEMAN		PROJECT & LEG MF09-04, leg 2				STATION DESIGNATION																									
CONSC CAST #		LATITUDE		LONGITUDE		DATE JD= 221		TIME (GMT)		DRY BULB (°C)		WET BULB (°C)		PRESSURE (mb)		SEA STATE		VISIBILITY		WIND DIRN. (deg)		WIND SPD. (knts)		CLOUD (amt)		WEATHER		BOTTOM DEPTH (m)		STA. NAME/ID	
0375826.78 N		17011.43 W		28 Sept 09		1708		3.2		89.8		0.7		180		14										7430MATH					
CTD		TYPE & SN 9+ S/N 2067		TIMES		DATA ON		JD/TIME		DATA LOCATION		Tape/Diskette ID		File Name/Header		REMARKS															
PRESS SN 2067		START DOWN								MF09-04, leg 2		CTD 037																			
PRI COND SN 915		AT DEPTH																													
PRI TEMP SN 710		AT SURFACE																													
SEC COND SN 535																															
SEC TEMP SN 884																															
PAR 4242		WETSTAR 1036P		SEC Dissolved Oxygen		430904		PRI Dissolved Oxygen		430910		Cleaned air bleed valve																			
CTD CONVERTED MONITOR VALUES		CTD CONVERTED MONITOR VALUES		CTD CONVERTED MONITOR VALUES		CTD CONVERTED MONITOR VALUES		CTD CONVERTED MONITOR VALUES		CTD CONVERTED MONITOR VALUES		CTD CONVERTED MONITOR VALUES		CTD CONVERTED MONITOR VALUES		CTD CONVERTED MONITOR VALUES		CTD CONVERTED MONITOR VALUES		CTD CONVERTED MONITOR VALUES		CTD CONVERTED MONITOR VALUES		CTD CONVERTED MONITOR VALUES		CTD CONVERTED MONITOR VALUES		CTD CONVERTED MONITOR VALUES		CTD CONVERTED MONITOR VALUES	
POS.	TRIP DEPTH	Ph	DK	DOC	TOC	SALINITY	SAL.	MORDY'S NUTR.	CHL.	WHIT'S NUTR.																					
1	66	/	33	/	12		32.3	31																							
2	50							32	.289																						
3	40							33	.283																						
4	30							34	.283																						
5	20							35	.283																						
6	10							36	.283																						
7	0	2	37	2	37			37	.283																						
8																															
9																															
10																															
11																															
12																															

02
107

MAX. DEPTH = 68 m
64

VESSEL: NOAA R/V MILLER FREEMAN PROJECT & LEG: MF09-04, leg 2 STATION DESIGNATION:

CONSC CAST #	LATITUDE	LONGITUDE	DATE	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (knts)	CLOUD (amt)	TYPE	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
038	5837.51 N	17016.81 W	28 Sept 09	1835	7.2	.	06			170	11				31	70m28

CTD TYPE & SN: 9+ S/N 2067 DATA ON: _____ JD/TIME: _____
 PRESS SN: 2067 START DOWN: _____
 PRI COND SN: 915 AT DEPTH: _____
 PRI TEMP SN: 710 AT SURFACE: _____
 SEC COND SN: 535
 SEC TEMP SN: 884

PAR 4242 WETSTAR 1036P SEC Dissolved Oxygen 430904 PRI Dissolved Oxygen 430910 Cleaned air bleed valve

CTD CONVERTED MONITOR VALUES

POS.	TRIP DEPTH	Ph	DK	DOC	TOC	SALINITY	SAMPLE BOTTLE DATA	SAMPLE BOTTLE NUMBER
1	67					324		38
2	50					29		289
3	40					40		283
4	30					41		283
5	20					42		285
6	10					43		283
7	0					44		283
8								
9								
10								
11								
12								

Nettle looking in Star vent around

VESSEL NOAA RV MILLER FREEMAN		PROJECT & LEG MF09-04, leg 2				STATION DESIGNATION										
CONSC CAST #	LATITUDE	LONGITUDE	DATE JD=231		TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (knts)	CLOUD (amt)	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
03915846	46.47N	17017.96W	28	Sept	09	2003	16.7	16.8	58	165	12	8	6	71	70m29	
CTD		TIMES		JD/TIME		DATA LOCATION				REMARKS						
TYPE & SN 9+ S/N 2067		DATA ON		Tape/Diskette ID		File Name/Header					MAX. DEPTH = 68 m					
PRESS SN 2067		START DOWN		MF09-04, leg 2		CTD 039										
PRI COND SN 915		AT DEPTH														
PRI TEMP SN 710		AT SURFACE														
SEC COND SN 535																
SEC TEMP SN 884																
<input checked="" type="checkbox"/> PAR 4242 <input checked="" type="checkbox"/> WETSTAR 1036P <input checked="" type="checkbox"/> SEC Dissolved Oxygen 430904 <input checked="" type="checkbox"/> PRI Dissolved Oxygen 430910 <input type="checkbox"/> Cleaned air bleed valve		CTD CONVERTED MONITOR VALUES														
POS.	TRIP DEPTH	Ph	DK	DOC	TOC	SALINITY	SAL.	MORDY'S NUTR.	CHL.	WHIT'S NUTR.						
1	610	7	24		1		32.5	45								
2	50							41.9								
3	40		28		9			43								
4	30		32		30			48								
5	20		42		35			49								
6	10							50								
7	10							51								
8	0		58		38											
9																
10																
11																
12																

02014
-016

VESSEL NOAA RV MILLER FREEMAN		PROJECT & LEG MF09-04, leg 2				STATION DESIGNATION																											
CONSC CAST #		LATITUDE		LONGITUDE		DATE		TIME (GMT)		DRY BULB (°C)		WET BULB (°C)		PRESSURE (mb)		SEA STATE		VISIBILITY		WIND DIRN (deg)		WIND SPD. (knts)		CLOUD (amt)		TYPE		WEATHER		BOTTOM DEPTH (m)		STA. NAME/ID	
0405857		14 N		15019.82 W		28 Sept 09		21 29		6.9		9.8		0.5						175		14						71		70M36			
CTD		TYPE & SN		DATA ON		START DOWN		AT DEPTH		AT SURFACE		Tape/Diskette ID		File Name/Header		DATA LOCATION		REMARKS															
PRESS SN		2067		9+ S/N 2067						MF09-04, leg 2		CTD 040		10 meters (on water)																			
PRI COND SN		915		710																													
SEC COND SN		535		884																													
SEC TEMP SN		884																															
PAR 4242		WETSTAR 1036P		SEC Dissolved Oxygen 430904		PRI Dissolved Oxygen 430910		Cleansed air bleed valve																									
CTD CONVERTED MONITOR VALUES		PH		DK		DOC		TOC		SALINITY		SAL.		MORDY'S NUTR.		CHL.		WHIT'S NUTR.															
POS. TRIP DEPTH		1 60		50		40		30		20		10		0																			
2		3		4		5		6		7		8		9		10		11		12													

VESSEL NOAA RV MILLER FREEMAN		PROJECT & LEG MF09-04, leg 2				STATION DESIGNATION									
CONSC CAST #	LATITUDE DEG MIN	LONGITUDE DEG MIN	DATE JD=272 DAY MO YR	TIME (GMT) HR MIN	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE *	VISIBILITY *	WIND DIRN (deg)	WIND SPD. (knts)	CLOUD (amt) TYPE *	WEATHER *	BOTTOM DEPTH (m)	STA. NAME/ID
0425914.91N	17024.96W	28 Sept 09	0018	6.895.3035817510	86.2	69.70m3a									
CTD		TIMES		DATA LOCATION		REMARKS									
TYPE & SN 9+ S/N 2067		DATA ON		Tape/Diskette ID MF09-04, leg 2		File Name/Header CTD 042									
PRESS SN 2067		START DOWN													
PRI COND SN 915		AT DEPTH													
PRI TEMP SN 710		AT SURFACE													
SEC COND SN 535															
SEC TEMP SN 884															
		<input checked="" type="checkbox"/> PAR 4242		<input checked="" type="checkbox"/> WETSTAR 1036P		<input checked="" type="checkbox"/> SEC Dissolved Oxygen 430904		<input checked="" type="checkbox"/> PRI Dissolved Oxygen 430910				<input type="checkbox"/> Cleaned air bleed valve			
CTD CONVERTED MONITOR VALUES															
POS.	TRIP DEPTH	pH		DK	DOC	TOC	SALINITY		SAL.	MORDY's NUTR.	CHL.	WHIT'S NUTR.			
1	62						32.7		66	66					
2	50						67		68	69					
3	40						70		71	72					
4	30						71		72						
5	20						72								
6	10						72								
7	0						72								
8															
9															
10															
11															
12															

MAX. DEPTH = 65 m

VESSEL: NOAA RV MILLER FREEMAN
 PROJECT & LEG: MF09-04, leg 2
 STATION DESIGNATION:

CONSC CAST #	LATITUDE	LONGITUDE	DATE	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN (deg)	WIND SPD (knts)	CLOUD (amt)	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
043	59 20.24 N	130 39.42 W	28 Sept 09	0146	6.59	5.20	28.58			155	09	86		70	70M33

CTD TYPE & SN: 9+ S/N 2067
 PRESS SN: 2067
 PRI COND SN: 915
 PRI TEMP SN: 710
 SEC COND SN: 535
 SEC TEMP SN: 884

DATA ON: _____
 START DOWN: _____
 AT DEPTH: _____
 AT SURFACE: _____

Tape/Diskette ID: MF09-04, leg 2
 File Name/Header: CTD 643

MAX. DEPTH = 65 m

CTD TIMES: _____ JD/TIME: _____

DATA LOCATION: _____

REMARKS: _____

PAR 4242
 WESTAR 1036P
 SEC Dissolved Oxygen 430904
 PRI Dissolved Oxygen 430910
 Cleaned air bleed valve

CTD CONVERTED MONITOR VALUES

POS.	TRIP DEPTH	pH	DK	DOC	TOC	SALINITY	SAL	MORDY'S NUTR.	CHL.	WHIT'S NUTR.
1	63	7.63	52	1	11		328	73		
2	50							74		
3	40							75		
4	30		41	2	39			76		
5	20							77		
6	10							78		
7	0	3	53	3	29			79		
8										
9										
10										
11										
12										

19602

VESSEL: **NOAA RV MILLER FREEMAN** PROJECT & LEG: **MF09-04, leg 2** STATION DESIGNATION: **702035**

CONSC CAST #	DEG	MIN	LATITUDE	DEG	MIN	LONGITUDE	DATE	JD	MO	YR	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN (deg)	WIND SPD (knts)	CLOUD (amt)	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
045	59	35	66 N	17	05	54 W	29	272	Sept	09	0445	6.6	9.4	6647	15	0	08	8			727	02035

CTD TYPE & SN: **9+ S/N 2067** DATA ON: _____ JD/TIME: _____
 PRESS SN: **2067** START DOWN: _____
 PRI COND SN: **915** AT DEPTH: _____
 PRI TEMP SN: **710** AT SURFACE: _____
 SEC COND SN: **535**
 SEC TEMP SN: **884**

Tape/Diskette ID: **MF09-04, leg 2** File Name/Header: **CTD 645**

MAX. DEPTH = **67** m

PAR 4242 WET STAR 1036P SEC Dissolved Oxygen 430904 PRI Dissolved Oxygen 430910 Cleaned air bleed valve

POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES										SAMPLE BOTTLE DATA		SAMPLE BOTTLE NUMBER			
		pH	DK	DOC	TOC	SALINITY	SAL.	MORDY's NUTR.	CHL.	WHIT's NUTR.							
1	80	/	/	/	/			87									
2	50							88									
3	40							89									
4	30							90									
5	20							91									
6	15							92									
7	0	DOH	/	/	/			93									
8	0																
9																	
10																	
11																	
12																	

02
206

VESSEL NOAA RV MILLER FREEMAN		PROJECT & LEG MF09-04, leg 2				STATION DESIGNATION 70 m 36													
CONSC CAST #	LATITUDE DEG MIN	LONGITUDE DEG MIN	DATE JD=237 DAY MO YR	TIME (GMT) HR MIN	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE *	VISIBILITY *	WIND DIRN. (deg)	WIND SPD. (knts)	CLOUD (amt) *	WEATHER *	BOTTOM DEPTH (m)	STA. NAME/ID				
0465943	16 N	17108.05 W	29 Sept 09	0607	6.8		9947			141	098			7276	m36				
CTD		TIMES		DATA LOCATION		REMARKS													
TYPE & SN 9+ S/N 2067		DATA ON		Tape/Diskette ID MF09-04, leg 2		File Name/Header CTD 046													
PRESS SN 2067		START DOWN																	
PRI COND SN 915		AT DEPTH																	
PRI TEMP SN 710		AT SURFACE																	
SEC COND SN 535																			
SEC TEMP SN 884																			
		<input checked="" type="checkbox"/> PAR 4242		<input checked="" type="checkbox"/> WEI STAR 1036P		<input checked="" type="checkbox"/> SEC Dissolved Oxygen 430904		<input checked="" type="checkbox"/> PRI Dissolved Oxygen 430910											
POS. TRIP DEPTH		CTD CONVERTED MONITOR VALUES		SAMPLE BOTTLE DATA		SAMPLE BOTTLE NUMBER													
		pH		DK		DOC		TOC		SALINITY		SAL.		MORDY'S NUTR.		CHL.		WHIT'S NUTR.	
1	81 67											331	94						
2	50												95						
3	40												96	X					
4	30												97	X					
5	20												98	X					
6	10												99	X					
7	0												100	X					
8																			
9																			
10																			
11																			
12																			

Cleaned air bleed valve

MAX. DEPTH = 67 m

VESSEL: NOAA RV MILLER FREEMAN
 PROJECT & LEG: MF09-04, leg 2
 STATION DESIGNATION: MS South

CONSC CAST #	0475942	LATITUDE DEG	12	MIN	17	LONGITUDE DEG	129	MIN	07	DATE	29	MO	Sept	YR	09	TIME (GMT)	0748	DRY BULB (°C)	6.8	WET BULB (°C)	9.1	PRESSURE (mb)	994.7	SEA STATE	1	VISIBILITY	13	WIND DIRN (deg)	130	WIND SPD (knts)	12	CLOUD (amt)	6	WEATHER		BOTTOM DEPTH (m)	74	STA. NAME/ID	
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CTD TYPE & SN: 9+ S/N 2067
 PRESS SN: 2067
 PRI COND SN: 915
 PRI TEMP SN: 710
 SEC COND SN: 535
 SEC TEMP SN: 884
 TIMES DATA ON: _____
 START DOWN: _____
 AT DEPTH: _____
 AT SURFACE: _____
 DATA LOCATION: File Name/Header: _____
 Tape/Diskette ID: MF09-04, leg 2
 CTD 047
 REMARKS: MAX. DEPTH = 70 m

PAR 4242
 WETSTAR 1036P
 SEC Dissolved Oxygen 430904
 PRI Dissolved Oxygen 430910
 Cleaned air bleed valve

CTD CONVERTED MONITOR VALUES

POS.	TRIP DEPTH	pH	DK	DOC	TOC	SALINITY	SAL.	MORDY's NUTR.	CHL.	WHIT's NUTR.
1	0.5					33.2	101	102	X287	
2	5.0							103	X283	
3	4.0							104	X283	
4	3.0							105	X283	
5	2.0							106	X283	
6	1.0							107	X283	
7	0									
8										
9										
10										
11										
12										

02
 2200

VESSEL NOAA RV MILLER FREEMAN		PROJECT & LEG MF09-04, leg 2				STATION DESIGNATION MS North															
CONSC CAST #		LATITUDE		LONGITUDE		DATE JD=232		TIME (GMT)		DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN (deg)	WIND SPD (knts)	CLOUD (amt)	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID	
049		61049.51N		17159.48W		29 Sept 09		1253		5.9		97			70	9			65	6470m38	
CTD		TYPE & SN		TIMES		DATA ON		JD/TIME		DATA LOCATION											
		9+ S/N 2067								Tape/Diskette ID MF09-04, leg 2											
		PRESS SN 2067		START DOWN						File Name/Header CTD 049											
		PRI COND SN 915		AT DEPTH																	
		PRI TEMP SN 710		AT SURFACE																	
		SEC COND SN 535								MAX. DEPTH = 57 m											
		SEC TEMP SN 884																			
										<input type="checkbox"/> PAR 4242 <input type="checkbox"/> WETSTAR 1036P <input type="checkbox"/> SEC Dissolved Oxygen 430904 <input type="checkbox"/> PRI Dissolved Oxygen 430910 <input type="checkbox"/> Cleaned air bleed valve											
POS.		TRIP DEPTH		CTD CONVERTED MONITOR VALUES																	
		57		pH		DK		DOC		TOC		SALINITY		SAL. BOTTLE DATA		MORDY'S NUTR.		CHL.		WHIT'S NUTR.	
1		Bot										333		115		116		.289			
2		50														117		.285			
3		40														118		.283			
4		36														119		.283			
5		20														120		.285			
6		10														121		.293			
7		0																			
8																					
9																					
10																					
11																					
12																					

01
058

VESSEL NOAA RV MILLER FREEMAN		PROJECT & LEG MF09-04, leg 2				STATION DESIGNATION															
CONSC CAST #		LATITUDE		LONGITUDE		DATE JD=272 DAY MO YR		TIME (GMT)		DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (knts)	CLOUD (amt)	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID	
050		59 53.06 N		171 42.75 W		29 Sept 09		1502		6.295	6.295	6.295			060	11			7270m38		
CTD		TIMES		JD/TIME		DATA LOCATION		Tape/Diskette ID		File Name/Header		REMARKS									
TYPE & SN		9+ S/N 2067		DATA ON				MF09-04, leg 2		CTD 050		BEFORE SITES									
PRESS SN		2067		START DOWN								MRG RECOVERIES									
PRI COND SN		915		AT DEPTH																	
PRI TEMP SN		710		AT SURFACE																	
SEC COND SN		535																			
SEC TEMP SN		884																			
POS.		TRIP DEPTH		PAR 4242		WETSTAR 1036P		SEC Dissolved Oxygen 430904		PRI Dissolved Oxygen 430910		CLEANED AIR BLEED VALVE									
				<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input type="checkbox"/>									
				CTD CONVERTED MONITOR VALUES		SAMPLE BOTTLE DATA		SAMPLE BOTTLE NUMBER		SAMPLE BOTTLE NUMBER											
				pH		DK		DOC		TOC		SALINITY		SAL.		MORDY'S NUTR.		CHL.		WHIT'S NUTR.	
1		66										122		123		.289					
2		50										None		121		.283					
3		40										125		125		.283					
4		30										126		126		.293					
5		20										127		127		.277					
6		10										128		128		.283					
7		0X										129		129		.287					
8		11										128		128		.288					
9		11										127		127		.287					
10		11										128		128		.288					
11		11										128		128		.288					
12		11										128		128		.288					

VESSEL NOAA RV MILLER FREEMAN		PROJECT & LEG MF09-04, leg 2				STATION DESIGNATION																									
CONC CAST #		LATITUDE		LONGITUDE		DATE JD=279 Sept 09		TIME (GMT)		DRY BULB (°C)		WET BULB (°C)		PRESSURE (mb)		SEA STATE		VISIBILITY		WIND DIRN. (deg)		WIND SPD. (knts)		CLOUD (amt)		WEATHER		BOTTOM DEPTH (m)		STA. NAME/ID	
0515955.19N		17142.45W		29		2328		5.892.0984		835812		61		69		70M38															
CTD		TYPE & SN 9+ S/N 2067		TIMES DATA ON		JD/TIME		DATA LOCATION		Tape/Diskette ID MF09-04, leg 2		File Name/Header CTD		REMARKS		MAX. DEPTH = 67 m		w1064													
PRESS SN 2067		START DOWN																													
PRI COND SN 915		AT DEPTH																													
PRI TEMP SN 710		AT SURFACE																													
SEC COND SN 535																															
SEC TEMP SN 884																															
POS.		TRIP DEPTH		PH		DK		DOC		TOC		SALINITY		SAL.		MORDY'S NUTR.		CHL.		WHIT'S NUTR.											
1		50		13.34		129		130		131		132		133		134		135		136		137		138		139		140			
2		40		13.34		129		130		131		132		133		134		135		136		137		138		139		140			
3		30		13.34		129		130		131		132		133		134		135		136		137		138		139		140			
4		19		13.34		129		130		131		132		133		134		135		136		137		138		139		140			
5		19		13.34		129		130		131		132		133		134		135		136		137		138		139		140			
6		19		13.34		129		130		131		132		133		134		135		136		137		138		139		140			
7		19		13.34		129		130		131		132		133		134		135		136		137		138		139		140			
8		10		13.34		129		130		131		132		133		134		135		136		137		138		139		140			
9		0		13.34		129		130		131		132		133		134		135		136		137		138		139		140			
10				13.34		129		130		131		132		133		134		135		136		137		138		139		140			
11				13.34		129		130		131		132		133		134		135		136		137		138		139		140			
12				13.34		129		130		131		132		133		134		135		136		137		138		139		140			

PAR 4242
 WETSTAR 1036P
 SEC Dissolved Oxygen
 430904
 PRI Dissolved Oxygen
 430910

Cleaned air bleed valve

CTD CONVERTED MONITOR VALUES

SAMPLE BOTTLE DATA

SAMPLE BOTTLE NUMBER

1

134

149

VESSEL: NOAA R/V MILLER FREEMAN
 PROJECT & LEG: MF09-04, leg 2
 STATION DESIGNATION: 7370M39

CONSC CAST #	DEG	MIN	DEG	MIN	DATE	JD	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (knts)	CLOUD (amt)	TYPE	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
052	59	54	00	N	17	21	0	09	01	15	6.00	90.599	48.32	012	6	1							7370M39

CTD TYPE & SN: 9+ S/N 2067
 PRESS SN: 2067
 PRI COND SN: 915
 PRI TEMP SN: 710
 SEC COND SN: 535
 SEC TEMP SN: 884

DATA ON: _____
 START DOWN: _____
 AT DEPTH: _____
 AT SURFACE: _____

DATA LOCATION: Tape/Diskette ID: MF09-04, leg 2; File Name/Header: CTD052

REMARKS: ~~PRI COND SEEMS TO HAVE BEEN GUNKED UP DURING DESCENT~~
 MAX DEPTH = 69 m

PAR 4242 WET STAR 1036P SEC Dissolved Oxygen 430904 PRI Dissolved Oxygen 430910
 Cleaned air bleed valve

CTD CONVERTED MONITOR VALUES

POS.	TRIP DEPTH	pH	DK	DOC	TOC	SALINITY	SAL.	MORDY'S NUTR.	CHL.	WHIT'S NUTR.
1	69	/	46	/	78		335-140	139		
2	50							141		
3	40							142		
4	30							143		
5	20							144		
6	10							145		
7	0	9.2	50	2	89					
8										
9										
10										
11										
12										

02
74
74

70M39 also used BOC
 sediments w/o BOC

VESSEL NOAA RV MILLER FREEMAN		PROJECT & LEG MF09-04, leg 2				STATION DESIGNATION 70M40																							
CONC CAST #	LATITUDE	LONGITUDE	DATE	JD=213	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (knts)	CLOUD (amt)	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID													
05135954	63 N	17225 W	45	30	09	0317	5.5	92%			0048	310	18		74	76M40													
CTD		TIMES		JD/TIME		DATA LOCATION				REMARKS																			
TYPE & SN 9+ S/N 2067		DATA ON				Tape/Diskette ID MF09-04, leg 2				File Name/Header CTD053																			
PRESS SN 2067		START DOWN																											
PRI COND SN 915		AT DEPTH																											
PRI TEMP SN 710		AT SURFACE																											
SEC COND SN 535																													
SEC TEMP SN 884																													
		<input checked="" type="checkbox"/> PAR 4242		<input checked="" type="checkbox"/> WETSTAR 1036P		<input checked="" type="checkbox"/> SEC Dissolved Oxygen		430904		<input checked="" type="checkbox"/> PRI Dissolved Oxygen		430910		<input type="checkbox"/> Cleaned air bleed valve															
CTD CONVERTED MONITOR VALUES																													
POS.	TRIP DEPTH	pH				DK				DOC				TOC				SALINITY				SAL.		MORDY's NUTR.		CHL.		WHIT's NUTR.	
1	BoT																	336		146									
2	50																												
3	40																												
4	30																												
5	20																												
6	10																												
7	0																												
8																													
9																													
10																													
11																													
12																													

02
050

VESSEL NOAA RV MILLER FREEMAN		PROJECT & LEG MF09-04, leg 2				STATION DESIGNATION 70M41														
CONSC CAST #		LATITUDE		LONGITUDE		DATE JD= 333		TIME (GMT)		DRY BULB	WET BULB	PRESSURE	SEA STATE	VISIBILITY	WIND DIRN.	WIND SPD.	CLOUD (amt)	WEATHER	BOTTOM DEPTH	STA. NAME/ID
054		7958.67N		17244.44W		30 Sept 09		0454		5.3	93%	01473330	*	*	(deg)	(knts)	*	*	(m)	6870M41
CTD		TYPE & SN		TIMES		JD/TIME		DATA LOCATION				REMARKS								
		9+ S/N 2067		DATA ON				Tape/Diskette ID				File Name/Header								
		2067		START DOWN				MF09-04, leg 2				CTD 054								
		PRI COND SN		AT DEPTH																
		710		AT SURFACE																
		SEC COND SN																		
		535																		
		SEC TEMP SN																		
		884																		
MAX DEPTH = 63 m																				
POS.		TRIP DEPTH		CTD CONVERTED MONITOR VALUES		SAMPLE BOTTLE DATA		SAMPLE BOTTLE NUMBER				CLEANED AIR BLEED VALVE								
		63		PAR 4242		WETSTAR 1036P		SEC Dissolved Oxygen 430904				PRI Dissolved Oxygen 430910								
1		Bottom		/		/		/				333								
2		50		/		/		/				153								
3		40		/		/		/				154								
4		30		/		/		/				155								
5		20		/		/		/				156								
6		10		/		/		/				157								
7		0		/		/		/				158								
8				/		/		/				159								
9																				
10																				
11																				
12																				

Spike in sec. sal. Tally fresh?

VESSEL: NOAA RV MILLER FREEMAN
 PROJECT & LEG: MF09-04, leg 2
 STATION DESIGNATION: 70W42

CONSC CAST #	DEG	MIN	LONGITUDE	DEG	MIN	DATE	JD	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN (deg)	WIND SPD (knts)	CLOUD (amt)	WEATHER	BOTTOM DEPTH (m)	STA NAME/ID	
055	60	02.22	N	173	00.38	W	30	Sept	09	06	28	8	5.8	5.8	0547	4	3	46	167				68	

CTD TYPE & SN: 9+ S/N 2067
 PRESS SN: 2067
 PRI COND SN: 915
 PRI TEMP SN: 710
 SEC COND SN: 535
 SEC TEMP SN: 884
 DATA ON: _____
 START DOWN: _____
 AT DEPTH: _____
 AT SURFACE: _____
 TIMES: _____
 JD/TIME: _____
 DATA LOCATION: _____
 Tape/Diskette ID: MF09-04, leg 2
 File Name/Header: CTD055
 MAX. DEPTH = 63 m

PAR 4242
 WETSTAR 1036P
 SEC Dissolved Oxygen 430904
 PRI Dissolved Oxygen 430910
 Cleaned air bleed valve
 CTD CONVERTED MONITOR VALUES

POS.	TRIP DEPTH	pH	DK	DOC	TOC	SALINITY	SAL.	MORDY'S NUTR.	CHL.	WHIT'S NUTR.
1	63					338	160			
2	50						161			
3	40						162			
4	30						163			
5	20						164			
6	10						165			
7	0						166			
8										
9										
10										
11										
12										

02
 209

VESSEL NOAA RV MILLER FREEMAN		PROJECT & LEG MF09-04, leg 2				STATION DESIGNATION																									
CONSC CAST #		LATITUDE		LONGITUDE		DATE JD=223 DAY MO YR		TIME (GMT)		DRY BULB (°C)		WET BULB (°C)		PRESSURE (mb)		SEA STATE		VISIBILITY		WIND DIRN (deg)		WIND SPD (knts)		CLOUD (amt)		WEATHER		BOTTOM DEPTH (m)		STA. NAME/ID	
059		6034.48 N		17338.42 W		30 Sept 09		1234		4.778		5.10		355		11										69		10/14/09			
CTD		TYPE & SN		TIMES		JD/TIME		DATA LOCATION		REMARKS																					
		9+ S/N 2067		DATA ON				Tape/Diskette ID		File Name/Header																					
		2067		START DOWN				MF09-04, leg 2		CTD 059																					
		915		AT DEPTH																											
		710		AT SURFACE																											
		535																													
		884																													
SEC COND SN		884																													
SEC TEMP SN		884																													
PAR 4242		WETSTAR 1036P		SEC Dissolved Oxygen		430904		PFI Dissolved Oxygen		430910		Cleaned air bleed valve																			
CTD CONVERTED MONITOR VALUES		PH		DK		DOC		TOC		SALINITY		SAL.		MORDY'S NUTR.		CHL.		WHIT'S NUTR.													
1		63 @ depth								342		2		3		289															
2		50										3		4		283															
3		40										4		5		283															
4		30										5		6		283															
5		20										6		7		283															
6		10										7		8		283															
7		0										8		9																	
8												9		10																	
9												10		11																	
10												11		12																	
11												12																			
12																															

31
28
31
30
31
30

02-221

VESSEL: NOAA RV MILLER FREEMAN
 PROJECT & LEG: MF09-04, leg 2
 STATION DESIGNATION:

CONSC	LATITUDE	LONGITUDE	DATE	JD	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (knts)	CLOUD (amt)	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
	160 54.53 N	173 49.52 W	23	09	09	15	33	3	09	1.4	1.1	25.5			255	18			80	70M48

CTD TYPE & SN: 9+ S/N 2067
 PRESS SN: 2067
 PRI COND SN: 915
 PRI TEMP SN: 710
 SEC COND SN: 535
 SEC TEMP SN: 884

DATA ON: _____
 START DOWN: _____
 AT DEPTH: _____
 AT SURFACE: _____

Tape/Diskette ID: MF09-04, leg 2
 File Name/Header: CTD061

MAX. DEPTH = 75 m

PAR 4242
 METSTAR 1036P
 SEC Dissolved Oxygen 430904
 PRI Dissolved Oxygen 430910
 Cleaned air bleed valve

CTD CONVERTED MONITOR VALUES

POS.	TRIP DEPTH	pH	DK	DOC	TOC	SALINITY	SAL.	MORDY'S NUTR.	CHL.	WHIT'S NUTR.
------	------------	----	----	-----	-----	----------	------	---------------	------	--------------

1	95					34.4	16			
2	50						17	28.9		
3	40						18	28.3		
4	30						19	28.3		
5	20						20	28.3		
6	10						21	28.3		
7	0						22	28.3		
8										
9										
10										
11										
12										

02136

VESSEL: NOAA RV MILLER FREEMAN
 PROJECT & LEG: MF09-04, leg 2
 STATION DESIGNATION: 70MS0

CONSC CAST # 063
 LATITUDE 61 15.02 N
 LONGITUDE 173 44.52 W
 DATE JD= 223
 MO Sept 09
 TIME (GMT) 1831
 DRY BULB (°C) 4.4
 WET BULB (°C) 3.5
 PRESSURE (mb) 1018.2
 SEA STATE *
 VISIBILITY *
 WIND DIRN (deg) 290
 WIND SPD (knts) 14
 CLOUD (amt) *
 WEATHER *
 BOTTOM DEPTH (m) 7570
 STA. NAME/ID 063

CTD TYPE & SN 9+ S/N 2067
 PRESS SN 2067
 PRI COND SN 915
 PRI TEMP SN 710
 SEC COND SN 535
 SEC TEMP SN 884
 DATA ON _____
 START DOWN _____
 AT DEPTH _____
 AT SURFACE _____
 DATA LOCATION: Tape/Diskette ID MF09-04, leg 2; File Name/Header CTD 063
 REMARKS: MAX DEPTH = 70 m

PAR 4242
 WETSTAR 1036P
 SEC Dissolved Oxygen 430904
 PRI Dissolved Oxygen 430910
 Cleaned air bleed valve

CTD CONVERTED MONITOR VALUES

POS.	TRIP DEPTH	pH	DK	DOC	TOC	SALINITY	SAL.	MORDY'S NUTR.	CHL.	WHIT'S NUTR.
1	40					34.6	30			
2	50						31	X		
3	40						32	X		
4	30						33	X		
5	20						34	X		
6	10						35	X		
7	0						36	X		
8										
9										
10										
11										
12										

02167

VESSEL: NOAA RV MILLER FREEMAN
 PROJECT & LEG: MF09-04, leg 2
 STATION DESIGNATION: 70M51

CONSC CAST #	DEG	MIN	LONGITUDE	DEG	MIN	DATE	JD=	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN (deg)	WIND SPD (knts)	CLOUD (amt)	TYPE	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
064	61	24	173	44	40	20	20	Sept	09	19	58	5.5		13.1	1248	8	290	16	6				75	70M51

CTD TYPE & SN: 9+ S/N 2067
 PRESS SN: 2067
 PRI COND SN: 915
 PRI TEMP SN: 710
 SEC COND SN: 535
 SEC TEMP SN: 884

DATA ON: _____
 START DOWN: _____
 AT DEPTH: _____
 AT SURFACE: _____

Tape/Diskette ID: MF09-04, leg 2
 File Name/Header: CTD 064

MAX. DEPTH = 70 m

PAR 4242
 WETSTAR 1036P
 SEC Dissolved Oxygen 430904
 PRI Dissolved Oxygen 430910
 Cleaned air bleed valve

POS.	TRIP DEPTH	pH	DK	DOC	TOC	SALINITY	SAL.	MORDY's NUTR.	CHL.	WHIT's NUTR.
1	80.70	7.1	78	1	62		34.7	187		
2	50	7.2	70	2	64		34.7	189	283	
3	40			3				190	283	
4	30			3				191	283	
5	20			4				192	283	
6	10			4				193	283	
7	0			5						
8	0			DATA						
9										
10										
11										
12										

Second 0 bottle hung
 catch it on next cast

VESSEL NOAA RV MILLER FREEMAN		PROJECT & LEG MF09-04, leg 2				STATION DESIGNATION 70M52														
CONSC CAST #		LATITUDE		LONGITUDE		DATE JD=		TIME (GMT)		DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (knts)	CLOUD (amt)	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
065		6133.65 N		17342.72 W		30 Sept 09		2143	4.2	.	134	8280	18	6	7370	M52				
CTD		TYPE & SN 9+ S/N 2067		TIMES DATA ON		JD/TIME		DATA LOCATION Tape/Diskette ID MF09-04, leg 2				File Name/Header CTD 065		REMARKS						
PRESS SN 2067		PRI COND SN 915		START DOWN																
PRI TEMP SN 710		AT SURFACE																		
SEC COND SN 535																				
SEC TEMP SN 884																				
POS.		TRIP DEPTH		CTD CONVERTED MONITOR VALUES		SAMPLE BOTTLE DATA		SAMPLE BOTTLE NUMBER		CLEANED air bleed valve										
1		68		PAR 4242		WETSTAR 1036P		SEC Dissolved Oxygen 430904		PRI Dissolved Oxygen 430910										
2		50																		
3		40																		
4		30																		
5		20																		
6		10																		
7		0																		
8		0																		
9																				
10																				
11																				
12																				

02
212

VESSEL NOAA RV MILLER FREEMAN		PROJECT & LEG MF09-04, leg 2				STATION DESIGNATION 70M53									
CONSC CAST #	LATITUDE	LONGITUDE	DATE JD= DAY MO YR	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE *	VISIBILITY *	WIND DIRN. (deg)	WIND SPD. (knts)	CLOUD (amt) *	WEATHER *	BOTTOM DEPTH (m)	STA. NAME/ID
066	61 43.62 N	173 50.98 W	30 Sept 09	23011	5.6	.	1348	300	175					72	
CTD	TIMES		JD/TIME		DATA LOCATION					REMARKS					
TYPE & SN	9+ S/N 2067		DATA ON		Tape/Diskette ID					File Name/Header					
PRESS SN	2067		START DOWN		MF09-04, leg 2					CTD 066					
PRI COND SN	915		AT DEPTH												
PRI TEMP SN	710		AT SURFACE												
SEC COND SN	535														
SEC TEMP SN	884														
<input checked="" type="checkbox"/> PAR 4242 <input checked="" type="checkbox"/> METSTAR 1036P <input checked="" type="checkbox"/> SEC Dissolved Oxygen 430904 <input checked="" type="checkbox"/> PRI Dissolved Oxygen 430910 <input type="checkbox"/> Cleaned air bleed valve															
CTD CONVERTED MONITOR VALUES															
POS.	TRIP DEPTH	pH	DK	DOC	TOC	SALINITY	SAL.	MORDY'S NUTR.	CHL.	WHIT'S NUTR.					
1	8X	6	25	1	6		349	201							
2	50							202	X						
3	40							203	Y						
4	30							204	X						
5	20							205	Y						
6	10							206	X						
7	0	9	99	2	89			207	X						
8	0	BOM													
9															
10															
11															
12															

VESSEL NOAA RV MILLER FREEMAN		PROJECT & LEG MF09-04, leg 2				STATION DESIGNATION 70MS4																									
CONSC CAST #		LATITUDE		LONGITUDE		DATE JD=		TIME (GMT)		DRY BULB (°C)		WET BULB (°C)		PRESSURE		SEA STATE		VISIBILITY		WIND DIRN. (deg)		WIND SPD. (knts)		CLOUD (amt)		WEATHER		BOTTOM DEPTH (m)		STA. NAME/ID	
067		61511.83 N		17405.75 W		01 Sept 09		0035		3.5		.		133		8326		126										7270MS4			
CTD		TYPE & SN 9+ S/N 2067		TIMES DATA ON		JD/TIME		DATA LOCATION		Tape/Diskette ID MF09-04, leg 2		File Name/Header CTD 067		REMARKS		MAX. DEPTH = 68 m															
PRESS SN 2067		START DOWN																													
PRI COND SN 915		AT DEPTH																													
PRI TEMP SN 710		AT SURFACE																													
SEC COND SN 535																															
SEC TEMP SN 884																															
POS.		TRIP DEPTH		PH		DK		DOC		TOC		SALINITY		SAMPLE BOTTLE DATA		SAMPLE BOTTLE NUMBER		SAL.		MORDY'S NUTR.		CHL.		WHIT'S NUTR.							
1		80x																350		208											
2		50																209		x											
3		40																210		x											
4		30																211		x											
5		20																212		x											
6		10																213		x											
7		0																214		x											
8																															
9																															
10																															
11																															
12																															

PAR 4242 WETSTAR 1036P SEC Dissolved Oxygen 430904 PRI Dissolved Oxygen 430910 Cleaned air bleed valve

CTD CONVERTED MONITOR VALUES

20

190

VESSEL: NOAA RV MILLER FREEMAN
 PROJECT & LEG: MF09-04, leg 2
 STATION DESIGNATION: M8 South

CONC CAST #	DEG	MIN	LATITUDE	DEG	MIN	LONGITUDE	DATE	JD=	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN (deg)	WIND SPD (knts)	CLOUD (amt)	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID	
069	61	58.43	N	174	36.47	W	01	OCT	09	03	30	3.5	72%	15	38	3	10	10	6			76	

CTD TYPE & SN: 9+ S/N 2067
 PRESS SN: 2067
 PRI COND SN: 915
 PRI TEMP SN: 710
 SEC COND SN: 535
 SEC TEMP SN: 884
 DATA ON: _____
 START DOWN: _____
 AT DEPTH: _____
 AT SURFACE: _____
 TIMES: _____
 JD/TIME: _____
 DATA LOCATION: _____
 Tape/Diskette ID: MF09-04, leg 2
 File Name/Header: CTD 069
 REMARKS: MAX DEPTH = 71 m

PAR 4242
 WETSTAR 1036P
 SEC Dissolved Oxygen 430904
 PRI Dissolved Oxygen 430910
 Cleaned air bleed valve

CTD CONVERTED MONITOR VALUES

POS.	TRIP DEPTH	pH	DK	DOC	TOC	SALINITY	SAL.	MORDY'S NUTR.	CHL.	WHIT'S NUTR.
1	Bot					35.2	22.2			
2	50						22.3	X		
3	40						22.4	X		
4	30						22.5	X		
5	20						22.6	X		
6	10						22.7	X		
7	0						22.8	X		
8										
9										
10										
11										
12										

Ignore File 69 up until this cast!
 in Raw Data

162
 02

VADP

M8 North

VESSEL NOAA R/V MILLER FREEMAN		PROJECT & LEG MF09-04, leg 2				STATION DESIGNATION M8 North																					
CONSC CAST #		LATITUDE		LONGITUDE		DATE JD=2314 MO YR		TIME (GMT)		DRY BULB (°C)		WET BULB (°C)		PRESSURE (mb)		SEA STATE VISIBILITY		WIND DIRN. SPD. (deg) (knts)		CLOUD (amt) TYPE		WEATHER		BOTTOM DEPTH (m)		STA. NAME/ID	
0716225.01N		17442.44W		01 OCT 09		0817		2.8		35.		16		340		07								73			
CTD		TIMES		JD/TIME		DATA LOCATION		REMARKS																			
TYPE & SN 9+ S/N 2067		DATA ON				Tape/Diskette ID		File Name/Header																			
PRESS SN 2067		START DOWN				MF09-04, leg 2		CTD 071																			
PRI COND SN 915		AT DEPTH																									
PRI TEMP SN 710		AT SURFACE																									
SEC COND SN 535																											
SEC TEMP SN 884																											
PAR 4242		WETSTAR 1036P		SEC Dissolved Oxygen		430904		PRI Dissolved Oxygen		430910		Cleaned air bleed valve															
CTD CONVERTED MONITOR VALUES																											
POS. TRIP DEPTH		pH		DK		DOC		TOC		SALINITY		SAL.		MORDY's NUTR.		CHL.		WHIT's NUTR.									
1 Bot 19		/		/		/		/		354		236		237													
2 50																											
3 40																											
4 30																											
5 20																											
6 10																											
7 0																											
8																											
9																											
10																											
11																											
12																											

MAX DEPTH = 69 m

02

31
28
31
30
31
31
20
1

VESSEL: NOAA RV MILLER FREEMAN
 PROJECT & LEG: MF09-04, leg 2
 STATION DESIGNATION: M8 OPEN STAR

CONSC	CAST #	DEG	MIN	LONGITUDE	DEG	MIN	DATE	JD	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (knts)	CLOUD (amt)	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
	073621	11	6	5N	184	38	01	101	OCT	09	13	33	3.578.3	16		07511			07511				74	MSBCTA

CTD TYPE & SN: 9+ S/N 2067
 PRESS SN: 2067
 PRI COND SN: 915
 PRI TEMP SN: 710
 SEC COND SN: 535
 SEC TEMP SN: 884
 DATA ON: _____
 START DOWN: _____
 AT DEPTH: _____
 AT SURFACE: _____
 JD/TIME: _____
 DATA LOCATION: _____
 Tape/Diskette ID: MF09-04, leg 2
 File Name/Header: CTD073
 MAX. DEPTH = 70 m

PAR 4242
 WET STAR 1036P
 SEC Dissolved Oxygen 430904
 PRI Dissolved Oxygen 430910
 Cleaned air bleed valve

CTD CONVERTED MONITOR VALUES

POS.	TRIP DEPTH	pH	DK	DOC	TOC	SALINITY	SAL.	MORDY'S NUTR.	CHL.	WHITS NUTR.
1	70	8	/	1	/		35.0	38		
2	50	3	/	2	/		39	38.2		
3	40	4	/	3	/		40	38.9		
4	30	5	/	4	/		41	38.8		
5	21	6	/	5	/		42	38.3		
6	21							38.3		
7	21							38.3		
8	10	7	/	6	/		43	38.3		
9	0	8	/	7	/		44	38.3		
10										
11										
12										

38.3

VHDR

VESSEL NOAA RV MILLER FREEMAN		PROJECT & LEG MF09-04, leg 2				STATION DESIGNATION M2 CENITER																											
CONSC CAST #		LATITUDE		LONGITUDE		DATE JD=225		TIME (GMT)		DRY BULB (°C)		WET BULB (°C)		PRESSURE (mb)		SEA STATE		VISIBILITY		WIND DIRN. (deg)		WIND SPD. (knts)		CLOUD (amt)		TYPE		WEATHER		BOTTOM DEPTH (m)		STA. NAME/ID	
074		62/11.65N		174/39.46W		02 OCT 09		01/13		5.9		.		1537		145		14		8										73 MRCR			
CTD		TYPE & SN 9+ S/N 2067		TIMES DATA ON		JD/TIME		DATA LOCATION		Tape/Diskette ID MF09-04, leg 2		File Name/Header CTD 074		REMARKS AFTER SITE 8 DEPLOYMENTS		MAX. DEPTH = 71 m																	
PRESS SN 2067		START DOWN																															
PRI COND SN 915		AT DEPTH																															
PRI TEMP SN 710		AT SURFACE																															
SEC COND SN 535																																	
SEC TEMP SN 884																																	
POS.		TRIP DEPTH		PAR 4242		WETSTAR 1036P		SEC Dissolved Oxygen		430904		PRI Dissolved Oxygen		430910		Cleaned air bleed valve																	
				CTD CONVERTED MONITOR VALUES																													
1		0.2067																															
2		50																															
3		10																															
4		30																															
5		20																															
6		10																															
7		0																															
8																																	
9																																	
10																																	
11																																	
12																																	

1st cast with mark file
(add pressure to mark file of for this cast)

224

02

VESSEL NOAA R/V MILLER FREEMAN		PROJECT & LEG MF09-04, leg 2				STATION DESIGNATION 5L166																									
CONSC CAST #		LATITUDE		LONGITUDE		DATE JD= 275		TIME (GMT)		DRY BULB (°C)		WET BULB (°C)		PRESSURE (mb)		SEA STATE		VISIBILITY		WIND DIRN. (deg)		WIND SPD. (knts)		CLOUD (amt)		WEATHER		BOTTOM DEPTH (m)		STA. NAME/ID	
075		6144.95N		16830.00W		02 OCT 09		1830		5.085		7.10		085		AR												34		5L166	
CTD		TIMES		JD/TIME		DATA LOCATION		Tape/Diskette ID		File Name/Header		REMARKS																			
TYPE & SN		9+ S/N 2067		DATA ON				MF09-04, leg 2		CTD 075		Start of SL line																			
PRESS SN		2067		START DOWN								East end																			
PRI COND SN		915		AT DEPTH																											
PRI TEMP SN		710		AT SURFACE																											
SEC COND SN		535																													
SEC TEMP SN		884																													
POS.		TRIP DEPTH		pH		DK		DOC		TOC		SALINITY		SAL.		MORDY's NUTR.		CHL.		WHIT's NUTR.											
1		30		1		83		1		96				358		52		283													
2		20		1		83		1		96				358		53		283													
3		10		2		86		2		108				54		x283															
4		0		3		90		3		109				55		.283															
5		0		Poly																											
6																															
7																															
8																															
9																															
10																															
11																															
12																															

PAR 4242
 WETSTAR 1036P
 SEC Dissolved Oxygen
 430904
 PRI Dissolved Oxygen
 430910
 Cleaned air bleed valve

CTD CONVERTED MONITOR VALUES SAMPLE BOTTLE DATA SAMPLE BOTTLE NUMBER

MAX. DEPTH = 30 m

VESSEL NOAA R/V MILLER FREEMAN		PROJECT & LEG MF09-04, leg 2				STATION DESIGNATION SL1AR										
CONSC CAST #	LATITUDE	LONGITUDE	DATE	JD=	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE *	VISIBILITY *	WIND DIRN. (deg)	WIND SPD. (knts)	CLOUD (amt) %	WEATHER PE	BOTTOM DEPTH (m)	STA. NAME/ID
0766148	18.12N	159.1035W	02	09	2118	4.7		0776	0977	308					405	SL1AR
CTD	TIMES		JD/TIME		DATA LOCATION				REMARKS							
TYPE & SN	9+ S/N 2067	DATA ON			Tape/Diskette ID				File Name/Header							
PRESS SN	2067	START DOWN			MF09-04, leg 2				CTD 076							
PRI COND SN	915	AT DEPTH														
PRI TEMP SN	710	AT SURFACE							MAX DEPTH = 34 m							
SEC COND SN	535				5490/35 m				8640/20.7							
SEC TEMP SN	884								10750/10							
									12905/2							
POS. TRIP DEPTH		PAR 4242		WETSTAR 1036P		SEC Dissolved Oxygen 430904		PRI Dissolved Oxygen 430910		Cleansed air bleed valve		CTD CONVERTED MONITOR VALUES				
		pH	DK	DOC	TOC	SALINITY		SAL.	MORDY'S NUTR.	CHL.	WHIT'S NUTR.					
1	35	7.4	99	1	146	359		56	X							
2	20	7.5	94	2	117			57	X							
3	10	7.6	98	3	110			58	X							
4	0	7.7	97	4	102			59	X							
5																
6																
7																
8																
9																
10																
11																
12																

02
497

VESSEL NOAA R/V MILLER FREEMAN		PROJECT & LEG MF09-04, leg 2				STATION DESIGNATION																											
CONSC CAST #		LATITUDE		LONGITUDE		DATE JD= 276 DAY MO YR		TIME (GMT)		DRY BULB (°C)		WET BULB (°C)		PRESSURE (mb)		SEA STATE		VISIBILITY		WIND DIRN. (deg)		WIND SPD. (knts)		CLOUD (amt)		TYPE		WEATHER		BOTTOM DEPTH (m)		STA. NAME/ID	
07776150.94N		16951.03W		03		OCT 09		1733		3.8		91.7		044		6		028		19		8		2		44		54-11					
CTD		TIMES		JD/TIME		DATA LOCATION										REMARKS																	
TYPE & SN 9+ S/N 2067		DATA ON				Tape/Diskette ID		File Name/Header		Rosamond ops deck hiding ext log for at Lawrence MAX DEPTH = 4 m w1036																							
PRESS SN 2067		START DOWN				MF09-04, leg 2		CTD 077																									
PRI COND SN 915		AT DEPTH																															
PRI TEMP SN 710		AT SURFACE																															
SEC COND SN 535																																	
SEC TEMP SN 884																																	
POS. TRIP DEPTH		PH		DK		DOC		TOC		SALINITY		SAL		MORDY'S NUTR.		CHL.		WHIT'S NUTR.															
1 419		7		160		1		126		360		60		60		283		283															
2 30		2		82		2		98		61		61		283		283		283															
3 20		2		95		3		107		62		62		283		283		283															
4 10		5		87		4		120		63		63		283		283		283															
5 0										64		64		283		283		283															
6																																	
7																																	
8																																	
9																																	
10																																	
11																																	
12																																	

PAR 4242
 WETSTAR 1036P
 SEC Dissolved Oxygen
 430904
 PRI Dissolved Oxygen
 430910

Cleaned air bleed valve
 CTD CONVERTED MONITOR VALUES
 SAMPLE BOTTLE DATA
 SAMPLE BOTTLE NUMBER

VESSEL NOAA RV MILLER FREEMAN		PROJECT & LEG MF09-04, leg 2				STATION DESIGNATION 562A																							
CONSC CAST #		LATITUDE		LONGITUDE		DATE JD=276 OCT 09		TIME (GMT) 1953		DRY BULB (°C) 4.0		WET BULB (°C) 3.5 92%		PRESSURE (mb) 1064		SEA STATE * 7622		VISIBILITY * 228		WIND DIRN. (deg) 228		WIND SPD. (knts) * * * *		CLOUD (amt) TYPE WEATHER		BOTTOM DEPTH (m)		STA. NAME/ID	
078		6153.97N		17032.32W		03 OCT 09		1953		4.0		3.5 92%		1064		7622		228		* * * *						48		562A	
CTD		TYPE & SN 9+ S/N 2067		TIMES DATA ON		JD/TIME		DATA LOCATION		Tape/Diskette ID		File Name/Header		REMARKS															
PRESS SN 2067				START DOWN				MF09-04, leg 2		CTD 078																			
PRI COND SN 915				AT DEPTH																									
PRI TEMP SN 710				AT SURFACE																									
SEC COND SN 535																													
SEC TEMP SN 884																													
POS.		TRIP DEPTH		pH		DK		DOC		TOC		SALINITY		SAL.		MORDY's NUTR.		CHL.		WHIT's NUTR.									
1		43		92		81		88		101		96		361		65		66		67		68		69		70			
2		30'																											
3		20																											
4		15																											
5		0																											
6																													
7																													
8																													
9																													
10																													
11																													
12																													

PAR 4242
 METSTAR 1036P
 SEC Dissolved Oxygen
 PRI Dissolved Oxygen
 Cleaned air bleed valve

CTD CONVERTED MONITOR VALUES

SAMPLE BOTTLE DATA

SAMPLE BOTTLE NUMBER

MAX. DEPTH = 43 m

VESSEL NOAA RV MILLER FREEMAN		PROJECT & LEG MF09-04, leg 2				STATION DESIGNATION SL4A									
CONC CAST #	LATITUDE	LONGITUDE	DATE JD=	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (knts)	CLOUD (amt) TYPE	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
0796	156.65N	17113.82W	03 OCT 09	2159	3.8	3.8	08	47	020	207	*	*	*	51	SL4A
CTD	TIMES		JD/TIME	DATA LOCATION				REMARKS							
TYPE & SN	DATA ON			Tape/Diskette ID				File Name/Header							
2067				MF09-04, leg 2				CTD 079							
PRI COND SN	AT DEPTH														
915															
PRI TEMP SN	AT SURFACE														
710															
SEC COND SN															
535															
SEC TEMP SN															
884															
PAR 4242		WETSTAR 1036P		SEC Dissolved Oxygen		430904		PRI Dissolved Oxygen		430910		Cleaned air bleed valve			
CTD CONVERTED MONITOR VALUES															
POS.	TRIP DEPTH	pH		DK	DOC	TOC	SALINITY		SAL.	MORDY'S NUTR.	CHL.	WHIT'S NUTR.			
1	Bot 46	#7		/	#1	/	/		70	70	X				
2	40			/		/			71	71	X				
3	30	#8		/	#2	/			362	72	X				
4	20			/		/			73	73	X				
5	10	#9		/	#3	/			74	74	X				
6	0			/		/			75	75	X				
7															
8															
9															
10															
11															
12															

02
133

VESSEL NOAA R/V MILLER FREEMAN		PROJECT & LEG MF09-04, leg 2				STATION DESIGNATION SL 8A									
CONSC CAST #	LATITUDE DEG MIN	LONGITUDE DEG MIN	DATE JD- DAY MO YR	TIME (GMT) HR MIN	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE *	VISIBILITY *	WIND DIRN (deg)	WIND SPD. (knts)	CLOUD (amt) TYPE	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
0811	6202.50 N	17236.53 W	04 OCT 09	0228	3.2	11.5	8015	25	7					55	SL 8A
CTD	TIMES		JD/TIME	DATA LOCATION		REMARKS									
TYPE & SN	9+ S/N 2067		DATA ON	Tape/Diskette ID		File Name/Header									
PRESS SN	2067		START DOWN	MF09-04, leg 2		CTD081									
PRI COND SN	915		AT DEPTH												
PRI TEMP SN	710		AT SURFACE												
SEC COND SN	535														
SEC TEMP SN	884														
<input checked="" type="checkbox"/> PAR 4242 <input checked="" type="checkbox"/> WETSTAR 1036P <input checked="" type="checkbox"/> SEC Dissolved Oxygen 430904 <input checked="" type="checkbox"/> PRI Dissolved Oxygen 430910 <input type="checkbox"/> Cleaned air bleed valve															
CTD CONVERTED MONITOR VALUES															
POS.	TRIP DEPTH	pH	DK	DOC	TOC	SALINITY		SAL.	MORNY'S NUTR.	CHL.	WHIT'S NUTR.				
1	8.5	#6	108	#1	80			32	82	K					
2	40	#7	116	#2	141			33	83	K					
3	30		103		128			364	84	K					
4	20	#8	112	#3	134			85	85	K					
5	10		127		132			86	86	K					
6	5	#9	104	#4	77			87	87	K					
7															
8															
9															
10															
11															
12															

02 Sample was not the first draw
From the BOTTLE

02
211

VESSEL NOAA RV MILLER FREEMAN		PROJECT & LEG MF09-04, leg 2				STATION DESIGNATION 519A																									
CONSC CAST #		LATITUDE		LONGITUDE		DATE JD=		TIME (GMT)		DRY BULB (°C)		WET BULB (°C)		PRESSURE (mb)		SEA STATE		VISIBILITY		WIND DIRN. (deg)		WIND SPD. (knts)		CLOUD (amt)		WEATHER		BOTTOM DEPTH (m)		STA. NAME/ID	
0826205.83 N		17317.27 W		04 OCT 09		0446		2.8		1387		003		277														60519A			
CTD		TYPE & SN		TIMES		JD/TIME		DATA LOCATION		Tape/Diskette ID		File Name/Header		REMARKS																	
9+ S/N 2067		DATA ON								MF09-04, leg 2		CTD 082																			
PRESS SN 2067		START DOWN																													
PRI COND SN 915		AT DEPTH																													
PRI TEMP SN 710		AT SURFACE																													
SEC COND SN 535																															
SEC TEMP SN 884																															
MAX. DEPTH = 55 m																															
<input checked="" type="checkbox"/> PAR 4242 <input checked="" type="checkbox"/> WETSTAR 1036P <input checked="" type="checkbox"/> SEC Dissolved Oxygen 430904 <input checked="" type="checkbox"/> PRI Dissolved Oxygen 430910 <input type="checkbox"/> Cleaned air bleed valve		CTD CONVERTED MONITOR VALUES		SAMPLE BOTTLE DATA		SAMPLE BOTTLE NUMBER																									
POS.	TRIP DEPTH	pH		DK		DOC		TOC		SALINITY		SAL.		MORDY'S NUTR.		CHL.		WHIT'S NUTR.													
1	601 55	/		/		/		/		/		/		/		/		/													
2	40	/		/		/		/		/		/		/		/		/													
3	30	/		/		/		/		/		/		/		/		/													
4	20	/		/		/		/		/		/		/		/		/													
5	10	/		/		/		/		/		/		/		/		/													
6	0	/		/		/		/		/		/		/		/		/													
7		/		/		/		/		/		/		/		/		/													
8		/		/		/		/		/		/		/		/		/													
9		/		/		/		/		/		/		/		/		/													
10		/		/		/		/		/		/		/		/		/													
11		/		/		/		/		/		/		/		/		/													
12		/		/		/		/		/		/		/		/		/													

*Saved maybe
Bad bottle dup
cost re done
82A*

02
193

VESSEL NOAA R/V MILLER FREEMAN		PROJECT & LEG MF09-04, leg 2				STATION DESIGNATION SL9A									
CONSC CAST #	LATITUDE	LONGITUDE	DATE JD=	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (knts)	CLOUD (amt) TYPE	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
0826205.86 N	17317.06 W	04	OCT 09	0506	2.8	1.1	1367	003	277					60	
CTD	TIMES		JD/TIME		DATA LOCATION				REMARKS						
TYPE & SN	9+ S/N 2067		DATA ON		Tape/Diskette ID				File Name/Header						
PRESS SN	2067		START DOWN		MF09-04, leg 2				CTD 082A						
PRI COND SN	915		AT DEPTH												
PRI TEMP SN	710		AT SURFACE						MAX. DEPTH = 56 m						
SEC COND SN	535														
SEC TEMP SN	884														
<input checked="" type="checkbox"/> PAR 4242 <input checked="" type="checkbox"/> WETSTAR 1036P <input checked="" type="checkbox"/> SEC Dissolved Oxygen 430904 <input checked="" type="checkbox"/> PRI Dissolved Oxygen 430910 <input type="checkbox"/> Cleaned air bleed valve															
CTD CONVERTED MONITOR VALUES															
POS.	TRIP DEPTH	pH		DK	DOC	TOC	SALINITY		SAL.	MORDY'S NUTR.	CHL.	WHIT'S NUTR.			
1	6055	1		1	1	1				88					
2	40	1		1	1	1				89					
3	30	2		1	2	1				365	90				
4	20	3		1	3	1				51	91				
5	10	4		1	4	1				92	92				
6	0	5		1	5	1				93	93				
7															
8															
9															
10															
11															
12															

Second cast Hare 82A
1 Bottle did not Trip

02-193

VESSEL: NOAA RV MILLER FREEMAN
 PROJECT & LEG: MF09-04, leg 2
 STATION DESIGNATION: SL11A

CONSC CAST #	LATITUDE		LONGITUDE		DATE JD=		TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (knts)	CLOUD (amt) TYPE	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID	
	DEG	MIN	DEG	MIN	DAY	MO													YR
083	62	08.38	N	173	58.31	W	09	OCT	09	07	15	3.2	76%	19	58	003	204	64	SL11A

CTD TYPE & SN: 9+ S/N 2067
 PRESS SN: 2067
 PRI COND SN: 915
 PRI TEMP SN: 710
 SEC COND SN: 535
 SEC TEMP SN: 884

DATA ON: _____
 START DOWN: _____
 AT DEPTH: _____
 AT SURFACE: _____

Tape/Diskette ID: MF09-04, leg 2
 File Name/Header: CTD 083

MAX. DEPTH = 60 m

PAR 4242
 WETSTAR 1036P
 SEC Dissolved Oxygen 430904
 PRI Dissolved Oxygen 430910
 Cleaned air bleed valve

POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES										SAMPLE BOTTLE DATA		SAMPLE BOTTLE NUMBER		
		pH	DK	DOC	TOC	SALINITY	SAL.	MORDY'S NUTR.	CHL.	WHIT'S NUTR.						
1	80	8.0	1	1	1	366	94	95	96	97	98	99	100			
2	50	8.0	1	1	1											
3	40	8.0	1	1	1											
4	30	8.0	1	1	1											
5	20	8.0	1	1	1											
6	10	8.0	1	1	1											
7	0	8.0	1	1	1											
8																
9																
10																
11																
12																

File saved but cast again as 83A
 Bad bottle temp
 366

VESSEL NOAA R/V MILLER FREEMAN		PROJECT & LEG MF09-04, leg 2				STATION DESIGNATION SL11A	
CONSC CAST #		LATITUDE		LONGITUDE		DATE JD=	
083		6208.33N		17358.21W		09 OCT 09	
DEG MIN		DEG MIN		DAY MO YR		TIME (GMT)	
6 20 8.33		17 35 8.21		09 OCT 09		6733	
N		W				DRY BULB (°C)	
						3.2	
CTD		TIMES		JD/TIME		DATA LOCATION	
TYPE & SN		DATA ON		Tapel/Diskette ID		File Name/Header	
9+ S/N 2067				MF09-04, leg 2		CTD 083	
PRESS SN		START DOWN					
2067							
PRI COND SN		AT DEPTH					
915							
PRI TEMP SN		AT SURFACE					
710							
SEC COND SN							
535							
SEC TEMP SN							
884							
POS.		TRIP DEPTH		CTD CONVERTED MONITOR VALUES		CLEANED AIR BLEED VALVE	
1		R _{st} 61		pH		DK	
2		50		3		1	
3		40		5		2	
4		30		1		3	
5		20		1		4	
6		10		1		5	
7		0		1		6	
8							
9							
10							
11							
12							

Second attempt called 83A Bottle Fine sieve
 Second made in WOA for 83

VESSEL: NOAA R/V MILLER FREEMAN
 PROJECT & LEG: MF09-04, leg 2
 STATION DESIGNATION:

CONSC CAST #		LATITUDE		LONGITUDE		DATE JD=		TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (knts)	CLOUD (amt)	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
084	6212	12	11	174	17	07	04	09	33	3.169	5154	3442						68	SL12A

CTD TYPE & SN: 9+ S/N 2067
 PRESS SN: 2067
 PRI COND SN: 915
 PRI TEMP SN: 710
 SEC COND SN: 535
 SEC TEMP SN: 884
 DATA ON: _____
 START DOWN: _____
 AT DEPTH: _____
 AT SURFACE: _____
 TIMES: _____
 JD/TIME: _____
 DATA LOCATION: _____
 Tape/Diskette ID: MF09-04, leg 2
 File Name/Header: CTD084
 MAX. DEPTH = 65 m

PAR 4242
 WETSTAR 1036P
 SEC Dissolved Oxygen 430904
 PRI Dissolved Oxygen 430910
 Cleaned air bleed valve

CTD CONVERTED MONITOR VALUES

POS.	TRIP DEPTH	pH	DK	DOC	TOC	SALINITY	SAL.	MORDY's NUTR.	CHL.	WHIT's NUTR.
1	0.4							101		
2	5.0							102	.284	
3	10							103	.283	
4	30						267	104	.283	
5	20							105	.283	
6	10							106	.283	
7	0							107	.283	
8										
9										
10										
11										
12										

REMARKS: E CORNER MR68

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202

VESSEL NOAA RV MILLER FREEMAN		PROJECT & LEG MF09-04, leg 2				STATION DESIGNATION																									
CONSC CAST #		LATITUDE		LONGITUDE		DATE JD=277		TIME (GMT)		DRY BULB (°C)		WET BULB (°C)		PRESSURE (mb)		SEA STATE		VISIBILITY		WIND DIRN (deg)		WIND SPD (knts)		CLOUD (amt)		WEATHER		BOTTOM DEPTH (m)		STA. NAME/ID	
0815		62.12.11N		174.37.30W		04 OCT 09		1056		2.86		2.31		164		343		22										70		SL12	
CTD		TYPE & SN 9+ S/N 2067		TIMES		DATA ON		JD/TIME		DATA LOCATION		Tape/Diskette ID		File Name/Header		REMARKS															
PRESS SN 2067		START DOWN								MF09-04, leg 2		CTD085		MAX. DEPTH = 70 m		w/o															
PRI COND SN 915		AT DEPTH																													
PRI TEMP SN 710		AT SURFACE																													
SEC COND SN 535																															
SEC TEMP SN 884																															
POS.		TRIP DEPTH		PH		DK		DOC		TOC		SALINITY		SAL.		MORBY's NUTR.		CHL.		WHIT's NUTR.											
1		69		/		/		/		/		/		/		/		/		/											
2		50		2		/		2		/		/		/		/		/		/											
3		40		/		/		3		/		/		/		/		/		/											
4		30		/		/		4		/		/		/		/		/		/											
5		20		/		/		5		/		/		/		/		/		/											
6		10		/		/		6		/		/		/		/		/		/											
7		0		/		/		6		/		/		/		/		/		/											
8																															
9																															
10																															
11																															
12																															

CTD CONVERTED MONITOR VALUES

PAR 4242 METSTAR 1036P SEC Dissolved Oxygen 430904 PRI Dissolved Oxygen 430910

Cleaned air bleed valve

MOORINGS & SITES

VESSEL NOAA R/V MILLER FREEMAN		PROJECT & LEG MF09-04, leg 2				STATION DESIGNATION																									
CONSC CAST #		LATITUDE		LONGITUDE		DATE JD= 277		TIME (GMT)		DRY BULB (°C)		WET BULB (°C)		PRESSURE (mb)		SEA STATE		VISIBILITY		WIND DIRN (deg)		WIND SPD (knts)		CLOUD (amt)		WEATHER		BOTTOM DEPTH (m)		STA. NAME/ID	
0866211.98N		17509.02W		04 OCT 09		1243		2.7		6.7		7.174		330		23		330		23		330		23		79		SM14			
CTD		TIMES		JD/TIME		DATA LOCATION										REMARKS															
TYPE & SN 9+ S/N 2067		DATA ON				Tape/Diskette ID		File Name/Header																							
PRESS SN 2067		START DOWN				MF09-04, leg 2		CTD 086																							
PRI COND SN 915		AT DEPTH																													
PRI TEMP SN 710		AT SURFACE																													
SEC COND SN 535																															
SEC TEMP SN 884																															
		<input checked="" type="checkbox"/> PAR 4242		<input checked="" type="checkbox"/> WET STAR 1036P		<input checked="" type="checkbox"/> SEC Dissolved Oxygen		430904		<input checked="" type="checkbox"/> PRI Dissolved Oxygen		430910		<input type="checkbox"/> Cleaned air bleed valve																	
POS.		TRIP DEPTH		CTD CONVERTED MONITOR VALUES										SAMPLE BOTTLE DATA		SAMPLE BOTTLE NUMBER															
1		0 depth		pH		DK		DOC		TOC		SALINITY		SAL.		MORDY'S NUTR.		CHL.		WHIT'S NUTR.											
2		5m		6		/		/		/		/		/		/		/		/											
3		10		7		/		2		/		/		/		/		/		/											
4		30		7		/		/		/		/		/		/		/		/											
5		20		8		/		3		/		/		/		/		/		/											
6		10		8		/		/		/		/		/		/		/		/											
7		0		9		/		4		/		/		/		/		/		/											
8																															
9																															
10																															
11																															
12																															

MAX. DEPTH = 79 m

VESSEL NOAA RV MILLER FREEMAN		PROJECT & LEG MF09-04, leg 2				STATION DESIGNATION																							
CONSC CAST #		LATITUDE		LONGITUDE		DATE JD=277		TIME (GMT)		DRY BULB REL HUM		PRESSURE		SEA STATE		VISIBILITY		WIND DIRN		WIND SPD		CLOUD (amt)		WEATHER		BOTTOM DEPTH		STA. NAME/ID	
0876211.72N		17532.58W		04 OCT 09		1411		2.867.9		184		3.30		214												85		BLUES	
CTD		TIMES		JD/TIME		DATA LOCATION										REMARKS													
TYPE & SN 9+ S/N 2067		DATA ON				Tape/Diskette ID MF09-04, leg 2										File Name/Header CTD 087													
PRESS SN 2067		START DOWN																											
PRI COND SN 915		AT DEPTH																											
PRI TEMP SN 710		AT SURFACE														MAX. DEPTH = 80 m													
SEC COND SN 535																													
SEC TEMP SN 884																													
POS.		TRIP DEPTH		PH		DK		DOC		TOC		SALINITY		SAL.		MORDY'S NUTR.		CHL.		WHIT'S NUTR.									
1		80		1		/		1		/		/		184		185		289											
2		50		2		/		2		/		/		160		283													
3		10		3		/		3		/		/		.2710		1		283											
4		30		3		/		3		/		/				2		283											
5		20		3		/		3		/		/				3		283											
6		10		5		/		4		/		/				4		283											
7		0																											
8																													
9																													
10																													
11																													
12																													

PAR 4242
 WETSTAR 1036P
 SEC Dissolved Oxygen
 430904
 PRI Dissolved Oxygen
 430910
 CTD CONVERTED MONITOR VALUES

Cleaned air bleed valve

VESSEL: NOAA RV MILLER FREEMAN PROJECT & LEG: MF09-04, leg 2 STATION DESIGNATION: WM18

CONSC CAST # 0895959.06 N LATITUDE 17811.93 W DATE JD= 05 OCT 09 TIME (GMT) 0505 DRY BULB (°C) 4.5 REL HUM (%) 65% PRESSURE (mb) 2238 SEA STATE 3 VISIBILITY 306 WIND DIRN (deg) 11 WIND SPD. (knts) 7 CLOUD (amt) TYPE WEATHER BOTTOM DEPTH (m) 144 STA. NAME/ID

CTD TYPE & SN 9+ S/N 2067 DATA ON START DOWN AT DEPTH AT SURFACE TIMES JD/TIME DATA LOCATION: Tape/Diskette ID MF09-04, leg 2 File Name/Header CTD 089

SEC COND SN 535 SEC TEMP SN 884 PAR 4242 WETSTAR 1036P SEC Dissolved Oxygen 430904 PRI Dissolved Oxygen 430910 Cleaned air bleed valve

CTD CONVERTED MONITOR VALUES

POS.	TRIP DEPTH	pH	DK	DOC	TOC	SALINITY	SAL.	MORDY'S NUTR.	CHL.	WHIT'S NUTR.
1	8.1	7.1	1	1	1	32.2	12			
2	100	7.2	1	2	1		13			
3	50	7.3	1	3	1		14	289		
4	40						15	282		
5	30						16	283		
6	20						17	283		
7	10						18	282		
8	0	7.5	1	4	1		19	283		
9										
10										
11										
12										

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VESSEL NOAA RV MILLER FREEMAN		PROJECT & LEG MF09-04, leg 2				STATION DESIGNATION MN-17																									
CONSC CAST #		LATITUDE		LONGITUDE		DATE JD=		TIME (GMT)		DRY BULB (°C)		REL HUM (°C)		PRESSURE (mb)		SEA STATE		VISIBILITY		WIND DIRN (deg)		WIND SPD. (knts)		CLOUD (amt)		WEATHER		BOTTOM DEPTH (m)		STA. NAME/ID	
0910		5953.84 N		17735.72 W		05 OCT 09		0712		3.8		4.1		2238		320		107										138		MN-17	
CTD		TIMES		JD/TIME		DATA LOCATION		REMARKS																							
TYPE & SN		9+ S/N 2067		DATA ON																											
PRESS SN		2067		START DOWN																											
PRI COND SN		915		AT DEPTH																											
PRI TEMP SN		710		AT SURFACE																											
SEC COND SN		535																													
SEC TEMP SN		884																													
POS.		TRIP DEPTH		PH		DK		DOC		TOC		SALINITY		SAL.		MORDY's NUTR.		CHL.		WHIT's NUTR.											
1		607		/		/		/						37.5		20															
2		100		2		/		2								21															
3		75		3		/		3								22															
4		50		4		/		4								23		289													
5		40		5		/		5								24		283													
6		30		6		/		6								25		283													
7		20		7		/		7								26		283													
8		10		8		/		8								27		283													
9		0		9		/		9								28		283													
10																															
11																															
12																															

PAR 4242
 METSTAR 1036P
 SEC Dissolved Oxygen 430904
 PRI Dissolved Oxygen 430910

CTD CONVERTED MONITOR VALUES
 CTD CONVERTED MONITOR VALUES
 Cleaned air bleed valve

MAX. DEPTH = 133 m

Tape/Diskette ID MF09-04, leg 2
 File Name/Header CTD090

VESSEL NOAA RV MILLER FREEMAN			PROJECT & LEG MF09-04, leg 2					STATION DESIGNATION																								
CONSC CAST #			LATITUDE			LONGITUDE			DATE JD-278		TIME (GMT)		DRY BULB REL HUM		PRESSURE		SEA STATE		VISIBILITY		WIND DIRN.		WIND SPD.		CLOUD (amt)		WEATHER		BOTTOM DEPTH (m)		STA. NAME/ID	
0915954.24N			177100.35W			05 OCT 09		0945		4.066.5234		35007																136 MIN16				
CTD			TIMES			JD/TIME		DATA LOCATION										REMARKS														
TYPE & SN			9+ S/N 2067			DATA ON			Tape/Diskette ID			File Name/Header																				
PRESS SN			2067			START DOWN			MF09-04, leg 2			CTD091																				
PRI COND SN			915			AT DEPTH																										
PRI TEMP SN			710			AT SURFACE																										
SEC COND SN			535												MAX. DEPTH = 132 m																	
SEC TEMP SN			884												128																	
PAR 4242			<input checked="" type="checkbox"/> WETSTAR 1036P			<input checked="" type="checkbox"/> SEC Dissolved Oxygen			430904			<input checked="" type="checkbox"/> PRI Dissolved Oxygen			430910			<input type="checkbox"/> Cleaned air bleed valve														
CTD CONVERTED MONITOR VALUES																																
POS. TRIP DEPTH			CTD CONVERTED MONITOR VALUES												SAMPLE BOTTLE DATA				SAMPLE BOTTLE NUMBER													
1 133			pH			DK			DOC			TOC			SALINITY			SAL.			MORDY'S NUTR.			CHL.			WHITS NUTR.					
2 100			6			1			1			1						29			29											
3 75			9												30			30														
4 50			8			1			3			1			31			31			31											
5 40															32			32			32											
6 30															33			33			33											
7 20															34			34			34											
8 10															35			35			35											
9 0			1			1			4			1			37			37			37											
10																																
11																																
12																																

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VESSEL NOAA RV MILLER FREEMAN		PROJECT & LEG MF09-04, leg 2				STATION DESIGNATION																							
CONC CAST #		LATITUDE		LONGITUDE		DATE JD= 278		TIME (GMT)		DRY BULB REL HUM		PRESSURE		SEA STATE		VISIBILITY		WIND DIRN		WIND SPD		CLOUD (amt)		WEATHER		BOTTOM DEPTH (m)		STA NAME/ID	
0925954.14N		17624.22W		05 OCT 09		1158		41.162.0234		35009																140 MN15			
CTD		TYPE & SN		9+ S/N 2067		DATA ON		Tape/Diskette ID		File Name/Header		CTD 092		REMARKS		MAX. DEPTH = 136 m		w 10 132											
PRESS SN		2067		START DOWN																									
PRI COND SN		915		AT DEPTH																									
PRI TEMP SN		710		AT SURFACE																									
SEC COND SN		535																											
SEC TEMP SN		884																											
POS.		TRIP DEPTH		136		pH		DK		DOC		TOC		SALINITY		SAL.		MORDY'S NUTR.		CHL.		WHIT'S NUTR.							
1		100		1		1		1		2						38		29											
2		100		1		1		1		3						40		40											
3		100		1		1		1		4						41		41											
4		100		1		1		1		5						42		42											
5		100		1		1		1		6						43		43											
6		100		1		1		1		7						44		44											
7		100		1		1		1		8						45		45											
8		100		1		1		1		9						46		46											
9		100		1		1		1		10																			
10		100		1		1		1		11																			
11		100		1		1		1		12																			
12		100		1		1		1		13																			

PAR 4242
 WETSTAR 1036P
 SEC Dissolved Oxygen
 430904
 PRI Dissolved Oxygen
 430910
 Cleaned air bleed valve

CTD CONVERTED MONITOR VALUES

SAMPLE BOTTLE DATA SAMPLE BOTTLE NUMBER

VESSEL NOAA R/V MILLER FREEMAN		PROJECT & LEG MF09-04, leg 2				STATION DESIGNATION																							
CONSC CAST #		LATITUDE		LONGITUDE		DATE JD= 278 DAY MO YR		TIME (GMT)		DRY BUBB REL HUM		PRESSURE		SEA STATE		VISIBILITY		WIND DIRN.		WIND SPD.		CLOUD (amt)		WEATHER		BOTTOM DEPTH (m)		STA. NAME/END	
0925954.09 N		17548.33 W		05 OCT 09		1426		3.862.4234		30908		131		MNH															
CTD		TYPE & SN 9+ S/N 2067		TIMES		DATA ON		JD/TIME		DATA LOCATION		Tape/Diskette ID		File Name/Header		REMARKS		MAX. DEPTH =		m									
PRESS SN 2067		START DOWN								MF09-04, leg 2		CTD 093						w/o 123											
PRI COND SN 915		AT DEPTH																											
PRI TEMP SN 710		AT SURFACE																											
SEC COND SN 535																													
SEC TEMP SN 884																													
POS.		TRIP DEPTH		PH		DK		DOC		TOC		SALINITY		SAL.		MORDY'S NUTR.		CHL		WHIT'S NUTR.									
1		123 @ depth		6		/		/				376		47		48													
2		100		5.7		/		1								119													
3		75														20		289											
4		50						3								51		283											
5		30														52		283											
6		20														53		283											
7		10														54		283											
8		0						4								55		283											
9																													
10																													
11																													
12																													

CTD CONVERTED MONITOR VALUES

- PAR 4242
- WETSTAR 1036P
- SEC Dissolved Oxygen 430904
- PRI Dissolved Oxygen 430910
- Cleaned air bleed valve

02
176

VESSEL NOAA RV MILLER FREEMAN		PROJECT & LEG MF09-04, leg 2				STATION DESIGNATION													
CONSC CAST #		LATITUDE		LONGITUDE		DATE JD= 238		TIME (GMT)		1:2									
DEG MIN		DEG MIN		DAY MO YR		HR MIN		DRY BULB (°C)		REL HUM (°C)									
09 55 59 54		04 N		17 43 5		05 OCT 09		18 41		3.8 60.5 24									
CTD		TIMES		JD/TIME		DATA LOCATION													
TYPE & SN		9+ S/N 2067		DATA ON		Tape/Diskette ID		File Name/Header											
PRESS SN		2067		START DOWN		MF09-04, leg 2		CTD095											
PRI COND SN		915		AT DEPTH															
PRI TEMP SN		710		AT SURFACE															
SEC COND SN		535																	
SEC TEMP SN		884																	
		<input checked="" type="checkbox"/> PAR 4242		<input checked="" type="checkbox"/> WETSTAR 1036P		<input checked="" type="checkbox"/> SEC Dissolved Oxygen		430904		<input checked="" type="checkbox"/> PRI Dissolved Oxygen									
								430910		<input type="checkbox"/> Cleaned air bleed valve									
		CTD CONVERTED MONITOR VALUES																	
POS.	TRIP DEPTH	pH		DK		DOC		TOC		SALINITY		SAL.		MORDY'S NUTR.		CHL.		WHIT'S NUTR.	
1	2067	8		227		1		249				338		65					
2	106													66					
3	75	7		223		2		233						67					
4	50													68		289			
5	40	2		234		3		227						69		282			
6	30													70		282			
7	20													71		283			
8	10													72		282			
9	0	9		238		4		234						73		283			
10																			
11																			
12																			

MAX. DEPTH = 107 m

VESSEL: NOAA RV MILLER FREEMAN
 PROJECT & LEG: MF09-04, leg 2
 STATION DESIGNATION: MN11

CONSC CAST # 096
 LATITUDE 59 53.87 N
 LONGITUDE 173 59.41 W
 DATE JD=238
 MO OCT 09
 TIME (GMT) 2035
 DRY BULB (°C) 4.0
 REL HUM (°C) 59.0
 PRESSURE (mb) 1025.38
 SEA STATE *
 VISIBILITY *
 WIND DIRN (deg) 260
 WIND SPD (knts) 086
 CLOUD (amt) *
 TYPE *
 WEATHER *
 BOTTOM DEPTH (m) 162
 STA. NAME/ID MN11

CTD TYPE & SN 9+ S/N 2067
 DATA ON _____
 PRESS SN 2067
 START DOWN _____
 PRI COND SN 915
 AT DEPTH _____
 PRI TEMP SN 710
 AT SURFACE _____
 SEC COND SN 535
 SEC TEMP SN 884
 AT SURFACE _____
 MAX. DEPTH = 96 m

PAR 4242
 METSTAR 1036P
 SEC Dissolved Oxygen 430904
 PRI Dissolved Oxygen 430910
 Cleaned air bleed valve

CTD CONVERTED MONITOR VALUES

POS.	TRIP DEPTH	pH	DK	DOC	TOC	SALINITY	SAL.	MORDY's NUTR.	CHL.	WHIT's NUTR.
1	depth	7	229	1	229	37.9	37.9	74		
2	75	2	221	2	239			75		
3	50	3	230	3	235			76	289	
4	40	4	225	4	221			77	282	
5	30						37.9	78	283	
6	20	6	222	5	228			79	283	
7	10		233	8	248			80	283	
8	0	7	237	9	238			81	283	
9										
10										
11										
12										

Or
195

VESSEL NOAA RV MILLER FREEMAN		PROJECT & LEG MF09-04, leg 2				STATION DESIGNATION MN-10								
CONSC CAST #	LATITUDE DEG MIN	LONGITUDE DEG MIN	DATE JD= DAY MO YR	TIME (GMT) HR MIN	DRY BULB (°C)	REL HUM (°C)	PRESSURE (mb)	SEA STATE *	VISIBILITY *	WIND DIRN (deg)	WIND SPD. (knts)	CLOUD (amt) TYPE WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
0917	5954.06 N	17324.01 W	05 OCT 09	2253	5.0	58.0	02538	3	8	270	066		86	
CTD	TIMES		JD/TIME	DATA LOCATION				REMARKS						
TYPE & SN	9+ S/N 2067		DATA ON	Tape/Diskette ID				File Name/Header						
PRESS SN	2067		START DOWN	MF09-04, leg 2				CTD 097						
PRI COND SN	915		AT DEPTH											
PRI TEMP SN	710		AT SURFACE											
SEC COND SN	535													
SEC TEMP SN	884													
		<input checked="" type="checkbox"/> PAR 4242		<input checked="" type="checkbox"/> METSTAR 1036P		<input checked="" type="checkbox"/> SEC Dissolved Oxygen 430904		<input checked="" type="checkbox"/> PRI Dissolved Oxygen 430910				<input type="checkbox"/> Cleaned air-bleed valve		
POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES												
		pH	DK	DOC	TOC	SALINITY	SAL.	MORDY'S NUTR.	CHL.	WHIT'S NUTR.				
1	Bot	8	212	/	214		380	82						
2	60							83						
3	50	7	217	2	247		380	84	289					
4	40							85	283					
5	30	8	213	3	237			86	283					
6	20							87	283					
7	10							88	283					
8	0	9	205	4	232			89	283					
9														
10														
11														
12														

02
113

VESSEL: NOAA RV MILLER FREEMAN
 PROJECT & LEG: MF09-04, leg 2
 STATION DESIGNATION: Mn-09

CONSC CAST #	DEG	MIN	LATITUDE	DEG	MIN	LONGITUDE	DATE	JD=	YR	MO	HR	MIN	TIME (GMT)	DRY BULB (°C)	REL HUM (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN (deg)	WIND SPD (knts)	CLOUD (amt)	TYPE	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID	
69854	54	17	N	172	48	88	W	06	OCT	09	00	53	4.7	56.5	25	3	8	2	8	0	06	4			74	Mn-09

CTD TYPE & SN: 9+ S/N 2067
 PRESS SN: 2067
 PRI COND SN: 915
 PRI TEMP SN: 710
 SEC COND SN: 535
 SEC TEMP SN: 884

START DOWN: _____
 AT DEPTH: _____
 AT SURFACE: _____

Tape/Diskette ID: MF09-04, leg 2
 File Name/Header: CTD098

MAX. DEPTH = 70 m

PAR 4242
 WETSTAR 1036P
 SEC Dissolved Oxygen 430904
 PRI Dissolved Oxygen 430910
 Cleaned air bleed valve

CTD CONVERTED MONITOR VALUES

POS.	TRIP DEPTH	pH	DK	DOC	TOC	SALINITY	SAL.	MORDY'S NUTR.	CHL.	WHIT'S NUTR.
------	------------	----	----	-----	-----	----------	------	---------------	------	--------------

POS.	TRIP DEPTH	pH	DK	DOC	TOC	SALINITY	SAL.	MORDY'S NUTR.	CHL.	WHIT'S NUTR.
1	Bot	7	202	1	218	38.1	90	90	284	
2	50	2	211	2	216		91	92	283	
3	40	3	219	3	220		93	93	283	
4	30	4	206	4	243		94	94	283	
5	20	5	201	5	225		95	95	283	
6	10	6	218	6	187		96	96	283	
7	0	7	214	6	155					
8	0									
9										
10										
11										
12										

02-060

VESSEL NOAA R/V MILLER FREEMAN		PROJECT & LEG MF09-04, leg 2				STATION DESIGNATION MN-08										
CONSC CAST #	LATITUDE	LONGITUDE	DATE	JD=	TIME (GMT)	DRY BULB (°C)	REL HUM (°C)	PRESSURE (mb)	SEA STATE *	VISIBILITY *	WIND DIRN (deg)	WIND SPD. (knts)	CLOUD (amt) TYPE WEATHER *	BOTTOM DEPTH (m)	STA. NAME/ID	
0995953.90	N	17211.91	W	06	OCT	09	0306	4.9	60.0	263	8	300	06	2	73m	n-08
CTD		TIMES		JD/TIME		DATA LOCATION				REMARKS						
TYPE & SN 9+ S/N 2067		DATA ON				Tape/Diskette ID MF09-04, leg 2				File Name/Header CTD 099						
PRESS SN 2067		START DOWN														
PRI COND SN 915		AT DEPTH														
PRI TEMP SN 710		AT SURFACE								MAX. DEPTH = 67 m						
SEC COND SN 535																
SEC TEMP SN 884																
<input checked="" type="checkbox"/> PAR 4242 <input checked="" type="checkbox"/> WETSTAR 1036P <input checked="" type="checkbox"/> SEC Dissolved Oxygen 430904 <input checked="" type="checkbox"/> PRI Dissolved Oxygen 430910 <input type="checkbox"/> Cleaned air bleed valve		CTD CONVERTED MONITOR VALUES														
POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES										SAMPLE BOTTLE DATA		SAMPLE BOTTLE NUMBER		
		pH	DK	DOC	TOC	SALINITY	SAL.	MORDY'S NUTR.	CHL.	WHIT'S NUTR.						
1	8.0		/		/		382	97								
2	5.0		/		/			98	284							
3	4.0		/		/			99	283							
4	3.0		/		/			100	283							
5	2.0		/		/			101	283							
6	1.0		/		/			102	283							
7	0		/		/			103	283							
8																
9																
10																
11																
12																

-107

02

VESSEL: NOAA RV MILLER FREEMAN
 PROJECT & LEG: MF09-04, leg 2
 STATION DESIGNATION: MN-07

CONSC CAST # 100
 DEG 59 MIN 54.02
 LONGITUDE DEG 135 MIN 63 W
 DATE JD- 06 OCT 09
 TIME (GMT) 0459
 DRY BULB (°C) 4.4
 REL HUM (°C) 67.1
 PRESSURE (mb) 26.38
 SEA STATE *
 VISIBILITY *
 WIND DIRN (deg) 004
 WIND SPD (knts) 0.5
 CLOUD (amt) *
 WEATHER *
 BOTTOM DEPTH (m) 71
 STA. NAME/ID: MN-07

CTD TYPE & SN: 9+ S/N 2067
 PRESS SN: 2067
 PRI COND SN: 915
 PRI TEMP SN: 710
 SEC COND SN: 535
 SEC TEMP SN: 884
 DATA ON: _____
 START DOWN: _____
 AT DEPTH: _____
 AT SURFACE: _____
 TIMES: _____
 JD/TIME: _____
 DATA LOCATION: _____
 Tape/Diskette ID: MF09-04, leg 2
 File Name/Header: CTD_100
 MAX. DEPTH = 65 m

CTD CONVERTED MONITOR VALUES
 PAR 4242
 WETSTAR 1036P
 SEC Dissolved Oxygen 430904
 PRI Dissolved Oxygen 430910
 Cleaned air bleed valve

POS.	TRIP DEPTH	pH	DK	DOC	TOC	SALINITY	SAL.	MORDY'S NUTR.	CHL.	WHIT'S NUTR.
1	85	7.2	1	2	1	35.2	35.2	104		
2	20	7.2	1	2	1	35.2	35.2	105	289	
3	40	7.3	1	3	1	35.2	35.2	106	283	
4	30	7.5	1	4	1	35.2	35.2	107	283	
5	20	7.6	1	5	1	35.2	35.2	108	283	
6	10	7.7	1	6	1	35.2	35.2	109	283	
7	0	7.7	1	6	1	35.2	35.2	110	283	
8										
9										
10										
11										
12										

02
016

VESSEL NOAA RV MILLER FREEMAN		PROJECT & LEG MF09-04, leg 2				STATION DESIGNATION MN-06																							
CONSC CAST #		LATITUDE		LONGITUDE		DATE JD=		TIME (GMT)		DRY BULB REL HUM		PRESSURE		SEA STATE		VISIBILITY		WIND DIRN.		WIND SPD.		CLOUD (amt)		WEATHER		BOTTOM DEPTH		STA. NAME/ID	
101		5953.91 N		17059.78 W		06 OCT 09		0707		4.27		1.22		2638		050		062								70m		MN-06	
CTD		TYPE & SN		TIMES		JD/TIME		DATA LOCATION		REMARKS																			
		9+ S/N 2067		DATA ON				Tape/Diskette ID																					
		2067		START DOWN				MF09-04, leg 2																					
		915		AT DEPTH																									
		710		AT SURFACE																									
		535																											
		884																											
SEC COND SN		884																											
SEC TEMP SN		884																											
PRI TEMP SN		710																											
PRI COND SN		915																											
PRESS SN		2067																											
TYPE & SN		9+ S/N 2067																											
PAR 4242																													
METSTAR 1036P																													
SEC Dissolved Oxygen		430904																											
PRI Dissolved Oxygen		430910																											
Cleaned air bleed valve																													
CTD CONVERTED MONITOR VALUES																													
POS.	TRIP DEPTH	pH		DK		DOC		TOC		SALINITY		SAL.		MORDY'S NUTR.		CHL.		WHITS NUTR.											
1	85 65	8.7		/		2		/		38.4		111		112		289													
2	50	8.7		/										113		283													
3	40	8		/										114		283													
4	30	8		/		3		/						115		283													
5	20	8		/										116		283													
6	10	8		/										117		283													
7	0	8		/		4		/																					
8																													
9																													
10																													
11																													
12																													

182

02

VESSEL: NOAA RV MILLER FREEMAN
 PROJECT & LEG: MF09-04, leg 2
 STATION DESIGNATION: MN-05

CONC CAST #	DEG	MIN	LONGITUDE	DEG	MIN	DATE	JD	MO	YR	HR	MIN	TIME (GMT)	DRY BULB (°C)	REL HUM (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (knts)	CLOUD (amt)	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
102	25	58	48 N	170	23	06	09	09	09	09	02	09:02	4.0	72.1	1025.3			065	07			63	MN05

CTD TYPE & SN: 9+ S/N 2067
 PRESS SN: 2067
 PRI COND SN: 915
 PRI TEMP SN: 710
 SEC COND SN: 535
 SEC TEMP SN: 884

DATA ON: _____
 START DOWN: _____
 AT DEPTH: _____
 AT SURFACE: _____

Tape/Diskette ID: MF09-04, leg 2
 File Name/Header: CTD102

MAX. DEPTH = 53 m

PAR 4242
 WETSTAR 1036P
 SEC Dissolved Oxygen 430904
 PRI Dissolved Oxygen 430910
 Cleaned air bleed valve

CTD CONVERTED MONITOR VALUES

POS.	TRIP DEPTH	pH	DK	DOC	TOC	SALINITY	SAL.	MORNY'S NUTR.	CHL.	WHIT'S NUTR.
1	Bot	/	/	/	/		35.2	118		
2	50	2	/	2	/			119	289	
3	40	/	/	/	/			120	283	
4	30	3	/	3	/			121	283	
5	20	/	/	/	/			122	283	
6	10	/	/	/	/			123	283	
7	5	3	/	4	/			124	283	
8										
9										
10										
11										
12										

02
 196

w/o 55

21
 20
 19
 18
 17
 16
 15
 14
 13
 12
 11
 10
 9
 8
 7
 6
 5
 4
 3
 2
 1

10/25/04
10/25/04

VESSEL: NOAA R/V MILLER FREEMAN
 PROJECT & LEG: MF09-04, leg 2
 STATION DESIGNATION: _____

CONC CAST #	LATITUDE	LONGITUDE	DATE	JD = 229	TIME (GMT)	DRY BULB (°C)	REL HUM (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (knts)	CLOUD (amt)	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
103	59 53.81 N	169 48.34 W	06	OCT 09	11:14	4.27	1.02	103			022	13			52	MN04

CTD TYPE & SN: 9+ S/N 2067
 PRESS SN: 2067
 PRI COND SN: 915
 PRI TEMP SN: 710
 SEC COND SN: 535
 SEC TEMP SN: 884

DATA ON: _____
 START DOWN: _____
 AT DEPTH: _____
 AT SURFACE: _____

Tape/Diskette ID: MF09-04, leg 2
 File Name/Header: CTD 103

MAX. DEPTH = 47 m

PAR 4242
 WETSTAR 1036P
 SEC Dissolved Oxygen 430904
 PRI Dissolved Oxygen 430910
 Cleaned air bleed valve

CTD CONVERTED MONITOR VALUES

POS.	TRIP DEPTH	pH	DK	DOC	TOC	SALINITY	SAL.	MORDY'S NUTR.	CHL.	WHITT'S NUTR.
------	------------	----	----	-----	-----	----------	------	---------------	------	---------------

1	Alb	1	/	1	/			125	289	
2	40							126	283	
3	30	2	/	2	/			127	283	
4	20							128	283	
5	10							129	283	
6	0	3	/	3	/			130	282	
7										
8										
9										
10										
11										
12										

02
20p

VESSEL NOAA RV MILLER FREEMAN		PROJECT & LEG MF09-04, leg 2				STATION DESIGNATION															
CONSC CAST #		LATITUDE		LONGITUDE		DATE JD=279 OCT 09		TIME (GMT) 1308		DRY BULB REL HUM 4.7 69.4 23.3		PRESSURE SEA STATE VISIBILITY		WIND DIRN. DIRN. SPD. (knts)		CLOUD (amt) TYPE WEATHER		BOTTOM DEPTH (m)		STA. NAME/ID	
10459		53.73 N		169.12.34 W		06		1308		4.7 69.4 23.3		03017						45MN03			
CTD		TIMES		JD/TIME		DATA LOCATION		REMARKS													
TYPE & SN 9+ S/N 2067		DATA ON				Tape/Diskette ID MF09-04, leg 2		File Name/Header CTD 104													
PRESS SN 2067		START DOWN																			
PRI COND SN 915		AT DEPTH																			
PRI TEMP SN 710		AT SURFACE																			
SEC COND SN 535																					
SEC TEMP SN 884																					
		<input checked="" type="checkbox"/> PAR 4242		<input checked="" type="checkbox"/> WETSTAR 1036P		<input checked="" type="checkbox"/> SEC Dissolved Oxygen		430904		<input checked="" type="checkbox"/> PRI Dissolved Oxygen		430910		<input type="checkbox"/> Cleaned air bleed valve							
POS.		TRIP DEPTH		pH		DK		DOC		TOC		SALINITY		SAL.		MORDY'S NUTR.		CHL.		WHIT'S NUTR.	
		40		5		/		/4		/				38.7		131		283			
		30		/		/				/						132		283			
		20		/6		/		/5		/						133		283			
		10		/7		/		/6		/						134		283			
		0														135		283			

450

02
050

PG 1030R
V45R

VESSEL		PROJECT & LEG		STATION DESIGNATION												
NOAA RV MILLER FREEMAN		MF09-04, leg 2														
CONSC CAST #	LATITUDE	LONGITUDE	DATE JD=279	TIME (GMT)	DRY BULB (°C)	REL HUM (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (knts)	CLOUD (amt)	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID	
1055954	34.09 N	16835.98 W	06 OCT 09	1515	5.3	68.1	1003	0	050	20				39	MIN02	
CTD	TIMES		JD/TIME		DATA LOCATION		REMARKS									
TYPE & SN	9+ S/N 2067		DATA ON		Tape/Diskette ID		File Name/Header									
PRESS SN	2067		START DOWN		MF09-04, leg 2		CTD 105									
PRI COND SN	915		AT DEPTH													
PRI TEMP SN	710		AT SURFACE													
SEC COND SN	535															
SEC TEMP SN	884															
			<input type="checkbox"/> PAR 4242		<input checked="" type="checkbox"/> METSTAR 1036P		<input checked="" type="checkbox"/> SEC Dissolved Oxygen 430904		<input checked="" type="checkbox"/> PRI Dissolved Oxygen 430910		<input type="checkbox"/> Cleaned air bleed valve					
CTD CONVERTED MONITOR VALUES																
POS.	TRIP DEPTH	PH		DK	DOC	TOC	SALINITY		SAL.	MORDY'S NUTR.	CHL.	WHIT'S NUTR.	SAMPLE BOTTLE DATA			SAMPLE BOTTLE NUMBER
1	33	3.00		247		266	388		136	138	283					283
2	30			248		269			137	138	283					283
3	20									138	283					283
4	10			246		264			139	139	283					283
5	0			243		106			140	140	283					283
6																
7																
8																
9																
10																
11																
12																

02
58

MAX. DEPTH = 33 m
31

Handwritten signature

VESSEL: NOAA R/V MILLER FREEMAN
 PROJECT & LEG: MF09-04, leg 2
 STATION DESIGNATION:

CONSC CAST #	LATITUDE	LONGITUDE	DATE JD= 279	TIME (GMT)	DRY BULB (°C)	REL HUM (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (knts)	CLOUD (amt)	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
106	59 53.90 N	168 00.55 W	06 OCT 09	13 08	4.4	41.5	1017.4			068	28			30	MIN01

CTD TYPE & SN: 9+ S/N 2067
 PRESS SN: 2067
 PRI COND SN: 915
 PRI TEMP SN: 710
 SEC COND SN: 535
 SEC TEMP SN: 884

DATA ON: _____
 START DOWN: _____
 AT DEPTH: _____
 AT SURFACE: _____

DATA LOCATION: Tape/Diskette ID MF09-04, leg 2
 File Name/Header: CTD 106

REMARKS: _____

MAX. DEPTH = 26 m

PAR 4242
 METSTAR 1036P
 SEC Dissolved Oxygen 430904
 PRI Dissolved Oxygen 430910
 Cleaned air bleed valve

CTD CONVERTED MONITOR VALUES

POS.	TRIP DEPTH	pH	DK	DOC	TOC	SALINITY	SAL.	MORDY's NUTR.	CHL.	WHIT'S NUTR.
------	------------	----	----	-----	-----	----------	------	---------------	------	--------------

POS.	TRIP DEPTH	pH	DK	DOC	TOC	SALINITY	SAL.	MORDY's NUTR.	CHL.	WHIT'S NUTR.
1	26		275		268		389	141	283	
2	20		276		267			142	283	
3	10		242		195			143	283	
4	0		244		270			144	284	
5										
6										
7										
8										
9										
10										
11										
12										

02
74

VESSEL: NOAA RV MILLER FREEMAN PROJECT & LEG: MF09-04, leg 2 STATION DESIGNATION: CN-2

CONSC CAST #	LATITUDE	LONGITUDE	DATE JD=	TIME (GMT)	DRY BULB (°C)	REL HUM (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (knts)	CLOUD (amt)	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
103	57.38	118.56	16316	2200	7.29	70	1024	3	08	01	38			47	

CTD	TYPES & SN	DATA ON	JD/TIME	DATA LOCATION	REMARKS
	9+ S/N 2067			Tape/Diskette ID MF09-04, leg 2	
	PRESS SN 2067	START DOWN		File Name/Header CTD103	
	PRI COND SN 915	AT DEPTH			
	PRI TEMP SN 710	AT SURFACE			
	SEC COND SN 535				
	SEC TEMP SN 884				

PAR 4242
 METSTAR 1036P
 SEC Dissolved Oxygen 430904
 PRI Dissolved Oxygen 430910
 Cleaned air bleed valve

CTD CONVERTED MONITOR VALUES

POS.	TRIP DEPTH	pH	DK	DOC	TOC	SALINITY	SAL.	MORDY's NUTR.	CHL.	WHIT's NUTR.
1	88	/	279	/	294		390	145	283	
2	20							146	283	
3	20		280	2	287			147	283	
4	10							148	283	
5	0		281	3	300			149	283	
6										
7										
8										
9										
10										
11										
12										

VESSEL: NOAA RV MILLER FREEMAN PROJECT & LEG: MF09-04, leg 2 STATION DESIGNATION: CN-3

CONSC CAST #	LATITUDE	LONGITUDE	DATE JD=	TIME (GMT)	DRY BULB (°C)	REL HUM (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (knts)	CLOUD (amt)	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
108	51° 22.73' N	163° 31.95' W	08 OCT 09	0033	7.4	93.8	994	708	19	8				53	CN03

CTD TYPE & SN: 9+ S/N 2067 DATA ON: _____ JD/TIME: _____
 PRESS SN: 2067 START DOWN: _____
 PRI COND SN: 915 AT DEPTH: _____
 PRI TEMP SN: 710 AT SURFACE: _____
 SEC COND SN: 535
 SEC TEMP SN: 884
 DATA LOCATION: Tape/Diskette ID: MF09-04, leg 2 File Name/Header: CTD108
 REMARKS: MAX. DEPTH = 47 m

CTD CONVERTED MONITOR VALUES
 PAR 4242 WETSTAR 1036P SEC Dissolved Oxygen 430904 PRI Dissolved Oxygen 430910
 Cleaned air bleed valve

POS.	TRIP DEPTH	pH	DK	DOC	TOC	SALINITY	SAL.	MORDY's NUTR.	CHL.	WHIT's NUTR.
1	80	X	277	X	292	391	150	289		
2	10						151	283		
3	30		278		297		152	283		
4	20	X		X			153	283		
5	10						154	283		
6	0	X	282	X	283		155	283		
7										
8										
9										
10										
11										
12										

02
69

VESSEL: NOAA RV MILLER FREEMAN PROJECT & LEG: MF09-04, leg 2 STATION DESIGNATION: CN-4

CONSC CAST #	LATITUDE	LONGITUDE	DATE JD=	TIME (GMT)	DRY BULB (°C)	REL HUM (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (knts)	CLOUD (amt)	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
10195707	16347.76 N	17908.79 W	08 OCT 09	08228	7.0	98.1	9633	0617	11	8				67	CN-4

CTD TYPE & SN: 9+ S/N 2067 DATA ON: _____ JD/TIME: _____
 PRESS SN: 2067 START DOWN: _____
 PRI COND SN: 915 AT DEPTH: _____
 PRI TEMP SN: 710 AT SURFACE: _____
 SEC COND SN: 535
 SEC TEMP SN: 884

DATA LOCATION: Tape/Diskette ID: MF09-04, leg 2 File Name/Header: CTD_109

REMARKS: MAX. DEPTH = 60 m

PAR 4242 WETSTAR 1036P SEC Dissolved Oxygen 430904 PRI Dissolved Oxygen 430910 Cleaned air bleed valve

CTD CONVERTED MONITOR VALUES

POS.	TRIP DEPTH	PH	DK	DOC	TOC	SALINITY	SAL.	MORDY'S NUTR.	CHL.	WHIT'S NUTR.
1	60	8	283	1	274		34.5	156		
2	50							157	289	
3	40							158	283	
4	30	1	285	2	288			159	282	
5	20							160	283	
6	10							161	283	
7	0	8	284	3	295		392	162	283	
8										
9										
10										
11										
12										

Pri Cond. Skiff ≈ 48m

02
232

VESSEL NOAA RV MILLER FREEMAN		PROJECT & LEG MF09-04, leg 2				STATION DESIGNATION CM-5										
CONSC CAST #	LATITUDE	LONGITUDE	DATE JD=	TIME (GMT)	DRY BULB (°C)	REL HUM (%)	PRESSURE (mb)	SEA STATE *	VISIBILITY *	WIND DIRN. (deg)	WIND SPD. (knts)	CLOUD (amt) *	WEATHER *	BOTTOM DEPTH (m)	STA. NAME/ID	
1105653	88 N	16902.15 W	08 OCT 09	0508	6.9	99.4	993.4	032	14	8				71	CM-5	
CTD	TIMES		JD/TIME	DATA LOCATION				REMARKS								
TYPE & SN	9+ S/N 2067	DATA ON		Tape/Diskette ID				File Name/Header								
PRESS SN	2067	START DOWN		MF09-04, leg 2				CTD/110								
PRI COND SN	915	AT DEPTH														
PRI TEMP SN	710	AT SURFACE														
SEC COND SN	535															
SEC TEMP SN	884															
		<input checked="" type="checkbox"/> PAR 4242	<input checked="" type="checkbox"/> WETSTAR 1036P	<input checked="" type="checkbox"/> SEC Dissolved Oxygen	430904	<input checked="" type="checkbox"/> PRI Dissolved Oxygen	430910	<input type="checkbox"/> Cleaned air bleed valve								
POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES										SAMPLE BOTTLE DATA	SAMPLE BOTTLE NUMBER			
		pH	DK	DOC	TOC	SALINITY				SAL.	MORDY's NUTR.	CHL.	WHIT's NUTR.			
1	R ₀ T	/	/	/	/					37	163					
2	S ₀										164	289				
3	4 ₀										165	283				
4	2 ₀	2	/	2	/						166	283				
5	2 ₀										167	283				
6	1 ₀										168	283				
7	0	3	/	3	/						169	283				
8																
9																
10																
11																
12																

242

02

VESSEL: NOAA R/V MILLER FREEMAN PROJECT & LEG: MF09-04, leg 2 STATION DESIGNATION: CN-6

CONSC CAST #	LATITUDE	LONGITUDE	DATE	JD = 281	TIME (GMT)	DRY BULB (°C)	REL. HUM. (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (knts)	CLOUD (amt)	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
11115642	15 N	16430.16 W	08	OCT 09	08:39	6.399	39	913			060	18			75	CN-6

CTD TYPE & SN: 9+ S/N 2067 DATA ON: _____ JD/TIME: _____ DATA LOCATION: _____
 PRESS SN: 2067 START DOWN: _____ File Name/Header: _____
 PRI COND SN: 915 AT DEPTH: _____ CTD 111
 PRI TEMP SN: 710 AT SURFACE: _____
 SEC COND SN: 535
 SEC TEMP SN: 884
 MAX. DEPTH = 71 m

PAR 4242 WETSTAR 1036P SEC Dissolved Oxygen 430904 PRI Dissolved Oxygen 430910
 Cleaned air bleed valve

POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES										SAMPLE BOTTLE DATA		SAMPLE BOTTLE NUMBER		
		pH	DK	DOC	TOC	SALINITY	SAL.	MORDY's NUTR.	CHL.	WHIT's NUTR.						
1	8.5	8.5	/	/	/	88	170	289								
2	5.0	9.6	/	2	/		171	283								
3	4.0		/	3	/		172	283								
4	3.0		/	4	/		173	283								
5	2.0		/	5	/		174	283								
6	1.0		/	6	/		175	283								
7	0		/	7	/		176	283								
8																
9																
10																
11																
12																

88 145

02
220

W 10 68

91
28
30
31
32
33
34
35

VESSEL: NOAA R/V MILLER FREEMAN
 PROJECT & LEG: MF09-04, leg 2
 STATION DESIGNATION: 430910

CONSC CAST # 1125
 LATITUDE 56° 33.77' N
 LONGITUDE 164° 54.25' W
 DATE JD=281
 MO OCT 09
 TIME (GMT) 1027
 DRY BULB (°C) 8.0
 REL. HUM (%) 99.8
 PRESSURE (mb) 99.8
 SEA STATE 3
 VISIBILITY 3
 WIND DIRN. (deg) 100
 WIND SPD. (knts) 21
 CLOUD (amt) TYPE WEATHER
 BOTTOM DEPTH (m) 78
 STA. NAME/ID CIN-7

CTD TYPE & SN 9+ S/N 2067
 PRESS SN 2067
 PRI COND SN 915
 PRI TEMP SN 710
 SEC COND SN 535
 SEC TEMP SN 884
 DATA ON _____
 START DOWN _____
 AT DEPTH _____
 AT SURFACE _____
 DATA LOCATION: Tape/Diskette ID MF09-04, leg 2; File Name/Header CTD012
 REMARKS: MAX. DEPTH = 73 m
 W10 71

PAR 4242 WETSTAR 1036P SEC Dissolved Oxygen 430904 PRI Dissolved Oxygen 430910
 Cleaned air bleed valve
 CTD CONVERTED MONITOR VALUES

POS.	TRIP DEPTH	SAMPLE BOTTLE DATA				SAMPLE BOTTLE NUMBER			
		pH	DK	DOC	TOC	SALINITY	SAL.	MORDY's NUTR.	CHL.
1	10.5	/	/	/	/	81	137	289	
2	50					139	283		
3	40					180	283		
4	30					181	283		
5	20					182	283		
6	10					183	283		
7	0								
8									
9									
10									
11									
12									

02
 217

VESSEL: NOAA RV MILLER FREEMAN PROJECT & LEG: MF09-04, leg 2 STATION DESIGNATION:

CONSC CAST #	LATITUDE	LONGITUDE	DATE	TIME (GMT)	DRY BULB (°C)	REL HUM (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (knts)	CLOUD (amt)	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
113	56 25.39 N	165 19.02 W	08 OCT 09	1216	9.09	8.0	990			140	22			84	CN-8

CTD TYPE & SN: 9+ S/N 2067 DATA ON: _____ JD/TIME: _____
 PRESS SN: 2067 START DOWN: _____
 PRI COND SN: 915 AT DEPTH: _____
 PRI TEMP SN: 710 AT SURFACE: _____
 SEC COND SN: 535
 SEC TEMP SN: 884
 MAX. DEPTH = 81 m

PAR 4242
 WETSTAR 1036P
 SEC Dissolved Oxygen 430904
 PRI Dissolved Oxygen 430910
 Cleaned air bleed valve

CTD CONVERTED MONITOR VALUES

POS.	TRIP DEPTH	pH	DK	DOC	TOC	SALINITY	SAL.	MORDY'S NUTR.	CHL.	WHIT'S NUTR.
1	0 depth	7.8	1	1	1	32	18.4			
2	35	7.7	1	2	1	32	18.5			
3	50	7.6	1	3	1	32	18.6	289		
4	10	7.5	1	3	1	32	18.7	283		
5	30	7.4	1	4	1	32	18.8	283		
6	20	7.3	1	4	1	32	18.9	283		
7	10	7.2	1	5	1	32	19.0	283		
8	0	7.1	1	5	1	32	19.1	289		
9										
10										
11										
12										

143
02

VESSEL: NOAA RV MILLER FREEMAN PROJECT & LEG: MF09-04, leg 2 STATION DESIGNATION: MF09-04, leg 2

CONSC CAST #	LATITUDE	LONGITUDE	DATE JD=281	TIME (GMT)	DRY BULB (°C)	REL HUM (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (knts)	CLOUD (amt)	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
114516	16.72 N	16542.22 W	08 OCT 09	1419	8.89	11.59	990			125	15			92	CN-9

CTD	TYPE & SN	9+ S/N 2067	DATA ON	FILE NAME/HEADER	DATA LOCATION	REMARKS
	PRESS SN	2067	START DOWN	MF09-04, leg 2	CTD 114	
	PRI COND SN	915	AT DEPTH			
	PRI TEMP SN	710	AT SURFACE			
	SEC COND SN	535				
	SEC TEMP SN	884				

PAR 4242
 WETSTAR 1036P
 SEC Dissolved Oxygen 430904
 PRI Dissolved Oxygen 430910
 Cleaned air bleed valve

CTD CONVERTED MONITOR VALUES

POS.	TRIP DEPTH	pH	DK	DOC	TOC	SALINITY	SAL.	MORDY'S NUTR.	CHL.	WHIT'S NUTR.
1	0		/			95.1	95	7	289	
2	75		/			95.1	95	7	289	
3	50		/			95.1	95	7	289	
4	40		/			95.1	95	7	289	
5	30		/			95.1	95	7	289	
6	20		/			95.1	95	7	289	
7	10		/			95.1	95	7	289	
8	0		/			95.1	95	7	289	
9										
10										
11										
12										

MAX. DEPTH = 86 m

198
02

VESSEL: NOAA RV MILLER FREEMAN
 PROJECT & LEG: MF09-04, leg 2
 STATION DESIGNATION:

CONSC CAST #	LATITUDE	LONGITUDE	DATE JD= 281	TIME (GMT)	DRY BULB (°C)	REL HUM (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN (deg)	WIND SPD (knts)	CLOUD (amt)	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
1155608	18.51N	16605.81W	08 OCT 09	1602	28.88	390	12016							109	CN-110

CTD TYPE & SN: 9+ S/N 2067
 PRESS SN: 2067
 PRI COND SN: 915
 PRI TEMP SN: 710
 SEC COND SN: 535
 SEC TEMP SN: 884

DATA ON: _____
 START DOWN: _____
 AT DEPTH: _____
 AT SURFACE: _____

Tape/Diskette ID: MF09-04, leg 2
 File Name/Header: CTD 115

REMARKS: MAX. DEPTH = 104 m

PAR 4242
 METSTAR 1036P
 SEC Dissolved Oxygen 430904
 PRI Dissolved Oxygen 430910
 Cleaned air bleed valve

POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES				SAMPLE BOTTLE DATA		SAMPLE BOTTLE NUMBER		
		pH	DK	DOC	TOC	SALINITY	SAL.	MORDY'S NUTR.	CHL.	WHIT'S NUTR.
1	100		266		313		92	14		
2	100		265		327		15	16		
3	50		264		322		18	283		
4	50		262		303		20	283		
5	30		263		307		21	283		
6	30									
7	20									
8	10									
9	10									
10										
11										
12										

02
115

VESSEL: NOAA RV MILLER FREEMAN
 PROJECT & LEG: MF09-04, leg 2
 STATION DESIGNATION: 430910

CONSC CAST #	LATITUDE	LONGITUDE	DATE	JD=281	TIME (GMT)	DRY BULB (°C)	REL HUM (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN (deg)	WIND SPD (knts)	CLOUD (amt)	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
1165559	20 N	16630.32 W	08 OCT 09		1816	9.086	109039	11520							121	CN-11

CTD TYPE & SN: 9+ S/N 2067
 PRESS SN: 2067
 PRI COND SN: 915
 PRI TEMP SN: 710
 SEC COND SN: 535
 SEC TEMP SN: 884

DATA ON: _____
 START DOWN: _____
 AT DEPTH: _____
 AT SURFACE: _____

DATA LOCATION: Tape/Diskette ID MF09-04, leg 2; File Name/Header CTD 116

REMARKS: MAX. DEPTH = 121 m

PAR 4242 METSTAR 1036P SEC Dissolved Oxygen 430904 PRI Dissolved Oxygen 430910

Cleaned air bleed valve

POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES										SAMPLE BOTTLE DATA		SAMPLE BOTTLE NUMBER		
		pH	DK	DOC	TOC			SALINITY	SAL.	MORDY's NUTR.	CHL.	WHIT's NUTR.				
1	0 depth	7	261	3	309			90	23	28	283					
2	100								24							
3	75								25							
4	50	2	260	2	311				26		289					
5	40								27		283					
6	30								28		283					
7	20								29		283					
8	10								30		283					
9	0	3	259	3	306				31		283					
10																
11																
12																

02
86

VESSEL: NOAA RV MILLER FREEMAN
 PROJECT & LEG: MF09-04, leg 2
 STATION DESIGNATION: CN-12

CONSC CAST #	LATITUDE	LONGITUDE	DATE JD=281	TIME (GMT)	DRY BULB (°C)	REL HUM (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN (deg)	WIND SPD (knts)	CLOUD (amt)	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
1	55 50.87 N	166 54.82 W	08 OCT 09	2011	8.9	86.8	89	4	8	100	23	3		135	CN-12

CTD TYPE & SN: 9+ S/N 2067
 PRESS SN: 2067
 PRI COND SN: 915
 PRI TEMP SN: 710
 SEC COND SN: 535
 SEC TEMP SN: 884

DATA ON: _____
 START DOWN: _____
 AT DEPTH: _____
 AT SURFACE: _____

DATA LOCATION: File Name/Header: _____
 Tape/Diskette ID: MF09-04, leg 2
 CTD: 117

REMARKS: MAX. DEPTH = 130 m

PAR 4242 METSTAR 1036P SEC Dissolved Oxygen 430904 PRI Dissolved Oxygen 430910
 Cleaned air bleed valve

CTD CONVERTED MONITOR VALUES

POS.	TRIP DEPTH	pH	DK	DOC	TOC	SALINITY	SAL.	MORDY's NUTR.	CHL.	WHIT's NUTR.
1	130	/	258	/	304		32	32		
2	100	/	257	2	319		33	33		
3	75	/	306	3	321		34	34		
4	50	/	307	3	317		35	35		
5	40	/	307	3	317		36	36		
6	30	/	307	3	317		37	37		
7	20	/	307	3	317		38	38		
8	10	/	307	3	317		39	39		
9	0	/	307	3	317		40	40		
10										
11										
12										

VESSEL: NOAA RV MILLER FREEMAN
 PROJECT & LEG: MF09-04, leg 2
 STATION DESIGNATION: CN-13

CONSC CAST #	LATITUDE	LONGITUDE	DATE JD=	TIME (GMT)	DRY BULB (°C)	REL HUM (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN (deg)	WIND SPD (knts)	CLOUD (amt)	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
118	55° 11.72' N	167° 18.28' W	08 OCT 09	2221	9.0	84.1	8857	107	31	6				136	CN-13

CTD TYPE & SN: 9+ S/N 2067
 PRESS SN: 2067
 PRI COND SN: 915
 PRI TEMP SN: 710
 SEC COND SN: 535
 SEC TEMP SN: 884

DATA ON: _____
 START DOWN: _____
 AT DEPTH: _____
 AT SURFACE: _____

Tape/Diskette ID: MF09-04, leg 2
 File Name/Header: CTD 118

MAX. DEPTH = 131 m

PAR 4242
 WETSTAR 1036P
 SEC Dissolved Oxygen 430904
 PRI Dissolved Oxygen 430910

CTD CONVERTED MONITOR VALUES

Cleaned air bleed valve

POS.	TRIP DEPTH	pH	DK	DOC	TOC	SALINITY	SAL.	MORDY's NUTR.	CHL.	WHIT's NUTR.
1	131	✓	309	✓	305		73	41		
2	100							42		
3	75							43		
4	50		310	2	310			44	289	
5	40							45	283	
6	30							46	283	
7	20							47	283	
8	10							48	283	
9	0		301	3	323			49	283	
10										
11										
12										

219

02

VESSEL: NOAA RV MILLER FREEMAN
 PROJECT & LEG: MF09-04, leg 2
 STATION DESIGNATION: CN-13

CONSC CAST #	LATITUDE	LONGITUDE	DATE	TIME (GMT)	DRY BULB (°C)	REL HUM (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (knts)	CLOUD (amt)	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
1119	5541.50 N	16718.28 W	09 OCT 09	0912	8.8	81.3	915			125	30			130	CN-13

CTD TYPE & SN: 9+ S/N 2067
 PRESS SN: 2067
 PRI COND SN: 915
 PRI TEMP SN: 710
 SEC COND SN: 535
 SEC TEMP SN: 884

DATA ON: _____
 START DOWN: _____
 AT DEPTH: _____
 AT SURFACE: _____

DATA LOCATION: File Name/Header: _____
 Tape/Diskette ID: MF09-04, leg 2
 CTD 119

REMARKS: MAX. DEPTH = 131 m

PAR 4242
 METSTAR 1036P
 SEC Dissolved Oxygen 430904
 PRI Dissolved Oxygen 430910

Cleaned air bleed valve

POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES					SAMPLE BOTTLE DATA			SAMPLE BOTTLE NUMBER			
		pH	DK	DOC	TOC	SALINITY	SAL.	MORDY'S NUTR.	CHL.	WHIT'S NUTR.			
1	131						86						
2	100												
3	75												
4	50												
5	40												
6	30												
7	25												
8	10												
9	0												
10													
11													
12													

31
28
21
31
30
21
21
30
9

02
-155

86
222

FOR LAB USE
 V40R

VESSEL NOAA RV MILLER FREEMAN		PROJECT & LEG MF09-04, leg 2				STATION DESIGNATION															
CONSC CAST #		LATITUDE		LONGITUDE		DATE JD=282		TIME (GMT)		DRY BULB REL HUM		PRESSURE SEA STATE VISIBILITY		WIND DIRN. WIND SPD		CLOUD (amt) TYPE WEATHER		BOTTOM DEPTH (m)		STA. NAME/ID	
1205532.91N		16742.38W		09 OCT 09		1110		8.281.915		12528		12528		12528		12528		12528		12528	
CTD		TYPE & SN		TIMES		JD/TIME		DATA LOCATION				REMARKS									
9+ S/N 2067		DATA ON						Tape/Diskette ID MF09-04, leg 2				File Name/Header CTD\20									
PRESS SN 2067		START DOWN																			
PRI COND SN 915		AT DEPTH																			
PRI TEMP SN 710		AT SURFACE																			
SEC COND SN 535																					
SEC TEMP SN 884																					
												MAX. DEPTH = 130 m									
												w/o 128									
												<input checked="" type="checkbox"/> PAR 4242									
												<input checked="" type="checkbox"/> WETSTAR 1036P									
												<input checked="" type="checkbox"/> SEC Dissolved Oxygen 430904									
												<input checked="" type="checkbox"/> PRI Dissolved Oxygen 430910									
												<input type="checkbox"/> Cleaned air bleed valve									
POS. TRIP DEPTH		PH		DK		DOC		TOC		SALINITY		SAMP. BOTTLE DATA		SAMP. BOTTLE NUMBER		SAL. MORDY's NUTR. CHL. WHIT'S NUTR.					
1 131		1		/		1		/		/		/		/		37 50					
2 100		2		/		2		/		/		/		/		51					
3 35		3		/		3		/		/		/		/		52					
4 50		4		/		4		/		/		/		/		53 289					
5 40		5		/		/		/		/		/		/		54 285					
6 30		6		/		/		/		/		/		/		55 283					
7 20		7		/		/		/		/		/		/		56 285					
8 10		8		/		/		/		/		/		/		57 283					
9 0		9		/		/		/		/		/		/		58 283					
10		10		/		/		/		/		/		/							
11		11		/		/		/		/		/		/							
12		12		/		/		/		/		/		/							

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 02

VESSEL: NOAA RV MILLER FREEMAN
 PROJECT & LEG: MF09-04, leg 2
 STATION DESIGNATION:

CONSC CAST #	LATITUDE	LONGITUDE	DATE	TIME (GMT)	DRY BULB (°C)	REL HUM (%)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN (deg)	WIND SPD (knts)	CLOUD (amt)	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
121	55 22.43 N	168 11.52 W	09 OCT 09	1423	7.89	100	1012			125	22			551	CN-116

CTD TYPE & SN: 9+ S/N 2067
 PRESS SN: 2067
 PRI COND SN: 915
 PRI TEMP SN: 710
 SEC COND SN: 535
 SEC TEMP SN: 884
 DATA ON: _____
 START DOWN: _____
 AT DEPTH: _____
 AT SURFACE: _____
 TIMES: _____
 JD/TIME: _____
 DATA LOCATION: _____
 File Name/Header: CTD 121
 Tape/Diskette ID: MF09-04, leg 2
 MAX. DEPTH = 525 m

PAR 4242
 WET STAR 1036P
 SEC Dissolved Oxygen 430904
 PRI Dissolved Oxygen 430910
 Cleaned air bleed valve

CTD CONVERTED MONITOR VALUES

POS.	TRIP DEPTH	pH	DK	DOC	TOC	SALINITY	SAL.	MORDY'S NUTR.	CHL.	WHIT'S NUTR.
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1	500		/		/		94	59		
2	250		/		/			60		
3	50		/		/			61	289	
4	40		/		/			62	283	
5	30		/		/			63	283	
6	20		/		/			64	283	
7	10		/		/			65	283	
8	0		/		/			66	283	
9										
10										
11										
12										

527
526

02
205

even flow light comes on

VESSEL: NOAA RV MILLER FREEMAN
 PROJECT & LEG: MF09-04, leg 2
 STATION DESIGNATION: _____

CONSC CAST #	LATITUDE	LONGITUDE	DATE	JD=282	TIME (GMT)	DRY BULB (°C)	REL HUM (%)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN (deg)	WIND SPD (knts)	CLOUD (amt)	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
122552	1.60N	16813.09W	09 OCT 09	1653	7.59	2.19	92	1202			1202				1040	09N-17

CTD TYPE & SN: 9+ S/N 2067
 PRESS SN: 2067
 PRI COND SN: 915
 PRI TEMP SN: 710
 SEC COND SN: 535
 SEC TEMP SN: 884

DATA ON: _____
 START DOWN: _____
 AT DEPTH: _____
 AT SURFACE: _____

DATA LOCATION: File Name/Header: _____
 Tape/Diskette ID: MF09-04, leg 2
 CTD 122

REMARKS: PRI OXYGEN IS ERRATIC
 PRI OXYGEN IS ERRATIC
 MAX. DEPTH = 1001 m

PAR 4242 METSTAR 1036P SEC Dissolved Oxygen 430904 PRI Dissolved Oxygen 430910

CTD CONVERTED MONITOR VALUES

ERRATIC

Cleaned air bleed valve

POS.	TRIP DEPTH	pH	DK	DOC	TOC	SALINITY	SAL.	MORDY'S NUTR.	CHL.	WHIT'S NUTR.
1	1001		331		318		95	67		
2	500		314		298			68		
3	250		315		257			69		
4	100		326		279			70		
5	75							71		
6	50		321		272			72	289	
7	40							73	283	
8	30		336		320			74	282	
9	20							75	285	
10	10							76	283	
11	0		316		280			77	283	
12										

146
 97
 114
 02

VESSEL NOAA RV MILLER FREEMAN		PROJECT & LEG MF09-04, leg 2		STATION DESIGNATION											
CONSC CAST #	LATITUDE	LONGITUDE	DATE JD=282	TIME (GMT)	DRY BULB (°C)	REL HUM (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN (deg)	WIND SPD (knts)	CLOUD (amt)	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
102	55 06 . 99 N	176 8 28 . 79 W	09 OCT 09	2019	7.9	93.4	914	8	110	14	5			1710cm-19	
CTD	TIMES		DATA LOCATION		REMARKS										
TYPE & SN	9+ S/N 2067	DATA ON	Tape/Diskette ID		File Name/Header										
PRESS SN	2067	START DOWN	MF09-04, leg 2		CTD 123										
PRI COND SN	915	AT DEPTH													
PRI TEMP SN	710	AT SURFACE													
SEC COND SN	535														
SEC TEMP SN	884														
			PAR 4242		METSTAR 1036P		SEC Dissolved Oxygen 430904		PRI Dissolved Oxygen 430910		Cleaned air bleed valve				
POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES													
		pH	DK	DOC	TOC	SALINITY	SAL.	MORDY's NUTR.	CHL.	WHIT's NUTR.					
1	1000	✓	333	✓	284	163	78	79	80	81	82	83	84	85	86
2	1000	✓	329	✓	284										
3	500	✓	330	✓	330										
4	250	✓	334	✓	290										
5	100	✓	328	✓	254										
6	75	✓	327	✓	329										
7	50		335		291										
8	40														
9	30														
10	20														
11	10	✓	332	✓	275										
12															

75' popped in over
So no zero g/fld

222

150

092

02

VESSEL: NOAA RV MILLER FREEMAN PROJECT & LEG: MF09-04, leg 2 STATION DESIGNATION:

CONSC CAST #	1245458	LATITUDE	21 N	LONGITUDE	16845.38 W	DATE JD=	09 OCT 09	TIME (GMT)	2300	DRY BULB (°C)	8.4	REL HUM (°C)	93.2	PRESSURE (mb)	894	SEA STATE	8	VISIBILITY	6	WIND DIRN (deg)	63	WIND SPD. (knts)	05	CLOUD (amt)	8	WEATHER		BOTTOM DEPTH (m)	2016	STA. NAME/ID	CM-20
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CTD TYPE & SN: 9+ S/N 2067 DATA ON: _____
 PRESS SN: 2067 START DOWN: _____
 PRI COND SN: 915 AT DEPTH: _____
 PRI TEMP SN: 710 AT SURFACE: _____
 SEC COND SN: 535
 SEC TEMP SN: 884
 TAPES/DISKETTE ID: MF09-04, leg 2
 FILE NAME/HEADER: CTD 124
 MAX. DEPTH = 1502 m

PAR 4242 WETSTAR 1036P SEC Dissolved Oxygen 430904 PRI Dissolved Oxygen 430910
 Cleaned air bleed valve

POS.	TRIP DEPTH	pH	DK	DOC	TOC	SALINITY	SAL.	MORDY'S NUTR	CHL.	WHIT'S NUTR.
1	1500	1	320	1	265			89		
2	1600	2	323	2	332			90		
3	508	3	325	3	258		080	91		
4	250		322		328			92		
5	100		324		263			93		
6	50		317		531			94	269	
7	40							95	283	
8	30		319		252			96	283	
9	20							97	283	
10	10							98	283	
11	0		318		314			99	283	
12										

Cleaned p100 on primary O2
 Better these now,

72 132 149

02
 72
 132
 149

VESSEL: NOAA RV MILLER FREEMAN
 PROJECT & LEG: MF09-04, leg 2
 STATION DESIGNATION: CN-21

CONSC CAST #	1255440.1	LATITUDE DEG MIN	40.1	N	LONGITUDE DEG MIN	169.11.38	W	DATE	10	MO	OCT	YR	09	TIME (GMT) HR MIN	03:08	DRY BULB (°C)	7.79	REL HUM (°C)	2.1	PRESSURE (mb)	844.8	SEA STATE	8	VISIBILITY	3.25	WIND DIRN (deg)	08	WIND SPD (knts)	08	CLOUD (amt)		WEATHER		BOTTOM DEPTH (m)	1688	STA. NAME/ID	CN-21
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CTD TYPE & SN: 9+ S/N 2067
 PRESS SN: 2067
 PRI COND SN: 915
 PRI TEMP SN: 710
 SEC COND SN: 535
 SEC TEMP SN: 884

DATA ON: _____
 START DOWN: _____
 AT DEPTH: _____
 AT SURFACE: _____

DATA LOCATION: File Name/Header: CTD_125
 Tape/Diskette ID: MF09-04, leg 2

REMARKS: MAX. DEPTH = 1500 m

PAR 4242 WETSTAR 1036P SEC Dissolved Oxygen 430904 PRI Dissolved Oxygen 430910 Cleaned air bleed valve

POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES										SAMPLE BOTTLE DATA		SAMPLE BOTTLE NUMBER																								
		pH	DK	DOC	TOC	SALINITY	SAL.	MORDY's NUTR.	CHL.	WHIT's NUTR.	DOC	TOC	SALINITY	SAL.	MORDY's NUTR.	CHL.	WHIT's NUTR.																					
1	1500	X		X																																		
2	1000	X		X																																		
3	500	X		X																																		
4	250	X		X																																		
5	100	X		X																																		
6	50	X		X																																		
7	40	X		X																																		
8	30	X		X																																		
9	20	X		X																																		
10	10	X		X																																		
11	0	X		X																																		
12																																						

102
105
159
164

VESSEL NOAA RV MILLER FREEMAN		PROJECT & LEG MF09-04, leg 2				STATION DESIGNATION CN-22									
CONSC CAST #	LATITUDE DEG MIN	LONGITUDE DEG MIN	DATE JD= DAY MO YR	TIME (GMT) HR MIN	DRY BULB (°C)	REL HUM (°C)	PRESSURE (mb)	SEA STATE *	VISIBILITY *	WIND DIRN. (deg)	WIND SPD. (knts)	CLOUD (amt) *	WEATHER *	BOTTOM DEPTH (m)	STA. NAME/ID
126	5426.29 N	16906.61 W	10 OCT 09	0559	21.39	82.9	8048	300	126					16	CN-22
CTD		TIMES		DATA LOCATION		REMARKS									
TYPE & SN 9+ S/N 2067		DATA ON		Tape/Diskette ID		File Name/Header									
PRESS SN 2067		START DOWN		MF09-04, leg 2		CTD 126									
PRI COND SN 915		AT DEPTH													
PRI TEMP SN 710		AT SURFACE													
SEC COND SN 535															
SEC TEMP SN 884															
		<input type="checkbox"/> PAR 4242 <input type="checkbox"/> WETSTAR 1036P <input checked="" type="checkbox"/> SEC Dissolved Oxygen 430904 <input checked="" type="checkbox"/> PRI Dissolved Oxygen 430910 <input type="checkbox"/> Cleaned air bleed valve		CTD CONVERTED MONITOR VALUES											
POS.	TRIP DEPTH	pH		DK	DOC	TOC	SALINITY		SAL.	MORDY'S NUTR.	CHL.	WHIT'S NUTR.			
1	1500						84		111						
2	1200						112		112						
3	500						113		113						
4	250						114		114						
5	100						115		115						
6	50						116		116	289					
7	40						117		117	283					
8	30						118		118	283					
9	20						119		119	283	171				
10	10						120		120	283					
11	0						121		121	283					
12															

179

02

119

168

171

MAX DEPTH = 1501 m

JADK

VESSEL NOAA R/V MILLER FREEMAN		PROJECT & LEG MF09-04, leg 2				STATION DESIGNATION CN-23																							
CONSC CAST #		LATITUDE		LONGITUDE		DATE JD=		TIME (GMT)		DRY BULB REL HUM		PRESSURE		SEA STATE		VISIBILITY		WIND DIRN.		WIND SPD.		CLOUD (amt)		WEATHER		BOTTOM DEPTH		STA. NAME/ID	
127		18.00N		151.15W		10 OCT 09		0848		71.094.3793		26017														1806CN-23			
CTD		TYPE & SN		TIMES		JD/TIME		DATA LOCATION		Tape/Diskette ID		File Name/Header		REMARKS															
		9+ S/N 2067		DATA ON						MF09-04, leg 2		CTD 127																	
PRESS SN		2067		START DOWN																									
PRI COND SN		915		AT DEPTH																									
PRI TEMP SN		710		AT SURFACE																									
SEC COND SN		535																											
SEC TEMP SN		884																											
POS.		TRIP DEPTH		PH		DK		DOC		TOC		SALINITY		SAL.		MORDY'S NUTR.		CHL.		WHIT'S NUTR.									
1		1500												78		122													
2		1000														123													
3		500														124													
4		250														125													
5		100														126													
6		50														127		289											
7		40														128		283											
8		30														129		283											
9		20														130		283											
10		10														78		131		283									
11		0														132		283											
12																													

PAR 4242
 WETSTAR 1036P
 SEC Dissolved Oxygen
 430904
 PRI Dissolved Oxygen
 430910
 Cleaned air bleed valve

CTD CONVERTED MONITOR VALUES

MAX. DEPTH = 1503 m

END Bearing Sea portion of MF-09-4 leg 2

02
207
93

VESSEL: NOAA RV MILLER FREEMAN PROJECT & LEG: MF09-04, leg 2 STATION DESIGNATION: Pauloff Bank

CONSC	LATITUDE	LONGITUDE	DATE	JD=	TIME (GMT)	DRY BULB (°C)	REL HUM (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN (deg)	WIND SPD (knts)	CLOUD (amt)	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
128	5510.55 N	16141.08 W	12	OCT	09	1532	8.8	94.8	1027	2	90	09			81	

CTD TYPE & SN: 9+ S/N 2067 DATA ON: _____ JD/TIME: _____
 PRESS SN: 2067 START DOWN: _____
 PRI COND SN: 915 AT DEPTH: _____
 PRI TEMP SN: 710 AT SURFACE: _____
 SEC COND SN: 535
 SEC TEMP SN: 884

PAR 4242 WETSTAR 1036P SEC Dissolved Oxygen 430904 PRI Dissolved Oxygen 430910
 Cleaned air bleed valve

POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES										SAMPLE BOTTLE DATA		SAMPLE BOTTLE NUMBER		
		pH	DK	DOC	TOC	SALINITY	SAL.	MORDY'S NUTR.	CHL.	WHIT'S NUTR.						
1	81						74									
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																

REMARKS: Pre Recovery CTD at Pauloff

MAX. DEPTH = 81 m

VESSEL: NOAA RV MILLER FREEMAN
 PROJECT & LEG: MF09-04, leg 2
 STATION DESIGNATION: *Pa 1015 Bay*

CONSC	LATITUDE	LONGITUDE	DATE	JD=	TIME (GMT)	DRY BULB (°C)	REL HUM (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (knts)	CLOUD (amt)	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
129	55 11.03 N	161 40.9 W	12	OCT	09	1835	8.9	69.5	1138	355	23	6			98	

CTD TYPE & SN: 9+ S/N 2067
 DATA ON: _____
 JD/TIME: _____

PRESS SN: 2067
 START DOWN: _____
 File Name/Header: CTD/29

PRI COND SN: 915
 AT DEPTH: _____

PRI TEMP SN: 710
 AT SURFACE

SEC COND SN: 535
 SEC TEMP SN: 884

PAR 4242 WETSTAR 1036P SEC Dissolved Oxygen 430904 PRI Dissolved Oxygen 430910 Cleaned air bleed valve

POS.	TRIP DEPTH	pH	DK	DOC	TOC	SALINITY	SAL.	MORDY's NUTR.	CHL.	WHIT'S NUTR.
1	93						79			
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										

CTD CONVERTED MONITOR VALUES

SAMPLE BOTTLE DATA

SAMPLE BOTTLE NUMBER

VESSEL NOAA R/V MILLER FREEMAN		PROJECT & LEG MF09-04, leg 2				STATION DESIGNATION																					
CONSC CAST #		LATITUDE		LONGITUDE		DATE JD= DEG MIN DAY MO YR		TIME (GMT)		DRY BULB REL HUM (°C) (°C)		PRESSURE (mb)		SEA STATE * * *		VISIBILITY * * *		WIND DIRN. WIND SPD. (deg) (knts)		CLOUD (amt) TYPE		WEATHER		BOTTOM DEPTH (m)		STA. NAME/ID	
13057193.47N		15217.94W		14 OCT 09		0219		9.399.11633		5		05008		6		1610											
CTD		TIMES		JD/TIME		DATA LOCATION		REMARKS																			
TYPE & SN 9+ S/N 2067		DATA ON				Tape/Diskette ID MF09-04, leg 2		File Name/Header CTD 130																			
PRESS SN 2067		START DOWN																									
PRI COND SN 915		AT DEPTH																									
PRI TEMP SN 710		AT SURFACE																									
SEC COND SN 535																											
SEC TEMP SN 884																											
POS. TRIP DEPTH		PH		DK		DOC		TOC		SALINITY		SAL.		MORDY'S NUTR.		CHL.		WHIT'S NUTR.									
1 Bot										76																	
2																											
3																											
4																											
5																											
6																											
7																											
8																											
9																											
10																											
11																											
12																											

PAR 4242
 WETSTAR 1036P
 SEC Dissolved Oxygen 430904
 PRI Dissolved Oxygen 430910

CTD CONVERTED MONITOR VALUES

Cleaned air bleed valve

Secondary O2 flow

O2 FTE'd shallower than mooring
 will set up loops on 131

Pre-recovery at
 08-CB-1A1

MAX. DEPTH = 155 m

VESSEL NOAA RV MILLER FREEMAN		PROJECT & LEG MF09-04, leg 2				STATION DESIGNATION															
CONSC CAST #		LATITUDE		LONGITUDE		DATE JD=		TIME (GMT)		DRY BULB REL HUM		PRESSURE SEA STATE VISIBILITY		WIND DIRN. WIND SPD. CLOUD (amt) TYPE WEATHER		BOTTOM DEPTH (m)		STA. NAME/ID			
131		5743.30 N		152 16.8 W		14 OCT 09		0929		9.7 99.5		0235		11104		185					
CTD		TYPE & SN 9+ S/N 2067		TIMES DATA ON		JD/TIME		DATA LOCATION				REMARKS									
PRESS SN 2067		START DOWN						Tape/Diskette ID MF09-04, leg 2				File Name/Header CTD 131									
PRI COND SN 915		AT DEPTH										Post Deploy at 09-CB-1A									
PRI TEMP SN 710		AT SURFACE										MAX. DEPTH = 179 m									
SEC COND SN 535																					
SEC TEMP SN 884																					
POS.		TRIP DEPTH		PAR 4242		WETSTAR 1036P		SEC Dissolved Oxygen		PRI Dissolved Oxygen		CLEANED air bleed valve									
				CTD CONVERTED MONITOR VALUES																	
1		179		pH		DK		DOC		TOC		SALINITY		SAL.		MORDY'S NUTR.		CHL.		WHITT'S NUTR.	
2														83							
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

Lost CTD for MF-09-4 leg II!