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Consec		:# >O\	Vesse	I R FRE	Proj	. & Leg 89-04 F	OCI & LEVE	ent# Vesse	Sta. I.D.	Instr	uctions		ž.		Sta. D	esignatio	n .	
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S C	T	Trip Depth	Tim	e @			or Values				Values-CT			ple Bot.D	ata Sal.	Sal. Bot. #	Other	וחו
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	nsec. st #	Deg	Latitu g.	1 abu	or S De	Longitud	e E I	Date JD =	1	Time GMT Ir. Min.	Dry Bulb	Wet Bulb	Bar. mb 1008.8 °	Wind Si Dir.	Wind Pio	Botto	om S	ta. Nam or I.D	e
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<i>v</i> i	Т	Trip	Time			Monitor					Values-CTE		San	nple Bot.D	ata	Sal.	Other	os.
& Bot	Rack	Depth	Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.	Sal. Bot. #	Samp.	٩
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& Bo	ot. Ra	ick Dept	h Depth	Trip	Press.	Temp.		Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.	Bot. #	Samp.	Ğ.
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CTD Type & SN 91220-B On Deck at Surface Data on 213630 Tape/Diskette Tape/Diske		ion File Name/ 29 may		
Maniton Values CTD Sa	mple Bot.Dat	ta		ther so
Bot. Rack Depth Depth Trip Press. Temp. Cond. Other Press. Temp. Cond. Sal. Therm-P	Avg Tw	Sal. B	Sot. # Sa	ımp. △
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Pg. 8 of ___ Consec.Cast # Sta. Designation Event# Vessel Sta. I.D. Instructions Vessel Proj. & Leg H27 MILLER FREEMAN MF-89-04 FOCI 2 43 6007A Longitude E Date JD = 150 Latitude AS Goud Cloud Type Weath. Sta. Name Time Bottom Wind Wet Bar. Dry Consec. GMT or I.D Depth, m Dir. Bulb Bulb Cast # Deg. S Deg. W Day Mo. Yr. Min. Hr. Min. **Data Location** CTD ID/Time **Monitor Checks** Times Type & SN 91220-B Data on 64 43 20 Tape/Diskette I.D. File Name/Header on Deck at Surface Press. SN ____26072 at Surface 044815 30 may 6441 Temp. SN 710 Start Down 04 48 35 at Bottom 045211 Cond. SN ___ 304 Temp._____ Start Up 045330 Cond._____ Remarks at Surface Other____ Data off_____ Other Sample Bot.Data Conv. Mon. Values-CTD Monitor Values Trip Time @ Bot. Rack Depth Depth Trip Bot. # Samp. Therm-P Avg Tw Temp. Cond. Sal. Press. Press. Temp. Cond. Other 32.292 1023 0452 04152 103.443 4,014 30.316 32.280 3 3 5 5 6 6 7-8 8 9 9 10 10 11 11 12 12 Initials _____

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	nsec. st #	De	Latit	ıde	N or S De	Longitud	e E Da or	te JD =	SO Tir G1		Dry Bulb	Wet Bulb	Bar. mb	Wind Si Dir.	Wind Pno	Botto		ta. Nam or I.D	T -
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Pos	Bot.	Rack	Trip Depth	Tim Depth	e @ Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P		Sal.	Bot. #	Samp.	1
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Pg. <u>12</u> of ____

Pg. 13 of _ Sta. Designation Vessel Proj. & Leg Event# Vessel Sta. I.D. MILLER FREEMAN MF-89-04 FOCI 2 Consec.Cast # Instructions m 29 Longitude E Date JD = 150 Latitude Time Cloud Type Weath. Sta. Name Wet Wind Bottom Consec. Dry Bar. or GMT W Day Mo. Yr. Hr. Min. GMT or I.D Depth, m Dir. Cast # Bulb Bulb Deg. Min. Deg. 1m291 0758 **Data Location** CTD JD/Time **Monitor Checks** Times Type & SN 91220-B Tape/Diskette I.D. on Deck File Name/Header Data on____ at Surface Press. SN ____ 26072 at Surface 197045 30 may 1923 Press. S.73 Temp. SN 710 Start Down 19/31 at Bottom 19:38:14 Cond. SN __ 304 Start Up 19/38 Remarks Internal Clock is off-time at Surface _____ Other .001 Data off 1938:14 Sal. Other Samp. Sample Bot.Data Conv. Mon. Values-CTD Trip Time @ Monitor Values Bot. Rack Depth Depth Trip Sal. Therm-P Avg Tw Sal. Press. Temp. Cond. Temp. Cond. Other Press. 2014 4,24 185 2009 186.747 4,271 31:114 32,928 32,92\$ 2 3 4 5 6 ··7~ 8 8 9 9 10 10 11 11 12 12

Initials WF

Pg. 14 of ____ Sta. Designation M 24/27 Consec.Cast # Vessel Proj. & Leg Event # Vessel Sta. I.D.

MILLER FREEMAN MF-89-04 FOCI 2 Instructions M 26/27 Longitude E Date JD = 150Cloud Day Type Weath. Latitude Time Sta, Name Bottom Wind Dry Wet Consec. Bar. or W Day Mo. Yr. GMT or I.D S. S. Vis. Depth, m mb Dir. Bulb Cast # Bulb Deg. Min. Hr. Min. Deg. 39 Times 20 **Data Location Monitor Checks** ID/Time Type & SN 91220-B Data on 20:43:06 Tape/Diskette I.D. File Name/Header on Deck at Surface Press. SN 26072 at Surface 20 45 26 30 may 2039 Press. 6.5 Temp. SN 710 Start Down 2045 50 at Bottom 2053 55 Temp. . . o a l Cond. SN ___ 304 Remarks P.C. clock is off-time, header file Start Up 2-0 5 4 Cond. .001 at Surface _______Data off _205355 Other .002 Sample Bot.Data Sal. Other Conv. Mon. Values-CTD Monitor Values Trip Time @ Bot. Rack Depth Depth Bot. # Samp. Therm-P Avg Tw Sal. Temp. Cond. Press. Trip Press. Temp. Cond. Other 32, 367 27 2 3 4 5 6 7--8 8 9 9 10 10 il 11 12 12

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Pg. 16 of _ Sta. Designation Dave m 25 Cloud Type Weath. Bottom Sta. Name Depth, m or I.D **Data Location** Tape/Diskette I.D. File Name/Header

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Consec.Cast #

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Type & SN 91220-B

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Consec.

Cast #

Vessel

Latitude

Min.

MILLER FREEMAN

or

Deg.

Proj. & Leg

Longitude

MF-89-04 FOCI 2

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Event#

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Monitor Checks

Vessel Sta. I.D.

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Sta. Designation Event# Vessel Sta. I.D. Instructions Consec.Cast # Proj. & Leg Vessel m 24 MF-89-04 FOCI 2 MILLER FREEMAN Date JD = Weath. N Longitude Е Latitude Sta. Name Time Bottom Wind Wet Dry Bar. Consec. GMT or I.D S. S. Depth, m or Dir. mb. Bulb Bulb Cast # Deg. W Day Mo. Yr. Deg. Hr. Min. Min. Data Location ID/Time CTD Times **Monitor Checks** Type & SN 91220-B File Name/Header Tape/Diskette I.D. Data on 015 3:03 on Deck at Surface Press. SN 26072 at Surface OIIS 8:31 31 May 0153 Start Down 01:59 at Bottom 62/08:50 Cond. SN <u>304</u> Start Up 62 09 Cond. 1007 Remarks at Surface _____ Other .007 Data off ___ Other Sal. Sample Bot.Data Conv. Mon. Values-CTD **Monitor Values** Trip Time @ Bot. Rack Depth Depth Trip Bot. # Samp. Therm-P Avg Tw Sai. Sal. Temp. Cond. Press. Cond. Other Press. Temp. 31 02:12:00 02:12:26 192.828 3.547 30.005 32.319 32.328 190 3 3 4 5 5 6 6 7-8 8 9 9 10 10 11 11 12 12

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Pg. 12 of __ Sta. Designation M23 Consec.Cast # 18 Proj. & Leg Event# MF-89-04 FOCI 2 Vessel Sta. I.D. Instructions Vessel MILLER FREEMAN ds de Cloud Weath. E Date JD = 151 Sta. Name Latitude Longitude Bottom Time Wind Dry Wet Bar. Consec. Si Depth, m or I.D **GMT** or W Day Mo. Yr. Dir. Bulb Bulb Cast # Deg. Deg. Hr. Min. Min. **Data Location** JD/Time CTD **Monitor Checks** Times Type & SN 91220-B Data on 03:23:03 Tape/Diskette I.D. File Name/Header at Surface on Deck Press. SN 26072 at Surface 63/25/04 31 may 0320 Start Down 03 25:35 Temp. SN 710 at Bottom 03:35:51 Cond. SN ___ 304 Start Up <u>03:36</u> Remarks at Surface_____ Ozher - - 005 Data off 03735;5/ Other Sample Bot.Data Conv. Mon. Values-CTD **Monitor Values** Trip Time @ Bot. Rack Depth Depth Trip Bot. # Samp. Therm-P Avg Tw Sal. Temp. Cond. Press. Temp. Cond. Other Press. 31.707 307 03:3551 03:36:11 33.188 21 4.667 33.153 309.685 3 4 5 5 6 6 8 8 9 9 10 10 11 H 12 12 Initials

Pg. 19 of ____ Sta. Designation Consec.Cast # Vessel Proj. & Leg Event# Vessel Sta. I.D. instructions m22 MILLER FREEMAN MF-89-04 FOCI 2 99 Longitude E Date JD = 151 Latitude Time Sta. Name Wind Wind Pnol Virginia National Nation Bottom Dry Wet Bar. Consec GMT Depth, m or I.D S. S. Bulb Bulb mb Cast # Deg. W Day Mo. Yr. Min. S Deg. Hr. Min. 209 Data Location CTD Type & SN <u>91220-B</u> JD/Time **Monitor Checks** Times Tape/Diskette I.D. File Name/Header on Deck at Surface Data on____ Press. SN 26072 31 May 1117 at Surface____ Start Down 11126 Temp. SN ___710 Press,_____ 11:34 Cond. SN ___ 304 Temp. _____ at Bottom____ Start Up 11:40 Cond.______ Remarks at Surface Other ____ Data off____ Sal. Other Samp. Sample Bot.Data Conv. Mon. Values-CTD Trip Time @ Monitor Values Bot. Rack Depth Depth Trip Therm-P Avg Tw Temp. Cond. Sal. Press. Press. Temp. Cond. Other 3,718 32.238 6 175 11:34 11:39 177.360 3,723 30.063 32,2303 2 3 3 4 5 8 8 9 10 11 12

Initials

Pg. <u>2D</u> of _

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la l	Bot.	Rack	Depth	Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.		Jamp.	
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Pg. <u>11</u> of _ Consec.Cast #22 Proj. & Leg MF-89-04,Leg 2 Sta. Designation Vessel Event# Vessel Sta. I.D. Instructions Miller Freeman Longitude E Date JD = 52 Latitude Time Consec. Sta. Name Dry Wet Bottom Bar. or GMT W Day Mo. Yr. Hr. Min. or mb | S | S | S | S | S | Cast # Depth, m or I.D Bulb Bulb Deg. Deg. 522 80 CTD Type & SN <u>91220-B</u> 244 **Monitor Checks** JD/Time **Data Location Times** on Deck at Surface Data on_ Tape/Diskette I.D. File Name/Header Press. SN 26072 22:12 temp at Surface... 01 JUN 2249 Press. Temp. SN 710 22:12 Start Down_ Cond. SN 304 22:20 Temp. at Bottom_ depth Cond. 22:20 Start Up____ Remarks at Surface _____ press Other 218 Data off_ Trip Time @ **Monitor Values** Conv. Mon. Values-CTD Sample Bot.Data Other Sal. Bot. Rack Depth | Depth | Trip Bot. # Samp. Press. Temp. Cond. Other Temp. Cond. Sal. Therm-P Avg Tw Sal. Press. 1521 6 218.3 55151 2227 4.952 31.986 220.691 4.93 33.249 35 33.236 2 3 3 4 5 6 7 8 8 9 Ī 10 П 12

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Pg. <u>14</u> of ____

Co	nsec	.Cast	# 24	Vesse Mill	l er Fre	eman F	Proj. & Leg MF-89-04	Leg 2	2 Ev	/ent#	Vessel	Sta. I.D	. Instr	uctions BKG cal	brotim	cost to	700 m	Sta. De	esignatio	n	
	nsec. st #	De;	Latit g.		N or S De	Longit	ude E or		JD =		GM [*]		Dry Bulb	Wet Bulb	Bar. mb 1024.5	Wind	1 1 1	Meath Dept		ita. Nam or I.D	ıe
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Pg. <u>15</u> of ____ Consec.Cast # 25 Proj. & Leg MF-89-04,Leg 2 Sta. Designation Vessel Sta. I.D. Vessel Event# Instructions M29 Miller Freeman Latitude E Date JD = 158 Longitude Time Weath Cloud Sb. Sta. Name Wind Bottom Dry Wet Consec. Bar. **GMT** Depth, m or I.D mb | ხენან Dir. Cast # Bulb Bulb Deg. Deg. Day Mo. Yr. Hr. Min. Min. 5 5 CTD Type & SN <u>91220-B</u> **Data Location Monitor Checks Times** JD/Time Data on Origion Tape/Diskette I.D. File Name/Header on Deck at Surface Press. SN 26072 at Surface 07:21:55 temp 07Jun 0711 Press. Temp. SN 710 Start Down 07:22:21 at Bottom 07128,49 Cond. SN 304 Temp. depth Cond. Start Up 07:29 Remarks at Surface press Other Data off Other Sample Bot.Data Sal. Trip **Monitor Values** Conv. Mon. Values-CTD Time @ Bot. Rack Depth | Depth | Trip Bot. # Samp. Therm-P Avg Tw Press. Cond. Press. Temp. Cond. Sal. Sal. Temp. Other 31.000 572928 192.129 4,185 32.869 32.877 2 3 3 5 6 7 8 9 10 11 12

Initials UF

Pg. <u>16</u> of ___ Sta. Designation Proj. & Leg MF-89-04,Leg 2 Consec.Cast # Vessel Event# Vessel Sta. I.D. Instructions m26/27 Miller Freeman E Date JD = 158 Latitude Longitude Time Weath Cloud Sb. Vs Sta. Name Bottom Wet Wind Consec. Dry Bar. or **GMT** or I.D Depth, m mb Dir. Cast # Bulb Bulb Deg. S Deg. Min. W Day Mo. Yr. Hr. Min. CTD Type & SN <u>91220-B</u> **Data Location Monitor Checks Times** JD/Time Data on 08:08/27 Tape/Diskette I.D. File Name/Header at Surface on Deck Press. SN 26072 at Surface 080959 temp Press. cond 07 Jun 0804 Temp. SN 710 Start Down____ at Bottom_081825 Cond. SN 304 Temp. Start Up 08/18:45 depth Cond. Remarks at Surface ____ press Other Data off _08/18/25 Other Sample Bot.Data Sal. Conv. Mon. Values-CTD Trip **Monitor Values** Time @ Bot. Rack Depth Depth Trip Bot. # Samp. Temp. Therm-P Avg Tw Sal. Press. Cond. Sal. Temp. Cond. Other Press. 20 123.303 3.622 29.956 32.241 32.231 122.082 2 3 3 5 6 8 9 10

Initials <a>F

Pg. 27 of ____ Consec.Cast # 27 Sta. Designation VesselProj. & LegEvent#Miller FreemanMF-89-04, Leg2 Vessel Sta. I.D. Instructions Longitude E Date JD = 158 Latitude Time Cloud Type Weath. Sta. Name Bottom Wind Wind Sp. Dry Wet Bar. Consec. or **GMT** or I.D Depth, m Dir. Bulb Bulb Cast # Deg. S Deg. Min. W Day Mo. Yr. Hr. Min. CTD Type & SN <u>91220-B</u> **Data Location Monitor Checks JD/Time** Times Data on 09:04:58 Tape/Diskette I.D. File Name/Header on Deck at Surface Press. SN 26072 at Surface 09 0724 temp Press. cond 07 Jun 0901 Temp. SN_710 Start Down 09:07:40 at Bottom_09:17:34 Cond. SN 304 Temp. Start Up 09/23 depth Cond.. Remarks at Surface____ press Other Data off 09:17:34 Sample Bot.Data Other Conv. Mon. Values-CTD Trip Monitor Values T | Trip | Time @ Bot. Rack Depth | Depth | Trip Time @ Bot. # Samp. Temp. Therm-P Avg Tw Sal. Cond. Sal. Press. Temp. Cond. Other Press. 4.81 31,919 33,272 14 4,827 269,629 33.259 2 2 3 3 4 5 6 8 9 10 10 П 12

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	nsec: st #	De	Latit ig.		N or		itude	E or	Date JD =	/58 Yr.	Tim GM [*] Hr.	T	Dry Bulb	Wet Bulb	Bar. mb 1024.8 ✓	Wind Dir.	Wind Page	Neptl Deptl	_ 1	Sta. Nam or I.D	e
	28	5	652	87	N	1554	0 6 6	W	JUN	8 9	09	58	5 5	50	25 4	8220	118	82 2	91	m 2	5
Pr Te		N_9 N_2 N_7				temp Press cond Temp depth Cond press Other	on De		nitor Checks at <u>09:4</u>	Surfac	e 	at Su Start D at Bo Star at Su	mes a on 09: rface 09: bown 09:5 ttom 09:5 rface rface ta off 09:	8 17:55 1:55	Tap	ne/Diskette	Data Loc		n 694		
Pos.		Т	Trip	Tim	e @				tor Values			: C	onv. Mon.	Values-CT			nple Bot.D		Sal.	Other Samp.	os.
<u>~</u>	Bot.	Kack		Depth				emp.		Oth	ner	Press.	Temp.	Cond.	Sal.		Avg Tw			samp.	Ë
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Pg. <u>29</u> of ____

C	onsec	. Cast	# 29	Vesse Mil		eeman M	oj. & Leg IF-89-04,	Leg 2	Event#	Vessel	Sta. I.D.	Instr	uctions	m24		1	Sta. D	esignatio	on	
	nsec ast #	De	Latit		N or	Longitu eg.	de E I	Date JD Day Mo	= 158	Tin GM Hr.	T	Dry Bulb	Wet Bulb	Bar. mb	Wind Dir.	Wind Proc	Neath Dept	1	Sta. Nam or I.D	e
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	C	TD				<u>-: </u>	Mor	nitor Che	cks	7 0	Ti	mes	JD/Time		. <u></u>	Data Loc	· · · · · · · · · · · · · · · · · · ·		<u> </u>	
			1220-B	· · · · · ·	- .		n Deck		at Surfa	ce	Dat	ta on <u>/0;3</u>	3:14	Ta	pe/Diskette	I.D.	File Nan			
1		5N_7		· · · · ·	- iit F	emp Press ond	<u>.</u> .		131:30)	I .	rface <u>/0/3</u> own			<u>. </u>	10	07 Ju	-1029		
		$\frac{3}{100}$		-	- C	ond emp			4		at Bo	ttom_ <u></u>	16:59	_ -	<u> </u>					
_	<u> </u>	,			_ d	epth Cond						t Up <u>/01</u>	47	Rem	arks					\dashv
_						ress Other				,	at Su	rface ta_off_ <u>/b/</u>	46:59							
SS		T	Trip	Tin	ne @	- Depth		or Value	s De	oth	C	onv. Mon	. Values-CT			nple Bot.D		Sal.	Other	
P	Bot.	Rack	Depth	Depth		A	Temp.		I. Ot	her	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.	Bot. #	Samp.	-
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Initials <u>LF</u>

Pg. 30 of ____ Sta. Designation m 23 Vessel Proj. & Leg Event#
Miller Freeman MF-89-04, Leg 2 318 Consec.Cast # Event# Vessel Sta. I.D. Instructions E Date JD = 158 Latitude Longitude Time Cloud Punk Type Weath. Sta. Name Bottom Wind Dry Wet Bar. Consec. or **GMT** or I.D Depth, m Dir. Cast # Bulb Bulb Deg. Deg. Min. W Day Mo. Yr. Hr. Min. 4 5 50 CTD Type & SN 91220-B **Data Location Monitor Checks** Times JD/Time Data on //:24:4/ Tape/Diskette I.D. at Surface File Name/Header on Deck Press. SN 26072 at Surface 11:28:53 temp 07 Jun 1119 11:23:10 Press. cond Temp. SN 710 Start Down____ at Bottom_//:39:43 Cond. SN 304 Temp. depth Cond. Start Up_____at Surface_____ Remarks press Other Data off ________//:39:43 Sal. Other of Bot. # Samp. Sample Bot.Data Conv. Mon. Values-CTD Trip Time @ **Monitor Values** Bot. Rack Depth Depth Trip Temp. Sal. Therm-P Avg Tw Sal. Press. Temp. Cond. Other Press. Cond. 298 11:40:20 11:45:20 301 765 5.178 33.237 18 32.207 298.486 32.225 5.16 3 3 4 5 6 6 8 9 10 10 12

Initials _/_F___

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Const. Latitude N	Co	nsec	.Cast	1#31	Vess Mil		Freeman	Proj. & Le MF-89-0	g 4,Leg	2 Eve	ent# Vesse	Sta. I.D.	Instri	uctions				Sta. De	esignation	on	
Note			1			or	Longi	tude E or	Date	JD =	Tin GM	1T			Bar. mb	Wind Si Dir.	Wind PnolO	Neath Depti	1		ie
Type & N 91220-B Press. N 26072 Temp. SN 710 Cond. SN 304 Temp. SN 710 Temp. SN 710		31	5	70	271	N	15602	17 W	07	א ט נ	8912	43	4 5	4 5	1				22	m a	3
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	12																				12

Initials WF

Pg. 32 of ____ Sta. Designation Consec.Cast # Vessel Proj. & Leg Event#
Miller Freeman MF-89-04, Leg 2 312 Event# Vessel Sta. I.D. Vessel Instructions m21 Longitude E Date JD = 158 Latitude Time Wind Wind Pind A Sta. Name Bottom Dry Wet Bar. Consec. V 52.0 or **GMT** or I.D Depth, m Bulb Bulb Cast # Deg. Min. S Deg. W Day Mo. Yr. Hr. Min. CTD Type & SN <u>91220-B</u> **Data Location Monitor Checks** Times ID/Time Data on 13/02/56 Tape/Diskette I.D. File Name/Header at Surface on Deck Press. SN 26072 at Surface 13:05:21 temp 07Jun 1301 13/02/31 Press. Temp. SN _710_ Start Down 13:05:55 at Bottom 13:11:15 Cond. SN 304 Temp. depth Cond. Start Up 13:11 Remarks at Surface _____ press Other Data off _13/11/15 Other Sample Bot.Data Sal. Conv. Mon. Values-CTD Trip **Monitor Values** Time @ Depta Bot. Rack Depth Depth Trip Bot. # Samp. Therm-P Avg Tw Sal. Press. Temp. Cond. Other Press. Temp. Cond. Sal. 37.689 56.524 31.570 34 5.674 31,560 31.055 2 3 5 5 6 6 8 8 9 9 10 10 H 12

Initials <u>WF</u>

Pg. 33_ of ____ Consec.Cast # Vessel Proj. & Leg Event#
Miller Freeman MF-89-04, Leg 2 323 Sta. Designation Event# Vessel Sta. I.D. Vessel Instructions Pragy E Date JD = 158 Latitude Longitude Time Wind Wind Pno V Aceth Sta. Name Bottom Dry Wet Bar. Consec. **GMT** Depth, m or I.D Bulb mb Bulb Cast # Deg. Min. S Deg. W Day Mo. Yr. Hr. Min. CTD Type & SN 91220-B **Data Location Monitor Checks** Times JD/Time Data on 13:54:25 Tape/Diskette I.D. File Name/Header on Deck at Surface Press. SN 26072 at Surface 13:56:35 temp 07 Jun 1350 13.53:49 Press. cond Temp. SN 710 Start Down_____ at Bottom 14 03 53 Cond. SN 304 Temp. depth Cond. Start Up____at Surface_____ Remarks oress Other Data off 14:03:53 Sample Bot.Data Other Sal. Conv. Mon. Values-CTD Trip **Monitor Values** Time @ Death Bot. Rack Depth | Depth | Trip Bot. # Samp. Temp. Sal. Therm-P Avg Tw Press. Temp. Cond. Other Press. Cond. 5.192 05:40 142.705 30,953 141,292 31.872 31.858 2 3 4 5 6 7 8 9 10 10 11 12

Initials ______

Pg. <u>34</u> of ____

Consec. Cast # Deg. Min. S Deg. W Day Mo. Yr. Hr. Min. Bulb Bulb Bulb Bulb Bulb Bulb Bulb Bulb	C	nsec	.Cast	34	Vesse Mill		eeman M	oj. & Leg F-89-04,1	eg 2 3	42	el Sta. I.D.	Instru	uctions	Topmo	st 1		Sta. De	esignatio	on	
CID Type & SN 250 2					ude	N or	Longitud	ie E D	Date JD =	159 Ti	ЧТ			Bar	Wind	Wind Pnoi	Meath Dept	1	Sta. Nam or I.D	ıe
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Second S						_ 1	Гетр	:40:10			Start C	own ttom_ <u>06 /</u>	56:59				- 8) (NA	76	12	
Bot Rack Depth Depth Trip Press Temp. Cond. Other Press Temp. Cond. Sal. Therm-P Avg Tw Sal. Bot. # Samp	_					_ [Cond press Other				at Su	rface ta off <u>つ</u> ら	56:59	To-	3/6m			T. C. L.	10.1	
1 296 0657 06580 2496.665 47.975 32.476 247.094 33.737 33.737 33.737 33.735 79 33.735 79 33.737 33.737 33.737 33.735 79 33.737 33.737 33.737 33.737 33.737 33.737 33.737 33.737 33.737 33.737 35 33.	Pos.	Bot.	T Rack	Depth	Tim Depth	e @ Trip	Press.													
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Initials W

Pg. <u>35</u> of ____ VesselProj. & LegEvent#Miller FreemanMF-89-04, Leg 2343 Consec.Cast # Event# Vessel Sta. I.D. Sta. Designation Instructions Topmast - 2 N Longitude E Date JD = 159 Latitude Time Wind Wind Pind Akeath Weath Sp. Old Pind Weath Sp. Consec. Bottom Sta. Name Dry Wet Bar. or **GMT** mb s Cast # or I.D Bulb Depth, m Bulb Deg. W Day Mo. Yr. Hr. Min. Min. S Deg. CTD Type & SN 91220-B **Monitor Checks Data Location** ID/Time Times Data on 07:41:24 on Deck at Surface Tape/Diskette I.D. File Name/Header Press. SN 26072 Press. 07:39:21 at Surface 07:47:24 08 Jun 0736 Temp. SN _710 Start Down 07:47 Cond. SN_304 at Bottom 08:19:06 Temp._ depth Cond. Start Up 19 Remarks at Surface ____ press Other_ Data off 08:19:66 To-1040m **Monitor Values** Trip Sample Bot.Data Other Time @ Conv. Mon. Values-CTD Sal. Dr ath Other Sal. Other & Bot. # Samp. Bot. Rack Depth | Depth | Trip Temp. Press. Temp. Cond. Press. Cond. Sal. Therm-P Avg Tw Sal. 48 3.09 989,133 3,116 980 31.625 979,348 34,304 34.318 2 2 3 3 4 5 6 8 9 10 10 12

Initials <u>WF</u>

Pg. <u>36</u> of ____ Consec.Cast # Vessel Proj. & Leg Event# 36 Miller Freeman MF-89-04, Leg 2 345 Vessel Sta. I.D. Sta. Designation Event# Instructions Topmast-3 Longitude E Date JD = 159 Latitude Time Wind Wind Place Areath. Sta. Name Bottom Consec. Dry Wet GMT mb or I.D Cast # Bulb Depth, m Bulb Deg. S Deg. W Day Mo. Yr. Hr. Min. Min. CTD Type & SN 91220-B **Data Location Monitor Checks** Times JD/Time Data on 09:35:55 on Deck at Surface Tape/Diskette I.D. File Name/Header Press. SN 26072 Press. 09:31:59 (Log) _____ at Surface 0913 8115 08 Jun0929 Temp. SN _ 710 Start Down 09:38 Cond. SN_ 304 at Bottom /0127105 6 Temp. depth Cond. Start Up_____at Surface_____ Remarks press Other Data off 10:27:17 To 1500 meters Sample Bot.Data Sal. Other **Monitor Values** Conv. Mon. Values-CTD Time @ troth Bot. Rack Depth | Depth | Trip Temp. Bot. # Samp. Press. Temp. Cond. Other Press. Cond. Therm-P Avg Tw 1511.035 2.298 31.289 1496.074 34,488 34,500 2 3 6 8 9 10 H 12

Initials WF

Pg. <u>37</u> of ____ Consec.Cast # Sta. Designation VesselProj. & LegEvent#Vessel Sta. I.D.Miller FreemanMF-89-04, Leg 2347 Vessel Instructions Topmast-4 Longitude E Date JD = 159Latitude Time Weath. Sta. Name Bottom Consec. Dry Wet Bar. Wind or GMT W Day Mo. Yr. Hr. Min. Depth, m or I.D Dir. Cast # Bulb Bulb Deg. Min. S Deg. CTD Type & SN 91220-B Times JD/Time Data on 11/59/33 **Data Location** Monitor Checks ** Tape/Diskette I.D. on Deck File Name/Header at Surface Press. SN 26072 at Surface 12,0144 08 Jun 1156 Temp. SN 710 Start Down____ cond at Bottom 12:54:33 Cond. SN 304 Temp. depth Cond. Start Up_____at Surface_____ Remarks press Other Sample Bot. Data Data off 1254:33 Sal. Other Samp. Trip **Monitor Values** Conv. Mon. Values-CTD Time @ Death Bot. Rack Depth Depth Trip Therm-P Avg Tw Press. Temp. Cond. Other Press. Temp. Cond. Sal. 697.567 3,321 31.633 690.660 34.244 34,253 5 6 8 8 9 9 10 10 II 12

Initials WF

Pg. 38 of ____ Consec.Cast # 3 8 Sta. Designation VesselProj. & LegEvent#Miller FreemanMF-89-04, Leg2349 Event# Vessel Sta. I.D. Vessel Instructions Topmart-5 Longitude E Date JD = 159 Latitude Time Wind Wind Dir. Sp. Q Sta. Name Bottom Dry Wet Bar. Consec. **GMT** or I.D Depth, m Bulb Cast # Bulb Deg. S Deg. W Day Mo. Yr. Hr. Min. Min. CTD Type & SN <u>91220-B</u> **Data Location Monitor Checks** Times ID/Time Data on 14:42:26 at Surface 14:44:41 Tape/Diskette I.D. File Name/Header on Deck at Surface Press. SN 26072 temp Press. 14:42:14 © cond 08 Jun 1440 Start Down 14:45 Temp. SN <u>710</u> at Bottom 15:28:04 Cond. SN 304 Temp. Remarks Bottom depth too deep to register (To: 1500 meters) on ships sounder that Start Up_____ depth Cond.. press Other Sample Bot. Data Sal. Other Conv. Mon. Values-CTD **Monitor Values** Time @ Droth Bot. Rack Depth Depth Trip Bot. # Samp. Therm-P Avg Tw Temp. Cond. Press. Cond. Other Temp. Press. 15:34 15:35:03 1214.4.7 2.529 31,321 34.447 38 1262,383 34,434 3 4 5 6 6 8 8 9 9 10 10 Initials _ WF

VesselProj. & LegEventMiller FreemanMF-89-04, Leg2 Consec.Cast # Sta. Designation Vessel Sta. I.D. Event# Instructions Longitude E Date JD = 159 Latitude Wind Wind Dir. Sp. Cloud Sp. Cloud Time Sta. Name Consec. Dry Wet Bottom Bar. **GMT** Cast # Bulb mb 1002.5 Depth, m or I.D Bulb Deg. W Day Mo. Yr. Hr. Min. S Deg. CTD Type & SN <u>91220-B</u> **Data Location Monitor Checks** Times JD/Time on Deck Data on 16/44/04 at Surface Tape/Diskette I.D. File Name/Header Press. SN 26072 at Surface 16157151 16143:41 6 08 Jun 1641_ Temp. SN 710 Start Down 16:58 cond Cond. SN 304 at Bottom 17:39 Temp. depth Cond._ Start Up_____ Remarks at Surface_____ press Other_ Data off 17.40:09 cast To 1500 meters Sample Bot.Data **Monitor Values** Sal. Other Trip Conv. Mon. Values-CTD Time @ Death Bot. Rack Depth | Depth | Trip Bot. # Samp. Temp. Press. Press. Therm-P Avg Tw Temp. Cond. Other Cond. 2.23 34.512 45 1:44:36 1511. 720 2.240 1496,752 31,249 34.501 2 3 3 4 5 6 8 8 9 9 10 10 H 12

Initials W

Pg. <u>40</u> of ____ Sta. Designation
Topmast 7 Vessel Proj. & Leg Event#
Miller Freeman MF-89-04, Leg 2 354 Event# Vessel Sta. I.D. Consec.Cast # Instructions Longitude E Date JD = 159 Latitude Time Cloud Puly Weath. Sta. Name Bottom Wind Consec. Dry Wet Bar. mb (S) Si **GMT** Depth, m or I.D Dir. Cast # Bulb Bulb S Deg. Deg. Min. W Day Mo. Yr. Hr. Min. CTD Type & SN 91220-B **Data Location Monitor Checks** Times JD/Time Data on 19:01:23 Tape/Diskette I.D. File Name/Header on Deck at Surface Press. SN 26072 at Surface 19:03:12 08 Jun 1859 temp 19101108 Press. Temp. SN <u>710</u> Start Down_____ cond at Bottom 19:43:25 Cond. SN 304 Temp. depth Cond. Start Up 19:43 Remarks at Surface ____ press Other Data off 19:43:25 cast To 1500 meters Sal. Other Sample Bot.Data Conv. Mon. Values-CTD **Monitor Values** Trip Time @ Death Bot. Rack Depth Depth Trip Therm-P Avg Tw Bot. # Samp. Other Temp. Cond. Press. Cond. Press. Sal. Temp. 746.370 3.06\$ 34.322 34.309 31.481 738.98 \$ 2 3 3 4 5 6 6 8 8 9 9 10 10 12

Initials <u>WF</u>

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Conse	c. Cast	4/		r Free		j. & Leg -89-04	Leg 2	Event#	Vessel	Sta. I.D.	Instru	uctions			8	Sta. De	signatio	on 8	
Consec Cast #		Latiti eg.	c	or S Deg	Longitud	OI/	Date JD : Day Mo.		Tim GM ⁻ Hr.		Dry Bulb	Wet Bulb	Bar. mb	Wind Si Dir.	Wind P	1 1 1	om S	Sta. Nam or I.D	е
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Type & Press. Temp. Cond.	SN_2 SN_7	710	101 14	Ter der Co		Deck .53 :3	6	ks at Surfac	e 	Data at Sur Start Do at Bot Start at Sur	nes a on Zoi face Zoi tom 21:3 Up face a off 21:1	55/39 6:14	Rema	rks	Data Local I.D.	File Nam	•		
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Pg. <u>42</u> of ____

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Consec Cast #		Latit	ude	N or	Longitud	le E D or	oate JD =	160 Tii	ne MT Min.	Dry Bulb	Wet Bulb	Bar.				om S	Sta. Nam or I.D	е
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	isec. st #	De	Latit g.		N or		Longitud	e E or W	Date	$ID = \frac{1}{0}$	GM	т	Dry Bulb	Wet Bulb	Ba	P si	Wind Dir.	Wind Page 1	Meath Dept		Sta. Nam or I.D	ie
		1	20	168	N	155	435	7 W	09 J	U N 8 9	9 18	43	70	60	0	0 4	8248	143	7145	728	PRI	3
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					- -	dept Con- pres Othe	d					at Sui Dat	: Up face a off_ <u>1874</u>	13:42		Rema						
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