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Event# Vessel Sta. I.D. 3 \$\dagger\$

Instructions

Consec.Cast # 001

Vessel MILLER FREEMAN

Proj. & Leg MF-91-05

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6	20		30		22.	49							30.786	4.470	30.585	32.	185					<u> </u>				6
7 1	$\overline{}$		20	V	22.								19.200	4,470	30,579	32	.185		· · ·			_				7
8 2	24		10		72:	51							9,993	4,438	30.569	32	.180	1							ŀ	8
9																		_					· · - · · ·			9
10																		\perp						1		H
11																						-		10		
12							,							<u> </u>								<u> </u>				17
		_						4												- ba	115	TA	2	Initials		

WF, JOS In

C	onsec		8	Vess MIL	el LER	FREE	MAN	Proj. 8 MF -	k Leg 91-0	5	I	vent#	Vesse	el Sta. I.D. 5 <i>B</i>	Ins	truci	tions		-							esignati	ion	•
	onsec. ast #	De	Latit g.	ude Min.	Z o s	Deg		itude	E or W		JD =	=	Ti	me MT Min.	Dry Bulb	ô	Wet Bulb	Bar. mb	S. S.	Vis.	Wind Dir.	Wine Sp.	Cloud	Weath.	Botte Dept		Sta. Nar or I.D	
0	08	5	736	01	N	15	500	3 2	W	0	M A	9 1	23	50	50	T	4 2	11		7 (245	556	87			39	Ø5	a
1	_	רח	1220-A		_	<u> </u>				onitor				T	imes	JD	/Time						Loca				1,1	=1
1	ress. S				_			on D				at Surfac 146		1 -	ta on ırface			-	Tape	e/Di	skette		~^ ~			e/Hea		E
	mp. S				-			<u>-</u>				/ [6		- Start D	Down			_ _					4451 <u>.</u> -	00	D=0	IMA	<u>4234</u> 4	Ī
١	ond. S	N			-							<u> </u>	<u></u>		ttom rt Up			-					_					
					╸.		nd ner							at Su	ırface				emar		070	AD.						
S.		Т	Trip	Tin	- 1e @		<u> </u>		Моп	itor V	 alues				ta off Conv. Mo		alues-CT		(کرار د	-/(.c			ot.Da	ta		Sal.	Other	Ŧ
	1 :	Rack	Depth	Tin Depth	T	ip	Press		Temp		Cond.	Ot	ner	Press.	Temp		Cond.	Sal.		The	rm-P				al.	4	# Samp.	•
Ľ	28				23		***********							61.166	4:514	4_3	0.646	32.19	98								MZ	-
2	23		50	49 (5)	23	50								51,145	4.515	3	0.642	32.19	පි	7							CM	T
3	24			50	23:	50								51.209	4,515	3	30.642	32-19	77								mz	Ī
4	29			40	23:	51								39.883	24.512	- 3	30.635	32,59	18								MZ	\prod_{i}
5	24		~	40	23:	52	_							40.153	4,513	3 3	30.635	32.19	18			!					au	T
6	20		/	30	23	53							-	29.678	4.511	3	20.630	32,19	78	-							ME	T
7	19		V	30	23	54								29.966	4.50	7 3	0.626	32.1	77		I						CH	T
8	24		~	20	23:	54								20,200	4.510	, ,	30,625	32.19	78	• .							WF	T
9	25			/20	23:	55								20.30	4,50	5 3	30.620	32.1	97								Q1	T
10	22			/ 10	23	,56									1		30.615										WE	
<u> </u>	23	_	V	10	23	56										$\overline{}$	0.613										CH	
12																												
																				'	• •					Initials	<u> </u>	-

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	onse	c.Cas	<u> </u>		el LER FR	REEMAN	Proj. & Le MF-91-	05 05	Ε	vent# 43	Vesse	1 Sta. I.D. 59	Inst	ructions					Designat		_
	onsec		Latit g.	ude Min.	Or S	Longi Deg.	tude E	r	JD =		Tir GN		Dry Bulb	Wet Bulb	Bar. mb	Wind	, -	Type Weath.	ottom epth, m	Sta, Nar or I.D	
0	06	5	738	3 4 1	N)	5503	58 W	02	MAY	9 1	01	30	5 6	50	0105	605	0448		255	05	9
Ty	/pe &	TD SN_9	1220-A			<u> </u>	٨	lonitor					imes	JD/Time			Data Le		. I 1 I	<u> </u>	<u>-i.i.</u>
· 1 '	•		5084		_		on Deck			t Surfac			ta on	<u>-</u>	l .	oe/Diskette	: I.D.	File N 5 <i>T 00 %</i>	ame/He	ader A. V. Son (5 7
	emp.				-	Press		-		_	45	Start C	Down) [CC 7 wa	OLIVI		در اا
	ond.	214 <u> </u>				Femp Cond							ttom rt Up		_						
_				-		Other						at Su	ırface		Rema	arks SF	C = 300	He Q Ki	S		
os.	D	T	Trip	Tim Depth			Мо	nitor V	alues				ta off Conv. Mor	n. Values-C			mple Bot.		Sal.	Other # Samp.	Ţ
la la		Каск			1		Ten	ip. (Cond.	Otl	-	Press.	Temp.		Sal.	Therm-P	Avg Tw	Sal.			\top
-	28		250	86/1	01:03	-				 			4.536			<u> </u>	ļ	125	0 27	- WE	
2	23		200	%	01:0	Š						198.041	+ 4,233	30,611	32.363				125	Da.	12
3	26		150	38	01:07	2	_					14831	3 4.439	30,671	32.256				125	2 mg	1
4	29		100	×	01109							98,965	4,496	30,683	32.239	ĺ			125	3 192	// 4
5	ય		75		01:11		Ē				-		4,461	100	1				1250	4 84]:
6	25		50	36	61:11	2							4.431		32.158				1255		1
7	19		30	36	OI: 1:	3 *				•	-		7	30.349]			125	TX.V	_
8	24		20	26	01:15				·				1		32.013				125	7 MZ	1
9	25		10	\ /	DI: (5										32,037	1			1258	-16	
10	22			X											27.00				1 1 1 1	M ₂	\$
Ш	23																 	 		341	, -
12									-		一					<u>† </u>	 	_		74(1
					<u> </u>					<u> </u>	I		1		<u></u>				Initials	•	<u> </u>

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																			r	g. <u>U</u>	Of	
C	onsec.		#	Vessel MILL	ER FR	EEMAN	Proj. & Leg MF-91-0	5	Eve	nt#	Vessel 5	Sta. I.D.	inst	ructions					Sta.	Designat	ion	100
1	nsec. st #	De	Latito		N or S D	Longi	tude E or W	Date Day	JD = Mo.	Yr.	Tim GM Hr.		Dry Bulb	Wet Bulb		Bar. mb	Wind Dir.	Wind Pnol	Type Weath.	ttom oth, m	Sta. Nan or I.D	
0	10	5 ?	738	17	N I	5503	5 5 W	02	МАҮ	9 1	02	25	5 2	4 8	30	8 5	6 \$ 5 5			5 1	05	9
Tv	CT 2 & ec	D 9	1220-A					onitor	Checks	,		1	nes	JD/Time		_		Data Lo		4		
	ess. S						on Deck		at S	Surfac	e		a on face			Tap	e/Diskette	I.D.	File Na	me/Hea		2
Te	mp. S	N_7	01		_ F	Press						Start D	own	2:22 ?								
C	ond. S	N_3	04		. 1	emp						, at Bot	tom : Up			_				1 4		
-				· · · · · · · · · · · · · · · · · · ·	·		<u> </u>			·		at Sur	face			Rema	arks \CROZEE	0.01	HA PER	K A	1 601	14
<u> -</u>	1	-	Trip	T:		Other	Mor	itor V	Zaluana				ony Mo	n. Values-C	TD	IM	Sar	mple Bot.[Data	Sal.	Other	· ·
Pos	Bot.	Rack	Depth	Tim Depth	e @ Trip	Press			Cond.	Ot	ner	Press.	Temp			Sal.	Therm-P		_	Bot.	Other # Samp.	S _O
	28		V		02:2	ŀ						59.618	4,419	30.50	2 32	1124					WE	1
2	27		/	94										30,50		. 126					CH	2
3	24			50	02:27							48.838	4,40	9 30.48	2 3 2	115					mz	3
4	29		7		02:28						4	40,948	4.310	30.344	1.32	.055					M2	4
5	24		V	40	02:28	3					1	+1.602	4.28	7 30,313	32	041					au	5
6	25			30	02:29	1						29.424	4.193	30-178	3#	982					MZ	+
7	19			30	02:30				3			29.323	4.213	30,206	31.	,995					CM	7
8	24		\	20	02:3	1					•	21.452	4.166	30.140	31	.966					Ws	
9	25				02:3							22.138	4.16	9 30.14.	3 31.	967		<u></u>		_	du	
10	22		V		02:3									2 30.129							ME	10
11	23		V		023							10,047	4,16	30.12	7 31.	963					CH	11
12																				 		12
	·	. •	<u> </u>		·			1												Initials		

The property of the property o

Col		Cast	#	Vesse	ER FRE	EMAN	MF - 91 - 0	5		ent#	Vesse G	el Sta. I.D. 006	Inst	ructions				18	ta. Design	ation	33	
1	sec.	Deg	Latit	ude Min.	N or S D	Longit	or W		JD = Mo.	221	GI	me MT Min.	Dry Bulb	Wet Bulb	Bar. mb	Wind ∴ Dir.	Wind Property Cloud	Weath.	Bottom Depth, m		. Name or I.D	e
0	11	5	740	56	N /	5510	54 W	02	MAY	9 1	03	26	5 1	44	095	605		76	288	FO	X6	0
		D 91 N 91 N 21	1220-A		-		Mo on Deck	onitor	Checks	s Surfac	:e	Data	nes a on	JD/Time	-		Data Loca I.D. TCASTO		Name/H	eader		
Ten	np. S	N_7()1		- - P	ress	. <u>-</u> .					at Sur Start Do	•	3 16:18	_ <u>57</u> <u>34</u> 1	diaed a	TICASTO	11-	OZMA	403	<u>15</u>	
Co	nd. S	N_3()4			•						— ı	tom : Up		\		<u> </u>					
-						ond other			-			at Sur	face		Rema	rks TAPE OVER U	PER 20	MO	1210G 1210G	UPC	A51	
i		T	Trip	Tim			Mon	itor V	 'alues				off	n. Values-CT			nple Bot.D				ther	<u>ئ</u> ن
1 1				Depth	Тгір	Press.			Cond.	Oti	her	Press.	Temp.		Sal.	Therm-P		Sa		. # Sai	ımp.	<u>유</u>
1	28		250	03:27	-	1						247,666	4.410	30.801	32.386		34		1.	3		1
	27		200	: 1/	D3:29	·						200.185	4,489	30,706	32,322							2
3	26		150		03:31		96					152.904	4.39	1 30.527	32.130							3
4	29		100		03:33.5				99 (0			98,661	4.368	30,460	32.105							4
5	21	De.	75		03:35				•			76.069	4.368	30448	32,102			·				5
6	20		50	V	03:37									30,223								6
7	19		30		63:38									30.157								7
8	24		20		03:40									30,150	-							8
9	25		10		0374									30.149								9
10												1	(· · · · · · · · · · · · · · · · · · ·							10
	23				121																	11
12				2)																		12
<u> </u>				<u> </u>	1		ł	<u> </u>		1			<u> </u>		<u> </u>		<u></u>		Initia	 İs		

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Consec.	Cast #	Vess MIL	el LER FRE	EMAN Pro	j. & Leg IF -91 -0:	5	Event:	t Vess	el Sta. I.D.	. In	struc	tions								Sta. De	signatio	on	
Consec. Cast #	Deg.	Min.	N or S D	Longitud	le E or W		JD = 122 Mo. Yr.	G	ime MT Min.	Dry Bulb	ē.	Wet Bulb	Ba		. t 1	Wind Dir.	Wind Sp.	Cloud	Veath.	Botto Depth		Sta. Nan or I.D	
012	574	1045	5 N /	55102	7 W	02	M A Y 9	108	-14	5	0	4 2	.0	95	60	55		8 7	76	28	8	PE	0
CT Type & S	D N_9122	0-A				nitor	Checks		4	imes	-	D/Time		T	- /Dial		Data			. .	/t t = =	. 9	
Press. S	N <u>2508</u>		_ _		n Deck		at Surf	ace	1	ita on irface				гар	ie/Disi	Kette	I.D. <i>CA</i> S	ST 0		e Name		oer 0507	_
Temp. S	N <u>701</u> N 304		_	ress			<u> </u>			Down													
Cond. 3	N		*	emp Cond						rt Up				Rema									
				.ona)ther						urface ita off						019	note	ລ ≎	د ا، د	Volt	źs –	•	
8	T Tr	ip Tir	ne @		Моп	itor V	'alues					Values-CT				San	nple B	ot.D:	ata		Sal.	Other Samp.	os.
	Rack De	pth Depth	Trip	Press.	Temp). (Cond. C	ther	Press.	Tem	•	Cond.	1	al.	Ther	m-P	Avg	[w	S	al.	Bot. #		100
1 25		v 60	05:11						 			30,335										MZ	<u> </u>
2 23	:	V 7/3	05:13									30.340										CM	2
3 26		50	05:13		1:1				49,976	4.29	9	30.342	32.0	59								mZ	3
4 29		V 40	OS:14						41.326	4, 29	9	30.339	32.C	60								MZ	4
5 24		V 40	05/15						41,452	4.30	9	30.340	32.0	61			· · - ·					au	5
6 25		130	05:16	,		-			30. 7	4.30	0	30.337	32,0	061								ME	6
7 19		V 30	05:17	1				-	31.276	4.29	6	30.333	32.0	060								CM	7
8 24		20	05:18									30,332				·		-		ï		ME	8
9 25		20	OS; P	1					1			30.340	1									Q1	9
10 22		/ 10		1								30.333					_		<u></u>			ME	10
11 23		-/ 1										30.337								•		CH	LE
12				1				· · ·			•												12
<u></u>	4		<u> </u>		<u> </u>	<u> </u>	-						,							Į.	nitials .		_

THE RESIDENCE OF THE PROPERTY
																								Pg.	73	of	
	onsec	Cast	3#	Vesse	ER FF	REEMAN	Proj. 8 MF -	k Leg 91-05	5	Event:	# Vess	el Sta. I.C	D. Ir	nstru	ctions									Sta. De			(4)
	onsec ast #	De	Latit	ude Min.	N or S	Long Deg.	itude	E or W		JD = 122 Mo. Yr	G	ime MT Min.	Dry Bulb		Wet Bulb		ar. nb	S. S.	Vis.	Wind Dir.	Win Sp.	Cloud	Type Weath.	Botto Depth	o <u>m</u> n, m	Sta. Nar or I.D	
0	13	5	742	88	N 7	5515	3 3	. W	02	M A Y 9	106	012	4	8	40	0	9	5	6	55				Z	3	06	5 1
	C	TD a	1220-A					Mo	nitor	Checks			Times][D/Time								catior	1			
4 '	ress. S				-		on D	eck		at Surf	ace		ata on				T:	ape,	/Dis	skette	I.D.		ー Fi	le Nam	e/Hea	der	
1			01		-	Press						at 9	Surface Down	<i>Φ</i> 6	02						<u>Cf</u>	BT	013.	-021	MA Y	0600	,
	ond.	N 3	04		_	Temp						at B	Bottom	-		<u></u>											
			····			Cond				·		St	art Up				Ren	narl	/5								
					_	Other							Surface							ed				r	udrice	its.	
		T	Trip	Tim		Other		· ·	itor V	alues		<u> </u>	Conv. M	ion.	Values-CT	<u>—</u>		T			nple	Bot.[Data	,		Other Samp.	ير
Po	Bot.	Rack	Depth	Tim Depth	Trip	Pres		Temp			Other	Press.	Ten		Cond.		Sal.		The	rm-P	Avg	Tw	9	al.	Bot. #	Samp.	١٥
1	28			250	06:14	+						250,88	6 4.37	4_	30.964	32.0	514							<u> </u>	12106		
2	27			200	06:1t							201.29	7 4,37	13	30.709	32.	3 3 8	3							12109		2
3	26		A		06:18	1						149,18	0 4.09	7	30.101	र्हें	92	5							1270	<u> </u>	3
4	29			100	W:J	0						1589	2 4.08	:7	30.069	3 ↑,	92								1271		4
5	21		V		0619										30.033										1245		5
6	20			50	06:5	B									30,018	ŀ		- 1		_					1273	ļ	6
7	19		~		06:2										30,008	l									1274	<u> </u>	7
8	24			20	06:21	6									30.010	ľ		- 1							1275		8
9	25				06:5								,		30.00%										1276	Sal #10	9
10	33																										10
1	70																				i		1		1	1	1.

Initials _

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Consec	Cast >14	#	Vesse MILL	i Er fr	EEMAN Pro	. & Leg -91-05	E	vent# 51	Vessel	Sta. I.D.	instru	ıctions				Sta.	Designat	ion	0.00
Consec. Cast #	Deg	Latitu g.	ıde Min.	N or S D	Longitud	or	Date JD =	122 Yr.	Tim GM Hr.		Dry Bulb	Wet Bulb	Bar. mb	Si Nind	Wind Pind Cloud	100 1 751	ttom oth, m	Sta. Nar or I.D	
014	5	743	13	N 1	55151	6 W O	ZMAY	9 1	07	3 3	45	43	0 4	5605			73	E	0
Type & S	N 9:	1220-A		_		Mon Deck	itor Checl	c s t Surfac		i		D/Time		Tape/Diskette	Data Lo		me/Hea	dos	
Press. S	N_2	5084		-		Deck	a	L SUFIAC	Ee	at Sur		429		rape/Diskette	1.5.	Cast C			17
Temp. S				- 1	Press					Start D	own	5729	<u>_</u>			<u>rant</u>		चे ।	
Cond. S	N_{-30}		· · ·	- 1	Гетр	<u> </u>				at Bot	· · · · · · · · · · · · · · · · · · ·	733	[_						
				- (Cond					at Sur		7 35	- 1	emarks	went	to~80	bu t	han	
				. · c	Other					4		735		416RO 2001		ickup to			
So Bor	T	Trip	Tim				or Values					Values-CT			nple Bot.I		Sal.		
	Kack	Depth	Depth	Trip	Press.	Temp.	Cond.	Ot	her	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.	Bot. 7	‡ Samp.	╀
1 28		2	60	6734	1				6	0,264	4.042	29.991	31.89	1			-	MZ	1
2 23		ų.	XG							50.419	4.045	29,991	37.62	74				CH	2
3 26			50	673	5	0			5	6.250	4,045	29.989	3/,89	3				mz	3
4 29			що	Ф736	,				411	40.464	4.044	29.985	31.89	13		拉		M2	4
5 24			40	\$73 (6				4	10.093	4.043	29.983	31,89	2				Chi	5
6 كت			30	4738					7	30,659	4,041	29.977	31,89	1				MZ	6
7 19			30	4739	ર					94762	4.042	29.977	31.89	1				CM	7
8 24			20	Φ74 0	o				1	10.416	4.045	29.978	31, 89	15			2	ME	8
9 25			20	441	1				1	20,244	4043	29.975	31.80	3				Chi	9
10 22			lo	φ 74 2	2					0,554	4.042	29.970	31.89	14			:	WE	10
11 23			10	074	2				/	0,582	4.042	29.976	31,89	3				CH	110
12										<u>.</u>						<u> </u>	Iniciale		12

ωF, DK Initials

C	onsec	Cast	#	Vesse MILI	ER FRE	EMAN P	roj. & Leg MF-91-05		Event#	Vessel	Sta. I.D.	Instr	uctions		,	<u></u>				Sta.	. Designat	ion	9
	nsec. ist #	De	Latit g.	ude Min.	N or S De	Longitu	or	Date J		Tim GM		Dry Bulb	Wet Bulb	Ba m			Wind Dir.	Wind Sp.	Cloud	Weath.	ottom epth, m	Sta. Na or I.[
Þ	16	5	62	191	N I	5654	1 1 W	03 M	A Y 9 1	06	48	46	4 5	0	13	61	0	7229	37	b	1 2 1		
Ту	C pe & S	TD 9	1220-A		_ _			nitor C					JD/Time					Data L	.ocat			_	
1 .	•		5084		_		on Deck		at Surfac	e	1	a on			Тар	e/Dis	kette	I.D.	10	File N	lame/Hea IAY <i>DE</i>	nder	
Te	mp. S	N_Z	01	_	- 1	ress					1							<u> </u>	<u>-</u> ۱۱۷	0)	MYGC	T &	
C	ond. S	N3	104	<u></u> -		emp						ttom											
-			· · ·		_ <	ond						t Up rface			Rema	irks							
						ther					Dat	a off											ŝ
Pos.	Bot.	T Rack	Trip Depth	Tim Depth	le @	Press.	Moni Temp.	tor Valu		hos	Press.	onv. Mon. Temp.	. Values-C7 Cond.	F D Sa	.1	The	Sar m-P	nple Bot Avg Tv		a Sal.	Sal.	Other \$ Samp.	۲
1			- Срин	Вери	11111	11633.	Temp.		ilid. Ot	i iei	1 1 533.	Temp.	Cond.	30	11.	THE	111-1	748 14	+	Sai.		7 Jan p.	+
	28					<u> </u>	-						 	-									╀
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Initials JOS/WF

Pg. <u>16</u> of .

Consec	:.Cast	#17	Vessel MILLE	R FREE	Pro	oj. & Leg 1F - 91 - 0	5	Ever	15#	Vessel	l Sta. I.D.	Ins	tructions						Sta.	Designat	ion	Ñ.
Consec Cast #		Latiti g.	•	N or S Deg	Longitud	ie E or W	ŀ]D = 1		Tin GM Hr.	ne	Dry Bulb	Wet Bulb	Ba m	ır. b	Win Si Si Dir	d Wind	Cloud	Weath.	ttom pth, m	Sta. Nan or I.D	
0/7	5	544	83	NIS	8330	OW	03	M A Y 9	1	12	56	5 3	3 5	00		3717	0 14	87	6	92	911	7 0
	TD	1220-A					onitor	Checks at Si	£	•		mes a on_123	JD/Time		Ta	pe/Diskett		Loca		ıme/Hea	nder	
Press.	SN_2	5084				ii Deck		4L 31	uriac	.ਦ	at Su		1252		, 4	pc, 01311011	·		casto			39
Temp.					ess					· · · · · ·	Start D		1252					-			O	
Cond.	2N				mp						_	ttom t Up	1255			 -			4			
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	T = 1	Tein			her							ta off	n. Values-C		CID	at eur	mple B			91914	Other	T
S Bot	Rack	Trip Depth	Time Depth	@ Trip	Press.	Tem		/alues Cond.	Otl	her	Press.	Temp			al.		Avg		Sal.	Bot. #	Other # Samp.	P _o
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2 27									•••		• • • • • • • • • • • • • • • • • • • •											2
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11 23			165	25658						_	63.87	2.33	7 28,760	32.0)9g	1	2.35	,		18		1
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Pg. 17 of ___

		Latitude Deg. Min. Deg. Min. S 5 5 0 9 6 CTD 91220-A SS. SN 25084 Depth Depth Depth Rack Depth Depth CG GG		117			T= -												Pg. 18	of	<u> </u>	
		пѕес	. Cas		Vesse MILI	ER FI	REEMAN	Proj. MF	& Leg -91-05		Event	# Vess	el Sta. I.D.	Instr	ructions	999,0	Programme and advisors	and the second section of the second	Sta	. Designat		10.75
		nsec st #		-		N or S	Lon Deg.	gitude	or	Date J		† T	ime MT Min.	Dry Bulb	Wet Bulb	Bar.	Wind	Wind B	Neath.	Bottom epth, m	Sta. Nan	
	0	1 8	5	50	7 66	N 1	560	13	3 W	OHM	A Y 9	1 1 2	T- /	60	50		1 1 1	5328		000	1	17
	Тур	e & S	D S	1220-A			-1	H		nitor Ch		<u>- T</u>			JD/Time		<u> </u>	Data Lo			€\$30	
						-			Deck		at Sur	face		rface	4: 1246 1248		oe/Diskette	I.D.		Name/Hea	ıder	•
					· · · · · · · · · · · · · · · · · · ·	- 1	Press					<u>-</u>		own					Cast	018-04	May 12	46
	Cor	nd. S	N				Temp					····		ttom								
	_	•••		·			Cond	-	<u> </u>					t Up rface	1309	Rema	arks byoke	L his	cen bottl	e handl	0	
}			Т	Trip	Tim		Other_		Monit	or Valu				a off	1256	<u> </u>	S.					
-	Š E	3ot.	Rack	Depth	Depth	Trip	Pres	s.	Temp.	Cor		ther	Press.	Temp.	Values-C7	Sal.	Therm-P	mple Bot.I Avg Tw		Bot. #	Other \$2mp.	Pos
-	1 2				60								58.827	4,280	30,757	32.558					MZ	ı
-	2)				66)								59.104	4.279	30,757	32,559				03	Chi	2
`[3)	ید			50					_			49,727	4,333	30,201	32,561					mz	3
-	4 1	29			40	·							39,765	4.378	30,832	32.559					M2	Ι.
	5 7	24			40								40,533	4.387	30,843	32,562					Ch	5
L	6 2	دع	_		30								29.604	4,105	30,518	32.466					MZ	6
\vdash	7 1	-			30								29.983	4.109		32,466					CH	7
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\vdash	0 2	- -	_		10								11.153	3,881	30.244	32.374					ME	10
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		\perp					1															12
*	· /\	of le	<u>.</u>	BOH	us @	Pos	itions	2+	3 W	ive b	roller	woo.	n reco	ivery-	contam	ination	n like	4.		Initials		_

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	Conse	Cast 19			el LER	FREEMAI	Pro	oj. & Le 4F - 91 -(5 15	Ev 1	ent# 3 7	Vesse	Sta. I.D	•	Instr	uctions					_		- 1		esignati	OR	
- E	onsec		Lati	Min.	Or S	L Deg.	ongitu	de E or W		JD = Mo.	Yr.	Fin G Hr.	19.7	Dr Bul	, .	Wet Bulb		Bar. nb	S. S. Vis.	Wind Dir.	Win Sp.	Cloud	Type Weath.	Bott Dept		Sta. Nam or I.D	
0			5/13	56 l	N	155	466	S W	04	маү	9 1	20	34	6	0	55	9	3	57	12		18	72	8	25	R9	7
	ت Spe & S	TD SN_9	1220-A	\		,	_			Checks				imes		JD/Time	,		•			a Lo	cation				
	ress. S				_			n Deck		at	Surfac	ce	c.					1	ape/[iskette					e/Hea		
	emp. S				_	Press.				-=			Start (Down.	124	20 30	30	-			<u>C/T</u>	5 1	<u> </u>	.041	rrc r	2029	
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Pos	Bot.	Rack	Depth	Depth	Tr	ip P	ress.	Tem		Cond.	Ot	her	Press.		emp.	Cond.		Sal.	+	nerm-P	mple E Avg			al.	Sal. Bot. #	Other \$ Samp.	P _o
	28				37:0							é	9.101		32	29.591	 									MZ	1
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3	X	341		50	38:	45				· · · · · · · · · · · · · · · · ·						29.549	1									mz	3
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_	25		V		43											29,723										Q1	9
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	 		····	72		<u>.</u>																	Pg	. <u>20</u>	<u>of _</u>	
Consec.(Cast # 0.2	5	Vessel MILL	ER FR	REEMAN	Pro	i. & Le F-91-(£)5	E	vent# 183	Vess	el Sta. I.D. 158	l Ir	nstri	ictions								Sta. D	esignat	ion	
Consec. Cast #	Deg.	atitud M		N or S	Lo Deg.	ngitud	e E or W		JD = Mo.	=	Ti G	me MT	Dry Bulb		Wet Bulb		ar.	Vis.	Wind Dir.	Win Sp.	Cloud	lype Weath.	Bott Dept		Sta. Na or i.	
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Cond. SN	1_304	1.4			Temp							— ,	ttom			<u>100</u>										•
					Cond Other_		<u> </u>				<u> </u>	at Su	t Up rface ta off		<u>. –</u>	_	Rema		2:	AIND	1.00	7/21	2116	1chi	ILIVE	, ₁
8	T Tr	ip	Time				Moi	nitor \	/alues						Values-CT	D	Jack 1 14			nple B						
Bot. R	ack Der	oth C	epth	Trip	Pr	ess.	Tem	p.	Cond.	Ot	her	Press.	Tem	ıp.	Cond.	5	al.	The	erm-P	Avg	Tw	Si	al.	Sal. Bot. #	# Samp)
1 28	l		60	24:0	0	almadrido do magazinho an analogo de s		in a second	andamahdah diring diranam samuni			59.953	3.57	7	29.74	32	.086	5							MZ	-
2 38	3 1	\[\frac{1}{1}	50	19:00	5							50.073	3.62	S	29.800	37.	080			3.6	0			33	3 41	
3 3141	l		50	19:3	9							50.204	3.63	0	29.807	32.0	84								MZ	-1-
4 29	1	L	1	30:4								40.028	3.715	5	29.829	32.	232								MZ	
5 7	\	4	0	31:15								40.263	3.712	_	29.826	32.0	30								CH	
6 20		13	30	32:2	0							2.744	3.72		29.825										MZ	
7 5		V 3	30	32:5	0				94			29.650	3.73		29.832					•					Chl	
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Consec.	Cast :	#	Vessel MILLE	ER F	REEMAN	Proj. & MF -91	_eg _05		Ever	nt#	Vessel	Sta. I.D		Instr	uctions									St	a. De	signati	ion	,
Consec. Cast #	Deg.	Latitu 1	(N or S	Long Deg.		or	ate ay	-	Yr.	Tin GM Hr.		Dry Bulb		Wet Bulb		Bar. mb	S. S.		Wind Dir.	>	Vind	Type	Weath.	Botto Depth		Sta. Nai or I.C	
021	55	57	20	N	1563	170	w O	6 m	A Y 9	1	06	45	4	5	43	39	2	4	3	22	5 1	86	54	1	20	2	1	57
Type & SI	D N_91	220-A						tor C	hecks				imes		JD/Time							ata L						
Press. SI						on De	k		at Su	urfac	e	1					1	•		kette	I.D.	./~~~ » «		File △ሬሰ	Nam	e/Hea 063	der 36	
Temp. SI	V_ <u>70</u>	1		.	Press								Down_				_					310.	<u>ا ب ال</u>		1711			
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		 .			Cond													nark		DA	TA	CO	LLE	OI	060 3	STOP	PED 61N	Λ
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S Bot.	T Vack [Trip Depth	Time Depth I	e @ Tri	ip Pres		mp.	or Val	ues ond.	Otl	her	Press.		mon. mp.	Values-C		Sal.	+	The			e Bot vg Tw		a Sal.		Bot. #	Other Samp.	Pos
1 28			BOTTO				•					97.61			30.971	1	852				- 2	<u></u>				25		Ī
2 8			60	49						· · ·									•								Chl	2
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6 20			30				<u> </u>				- 85							\perp									Che	6
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9 25	\bot																	_ _								<u> </u>		9
10 22												<u>.</u>			<u> </u>													10
11 23 12 Light Motes	_												_					_			_							11
12 Mere																	<u></u>											12
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Pg. 214 of _

Temp. SN_701 Fress. Start Down	Bottom Depth, m 4 1 2 0 2 cation File Name/Her 21 _ CGMT	10652
CTD	File Name/Her	eader 10652 6MAY063
Type & SN 91220-A on Deck at Surface Data on	File Name/Her 21 - COMH OF CASTOLIO	10652
Cond. SN 304 Temp.	THE PURE THE	A And
Other Data off Data off	ONLY	, porives
T Trip Time @ Monitor Values Conv. Mon. Values-CTD Sample Bot. Da Bot. Rack Depth Depth Trip Press. Temp. Cond. Other Press. Temp. Cond. Sal. Therm-P Avg Tw		. Other # Samp. 4
1 28 Cond. Cond. Cond. Cond.		
28 60 61,149 3,579 29,794 32,112		Cha:
3 3141 50 50,661 3.579 29.789 32.112		che:
4 29 40 40 40.002 3.582 29.788 32.112		ale.
5 7 30 30.165 3.600 29.798 32.113		Che
6 20 30.264 3.593 29.793 32.113		Che
7 5 1 20 20.144 3.608 29.800 32.112		Che?
8 24 10 10.099 7.022 30.145 32.119		Che
9 25		. 127
10 22		1
11 23		1
12 Light Mistre		1

Pg. 27 of _____ Sta. Designation Consec, Cast # Vessel MILLER FREEMAN Proj. & Leg MF -91 -05 Vessel Sta. I.D. Event# Instructions 122 Latitude E Date JD = 126 Longitude Time Sta. Name Weath. Bottom Wind Dry Wet Bar. Consec. **GMT** or or Depth, m or I.D Κ. Cast # Bulb Bulb Dir. Deg. W Day Mo. Min. Deg. Hr. Min. 48 93 4 99 3.2 **Data Location** CTD ID/Time **Monitor Checks** Times Type & SN_91220-A Tape/Diskette I.D. Data on_ File Name/Header on Deck at Surface CASTO22 -06 MAY0735 at Surface 07 36:55 Press. SN_25084 Temp. SN _701 Press. ___ Start Down___ Cond. SN_304 Temp. _____ at Bottom_____ Remarks & OCP INDICATES HOCMS OUTFLOW LINE 17. Throughout upper 150m Start Up_____ at Surface_____ Other____ Data off_____ Sal. Other 50 Bot. # Samp. & Sample Bot.Data T Trip Monitor Values Conv. Mon. Values-CTD T Trip Time @
Bot. Rack Depth Depth Trip Time @ Therm-P Avg Tw Temp. Sal. Sal. Other Cond. Cond. Press. Press. Temp. 1 28 2 30 TEMP 2 3.85 189.518 3.832 30.533 32.673 B01100-10750 Che 3 3 3141 60,767 3,533 29.864 32,242 0755 50 all 51.503 3.605 29.907 32.227 4 29 0756 Chil 5 7 1757 41.0163,702 29.966 32.206 CW 0758 29/833 32.015 20 5 0759 20.225 3.754 29.821 31.994 8 24 10.187 3.757 29,818 31.997 10800 25 10 22 10 11 11 23 12 Mere 12

Consec. Cast	# Ve	essel ILLER	EDEEM	AN Pro	i. & Leg F-91-05	Eve		el Sta. I.D.	Instr	uctions				S	ta. Designat	ion	19
Cast # Deg	Latitude	N or s		Longitud	e E Da	ate JD =	26 Ti	me MT Min.	Dry Bulb	Wet Bulb	Bar. mb	Wind	Wind Pa	Type Weath.	Bottom Depth, m	Sta. Na or I.I	
	5559	3 N		6215	1 1	G M A Y		1 1 1	48	45	╌╂╌╌╌	822	0 160		232	l	Ş
CTD Type & SN_9:		<u>I . J</u>	1	<u>. 1 - 1 - 1 </u>		or Checks		Ti	mes	JD/Time	992.9		Data Lo	cation	232		
rype & SN _3. Press. SN _2!				оп	Deck	at S	Surface			0903	Тар	e/Diskette	I.D.		Name/Hea		
Temp. SN_7			Pres	is				at Sur Start D	face own	0903	_			Car	to23-0	6 Mane	/1
Cond. SN <u>3</u> (04		Tem	P				_ at Bot	tom	6910	_						
			Con	ıd	.			•	: Up face	0911	Rema	ırks	. ^/		1	1	,
		<u> </u>	Oth	er				_ Dat	a off	०१॥					1chl		
Bot. Rack	Trip 7	Fime @	rip	Press.	Monito Temp.	r Values Cond.	Other	Press.	onv. Mon. Temp.	Values-CT Cond.	D Sal.	Sai Therm-P	mple Bot. Avg Tw		Sal.	Other \$ Samp	
28	60			11033.	in the second se	Cond.	Other	61.246	3,516	29,843				e data de sur sur estresa.		MZ	
8	×			,				50,229	3.114	29.442	32.157					Che	
3141	50							50,110	3 164	29,432	32,155					Mt	
29	4	5		·				39.969	3,243	29,562	32,159					MZ	
7	4	0				_		40,120	3,262	29,560	32.158			ļ <u> </u>		Chi	_
20	3.	0					ē.	30,172	3,961	19,986	32,033			<u> </u>		M2	
5	3.	0	\perp					30.429	3,878	29.945	32.638			ļ		Chl	-
21	2	<u> </u>						20,481	3.893	29,954	32,014					MZ	
25	2	0						20,488	3,893	29.954	32,015					Chl	,
22	1	٥						10.494	3,882	29.932	32,005					MZ	
23	<u>l'a</u>	>						10,466	3,872	29.914	31.993		-			Ch	
Light .														<u></u>			
															Initials		_

Pg. 24 of ____ Sta. Designation Consec.Cast # Proj. & Leg MF-91-05 Vessel Sta. I.D. Event# Instructions 180 Latitude Cloud Dui Weath. Longitude Date |D = Time Sta. Name Bottom Wet Bar. Wind Consec Dry **GMT** or S. S. Vis. or I.D or Depth, m Dir. Bulb Cast # Bulb mb Min. Deg. W Day Mo. Yr. Hr. Min. 226 5 0 6 245 5 5 5 4 4 5 5 226 **Data Location Monitor Checks** Times JD/Time 126 Type & SN 91220-A File Name/Header 1005 Tape/Diskette I.D. on Deck at Surface Data on_ Press, SN 25084 1006 Cast 024-1004 at Surface_ Press. ____ Temp. SN 701 1007 Start Down_ Cond. SN_304 1015 at Bottom_ Temp. _____ 1015 Start Up_ Runaway which at 1025

on bow which, at Luster 13:13

Sample Bot. Data Sal. Other & Cond._ Remarks 1313 at Surface. Other_ 1015 Data off_ Sal. Other o **Monitor Values** Conv. Mon. Values-CTD Trip Time @ Bot. Rack Depth Therm-P Avg Tw Sal. Depth Press. Temp. Cond. Sal. Trip Temp. Cond. Other Press. CU 1 28 1020 32,406 50 30 400 4,015 49.671 8 di 32.361 40 4,062 40,287 30,347 1022 3 3141 3 32,290 30 30, 247 36.173 3,959 1623 23 4 20,681 3,885 30,163 32, 198 29 20 1024 CTD wench 5 32. Runaway 7 10 6 16 m bettle not find 6 120 7 5 8 8 24 25 10 10 22 11 11 23 12 Meter 12

٦	onse	- Ca		Vess			Due: 0.1	-		1 10 15	10, 100, 400								Pg.	<u> 25 </u>	of _	
L	0	25	5	MIL	LER F	REEMAN	Proj. & Le: MF-91-0	5	Event# \ ないる	essel Sta. I.E). Inst	cructions							Sta. De	signati	ion	
	onsec ast #		Latin	Min.	N or S	Longi Deg.	tude E or W	Date JD : Day Mo.		Time GMT Hr. Min.	Dry Bulb	Wet Bulb	Ba			Wind Dir.	Wind Sp.	Cloud Type Weath.	Botto Depth	_ 1	Sta. Na or I.	
0	25	S	63	171	N	15632	84 W	O7 MA	9 1 0	251	50	50	9	3	61	70	14	9 66	19	6	E	1
Tv	ne & S	TD SN	91220-A		1		M	onitor Chec	ks		imes	JD/Time	1	0.000.0	1 1'		Data I	ocation	<u> </u>			. 1
	-	•	25084		i		on Deck	ä	it Surface		ata on	-		Тар	e/Disk		I.D.	Fi	le Name	/Head	ier	
Te	mp. S	SN_	701			Press.				Start	urface Down	45	一 [.		CA	570	<u> </u>	07M	AYO	24:	3	
C	ond. S	N_	304	-	-	Temp				at B	ottom <u>0</u> 2	51							_			
-					-	Cond					irt Up urface		— 	Remai	rks 15	<i>3</i> 5	TA. AL	ONG H	1AJOR	AXI	5 OF	
L			1	Si 1,5	- ·	Other				•	ata off		6	(00)	7(0)	VER) .	_				
Pos.	Bot.	T Raci	Trip k Depth	Tim	ne @	Press.		itor Values	1 0			. Values-CT			-		pie Bot			Sal.	Other Samp.	-T-
							1 EIII	Cond.	Other		Temp.	Cond.	Sa		Therr	n-P	Avg Tw	<u>' S</u>	al. B	ot. #	Samp.	10
	28	 	<u>'</u>		025				<u> </u>	59.711	4,102	30.158	32.0	30	2-						MZ	1
	3141		<u> </u>	50						49,526	4.106	30.132	32.0	101					1	16	Qu	2
					025	<u> </u>				49.43	7 4.106	30.132	32.0	100							MZ	3
	29			40	025	ଟ୍ର		_	ļ	39.235	4.104	30,123	31,90	18					· .		Ms	4
	7	. <u>-</u>	<u> </u>	40	015	9			ľ	39.212	4.104	30.123	31.99	18			_				al	5
_	20				2300				-	29.617	4.094	30.103	31.98	39				3			Ma	6
	5				0301				<u> </u>	29,778	4.095	30,104	31.98	99							all	7
	21			20	030	1				19.487	4.085	30.083	31.97	79			-				MZ	8
	ار ا			20	0.30					4		30.083									au	_
	22				030					9.298	4.176	30.153	31,97	79							ME	10
11	23			10	030	2						30.132								3		111
12	ight Notes			-																		12
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SPEEDS EST, DURING BONGO IE STEADY HEADING

for

- C. W.

<u> </u>	<u> </u>														4		3867	-		_		Pg.	<u>25</u>	of	
Consec.Cas	st#	Vessel MILLE	ER FR	EEMAN	Proj. & Le MF-91-	05	E	vent#	Vessel	Sta. I.D	. In	ıstru	ctions								- 1		esignat	ion	
Consec. Cast # D	Latit	•	N or S [Long	itude E o V	r	JD = Mo.	Yr.	Tim GM Hr.		Dry Bulb		Wet Bulb		Bar. mb	S. S.		Vind Dir.	Wind Sp.	Cloud	Weath.	Botte Depti		Sta. Na or I.	
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Press. SN_				_	on Deck	ζ	at	: Surfac	e		ata on urface				_ Tape/Diskette I.D. F _ CASTO 26_07 M								e/Hea ソンリ /	der	
Temp. SN_			1 .	Press						Start [Down	04:						10(0		- 7		7 -	1 617		•
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Bot. Raci	Trip	Time	@			nitor V		·					Values-CT			$oldsymbol{\mathbb{L}}$		Sam	pie Bo	t.Da	ta		Sal.	Othe	100
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1 28		60 (7438	<u> </u>					6	0723	3.90	8			941	-								MZ	-
2 38 B	V	150	244	1						1,450	3.89	2	29.880	31.	912								. ′	au	
3 3141	V	50	045						5	1,501	3.89	2	19.819	31,	911	<u> </u>								ME	\perp
4 29	V	40 0	7446	•					4	10.480	3.86	7	29.836	3/.	890	>								Ms	
5 7	V	40 6	2446						4	0.565	3.869	7	29,838	31.	891	/								al	1
6 20	/	30	9447	· .					. 3	0.620	3.85	6	29,819	3/.;	886	p ²				,			·	Mz	
75		30	2488	3					3	0.580	3.85	6	29.819	31.2	386	5								au	1
8 21		20 1	1449						2	0.707	3.86	2	21.819	31,	886	,		,						MZ	
9	V	20 (1440	ì		. 3.			2	0.	3.8		29.8	3/.8	3									and and	
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12 Meter																									
		t milt		£	T	5		1000			00 700 - 10 - 10 .0	W. B.	1890					-11-05		10-1		li	nitials .	28627	221000

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	onsec	Cas	t #	Vesse MILI	el LER	FREEMA	N Pr	oj. & Le: MF-91-0	5		ent#	Vesse	Sta. I.D.	•	Instr	uctions								Sta. I	Designat	ion	
	onsec ast #	De	Latit eg.	tude Min.	S & S	Deg.	ongitu	de E or W	_	JD = Mo.	Yr.	Tii Gì Hr.		Dry Bulb		Wet Bulb	Bar. mb		Vis.	Wind Dir.	Wind Sp.	Cloud	Weath.	Bo	etom oth, m	Sta. Na or I.I	
0	27	5	70	1 95	N	1 5 6	20	9 1 W	08	MAY	9 1	02	58	6	3	60	01	2	6	ા શ			86	1 1	76	B	2:
Ту	pe&:	TD SN_S	1220-A	\		Monitor Checks Times JD/Time 1040.5 Data Location on Deck at Surface Data on Tape/Diskette I.D. File																					
P	ress. S	SN_2	5084		-	,,	,	on Deck		at	Surfac	e	-	ita on irface			_	Тар	e/D (iskette I	I.D. 1117	- /	F ፍ	ile Na ドルイ	me/Hea	ider .54_	
Te	emp. S ond. S	SN_7 SN 3	<u>'01</u> 104	· ·	-	Press. Temp			 ·				100	Down ottom_			- =				<u> </u>						
_	J.1.G. C				-								Sta	rt Up_				ema	rks	INC.	TE:	014	52	ARO	RHEL	sch	A
L						Other	•					_	- 30	ırface_ ıta off_			- 1	へ子		Chi			-1	(عاصاه	5 84	0
Si	Bot	T Rack	Trip Depth	Tim Depth	e @	in	Press.	Mor	nitor V	alues Cond.	Oth		Press.		1on. mp.	Values-CT Cond.	D Sal			Sam erm-P	ple B			Sal.	Sal. Bot. #	Othe Samp	- 1
\Box	28	,	V	60	<u> </u>	" '	1633.	1611	, (2011 <u>a.</u>	Oti	ier	59.159	+	<u> </u>	1	31.97			erni-r		1 1		<u>Jai.</u>	300. 1	Mz	- 1
_	8			W/50			***						•	+												au	+
3	3141		V	1		十		_		····			48.963 48.80°			1	31.97	_					<u>.</u> .			MZ	÷
-	19			50				 																<u> </u>		Ms	
5			V	-	-	-							39,830	+		30,095	ſ		-							al	+
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6	20		V	30	_			<u> </u>								30,093						.				Ma	4
7	5		V	30	<u> </u>			<u> </u>								30,093									_	all	+
8	24		V	20			· · · · · · · · · · · · · · · · · · ·									30,080										MZ	_
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				- 2802049				20110-70	-			40.00	2000200	1933				e Real			_				Initials	N 1857	

Col	isec.	Cast	#	Vessel MILLE	R FRE	EMAN M	j. & Leg F - 91 - 05	5	Ever 2 6		Vessel	Sta. I.D.	Instr	uctions	_						Sta. D	esignati	on	
Con	sec.	Deg	Latitu . !	•	N or S De	Longitud	e E or W	Date Day	JD = 1	28 Yr.	Tim GM Hr.		Dry Bulb	Wet Bulb	Bar. mb	Vis.	Wind Dir.	Wind Sp.	Cloud	Weath.	Bott Dept		Sta. Nai or I.C)
00	18	5 7	708	94	N 1	56093	6 W	8 ک	M A Y 9	1	12	5 3	38	3 8	102	27	C	, 0	9	6 6		98	B	23
Typ Pre Ter	CT e & SI ess. SI np. SI		.220-A 5084		Р	<u> </u>	Mo Deck	onitor	Checks at Si	urface	e 	at Sur Start Do at Bot	on <u>128</u> face own tom	D/Time 1244 1245 1245 1249 1249	(902, 2 Tap	pe/Dis	skette	Data	Loca	Fi	le Nam	ne/Head	der May 12	44
_						Cond Other	· ·					at Sur	Up face off	1303	Rem	arks Was	631 6 hai	n oow ce hit	ام من د له ما	t Itan	~			
Sos.	Bot.	T Rack	Trip Depth	Time Depth	e @ Trip	Press.	Mon	itor V	alues Cond.	Oth	er	Press.	onv. Mon. Temp.	Values-CT Cond.	D Sal.	The	San rm-P	nple B Avg		_	Sal.	Sal. Bot. #	Other Samp.	Pos
\Box	28				1252	11 000.			Sond.			60,633	4.217	30./83	31,947								MZ	1
2				\$ 150			<u> </u>						4.215	30,175	31,946								al	2
	3141				1254								4.215	30.175	31,946								MZ	3
4	19			40	1255							9. 862	4.216	30.17/	31.945								Ws	4
5	ï			40	1256							39.940	4218	30.171	31.943								Cul	5
	20			30	1257							30,040	4.224	20./65	31.938								MZ	6
7	5			30	1258							30:116	4.221	30.165	3/.938							<u> </u>	ahl	7
8	4			20	1259	1						20.512	4,2260	30,161	31.933								MZ	8
	45			20	1300							20,787	4.227	30.162	31,933								an	9
	22			0	13=1							10.167	4.2 35	30.143	31.932								MZ	10
11				10	1302							10,138	4.236	30,163	3/.931							0,5	Chl	11
12	Light Motes												272.76				<i>\$</i> 7000			.54				12
																						lnitials .		

Pg. <u>12</u> of ____

Pg. 29 of ____ Consec.Cast # Vessel MILLER FREEMAN Proj. & Leg MF-91-05 Sta. Designation 188 Vessel Sta. I.D. Instructions G099A 629 Latitude Date JD = 129 Longitude E Time Weath Weath Sta. Name Consec Dry Wet Bar. Wind Bottom or **GMT** Depth, m or I.D Cast # mb Bulb Bulb Dir. Deg. Min. Deg. W Day Mo. Yr. Hr. Min. CTD Type & SN 91220-A **Data Location Monitor Checks** ID/Time **Times** Data on______at Surface_OY 40 Tape/Diskette I.D. on Deck at Surface File Name/Header Press. SN_25084 CASTO29-09MAY0439 Press____ Temp. SN _ 701_ Cond. SN 304 Temp. ______ Start Up_____ Remarks BONCO FI7-7 [G099A] Cond._____ at Surface_____ DEPLOYMENT SITE SAT BUOY 7168 Other____ Data off_____ Sample Bot.Data Other Time @ **Monitor Values** Conv. Mon. Values-CTD Bot. Rack Depth Depth Trip Bot. #|Samp. | 6 Therm-P Avg Tw Press. Temp. Cond. Other Press. Temp. Cond. Sal. Sal. 1/28 62.246 4.244 30.324 32.085 MZ 60 2 8 Qd 3(314) MZ 49,866 4.054 30055 31.961 50 4 29 MZ 40 39.937 4.005 29.977 31.923 at-1 6 20 7 5 2 M2 30,735 4.034 29.988 31.924 30 4 Mz 8 21.187 4.025 29.987 31.924 20 04 10/22 9,843 4,026 29,983 31,925 M2 10 10 11 23 112

	onsec.	Cast	# 030	MILL	er FRE	EMAN MI	i. & Leg F-91-05	5	320	vessei	Sta. I.D.	Instru	CCIONS							5112610		
	nsec. ist #	Deg	Latitu		N or S De	Longitud	e E or W	Date Day	JD = Mo. Yr.	Tim GM Hr.		Dry Bulb	Wet Bulb	Bar. mb	S	Wind Dir.	Wind Pnoi	Type Weath.	Bottom Depth, i		or I.D	2
0	30	55	510	114	N /	55485	W	10	M A Y 9 1	07	140	49	0 4 5	8 2	16	5215	309	66	57	/	R	4
		D q	1220 - A			1		onitor	Checks		Tir	nes J	D/Time				Data Lo					
	pe & S ress. S				-	on	Deck		at Surfa	ice	Data	a on face <i>0</i> 3 2	58		Tape,	/Diskette	I.D.	Fi	le Name/	Head	ier …カフィ	2
1	emp. S			··	_ P	ress					Start D	тасе <u> </u>		-		-		<u> </u>	+030-	10 M	YY Z	0
	ond. S				_ To	emp					1	tom		<u>-</u>		B. ele	Jone 2	9	مكم			
_					_ 0	Cond					I	t Up face		R	emarl	sno S	ample	7 10	han			
_					_ · c	ther						a off			RECO	B. ello SNO S RUING"	upcast	10	GET F	LOUR	ESENCE	ઢ
S.		T	Trip	Tim Depth	ie @			itor V				onv. Mon.		U		3411	ipie bot.	Data	C-1	Sal.	Other Samp.	Pos.
	Ŋ		Depth	Depth		Press.	Temp	D. (ther	Press.	Temp.	Cond.	Sal		Therm-P	Avg Tw	 	Sal.	IOL. #	me/	_
1	28		V	60	65					272	0.074	4.576	31,033	32.58	37				= -		ChL	_
2	-		7		50																	2
3	3141		V	40	تاسم				3.9	06 L	19.690	4.383	30,719	32.4	17						mZ/ ChL	3
4	29		V.	30	7-	1			1.0	150 3	39.655	3.830	29.962	32.0	76						mz/ chl	4
5	-				26																	5
6	20		V	20	10				1.4	67	29.751	3.820	29.943	32.0	169						mz/ /chl	6
7	-		,			1						3.807										7
8	21		1	50					2.6	17	50.6%	4088	30,335	32.2	57						me/ chl	8
	_			44114																		9
10	22			10					1.	396	12.600	3 400	29.920	32.0	062						m²/chi	10
11	(iV		~									4.078								16		11
12	Light				1													İ	1			12

STart

Initials ____

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																		Pg. <u>31</u>		=
Consec	.Cast	#31	Vessel MILL	ER F	REEMAN	Proj. & Lo MF-91-	05	Event 3 2 2		el Sta. I.D.	lns	structions	<u>-</u>				Sta	a. Designat	ion 	
Consec. Cast #	Deg	Latitu g. l		N or S	Long Deg.	0	Date Day		GI	me MT Min.	Dry Bulb	Wet Bulb	B	ar. nb 93.a si	Wind Si Dir.	Wind Pnoi	Weath.	Bottom Depth, m	Sta. Nan or I.D	
031	5	5/9	5 3	N	1554	8 3 6 W	1.0	M A Y 9	108	1170	5 2	045	- 9	36	6220	309	76	5 5 3		
Type & S	TD SNI 91	1220-A						Checks			mes	JD/Time		ĺ		Data Loc				
Press. S				-		on Decl	(at Sur	face	1	a on				e/Diskette l			Name/Hea		
Temp. S					Press					at Sul Start D	rrace own0	8:10:50		cost	- 03/		asto!	SI_IDM ay	<u> </u>	
Cond. S				_	Temp.					_ at Bo	tom									
				_	Cond									Rema	rks STA	R-9	•	····		
l		,			Other			14 . J			пасе :a off			1	FTER &				,	
8 _	_ T	Trip	Tim	e @		Mo	nitor V	/alues	74.		onv. Me	on. Values-C			Sam	ple Bot.D	, 	Sal.		
& Bot.	Rack	Depth	Depth	Tri	ip Pres	s. Ter	np.	Cond. (Other	Press.	Tem	p. Cond.		Sal.	Therm-P	Avg Tw	Sal.	Bot.	# Samp.	╬
.1.2%			60-	_		_ =				62564	4.561	- 32-603	3/.	035	V4-023					1
2			/																	2
3 34			50							50-644	4.26	30.587	32.	375	V=2.729			_		3
4 29			40							41.238	3.863	30.006	32	.095	v=1.602	·				4
5													_							5
6 20			30							32,999	3.82	29,942	- 32	.664	v=1-479					6
7			No.													- · ·				7
8 21			20							20.692	3.81	5 29.929	32	.059	V=1.450					8
9			1														<u> </u>			9
10 27			10							10.438	3.812	29.919	32	057	V=1.387	<u> </u>				10
11 11											ļ						<u> </u>			1
12															<u></u>		<u> </u>			12
																		Initial	S	

Pg. 32 of ____ Sta. Designation Consec.Cast # Event# Vessel Sta. I.D. Vessel Proj. & Leg MF-91-05 Instructions MILLER FREEMAN 032 33.4 Latitude Cloud Puly Veath. Sta. Name E Date JD = Longitude Time Wind Bottom Wet Bar. Consec. Dry GMT Depth, m or I.D or S. S. Dir. Bulb Bulb Cast # Deg. Deg. Min. Day Mo, Yr. Hr. Min. 46 5 4 9 **Data Location** 995.8 ID/Time **Monitor Checks** 16/4 Times Type & SN 91220-A File Name/Header Tape/Diskette I.D. Data on_ 1614 on Deck at Surface Press. SN 25084 CAST031_10 May/610 1610 at Surface_ Press.__ 1610 Temp. SN 701 Start Down... Cond. SN 304 1614 at Bottom_ 1614 Start Up___ Remarks I Eals stort Cond._____ 1625 at Surface_ Chil the ze 625 Other_ Data off_ Sai. Other . Sample Bot.Data Conv. Mon. Values-CTD T Trip **Monitor Values** Time @ Bot. Rack Depth Depth Trip Bot. # Samp. Thorm P Avg Tw Sal. Cond. Sal. Temp. Temp. Cond. Other Press. Press. MZ 1 28 1616 60 30,141 32.312 1.680 59,712 3.796 2 Qu 60/50 MZ 3 3141 3,795 1.636 1647 30,135 32,135 50,273 50 MZ 30.124 32,300 1.664 4 29 3.797 1619 39,718 40 al 5 40 Mz 32.118 1.753 4.091 30,211 6 30.474 20 30 1620 ay 30 MZ 8 21 30,224 32,688 1.895 1622 4.143 19.795 20 20 MZ 32,083 1,694 30,212 10 22 9.955 4.139 10 1624 # 11 33 \$1 32, 083 1.685 4.137 30,210 10 1624 9.947

Pg. <u>33</u> of ____ Consec.Cast # Vessel MILLER FREEMAN Event# Vessel Sta. I.D. Sta. Designation Proj. & Leg MF -91 -05 Instructions Longitude E Date JD = 136 Latitude N Weath. Time Bottom Sta. Name Wind Consec. Dry Wet Bar. GMT Cast # Deg. or I.D Bulb Bulb mb Dir. Depth, m Min. Deg. W Day Mo. Yr. Hr. Min. 153 4724924982 2 N 15611 1743 03355551 1742 CTD Type & SN <u>91220-A</u> Data Location 200 Times JD/Time **Monitor Checks** Data on 136! 1735 Tape/Diskette I.D. File Name/Header on Deck at Surface Press. SN 25084 1736 at Surface___ Cast 033_10 MAY 17 35 Temp. SN __701_____ 1736 Start Down____ at Bottom (1964) 1742 Cond. SN 304 Temp._____ Start Up____ 1742 Cond._____ Remarks 1754 at Surface_____ 1754 Other____ Chl-V Data off____ Sal. Other Sonp. Sample Bot.Data - Conv. Mon. Values-CTD Trip Time @ Monitor Values Bot. Rack Depth Depth Trip Therm-P Avg Tw Temp. Sal. Sal. Cond: Press. Temp. Cond. Other Press. Chy 1 1 28 6ф 1747 30,140 32,255 0,469 59,923 3,852 2 - 6 2 K_au Chymz 3 4.692 30.231 32.132 1.694 3 3141 50.269 1748 5ф Chimz 4 4 29 4.176 30.236 32,066 1.369 39 619 40 1749 k an Cul 6 6 20 4.172 30,225 32,056 1.461 30.176 34 1750 7 - 6 Kaw CH 8 8 21 30,24 32,657 1.431 19,623 4,175 20 1751 9-61 k a v Ch/ 10 4.171 30,216 32,456 10 22 1.406 10 1752 0.710 30,224 32,056 11 11 45 1338 1 0 1753 10,694 4,176 12 12 Initials

Pg. 34 of ____ Sta. Designation Proj. & Leg MF-91-05 Consec.Cast # Vessel MILLER FREEMAN Vessel Sta. I.D. Event# Instructions 339 Longitude E Date JD = 134 Weath. Latitude Time Sta. Name Bottom Wind Dry Wet Bar. Consec. GMT or or I.D Depth, m or Dir. Bulb mb Cast # Bulb Deg. S Deg. Hr. Min. Min. W Day Mo. Yr. 9822982 228 Ф3 4 5 5 5 5 5 3 4 N 1 5 6 1 S 2 3 W 9 Data Location 225 996.6 JD/Time CTD **Monitor Checks** Times Type & SN 91220-A Data on 1341, 1966 Tape/Diskette I.D. File Name/Header on Deck at Surface Press. SN 25084 1907 at Surface_ Cot 034 - 10 May 1966 Press._____ 1948 Start Down____ Temp. SN 701 1915 Cond. SN 304 Temp._____ at Bottom.... 1915 Start Up____ Cond.________ Remarks 1927 at Surface ____ Chl-Votts 1927 Other____ Data off_ Sal. Other Son Bot. # Samp. Sample Bot.Data - Conv. Mon. Values-CTD Monitor Values T Trip Time @ Bot. Rack Depth Depth Therm-P Avg Tw Sal. Cond. Press. Temp. Trip Press. Other Temp. Cond. CLY 1 6ф 32,245 0.343 1926 1 28 29.741 60,379 3.442 2 2 - b au CLYMZ 3 29,984 32,213 0,342 3 3141 3,713 1921 5ф 50,133 Chinz 4 30,228 32,663 1.461 4.163 40,033 29 40 1922 K an Cul/ 6 30,403 4,178 30,235 32,462 1,396 34 24 1923 Kaw CV/ 8 4.182 30.234 32.461 1.514 8 211 20 1924 19.928 9-6 | K a v Ch/12 10 4.196 30,236 32,661 1.475 1925 10 22 16 9.966 20 11 | 11 4,192 30,237 32,461 1.479 10 1926 10,119 12 Initials _____

C	onsec	.Cast :	# 035	Vesse MILL	l ER FR	REEMAN Pro	oj. & Les MF-91-0	5	Ev.	ent# Vess 1 4	el Sta. I.D.	Instru	uctions				Sta. D	esignati ———	ion	pe.
	nsec. Ist #	Deg.	Latitu	ıde	N or	Longitue Deg.	de E or W		JD = Mo.	Т	ime MT Min.	Dry Bulb	Wet Bulb	Bar. mb	Wind Dir.	Wind Piolo	Meath.	to <u>m</u> th, m	Sta. Nan or I.D	
U	35	5 5	55	19	N I	56213	SIW	10	MAY	9 12 2	24	5 5	45	98	48216	7247	712	33	١٤	32
- 1		רח	220-A				M n Deck	onitor	Checks	Surface		mes	JD/Time		ape/Diskette	Data Loca		ne/Hea	ıder	
		N_25			.					Juliace	at Su	rface 130	- 22 16	35	2 7 7 7 7 7 7 7 7 7 7	CASTO	35_1	OMAY	245	
		N_70 N_30			- 1	Press					- Start L	own ttom		=						
	J114. J		·		1	Temp Cond					Star	t Up			narks					-
_						Other			_		at Su	rface ta off		— Kei	nai KS					•
S.		Т	Trip	Tim	_ _	0	Mor	nitor V	alues				Values-CT	D		mple Bot.D	ata	Sal.	Other \$ Samp.	S.
<u></u>	Bot.			Depth	Trip	Press.	Tem	p. (Cond.	Other	Press.	Temp.	Cond.	Sal.		Avg Tw	Sal.	Bot. #	F Samp.	<u>a</u>
	28		60				_			0.366	60.555	3.731	30.054	32.27	2				MI	Ľ
2																				2
3	3141		50			64				0.635	51.307	3,974	30.190	32.198	3				1(3
4	29	,	40							2.041	40.469	4,234	30.288	32,06	5				11	4
5									·· <u>-</u>											5
6	20		30							2.446	30.362	4.245	30.292	32.06	3				n	6
7	_																			7
8	21		20							2813	20.580	4.270	30,308	32.06	2				11	8
	/		V																<u></u>	9
10	22		10							1.782	10,168	4.298	30.326	32.06	2					10
II	38	В								0.273				1	-	4.25		16	THEPMS	11
12	Light Neta					-		¥.		ļ <u></u> -										12
							•	141			7							Initials		

37

Initials _____

Pg. 35 of ____

Consec. 0	Cast #	Vessel MILLER	FREE	Pro MAN M	j. & Leg F-91-0	5	Event #	Vesse	el Sta. I.D.	Inst	ructions						Sta. Des	ignatio	n	89 ·
Consec.	Latit	or	-	Longitud	or		JD =	Ti	me MT	Dry Bulb	Wet Bulb	1	Bar.	Wind Si Dir.	Wind pnol O	ype Veath.	Bottor Depth,	0.04.90	ita. Nam or I.D	
\$36		Min. S	Deg	6265	O W	Day	Mo. Yr.	Hr.	Min.	51	1 1			 	0162		21	1 -	1 5	56
CTI Type & SN					Mo 1 Deck	onitor	Checks at Surf	260	- 1	mes	JD/Time	· · · · · · · · · · · · · · · · · · ·		<u> </u>	Data Loc	cation	le Name	/Head	er	
Press. SN Temp. SN	v <u>25084</u> v 701		Pre	ess	———			ace	at Su	rface 0	1:29				CASTO	36_	- 11 M	AYO	008	
Cond. SN	304		1	mp					_ at Bo	tom t Up										
	·····			ond her				 	at Su	rface a off			Rema							Æ
So Bot. R	T Trip lack Depth	Time Depth	@ Trip	Press.	Mor Tem	nitor V		ther	Press.	onv. Mo	n. Values-C		Sal.		nple Bot.[Avg Tw	· · · · · · · · · · · · · · · · · · ·	Sal.	Sal. Bot. #	Other Samp.	101
1 28	60			/-			~	015		 	30.32					-			chl MZ	
2 —				/																2
3 3141	50						2.	983	51.087	4.256	30.32	32.	081			ļ			Chl	3
4 29	40	E .	\checkmark				2.	422	39,940	4.258	30.321	32	.080						Chl	4
5 —	/		\checkmark															·	_	5
6 20	30		V	-			3.	237	29.940	4.265	30.323	3 32	080						MZ	6
7 _	/		/																-	7
8 21	20		V				3.	162	28,095	4.303	30.351	31	.081						MZ	8
9 /	/		/																	9
10 22	10		V				2	793	10.444	4.368	30.401	32	.081						ME	10
11 11	*//		V				0.	% S	205.93	3 4.621	31.528	3 33.	.044					32	<u> </u>	11
12 Light	3/		1																	12
						-											1	nitials .		

																								Pg	. 332	of	<u> </u>
Consec.(Cast #		Vessel MILLE	R FREE	EMAN	Proj. & Le MF-91-)5 55	Eye 3	ent#	Vesse	el Sta. I.D.	Ins	tructio	ons										Sta. D	esignat	ion ———	0.8%
Consec. Cast #		Latitud M	le N o in. S	r	Longi g.	tude E or W		JD = Mo.	Yr.		me MT Min.	Dry Bulb		Wet Bulb 4、タ		Bar. mb	S. S.		Wind Dir.		Vind Sp.	Cloud	Weath.	Bott Dept	om :h, m	Sta. Na or I.[
037	55	36	811	115	631	36 W		MAY	9 1	01	35	49		51	9	8	3	8:	21	0 1	4	21	1	2	21		5
CTI Type & Si	D y 912	20-A						Checks				mes		Time								Loca	tion				
Press. SN						on Deck		at S	Surfac	ce	Dat	ta on rface		.		T	ape	e/Dis	kette	l.D		~~	Fil karz	e Nan	ne/Hea	der 1017 /	
Temp. SN				Pr	ess							rrace Down			_						<u></u>	51	p37.	<u> (</u>	MA	1012	2
Cond. SN				Те	mp						_ at Bo	ttom										ic					
				C	ond							t Up rface				Rer	mar	ks								-	
				Ot	ther							ta off															
SO Bot. R	T	Trip	Time		1		nitor V					onv. Mo					1				e Bo				Sal.	Other Samp.	
	ack D			Trip	Press	. Ten	ip.	Cond.	VO	her 75	Press.	Temp		Cond.	1	Sal.	+	The	rm-P	A	vg T	~ 	<u>S</u> ;	al.	Bot. 7	M2	+
1 28			60	<u> </u>					2,3	63	59.863	4.255	30,	314	32.0	<u> 264</u>										Chl	1
2 —				/									-	transmitted to the second comments.	Transport of the last of the l	(continue)	rij.										<u>· </u>
3 3141			50	$\sqrt{}$		708 10			2.5	88	49.955	4.255	30	7,309	32.	063	3									CHR	3
4 29			40	✓					2,8	566	39.716	4.255	30	.305	32	063	3		<u></u>							Chl	14
5 —		-		V/						1	NIX.			and the same of th	CO ^{III, Temperori C} ine	-	de Paris						_		15		_ !
6 20			30	1					2.7	10	30.107	4.275	30	.306	32.	051								14		Che	1
7 _		-			9.									· ·													17
8 21			20.	V					2.5	49	19.534	14.32	0 30	7.336	32	.04	6									MZ Che	8
9		-		$\sqrt{}$																						-	٩
10 22			10						1.6	65	9.864	4.336	30	344	32	.04	6									Chil	1
11 1					/						199,591		$\overline{}$				$\neg \tau$								14		1
12 Light								_						4								T					12
						t						-				_					-				Initials		

Pg. 38 of _ Sta. Designation Cloud PuiW Type Weath. Sta. Name Bottom Depth, m or I.D **Data Location** Tape/Diskette I.D. File Name/Header

Wind

Dir.

Tyr	e & S	SN_9	1220-A		_			or Check			•	D/ Time	-	(D) :-1:	10		// 1		
Pr	ess. S	N_2	5084		- -	ess	n Deck	at	: Surface	at Sur	a on face02	. 46	lap	e/Diskette &	.D.	Cast 03	me/Head	der Nam D2	4
Cc	mp. 3 ond. S	N_Z N_3	01		-					Start Do	own	52							
-					_ C	ond				Start	: Up face		Rema	rks	\ - \ \ \ - \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	<u>-</u>			
						her				— Data	a off			C-1	1 0		I Cal	·	
Pas.	Bot.	T Rack	Trip Depth	Tim Depth	e @ Trip	Press.	Monitor Temp.	r Values Cond.	VOLTES	Press.	onv. Mon. Temp.	Values-CT Cond.	D Sal.		nple Bot.D Avg Tw	Pata Sal.	Sal. Bot. #	Samp.	,
	28			6 o		11633.	t Girip.	Cond.	0.762		_ .	29.827			776	Jai.		MZ	
2	_																		
3	3141			5.					0.845	49.870	3.701	29.829	32.039					Che	
4	29		:	40					0.791	40.022	3.702	29.825	32.039					MZ Cul	- -
5	_		-		/													N 4 2	~- [']
	20			30	/				0.918	30.284	3724	29,837	32,037					CVE	Í '
7	_				1													1	, _
8	21			کی ۔	V				1.016	20.334	3.775	29.874	32.036					NE	_
9	/		,						· AND STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET,									4/2	· ·
	22			10					0.986			29.933			= -			Chil	_
	38			Botton	/			-	0,134	161:247	3.005	29.436	32.201		3,66		19	ļ	
2	Light Neta				\checkmark				_			_							
																	Initials _		

12

Consec.Cast #

Cast # Deg.

Type & SN 91220-A

Consec

Latitude

Min.

Vessel MILLER FREEMAN

S Deg.

or

Proj. & Les MF-91-05

or

W

Longitude

Event#

Date JD =

Monitor Checks

Day Mo, Yr.

Vessel Sta. I.D.

Time

GMT

Hr. Min.

Instructions

Wet

Bulb 4.6

JD/Time

6

Bar.

mb

Dry

Bulb 5

Times

Consec. Cast	# 39	Vessel MILLI	R FREE	EMAN Pro	oj. & Leg 1F-91-05	Ev 3	ent# Vess	el Sta. I.D.	Instr	uctions				Sta	. D esignat	ion	
Cast # De	Latite		N er S De	Longitud	e r	ate JD =	(3) T	me MT Min.	Dry Bulb	Wet Bulb	Bar. mb	Wind Dir.	Wind PhoO	Type Weath.	Bottom epth, m	Sta. Na or I.I	
395	62	106	N / 5	5 45 5 0	8 w 1	1 M A Y	9 1	1040) 4 3	0 3 9	027	28/29	5089	82	127	1	4
CTD ype & SN_9 Press. SN_2				OI	Monit n Deck	or Checks at	Surface	Dat	a on 13	JD/Time :: (子もも (そゆ4)	Тар	oe/Diskette	Data Loc I.D.		Name/Hea		
emp. SN_7 Cond. SN_3	701		·	ess			<u></u>	Start D		1704 1704				Cast	239 <u>-</u> 1610	1ay 165	•
ond. SN			. c	mp ond ther				- Star	tom t Up rface a off	1764 1718 1218	Rema	erks was				•	
Bot. Rack	Trip	Time		D		r Values	l Od	C	onv. Mon.	Values-CT		Sar	nple Bot.[Sal.	Other Samp	
1 28	60	Depth 1767	Trip	Press.	Temp.	Cond.	Other	Press. 59.914	7emp.	30,084	Sal. 32,05 (Therm-P	Avg Tw	Sal.	, DOC. 1	- Ja.n.p.	
38 B	60	1767					1	59,818	3,976	32,069	32,049	0, 576	4.00	-	2.4		
3141	50	1712	I					50.490	3,953	30,038	32,039	0,625					
29	40	1713	-					46,286	3,753	29,833	31,999	0.811					
20	30	17 (5						30,439	3,809	29,876	32,000	0,826					
																 	
21	20	1716					7	20,141	3,924	29,977	32,011	0.747					
			:						· · · · · · · · · · · · · · · · · · ·								
22	10	1718				. 0		10,308	3.937	29.961	31,986	0,801					_
				1			l .	Į.	1	I		•		j	1 .	1	
Light	10		<u>-</u>		ļ						ļ						

Consect_Cast # Over MILER FREEMAN Proc. & Legitude Cast # Over Min. Standard Min. Min. Standard Min. Standard Min. Min. Min. Standard Min. M																	Pg. <u>₹∂</u>	of	_
Consect Case # Deg Min S Deg Min Deg Min M	Cons	sec.Ca	ıst # ∳\	・ Vesse ・ MILI	el LER FRI	EEMAN P	roj. & Leg MF-91-05	E	vent# Ves 3∢/	sel Sta. I.D.	Instr	ructions				Sta			
Cond. Sample Bot. Data Sam		ш			or	_	ог	Date JD =	131	MT			Bar. mb	Wind	Wind Boo	Type Weath.			
Type & SN 91220-A Press. SN 25084 Pr	ф4	φ 5	62	3 9 8	N J	5655	OW	I MAY	9 1 / 2	304.8	049	0 9 1	032	2816	089	82	126	149	7
Press. SN _ 25084	Туре	CTD & SN_	91220-/	1	_			4						-11111		cation	,	<u> </u>	
Temp. Start Down 1854 Start Up 1854	1				- _		on Deck	at	Surface				Tar	e/Diskette	I.D.				
Cond. Other Othe	Temp	5. SN_ 1 SNI	<u>701</u> 304		-		\			— Start D	own			<u> </u>			7 040 - 1	<u> [WVA (</u> Já	,8
Color	-	J. 31 4_													<u> </u>				
Start Trip Time @ Depth Trip Press. Temp. Cond. Other Press. Temp. Cond. Sal. Diagram-P Avg Tw Sal. Bot. # Samp. Cond. Sal. Diagram-P Avg Tw Sal.										at Su	rface		Rema						
1 28	S D	T	Trip	Tim			Monit	tor Values					TD	Sar Sar	nple Bot.[)ata	Sal.	Other	Γ
2	1 1	- 1	·-	- 26	Trip	Press.	Temp.	Cond.	Other	 		Cond.	Sal.				Bot. #	# Samp.	c
3 314	 	8	69	1805						112,084	3,430	29.645	32,056	o,547		-	09	ME	
4 29 40 Ch/m2 Ch/m2 6 24 34 Ch/m2 6 24 34 Ch/m2 6 24 34 Ch/m2 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	 -											=							:
4 19 Hp Chm2 5 / Chm2 6 2¢ 3¢ Chm2 7 /	3 311	41	54	1			ļ	<u> </u>										CLY MZ	
5	4 2	9	Цф	ð												7	-		_
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7 24 24 9 10 22 14 11 14 16 12 12 12 14 17 17 18 18 18 18 18 18	6 20	ф	3ф										-					Cal/	۱,
9	7 /	Z					Si.						0					7.12	:
9	8 2	<u>\</u>	24		-									7.4				Ch.	1
	9		-	a. Yi								20						//52	1
	10 22	2	14		_						-							Ch	1
	11 []		اھ										 				-	//172	1
	12							 	<u> </u>							<u>.</u>			1
		 '					<u></u> .		<u></u>	L.,	 	<u>.l</u> .	<u></u>]	<u> </u> nitials		Ľ -

[Conse	c.Cas	t #фч	Vess MIL	ei LER	FREE	1AN P	roj. & MF-9	Leg 1-05		Event# 383	Vesse	el Sta. I.D.	Inst	ructions								esignati	or	=
ı	onsec ast #		Lati eg.	tude Min.	n 9 Z	Deg.	Longiti	ude	E Day or W Day	te JD	= (3)		me MT Min.	Dry Bulb	Wet Bulb	Bar. mb	S. S.	Win Si Dir	d Win	Cloud	Type Weath.	Botto Depti		Sta. Nar or I.D	
0	41	5	62	407	N	1 5	655	9	wl	l M A	Y 9 1	19	04.0	047	039	03	2	817	006	59	82		27	4	Ţ
T	/pe &	SN_	91220-/	4						or Chec		<u> </u>		imes	JD/Time			1 - 1 - 1		a Loc	atio	n T		11 11	
			25084			_		on De	ck	,	at Surfa	e		ta on <u> 13 i</u> irface	1900	Ta	ape	e/Diskett	e I.D.		F	ile Nam	e/Hea	der -	
	emp. lond.				-	Pres				85	<u> </u>		- Start C	Down	1900	_				•	CA	STO41_	-11.Mf	17/85	S
	.ona.	21/1			-	Tem	•							ttom t Up	1904										
_			14		- [Cor Oth	_						– at Su	ırface		Ren	nar	ks							
os.	Pos	T	Trip	Tim Depth	1e @					Values				ta off onv. Mor	. Values-C7	<u> </u>	Т	Sa	mple I	Bot. C	ata		Sal.	Other	Г
	1		i		Tr	ip	Press.	Te	emp.	Cond.	Ot	ner	Press.	Temp.	Cond.	Sal.	_	Therm-F		_		Sal.	4	Samp.	d
	28	 	69	1907	_			 				10	59.975	3.56	6 29.720	32.03	8	0.737						CHY	
_	38		100	1911									59.502	3.540	29,704	32.04	5	0.65	<u>}</u>	_			15		2
3	3141		54	1912	ļ								49,802	3,564	29.7/3	l .	- 1		1			Ü		Chyme	3
4	29		44		4	士		fire	d some	where	between	40,	39,826	3,563	29,708	32,03	7	0,73	اسے ا	nont	ed (240m		Chinz	
5	- 10									_			,				1								T
6	24		3ф	1916					` -				30.253	3.575	29.713	32.03	6	0,771						Chy/	T,
7	1																1	- , ,	 					76,2	1
8	21		24	1917									20.275	3.585	7 29,716	32,03	2	0.801				,		Ch/ 2	1
9				1/											, , , ,		7	- 1006	+					/(5/2	+
0	22		14	1919		1		-			-		15 176	2 7 84	29.845	77 201	7	***	 	<u> </u>		·		ChV	
		一十		1919		+							10.128	3.780			1	0.859	-	-				Ch/h2	<u> '</u> '
2		-		1711/3		+		-					10.090	3,781	29.846	32,001	L	0.864	-		 			-	
<u>-1</u>		1		<u>_</u> _!				<u> </u>						,	<u> </u>				<u></u>						1:
																						,	nitials		

Pg. 42 of _ Consec.Cast # Vessel MILLER FREEMAN Proj. & Les MF-91-05 Event# Sta. Designation Vessel Sta. I.D. Instructions FOX 149 - 4 Latitude Ν Longitude Date |D = 132 Time Cloud PuiN Type Weath. Consec Sta. Name Bottom Dry Wet Bar. Wind **GMT** Cast # S. S. Depth, m or I.D Bulb Bulb mb Ş. S. Dir. Deg. Min. Deg. W Day Mo, Yr. Hr. Min. 5 5 5 N 0 **Monitor Checks ID/Time Data Location** Times Type & SN 91220-A on Deck File Name/Header at Surface Tape/Diskette I.D. Data on__ Press. SN_25084 at Surface__ CAST042_11MAY2359 Temp. SN _701 Press. Start Down_ Cond. SN 304 Temp. at Bottom..... 116 WO Start Up____ Remarks BOTTLES FIRED AT GOM EVERY LOW Cond. at Surface CAST NEAR LORAN BUDYS: Other_ Data off_ Trip **Monitor Values** Sal. Other Time @ Conv. Mon. Values-CTD Sample Bot.Data Bot. Rack Depth Depth Bot. # Samp. Trip Press. Temp. Cond. Other Press. Temp. Cond. Sal. Therm-P Avg Tw Sal. 28 07 30 28585 3 992 30,008 31.970 967 EMZIOM 3 3141 68 30 28547 3.979 24,948 31.978 967 EMZ20m 4 29 09 30 28,532 3.981 947 19,999 31978 5 977 28,578 3.976 29,995 31.978 6/20 ID 6 40 7 8 21 29.985 31.978 30 ,987 28549 3-964 8 11 50 m 9 9 10 22 30 28.511 3.961 29,983 31978 10 981 12 60 m

115 339 3 595

30.115

0.366

Initials JS

22

11

12

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	Co 	nsec.	Cast	# ₆ 43	Vess MIL	sel LER	FREE	MAN	Proj. MF.	& Les -91-05		E	vent# 3 <i>9</i> 6	Vessel	Sta. I.D.	Insti	uctions				-			•		Sta. De	signatio	on 	٠
		sec.	Deg	Latit g.	ude Min.	N o s	Deg	Longi	itude	or		JD =	132	Tim GM [*] Hr.		Dry Bulb	Wet Bulb		Bar. mb	S. S.	Vis.	Wind Dir.	Wind Sp.	Cloud	Weath.	Botto Depth		Sta. Nar or I.D	
	t) 1	3	5	629	s 2 -	3 N	15	653	3 6	2 W	12	MAY	9 1	01	390	50	09	3	05	2	8			78	\$ 2		23		
	Tvn	CT	D 9	1220-A				1 • '		Moi	nitor	Check	S		Ti	nes	JD/Time	•		• • •	-	=	Data	Loca	tion	Ī	TOX 14	49-5	Ame.
1				5084		_			on [Deck		at	Surfac	е	Dat	a on face	40		_ Т	ape	/Disl	kette	I.D.			le Name			
T	eг	np. SI	الا	01			Pre	ess								tace own		· <u>-</u> .						4	Cost	043-1	2 mac	0133	
	Co	nd. SI	<u>ا_3</u>	04		_	Ter	np							at Bot	tom			_ _					•	11	9~/0			
l	_						Co	nd							Star	: Up face			Rei	mar	ks							.	
	_	<u></u>				_ ·	Oti	her							1	a off			_										ě.
	S.	Bot I	T	Trip	Ti. Dept	ne @				Moni			1			onv. Mon		CTD		1			nple B		, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		Sal.	Other Samp.	So
-	\neg		Vack.	Depth	Deptr	ı Tı	rip	Press	s.	Temp.		Cond.	Oth	er	Press.	Temp.	Cond.		Sal.	╬	Ther	m-P	Avg 7	W		al.	Bot. #	Samp.	片
┞	┪	28					_					·	V= .3	81 11	9.465	3.877	30.097	3	2-148	4		ii)		_			03	<u> </u>	₽.
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L	3	3141							9										-						·			_	3
	4	29																		Ī	-								4
·F																				T									5
ſ	6	20										<u>-</u>								1									6
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	10	22										3	2						•	1	· ·								10
Г	11					1			1									1		十									11
_		988																-		-								1	12

Consec.	Cast	# 644	Vessel MILLE	R FRE	EMAN Pr	oj. & Leg MF - 91 - 0	5	Eve	nt#	Vessel :	Sta. I.D.	Ins	truc	tions					Sta.	Designat	ion ———		_
Consec. Cast #	Deg	Latitu	ide (N or S De	Longitu		Date	JD =	_	Tim GM Hr.		Dry Bulb		Wet Bulb	Bai mi		Wind Si Dir.	Wind Pholo	Weath.	pth, m		Name r i.D	
044	5	630			5659		12	MAY	9 1	07	950	5 3	3 6	547	0	62		- - 1 1	72	47			
Type & S	ID 9	1220-A	. M		-	M		Checks				mes	_	D/Time		_	/D: 1 1	Data Loc		/1 la			
Press. S					c	n Deck		at!	Surfac	е	-r C.	ta on rface				Tape	/Diskette I	.D.	cast 044	lame/He: _12Mau		3	
Temp. S	N_7	01		'	ress						Start E	own_o_ ttom) 14	3:50						41			
Cond. S	N_3	U 4			emp						at Bo	ttom τ Up <u></u> 7	: 4	-7	<u> </u>	Remar							
		·			Cond Other						at Su	rface ta off				Remar	KS					. 0	
· i	Т	Trip	Time					/alues				Conv. M	on.	Values-CT				nple Bot.E		Sal	0	other amp.	os.
& Bot.	Rack		Time Depth	Trip	Press.	Tem	p.	Cond.	Otl		Press.	Tem		Cond.	1	al.	Therm-P	Avg Iw	Sal.	IBOL.		11/	1
1 28		40	УФ	7:47	37.68	2.6	3.T. U	I, 799	$\langle j_j \rangle$		31.689	3.67	5	29.759	31.	788	1.055				- -	7.7	
2 - 6	1	as	K ー		1							= 5									1		2
3 3141		3,0	5\$	7:48							29.71	3.67	7	29,756	31.	988	1.138		<u> </u>	_		\m _₹	
4 29		20	49	7:49)	19,654	3,67	9	29,754	31.	928	1.211				10	Ch/mz	4
5 -b	1	an	k-		1																		5
6 29		10		7:50	5						1.655	7.7	47	29.800	2),	98/	1.216				C	MZ	1
7 - b			K -	-					+		1.653		,	011011	1	700							7
	 	au	24		1										1-						K		. [
- -	 	-						<u>, </u>	-		j.			 	85								,
9-6	—	av	K -		<u> </u>				-			-			+						- 7	Chy M2	1
10 22	-	30	10	-	-	-1			-				,		-	000/				2	—-·1	<u> / ୩</u> ፻	
11 34	8	41	16	-							41.973	3.67	6	29.761	3/,	988	v=1.372				_		
12 right								·													als 6	+	Τ,

START

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Consec	Cast		Vessel MILLE	R FRE	EMAN	Proj. MF	& Leg -91-0	5	Ev	ent#	Vessel	Sta, I.D	•	Instru	ıctions					.,			Sta. De	signatio	150	
Consec Cast #		Latiti g.	c	V S De		gitude	E or W	Date Day	JD = Mo.		Tim GM Hr.		Dr) Bul		Wet Bulb	1	ar.	Vis.	Wind Dir.	Wir Sp	Cloud	Type Weath.	Botto Depth		Sta. Namo or I.D	e
945	5	626	51	N A	५ ५५	69	7 W	1 2	M A Y	9 1	09	0 1	0 5	0	043	٥	61	8	110	1	80	72	010	30	015	O
Type 8.	TD 9	1220-A					Mo	nitor	Check	s			imes		JD/Time		-	200		Dat	ta Lo	catio	n			
Press.						on [Deck		at	Surfa	ce				8:57		Tap	e/D	iskette	I.D.			ile Nam	•		
Temp.				P	ress	 .						ī	urface. Down.		8:57						140	cas	1045-	12 Ma	70856	
Cond.	$\frac{3}{3}$	04		Te	emp							1	ottom.		9:01				E5.		-		201	රව		
				1	.ond								art Up		9:01		Rema	arks					····	77.		<u></u>
		· ·			ther								urface ata off		9:06	``					0					
80	T	Trip	Time		1		Mor	itor V	'alues						Values-CT	D.	1 <u>.</u>		Sar	nple	Bot.	Data		Sal.	Other Samp.	
& Bot	. Rack	Depth	Time Depth	Trip	Pre	ss.	Tem). ·	Cond.	Ot	ther	Press.	1	emp.	Cond.		Sal.	Th	erm-P	Av	g Tw		Sal.	Bot. #	Samp.	۵
1 28		90	SAS	9102				-				90,411	3,	720	29.896	32	.080	0	,444				- - -	33	CHY	
2 - b	1	au	K-								1															2
3 314	1		5ф	1)																					CLYME	3
4 29			44	li																		£			Chinz	4
5 -6	11	an	k -									=														5
6 29	P		3ф									ı						5.	104	d .					Cul/	6
7 - b	1	av	K -															15								7
8 21			20	4			·											1		M			-		CH.	8
9-6	1	av	k -	 														T			·				in 2	9
10 22	Ti Ti		10														· · · · · · · · · · · · · · · · · · ·	T							Ch/ ₁₂	10
11 11			10				•										,	1	,				<u>.</u>		1	11
12										1						2.5		T				1		,	3:	12
		4	<u></u>	<u> </u>							L				<u>l.,</u>									Iniciale	CBC	

Initials Office

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Consec.Cas		Vessel MILLER	R FREEN	MAN Proj	i. & Leg F-91-05	Eve 4	nt# Vessel	Sta. I.D.	Instru	uctions				Sta	i. Designati FOX 149	on 🖟	12
Consec.	Latitu		1	Longitude		te JD =	Tin		Dry Bulb	Wet Bulb	Bar. mb s		Wind Pinol Sp. Sp.		Bottom	Sta. Nar or I.D	
0465	624	12	1115		SwII	2 M A Y	9 10 9	390	SS	046	061	8 11	0078	72	1290	01	4
CTD Type & SN_	91220-4	· u ·			Monit	or Checks		Ti	mes 132	JD/Time			Data Loc				
Press. SN_				on	Deck	at S	Surface	1	a on rface	934	Tap	e/Diskette	l.D.		Name/Hea 046_13m		ΣŢ
Temp. SN_								- Start D	own O	934	- =						J 1.
Cond. SN_	304			•			· .	l Star	t Up 09	.34	Rema	-l		W	10 126		
			1					⁻l at Sui	rface 09°	99	— Rema	i KS	329				į.
S Bot. Rac	Trip	Time	@		Monito	r Values		- C	onv. Mon.	. Values-CT			nple Bot.D		Sal.	Other # Samp.	
Bot. Rac	K Depth		Trip 943	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.	1001. 1	CLY m2	
			1113			-		59.68	3,545	29,723	32.002	0.762				FILE	-
2 -b 1	au	K -	70.11					·	23.5			2 050	<u> </u>	1		CL/m	- 1
3 3141	-	3.4	1944							29,718		0.80				Ch/m	Ž
4 29	-	44	0945					40.109	3,550	29. 709	32.051	5.972					E
5 -6 1	an	1 1							9					1		Cav	
6 2¢		34	0946					29.892	- 3.559	29.707	30.046	0,996				any	Z
7-61	au	K -			ļ						_	<u> </u>		1			,
8 21		20	5947					19,908	3.709	29,868	₹₽.023	1.187		1		CH.	=
9-61	an	k -							i i					<u> </u>			,
10 22		19	0949					9.94	3.906	29.971	78.027	0.952				CHX	12
11 11 B		=1 \$	0939					116.75		1	33.144		2.92		05		
12																	
<u> </u>		1		R	.1										Initial	s City	g L
																/	

Initials <u>GRE</u>

Consec.	Cast		Vessel MILLE	R FREE	MAN M	. & Leg -91-05		Ever 4	nt# Ves	sel Sta.	. I.D.	Instru	ıctions					Sta. D	oitangiae(チピ <i>レン</i> (n 🛌	-
Consec. Cast #	Deg	Latitu	c	or S Deg	Longitud	or	Date Day	1D = /	32 T	ime GMT . Mi	n.	Dry Bulb	Wet Bulb 5.0		ar. S. S.	Wind Dir.	Wind Pind Sp.	Meath.		ta. Nam or I.D X 143	
048	5	617	88	N	6480	OW	12	M A Y 9	1	21	40	50	053	0	6	8092	089	7201	010	014	7
CI	D .	220 A	<u> </u>		<u> </u>	Moi	nitor	Checks			Tir	nes 132	D/Time				Data Loc				
Type & S					or	Deck		at S	urface			on 132	112110	_	Tape	e/Diskette i	.D.		me/Head		
Press. S Temp. S				Pr	'ess						at Sur tart De		5110				 .	castos	18-121	vory 2	69
Cond. S	$N = \frac{30}{30}$	04		Те	mp						at Bot	tom	2/13					Wo 9	<u> </u>		
				1	ond							- 	12114 217		Rema	rks		<u> </u>			
				. 0	ther						at Sur Dat		21/17				5.50				
اير	Т	Trip	Time	@			tor V				+ C	onv. Mon.	Values-CT				nple Bot.D		Sal. Bot. #	Other	Š
& Bot.	Rack	Depth	Depth	Trip	Press.	Temp	. •	Cond.	Other	Pr	ess.	Temp.	Cond.		Sal.	Therm-P	Avg Iw	Sal.	1	CVV	Η.
1 28			бФ	11G1						88.	491	3,203	29.509	32	130	0.479			12	CLY	<u> </u>
2 - b		م د	K-							1											2
3 3141	-		5ф	· · · · · · ·									≥ ,							CLY/M2	3
 				·					<u> </u>			-		-						Chinz	
			44	<u> </u>						-		A man of	1	-					-	71112	+,
5 - 6		an	k -																	- · · /	+
6 20			34									5 ,								Cu/	<u>:</u>
7 - b	 	av	1.																		;
8 21	 	00.1-	24			 				┪										CHX.	T
1 -1	 							·		 		-								1	Ť
9-6	<u> </u>	an	k -	<u> </u>	1					_				+		 				CLV	+
10 22			16		<u> </u>										1					Ch/	2
11 11			10								<u>.</u>										4
12					<u> </u>																
		1				<u>. </u>			<u></u>							_J			Initials	0131.	

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																				Pg. <u>49</u>	of	
Consec.	Cast #	# 1 9	Vessel MILLE	R FREE	MAN Pr	oi. & Leg MF - 91 - 0:	5	Eve 4	ent#	Vessel	Sta, I.D.	Instr	uctions						Sta.	Designat	ion	·
Consec. Cast #	Deg.	Latitu		or S Deg	Longitu g.	de E or W		JD = Mo.	132	Tim GM Hr.	T	Dry Bulb	Wet Bulb	Bar. mb	S. S. Vis.	Wind Dir.	Wind Sp.	Cloud Type	Weath. O B	ottom epth, m	Sta. Nan or I.D	
049	56	29	87	N / S	624	3 w	12	маү	9 1	14	210	4 3	041	07	16	230	06	98	8	2/6		
CT Type & S	D N 91	220 - A						Checks			Tin	nes	JD/Time				Data	Locati	on		4	
Press. S					, (n Deck		at	Surfac	ce	Data at Sur	on 132/1	410	Ta	ape/Dis	skette I	.D.			lame/He		
Temp. S	N_70	1		Pr	ess						Start Do		1410:30	$\equiv \mid -$				<u></u>	arto	49-12/	<u>1914</u> 0	9
Cond. S	$N = \frac{30}{}$	4		Te	mp	· · · · · · · · · · · · · · · · · · ·					at Bot		1415									
<u>.</u>				1 -	ond ther		· · · · · · · · · · · · · · · · · · ·				at Sur	face	1416	Ren	narks							
6	Τl	Trip	Time			Mor	nitor V	/alues				off	. Values-CT	<u>— </u>	1	San	nple Bo	ot.Dat		Sal.	Other	ند
& Bot	Rack	Depth	Depth	Trip	Press.	Tem	p.	Cond.		her	Press.	Temp.	Cond.	Sal.	The	rm-P			Sal.	Bot.	Other # Samp.	
1/28	m	ter		1415	the 1,5	ut m	10	pacol	1	PAREN	198.347	4.161	30,754	32,60	1 . 2	254				20	CH	1.
2 - b	-	au	k -		,																	2
3 3141			5ф				- N.	:													Ch/m	. 3
4 29		-	44		46.																Chi	4
5 - 6		an	k-																		,	5
6 20	1 1		34																		Cu/	6
7-6	1	o.v	K-								•											7
8 21			20						,												CH.	8
9-6	1	av	k -														İ					9
10 22	,		10																		Chy	١٥ ج
11 11			١φ																			11
12								•								/						12
<u> </u>				<u> </u>			L_			!		.l	<u>t</u>	<u>1</u>						Initia	c	

Pg. <u>50</u> of ____ Sta. Designation Event# Vessel Sta. I.D. Instructions Proj. & Leg MF-91-05 Consec.Cast # Vessel MILLER FREEMAN 650 421 Cloud DuiN Cloud Cloud Latitude Longitude E Date [D =)32 Sta. Name Time Bottom Wind Dry Wet Bar. Consec. GMT or S. S. Vis. Depth, m or I.D Dir. Bulb Bulb mb Cast # Deg. Deg. Hr. Min. W Day Mo, Yr. Min. 5 62961N 0 0 **Data Location** CTD Type & SN 91220-A ID/Time **Monitor Checks** Times Data on 132/16118 Tape/Diskette I.D. File Name/Header on Deck at Surface 16:18:30 Press. SN 25084 at Surface____ CAST 050_ 12MAY 1617 16:19 Start Down____ Temp. SN 701 713 W/0 Cond. SN 304 at Bottom_____ Temp. _____ Start Up_____ Cond._____ Remarks at Surface _____ Data off 16/31 Other____ Sal. Other Samp. Sample Bot.Data - Conv. Mon. Values-CTD Monitor Values Trip Time @ Bot. Rack Depth Depth Trip Therm-P Avg Tw Sal. Temp. Cond. Sal. Press. Cond. Other Press. Temp. CHY 30.797 32,622 0.259 6ф 203.194 4.189 28 1627 2 2 - 6 Kau Chymz 3 3 3141 5ф Chinz 4 29 40 -6 K an Cul/ 6 6 34 2ф 7-6 aw China 8 8 21 20 9-6 k o v Chine 10 22 16 11 10 12

Consec.C	3 CF #	17	.1	- T					 							rg. <u>> !</u>	<u>. ot</u>
COISEC.C.	51		ER FRE	EMAN	Proj. 8 MF-	& Leg 91-05	E	vent#	essel Sta. 1.D	. Inst	ructions			50	Sta	a. Designat	tion
Consec. Cast #	Lati Deg.	Min.	or S De	Longi	tude	E Da or W Da	ite J D =		Time GMT Hr. Min.	Dry Bulb	Wet Bulb	Bar. mb	Wind	Wind Pa	Type Weath.	Bottom Depth, m	Sta. Nar or I.D
0515	63	203	N	5619	69	W	2 M A Y	9 1	739	060	051	071	709	0129		210	\prod
CTD Type & SN.	91220-/	<u> </u>					or Check	S	Т	imes	JD/Time	-1	1 11. 11.	Data Lo	ocation	<u></u>	11
Press. SN_			_		on D	eck	aı	Surface	Da	ta on 13 3	17:32	Tap	e/Diskette	I.D.	File I	Name/Hea	ıder
Temp. SN_	701			ress		<u> </u>	-			ırface Down			· ·-·		croxo	SI- 12 A	10419
Cond. SN_	304						-		4	ottom	17:39	-	Na.		207	Wlo	
				ond						rt Up ırface	17:57	Rema	rks		<u> </u>		
á T	Trip	Time		ther		Monitor	Values			ta off	17:57 . Values-CT	<u> </u>		mala Day	<u> </u>		
Bot. Rac	k Depth	Depth	Trip	Press.		Temp.	Cond.	Othe		Temp.	Cond.	Sal.		nple Bot. Avg Tw		Sal. Bot. #	Other # Samp.
1 28	64	1750							60.115	4.064	30,227	32.148					CLY
2 /													II				1112
3141	54	m52							50,179	4.161	30.269	32.108	4 879				CLY
29	40	1753						 									Chimz
									46.058	4.701	701111	32.057	1,021		<u> </u>		/m2
20	2.									- 					<u> </u>		
20	34	1754			-		· · · · ·		30.193	4.084	30,142	32.044	1.157				Cal
260																	
21	24	1755							20.204	4.209	30.245	32.048	1.938				C/**
, a.C.																	
22	14	1756							10.149	4.396	30.378	32,026	1.685		- 		CW/2
NB	16	1745				_	· .		197.498		31.687			4.76		06	
1:9%													- V Jac 1		<u> </u>		
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Consec.	Cast #		Vessel MILLER	FREE	MAN P	roj. & Les MF-91-0	 15	Ev	ent#	Vessel	Sta. I.D.	Instr	uctions		•			S	ta. Design	ation	,	
Consec. Cast #		atitud M	or	1	Longitu		Date	JD =	32 Yr.	Tin GM Hr.		Dry Bulb	Wet Bulb	ł .	ar.	Wind Si Dir.	Wind Sp.	ype Weath.	Bottom Depth, m		a. Name or I.D	e
052		3 2	03 N	1	619	- I - I -	12		9 1	18	32	60	5 5	Ò	7/	7080	149		211			
CT	D 0122	<u>~</u>			 	M	onitor	Check	5	1	Ti	mes	JD/Time				Data Loc	ation				
Type & S						on Deck		at	Surfac	ce			118124		Tape	/Diskette l	l.D.		Name/H			
Press. SI Temp. SI				Pre	ess						at Su Start D		18125		ļ			cast	052-1	2Ma	71829	
Cond. SI	N 304										at Bo		18:32		ļ			W	10 210	<u> </u>		
	· ·				•						Star	t Up	18:32		Remai	ks						
				i i	her						1 .	rface :a off	18:37	—								
8	ТТ	rip	Time	_		Мо	nitor \	/alues		ī			. Values-C7	D			nple Bot.D	ata		sal.	Other Samp.	os.
So Bot.	Rack De	pth [Depth	Trip	Press.	Ten		Cond.	Ot	her	Press.	Temp.			Sal.	Therm-P	Avg Tw	Si	al. Bo)t. #	Samp.	<u> </u>
1 28	13	1	834	-	- ·	=.	-		-		137.892	3.719	30.157	32	.366	0.303			2	6	Chy	1
2											-				,							2
3 3141		54	¥ :																		CLYME	7 -
4 29		44	2																i		Chinz	4
5	1 /							<u> </u>	1													5
6 20		3 ę	()							_				1							Cul/	6
7 4	350							20						 	·	-						7
			90			_		·_	_			_		-	<u> </u>		 	-			CW/	†,
8 21		24	ŝi,																		Ch.	<u> </u>
9																<u> </u>						9
10 22		14								_											Ch.	۱ ع
11 11		16																		きも		1
12 higher															,							ı
Art.					L							<u> </u>			-	1	1		ln	itials		

																			78. <u>-2.4</u>		
Consec.	Cast #	Vess MIL	sel LER	FREEMA	N Pr	oj. & Les MF -91 -0	5	E	/ent#	Vesse	l Sta. I.D.	Instru	ctions					Sta	. Designati	on 	=
Consec. Cast #	L: Deg.	atitude Min.	N or S	Deg.	ongitu.	de E or W	1	JD =	/32 Yr.	Tir GN Hr.		Dry Buib	Wet Bulb	Ba m	ar. nb 's	Wind Si Dir.	Wind Pinol Sp. O	Weath.	Bottom Depth, m	Sta. Nar or I.D	
053	56	320	3 N	156	,19	4 I W	12	MAY	9 1	19	310	65	055	0	7 1	7090	1099	82	207		
CT Type & S	D 0100	^ A			•	M	onitor	Check	.s	19	Tir	nes J	D/Time				Data Loc	ation			
1			_		(on Deck		a	t Surfa	ce	Data	a on 132	1922		Таре	/Diskette I	.D.		Name/Hea		
1	N <u>2508</u>	4	_	D	_						at Sur		1924					cast	05)-17	May	1923
Temp. S	N <u>701</u>		_	Pres							- Start D		9:31					-			
Cond. S	N_304			Tem	p	<u></u>					at Bot		931								
 				Con	d						1	face			Remai	rks					
			·	Othe	er							a off								,	191
<u>'è</u>	T	rip Ti	me @	D [•	Мо	nitor \	/alues					Values-CT				nple Bot.E		Sal.	Other Samp	S S
& Bot.	Rack De	pth Dept	h î	rip	Press.	Ten	ıp.	Cond.	<u> </u>	ther	Press.	Temp.	Cond.		Sal.	Therm-P	Avg Tw	Sal	. DOL.	- Sallip	;
1 28				-																Chy mi	<u> </u>
2			jā.																		2
3(314)	90	193	ŧ								90521	3.745	30.083	32	1277	0.327		ļ		1 C/m	
4 29		1																Jä.		Ch/m	2 4
5			100						:-												5
6 2¢		S																		Cul/	7
7	5	<	# () + (,
8 21		24																		Ch.	12
9	7. S	\	1							· ·						1.					
10 22		X			<u>-</u>										2					Chy	12
11 11			~							·											
12 hapt			1											15							
14.	<u> </u>		<u> }</u>			!													Iniria		

Co	nsec.	Cast	# \$ 4	Vessel MILLE	R FRE	Pro EMAN M	i. & Leg F-91-05		ent# Vessel	Sta. I.D.	Instru	ıctions				Sta	. Designat	ion ———	
1	nsec. st #	Deg	Latitu		N or S De	Longitud	or	ate JD =	132 Tin		Dry Bulb	Wet Bulb	Bar. S	Wind Si Dir.	Wind pholD	Weath.	Bottom Pepth, m	Sta. Na or I.[
0	54	5	6 3 2	74	N)	56187	4 W 1	2 M A Y	9 1 2 0	28	57	5 2	1 1 1	!	188	72	215		
		$\overline{}$						tor Checks		Tin		JD/Time			Data Loca	ation			
			1220-A	· ·	.	O	n Deck	at	Surface		-		Тар	e/Diskette l	.D.	File I	Name/He	ader	
	ess. S				. .	ress				at Sur	face		— l			contos	4-12 Ma	2019	
			01	·	• 1					t t	own 201							<u> </u>	
	ond. S	N	U4		j	emp					om					و ملت	1		<u> </u>
_				 	. 0	ond			·	at Sur	face		Rema	rks Tape 1	recorder o	on Late	Aces T		
_			 	· · · · · · · · · · · · · · · · · · ·	. · C	Other					off						1.6	- 10-6	(H)
Pos.		Т	Trip	Tim				r Values				Values-CT			nple Bot.D		Sal	. Othe # Samp	S. S.
1 _A	Bot.	Rack	Depth	Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.	.	10kV	汁.
	28		6 0						v= .928	60.257	4.206	30.305	32.101					Ch	£ 1
2	/	111																	2
3	3141		54	<u></u>					1.211=1	50.625	4.246	30.320	32.084					Ch/	
4	29		Чф							40.554		30.217	32.066			12		Chy	n2 4
5	1	: :	/ 2	==					:-										5
6	24		34					V=1.182	30.486	30.486	4.113	30.180	32-057					Chi	32 6
7	/	(t) (t)	/	*:						,									
8	21		24	4/5					V=1.421	20569	4.110	30.158	32.043					CP	M= 8
9		40		· ·															(
10	22		14						V=1.587	15.449	4.366	30.367	32.044					Ch	M2 1
	38		16	20:29:15						178.738		30.631	32,546		4.10		1	1	!
12	light	4														İ			1

rg. <u>34</u> of _

Initials WF

Co	nsec.	Cast	# 055	Vessel MILLE	R FR	EEMAN	Proj. & 1 MF -91	_es_ _05	Eve	nt# Vesse	el Sta. I.D.	Instru	ictions				Sta	. Designat	.ion	
	nsec. st #	Deg	Latit	c	y S D	Longi		OI I	JD = 1	32 Ti Gl Yr. Hr.	me MT Min.	Dry Bulb	Wet Bulb	Bar. mb	Wind Dir.	Wind Sp.	Neath.	Sottom epth, m	Sta. Nam or I.D	
0	55		632			5610	63	W 12	M A Y 9		28	6 5	5 8	1 1 1	28070	107-		215		
Typ	C7 Se & S	D 9:	1220-A				_		Checks				D/Time		/ D:1	Data Loc				
			5084				on De			urface	Da at Su	ita on irface	<u></u>	1 '	e/Diskette			Vame/He		
Te	mp. S	N_7	01		ŀ	Press					- Start [Down2152	21:70	 1			COLT 0:	"5"_12m	ay 2120	
C	ond. S	N_3	U4		1	Гетр					_ at Bo	ottom		— <u> </u>						
-					- 1	Cond					at Si	irface	· · · · · · · · · · · · · · · · · · ·	Rema	arks					
						Other					_ Da	ita off			· ·	- 1. D . D		J C-1	Osbos	: T :2
Pos.	Bot.	T Rack	Trip Depth	Time Depth	@ Trip	Press		1onitor \ emp.	Values Cond.	Other	Press.	Temp.	Values-CT Cond.	Sal.	Therm-P	nple Bot.D Avg Tw	sata Sal.	Sal. Bot.	# Samp.	Pos
	28		64	3 · .	· · · · · · · · · · · · · · · · · · ·		_		Come.	<u> </u>									CLY	. 1
2		135	1/18/	= = *=																2
3	3141		54	305 ⁽²⁾						·									CLY/M2	3 ع
4	29		Чф	35													8)		Chi	2 4
5	1	:: ,							24											5
6	20		34	- 1					 -										di/	_Z 6
7	/	: 47 - 47		-	_															7
8	21		34							V=1.445	39.176	4,109	30.175	32-055				27	+ CV	2 8
9	1/2	34,																		9
10	22		14						,										Chy	2 10
11	1 ''		lφ	1																11
12	high?													2						t:
			•	J	<u> </u>								l					Initia	als WF	

Initials WF

rg. <u>55</u> ol____

Consec.	Cast :	# 056	Vessel MILLE	R FREE	EMAN Pro	i. & Leg F-91-05		Event	t# Vesse	l Sta. I.D.	Instru	ections				Sta. D	esignation	n .
Consec. Cast #	Deg	Latitu	de l	N or S De	Longitud	or	_		Tir GN		Dry Bulb	Wet Buib	Bar. mb si	Wind Dir.	Wind pnoD	Meath Dept		ta. Name or I.D
056	5 6	32	57	N] 5	56184	12W)	2 M	A Y 9	122	29	5 8	5 1	082	1 1 1	167-	1 2	19	
CT Type & S	D N_91	220-A					itor Cl	hecks		Tir	-	D/Time		/Distance I	Data Loca		// //	
Press. SI						n Deck			rface				1 '	e/Diskette l		cast 056	me/Heade	
Temp. SI	N_70	1	·		ess					- Start D	own		I			<u>Cas- 034</u>		1
Cond. Si	N_30) 4	 	1	mp													
			<u>-</u>		ond					at Sur	face		Remar	-ks				
		T.:- 1			ther						a off			· · · · · · · · · · · · · · · · · · ·	nple Bot.D		Sal	Other
S Bot.	Rack	Trip Depth	Time Depth I	Trip	Press.	Temp.	or Val		Other	Press.	Temp.	Values-CT Cond.	Sal.	Therm-P		Sal.	Sal. Bot. #	Samp.
1 28		64											= ==					CLY
2	35		500															=
3 3141		54	e) :				Ē.											CL/m
4 29		Чф	¥2 ·													W		Ch/K
5	ii.	12	4.4					7	· · ·									
6 20		3ტ	3 0															Cul/
7 /	36		1 2.1										ļ					
8 21		24	\$.		1													C/X
9	13.2		ii,															
10 22		14	::	,,	1				/= 283	213.499	4.748	31.682	33.092				07	Ch
11		lφ																
12 light																		
				<u> </u>	1	1	1				!		<u> </u>		- 4		Initials	WF

Consec.	Cast	# ₀ 57	Vessel	ER FRE	Pro Pro	oj. & Leg IF -91 -05	Even	t# Vesse	el Sta. I.D.	Instr	ructions		· · · · · ·	-		Sta. Des	signati	ion	Ĉ
Consec. Cast #	Deg	Latit	ude	N or	Longitud	le E Da	ate $JD = \sqrt{3}$ ay Mo.	ν Ti	me MT Min.	Dry Bulb	Wet Bulb	Bar.	Wind	Wind Sp.	Cloud Type	Botto Depth		Sta. Na or I.E	
057		3 1	24	N j	54206	2 W 1	2 M A Y 9	123	27	69	60		803	08	872	- 21	7		
CT Type & S	ח	1220_A	<u> </u>	1.	3 0 m - 10 0	Monit	tor Checks	1 -1 -12	Ti	mes	JD/Time				Locatio				
Press. S					OI	n Deck	at Su	ırface		a on rface		Tap	e/Diskette	I.D.		File Name دء چسطہ			, 9
Temp. S	N_Z	01		. P	ress	<u>-</u>	_		- Start D	own	<u> </u>	_ _			<i></i>	2057	-141		F 1
Cond. S	N_3	<u> </u>		1	emp			<u> </u>		tom r Un		_							33
			-	1	Cond				at Sui	rface		Rema	ırks						400
	ΤI	Trip	Time		Other		r Values			a off onv. Mon	. Values-CT	D	Sar	nple Bo	t.Data		Sal.	Other Samp.	T
Bot.	Rack	Depth	Time Depth	Trip	Press.	Temp.		Other	Press.	Temp.		Sal.	Therm-P	Avg T	w	Sal.	Bot. #	Samp.	+
1 28		64					ν	₹.869	60.898	4.166	30-290	32.122						CLY	1
2	i)	1/	A Be		_[1
3 3141		54	n. '.				V	=1.084	49.829	4.199	30.284	32.089					<u>.</u>	C/m	_
4 29		Чф	55	-			1 1		40.839		ł							Chi	اغ
5	[<u>*</u>	/			18														
6 24		3ф				73.		1406	30.698	4.263	30325	72 084						Chy	2
7 /	¥1	1					l l	21,700	30.01.	1,40,1	1001,00	32,00 (~				1
8 21		24			9			- 0		41	2 22-	22 02						CW/	
9		24	Lagrado de Antonio de Care	w.lhokkin re	de la vicina de accionación de de	e an experience de constant	ala mana (i) Carrena (in ta	-37.840	21.098	4.232	30.325	37.080	***************************************				1000	//	
DA (2)		//	E		 								A CONTRACTOR OF THE PARTY OF					Chy	_
10 22		14					l	1=2.261	9,970	4.757	30.717	32.070	<u> </u>	2				C.X.	
11 3/3	B	16	37.78,59				V	12.229	160,959	3.931	3-0.411	32.445	<u> </u>	3.9			04	-	1
12 1.91%	d)	1											<u>L</u>					249	
				-												Ir	nitials	WT	_

Pg. 58 of ____ Sta. Designation Consec.Cast # Vessel MILLER FREEMAN Proj. & Leg MF-91-05 Event# Vessel Sta. I.D. Instructions 058 Longitude E Date JD = 133 Latitude Cloud PuiNA Yeath. Sta. Name Time Bottom Wind Consec. Dry Wet Bar. **GMT** Depth, m or I.D S S Cast # Bulb Bulb mb Dir. Deg. Min. Deg. W Day Mo. Yr. Hr. Min. 1007.8 \$ 8 CTD **Data Location ID/Time Monitor Checks** Times Type & SN 91220-A Tape/Diskette I.D. File Name/Header on Deck at Surface Data on____ Press. SN <u>25084</u> cust 058-13 May 0102 Temp. SN 701 Cond. SN 304 at Bottom_____ Start Up_____ Remarks Cond.______ at Surface Other_ Data off____ Other Samp. Sal. Conv. Mon. Values-CTD Sample Bot.Data Trip Monitor Values Time @ Bot. Rack Depth Depth Bot. # Therm-P Avg Tw Temp. Sal. Press. Cond. Sal. Trip Press. Temp. Cond. Other CHE 1 28 64 Chymz 3 3 3141 54 Chinz 29 ЧФ 5 Chy 6 24 34 7 Ch/MZ 8 8 21 24 V= .278 140.559 3.726 30.189 32.396 9 9 Ch/12 10 10 22 14 $\Pi \mid \Pi$ 16 12 higher 12

Initials WK

Consec.

Cast #

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siete.

Initials <u>BC</u>