

Consec. Cast # 001		Vessel MILLER FREEMAN		Proj. & Leg MF-94-04		Event #		Vessel Sta. I.D.		Instructions										Sta. Designation														
Consec. Cast #		Latitude N or S Deg. Min.			Longitude E or W Deg.			Date JD = 103 Day Mo. Yr.			Time GMT Hr. Min.		Dry Bulb		Wet Bulb		Bar. mb		S.S.		Vls.		Wind Dir.		Wind Sp.		Cloud Type		Weath.		159 Bottom Depth, m		Sta. Name or I.D.	
001		583575N			1530529W			13 APR 94			09 07		03 00		02 29		847		265		18140						162				M2			
CTD Type & SN 91220-A				Monitor Checks								Times JD/Time				Data Location																		
Press. SN 26072				on Deck at Surface								Data on				Tape/Diskette I.D. File Name/Header																		
Temp. SN 701				Press. _____								at Surface _____				CAST001-13APR0859																		
Cond. SN 304				Temp. _____								Start Down _____				_____																		
				Cond. _____								at Bottom _____				_____																		
				Other _____								Start Up _____				Remarks																		
												at Surface _____																						
												Data off _____																						

Stn. No.	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				Sample Bot. Data			Sal. Bot. #	Other Samp.	Stn. No.
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.			
1		A	0+10	090720	091215					153.002	4.523	30.662	32.162			33*	02	377	1
2			50							50.254	4.795	30.740	32.040			30		378	2
3			30							29.707	4.721	30.589	31.948			27		379	3
4			10							10.759	4.430	30.254	31.849			26		380	4
5			10							10.471	4.424	30.248	31.848			35		381	5
6			10							10.909	4.522	30.352	31.873			32		382	6
7			3							3.757	4.402	30.223	31.843			28		383	7
8			3							3.898	4.407	30.228	31.844			34		384	8
9			3							3.482	4.408	30.227	31.843			31		376	9
10			0							0.760	4.396	30.214	31.841			29		375	10
11																			11
12																			12

Initials

✓                     

w/o 153 deep

shallow

Consec. Cast # 002			Vessel MILLER FREEMAN			Proj. & Leg MF-94-04			Event #			Vessel Sta. I.D.			Instructions										Sta. Designation									
Consec. Cast #		Latitude Deg. Min. N or S			Longitude Deg. E or W			Date JD = Day Mo. Yr.			Time GMT Hr. Min.		Dry Bulb		Wet Bulb		Bar. mb		S.S.		Vis.		Wind Dir.		Wind Sp.		Cloud Type		Weath.		197 Bottom Depth, m		Sta. Name or I.D.	
002		572989N			1544756W			13 APR 94			1925		-17		-28		05		38		29		514		68		1		202		9403			
CTD Type & SN 91220-A					Monitor Checks					Times JD/Time					Data Location																			
Press. SN 26072					on Deck at Surface					Data on at Surface					Tape/Diskette I.D.					File Name/Header														
Temp. SN 701					Press. _____					Start Down at Surface					_____					CAST002-13APR1916														
Cond. SN 304					Temp. _____					Start Up at Surface					_____					_____														
					Cond. _____					Data off					Remarks CTD, LIGHTMETER, FLUOROMETER, CHIAM																			
Other _____																																		

Stn. #	Bot. Rack	T	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				Sample Bot. Data			Sal. Bot. #	Other Samp.	Stn. #
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.			
1	A	B+10	192500	193008					192.232	3.680	30.108	32.319				09	133-NCT	1	
2		60							58.603	3.522	29.546	31.875					Chl	2	
3		50							50.007	3.811	29.768	31.859					132/Chl	3	
4		40							40.178	3.832	29.775	31.853					Chl	4	
5		30							30.069	3.569	29.508	31.798					131/Chl	5	
6		20							19.692	3.543	29.476	31.791					Chl	6	
7		10							9.754	3.539	29.469	31.791					Chl	7	
8		10							9.868	3.541	29.471	31.791					Chl	8	
9		10							9.912	3.542	29.471	31.792					130/Chl	9	
10		0							-0.161	3.546	29.463	31.783					129/Chl	10	
11																		11	
12																		12	

w/o 194

Initials

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Consec. Cast # <b>3</b>		Vessel <b>MILLER FREEMAN</b>		Proj. & Leg <b>MF-94-04</b>		Event # <b>55</b>		Vessel Sta. I.D.		Instructions <i>morning 9402</i>										Sta. Designation							
Consec. Cast #	Latitude Deg. Min.		N or S	Longitude Deg.		E or W	Date JD = <b>102</b> Day Mo. Yr.			Time GMT Hr. Min.		Dry Bulb	Wet Bulb	Bar. mb <i>1003.1</i>	S.S.	Vis.	Wind Dir.	Wind Sp.	Cloud	Type	Weath.	244 Bottom Depth, m	Sta. Name or I.D.				
<b>9403</b>	<b>5</b>	<b>73</b>	<b>7</b>	<b>11</b>	<b>N</b>	<b>155</b>	<b>03</b>	<b>3</b>	<b>5</b>	<b>W</b>	<b>13</b>	<b>APR</b>	<b>94</b>	<b>21</b>	<b>54</b>	<b>-</b>	<b>18</b>	<b>-</b>	<b>25</b>	<b>03</b>	<b>28</b>	<b>280</b>	<b>14</b>	<b>48</b>	<b>1</b>	<b>245</b>	<b>9402</b>
CTD Type & SN <b>91220-A</b>				Monitor Checks on Deck at Surface				Times JD/Time Data on _____ at Surface _____ Start Down _____ at Bottom _____ Start Up _____ at Surface _____ Data off _____				Data Location Tape/Diskette I.D. _____ File Name/Header <i>cast 003 - 13 Apr 2144</i>															
Press. SN <b>26072</b>				Press. _____								Remarks <i>Clear, Fluorometer</i>															
Temp. SN <b>701</b>				Temp. _____								<i>light meter</i>															
Cond. SN <b>304</b>				Cond. _____								<i>w/o 241</i>															
Other _____				Other _____																							

Sts.	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				Fluor Sample Bot. Data			Sal. Bot. #	Other Samp.	Sts.
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.			
1			235	21:54:30	21:59:14					235.862	4.635	31.202	31.637	.108			#23	NUT 138	1
2			50	54						50.022	4.177	30.195	31.908	.182			#23	CHL 137	2
3			30	30						30.033	3.637	29.512	30.633	.295				CHL 136	3
4			13	13						13.223	3.585	29.426	31.694	.255				CHL	4
5			13	13						13.224	3.588	29.434	31.696	.252				CHL	5
6			13	13						13.054	3.586	29.427	31.693	.264				CHL	6
7			10	10						9.823	3.586	29.422	31.689	.198				CHL	7
8			10	10						9.981	3.586	29.421	31.687	.209				CHL	8
9			10	10						10.005	3.589	29.423	31.688	.202				CHL 135	9
10			0	0						0.256	3.582	29.424	31.689	.159				CHL 134	10
11																			11
12																			12

Initials WR/DK

Consec. Cast # <u>4</u>		Vessel <u>MILLER FREEMAN</u>		Proj. & Leg <u>MF-94-04</u>		Event # <u>61</u>		Vessel Sta. I.D.		Instructions <u>morning 94-01</u>										Sta. Designation							
Consec. Cast #	Latitude Deg. Min.		N or S	Longitude Deg.		E or W	Date JD = <u>164</u> Day Mo. Yr.			Time GMT Hr. Min.		Dry Bulb	Wet Bulb	Bar. mb <u>1001.0</u>	S.S.	V.S.	Wind Dir.	Wind Sp.	Cloud	Type	Weath.	291 Bottom Depth, m	Sta. Name or I.D.				
<u>4</u>	<u>57</u>	<u>41</u>	<u>57</u> N	<u>155</u>	<u>14</u>	<u>70</u> W	<u>14</u>	<u>APR</u>	<u>94</u>	<u>00</u>	<u>20</u>	<u>-</u>	<u>19</u>	<u>-</u>	<u>36</u>	<u>01</u>	<u>28</u>	<u>290</u>	<u>14</u>	<u>18</u>	<u>1</u>	<u>296</u>	<u>9401</u>				
CTD Type & SN <u>91220-A</u>			Press. SN <u>26072</u>			Temp. SN <u>701</u>			Cond. SN <u>304</u>			Monitor Checks on Deck at Surface Press. _____ Temp. _____ Cond. _____ Other _____				Times JD/Time Data on _____ at Surface _____ Start Down _____ at Bottom _____ Start Up _____ at Surface _____ Data off _____				Data Location Tape/Diskette I.D. _____ File Name/Header <u>cast 004 - 14 Apr 0008</u>				Remarks <u>clear, F/100meters</u> <u>light meter</u>			
Pos.	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				Sample Bot. Data			Sal. Bot. #	Other Samp.	Pos.								
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal. Chl											
1			250	00:20:40						285.265	5.188	32.664	38.054	0.100			#29	X139	1								
2			60							59.886	3.675	29.600	31.778	0.228		X			2								
3			50							50.247	3.796	29.762	31.797	0.213		X		X140	3								
4			40							40.414	3.581	29.473	31.739	0.255		X			4								
5			30							30.118	3.599	29.459	31.711	0.244		X		X141	5								
6			20							20.137	3.385	29.211	31.628	0.278		X			6								
7			10							10.386	3.327	29.142	31.607	0.203		X			7								
8			10							10.463	3.327	29.142	31.607	0.197		X			8								
9			10							10.507	3.319	29.134	31.605	0.196		X		X142	9								
10			0							-0.446	3.345	29.153	31.609	0.135		X		X143	10								
11																			11								
12																			12								

Initials WF/DK

Chl  
Chl  
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Chl  
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Chl  
Chl  
Chl

Consec. Cast # <b>005</b>		Vessel MILLER FREEMAN		Proj. & Leg MF-94-04		Event # 73		Vessel Sta. I.D.		Instructions										Sta. Designation				
Consec. Cast #	Latitude		N or S	Longitude		E or W	Date JD = <b>104</b>			Time GMT		Dry Bulb	Wet Bulb	Bar. mb	S S	Vis	Wind Dir.	Wind Sp.	Cloud	Type	Weath.	216 Bottom Depth, m	Sta. Name or I.D.	
	Deg.	Min.		Deg.	Day		Mo.	Yr.	Hr.	Min.														
005	57	05	N	156	00	14	W	14	APR	94	05	49	01	2	-	05	00	38	00	01	81	61	223	04
CTD Type & SN <b>91220-A</b>			Monitor Checks				Times JD/Time				Data Location <b>220</b>													
Press. SN <b>26072</b>			on Deck				at Surface				Data on				Tape/Diskette I.D.				File Name/Header					
Temp. SN <b>701</b>			Press. _____				_____				at Surface _____				_____				_____					
Cond. SN <b>304</b>			Temp. _____				_____				Start Down _____				_____				_____					
_____			Cond. _____				_____				at Bottom _____				_____				_____					
_____			Other _____				_____				Start Up _____				_____				_____					
_____			_____				_____				at Surface _____				_____				_____					
_____			_____				_____				Data off _____				_____				_____					
Remarks			NWT																					

Stn. #	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				Flux Sample Bot. Data			Sal. Bot. #	Other Samp.	Stn. #
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.			
1		A	(214) 200	65'						214.176	4.150	30.462	32.262	0.104			151	1	
2			150							150.313	3.862	30.092	32.441	0.118			150	2	
3			160							99.711	3.645	29.807	32.043	0.183			149	3	
4			50							49.534	3.417	29.495	31.922	0.234			148	4	
5			35							34.706	3.178	29.185	31.793	0.312			147	5	
6			20							20.394	3.214	29.165	31.740	0.325			146	6	
7			10							9.712	3.378	29.179	31.722	0.249				7	
8			10							9.736	3.299	29.116	31.724	0.258				8	
9			10							9.715	3.333	29.243	31.722	0.260			145	9	
10			0							-0.054	3.269	29.268	31.722	0.247			144	10	
11																		11	
12																		12	

 Initials WF  
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Consec. Cast # 006		Vessel MILLER FREEMAN		Proj. & Leg MF-94-04		Event # 86		Vessel Sta. I.D.		Instructions										Sta. Designation					
Consec. Cast #	Latitude			N or S	Longitude			E or W	Date JD =			Time GMT		Dry Bulb	Wet Bulb	Bar. mb	S.S.	Vis.	Wind Dir.	Wind Sp.	Cloud	Type	Weath.	SS Bottom Depth, m	Sta. Name or I.D.
	Deg.	Min.			Deg.		Day		Mo.	Yr.	Hr.	Min.													
006	56	26	64	N	156	58	77	W	14	APR	94	11	48	-3	2	-4	0	00	48	34	02	21	66	93	9443
CTD Type & SN 91220-A				Monitor Checks				Times JD/Time				Data Location													
Press. SN 26072				on Deck				Data on				Tape/Diskette I.D.													
Temp. SN 701				at Surface				at Surface				File Name/Header													
Cond. SN 304				Press. _____				Start Down				_____													
				Temp. _____				at Bottom				_____													
				Cond. _____				Start Up				_____													
				Other _____				at Surface				Remarks LIGHTMETER, FLUOROMETER, CHLAM													
								Data off				NUTS													

Pos.	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				FLUOR Sample Bot. Data			Sal. Bot. #	Other Samp.	Pos.
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.			
1		A	85	114900						86.246	3.336	29.507	31.996	0.169			11	152	1
2			75							75.624	3.331	29.497	31.996	0.182				153	2
3			60							61.371	3.310	29.471	31.992	0.184				154	3
4			45							44.773	3.280	29.435	31.987	0.189				156	4
5			30							29.683	3.261	29.408	31.981	0.220				157	5
6			20							19.785	3.194	29.311	31.936	0.250				158	6
7			10							9.322	3.143	29.254	31.923	0.247					7
8			10							9.033	3.137	29.248	31.923	0.248					8
9			10							9.001	3.140	29.250	31.922	0.243				155	9
10			0							-0.147	3.119	29.228	31.921	0.234				158A	10
11																			11
12																			12

Initials

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W/O 89

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Consec. Cast # <b>007</b>		Vessel <b>MILLER FREEMAN</b>		Proj. & Leg <b>MF-94-04</b>		Event # <b>222</b>		Vessel Sta. I.D.		Instructions										Sta. Designation <b>13 HAUL 2</b>				
Consec. Cast #	Latitude N or S Deg. Min.		Longitude E or W Deg.		Date JD = <b>106</b> Day Mo. Yr.			Time GMT Hr. Min.		Dry Bulb	Wet Bulb	Bar. mb	S.S.	Vis.	Wind Dir.	Wind Sp.	Cloud	Type	Weath.	Bottom Depth, m	Sta. Name or I.D.			
<b>007</b>	<b>55</b>	<b>10</b>	<b>04</b>	<b>N</b>	<b>169</b>	<b>10</b>	<b>14</b>	<b>W</b>	<b>16</b>	<b>APR</b>	<b>94</b>	<b>19</b>	<b>34</b>	<b>02</b>	<b>30</b>	<b>06</b>	<b>64</b>	<b>27</b>	<b>27</b>	<b>40</b>	<b>38</b>	<b>42</b>	<b>2058</b>	<b>1301</b>
CTD Type & SN <b>91220-A</b>			Monitor Checks						Times JD/Time				Data Location <b>2663</b>											
Press. SN <b>26072</b>			on Deck at Surface						Data on _____				Tape/Diskette I.D. File Name/Header											
Temp. SN <b>701</b>			Press. _____						at Surface _____				_____ <b>CAST007_16APR1917</b>											
Cond. SN <b>304 303</b>			Temp. _____						Start Down _____				_____											
			Cond. _____						at Bottom _____				_____											
			Other _____						Start Up _____				Remarks <b>LIGHT METER</b>											
									Data off _____				_____ <b>FLUOROMETER</b>											
													_____ <b>CHLAM</b>											
													_____ <b>Phyto/Lugols</b>											
													_____ <b>Notes</b>											

Pos.	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				FLUOR Sample Bot. Data			Sal. Bot. #	Other Samp.	Pos.
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.			
1		A	300	193340						299.860	3.822	31.343	33.586	0.078			26	160	1
2			150							149.723	3.218	30.351	33.097	0.084				161	2
3			75							75.558	3.550	30.358	32.808	0.281				162	3
4			50							49.684	3.536	30.332	32.804	0.324					4
5			35							34.806	3.538	30.328	32.805	0.326				163	5
6			10							9.862	3.538	30.318	32.805	0.318		Lugols phyto form		164	6
7			0							0.820	3.546	30.320	32.804	0.283				165	7
8																			8
9																			9
10																			10
11																			11
12																			12

change Salinity cell to #303

cleaned But corrosion on sensor end of Temp + Sal probe Should be replaced! wF

Initials





Consec. Cast # <u>009</u>		Vessel <u>MILLER FREEMAN</u>		Proj. & Leg <u>MF-94-04</u>		Event # <u>238</u>		Vessel Sta. I.D.		Instructions										Sta. Designation																										
Consec. Cast #	Latitude Deg. Min.		N or S	Longitude Deg.		E or W	Date <u>JD = 107</u> Day Mo. Yr.			Time GMT Hr. Min.		Dry Bulb	Wet Bulb	Bar. mb <u>102.5</u>	S.S.	Vis.	Wind Dir.	Wind Sp.	Cloud	Type	Weath.	Bottom Depth, m <u>139</u>	Sta. Name or I.D.																							
	9	5	5	3	1	N	1	6	2	3	6	7	W	1	7	A	P	R	9	4	0	2	1	2	1	0	0	6	0	3	2	7	1	3	0	3	8	7	2	1	4	5	1	6	0	1
CTD Type & SN <u>91220-A</u>				Monitor Checks				Times JD/Time				Data Location <u>150</u>																																		
Press. SN <u>26072</u>				on Deck				Data on _____				Tape/Diskette I.D.				File Name/Header																														
Temp. SN <u>701</u>				at Surface				at Surface _____								<u>cast 009 - 17 Apr 2007</u>																														
Cond. SN <u>304 303</u>				Press. _____				Start Down _____																																						
				Temp. _____				at Bottom _____																																						
				Cond. _____				Start Up _____																																						
				Other _____				at Surface _____																																						
								Data off _____								Remarks																														
																28 Nts																														

St. #	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				Elor Sample Bot. Data			Sal. Bot. #	Other Samp.	Pos
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.			
1	28	A	134	02:13						136.388	3.949	30.812	32.913	0.089			28		1
2			175	1:05						74.865	3.159	29.672	32.337	0.315			176		2
3			50							49.989	3.123	29.622	32.366	0.358			175		3
4			35							34.875	2.906	29.381	32.299	0.413			174		4
5			80							10.208	2.856	29.308	32.275	0.388		Lucy's phyto-fam	173		5
6			10							1.032	3.009	29.425	32.268	0.302			172		6
7			0																7
8																			8
9																			9
10																			10
11																			11
12																			12

 Initials \_\_\_\_\_  
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Consec. Cast # 010		Vessel MILLER FREEMAN		Proj. & Leg MF-94-04		Event # 302		Vessel Sta. I.D.		Instructions										Sta. Designation																
Consec. Cast #		Latitude Deg. Min.		N or S		Longitude Deg.		E or W		Date JD = 108 Day Mo. Yr.			Time GMT Hr. Min.		Dry Bulb		Wet Bulb		9963 Bar. mb		S.S.		Vis.		Wind Dir.		Wind Sp.		Cloud Type		Weath.		Bottom Depth, m		Sta. Name or I.D.	
010		5500		16		N		167033		5W		18 APR 94			0335		19		43		96		46		290		2237		5		158		3001			
CTD Type & SN 91220-A				Press. SN 26072				Temp. SN 701				Cond. SN 304 309				Monitor Checks on Deck at Surface				Times JD/Time Data on _____ at Surface _____ Start Down _____ at Bottom _____ Start Up _____ at Surface _____ Data off _____				Data Location Tape/Diskette I.D. _____ File Name/Header <u>cast 010 - 18 Apr 2026</u> _____ _____ Remarks _____ <u>Phyto/Lug</u> <u>abs</u>												
St. Bot.		T Rack		Trip Depth		Time @ Depth Trip		Monitor Values Press. Temp. Cond. Other				Conv. Mon. Values-CTD Press. Temp. Cond. Sal.				Sample Bot. Data Therm-P Avg Tw Sal.				Sal. Bot. #		Other Samp.		St. Bot.												
1				150								149.568 3.886 30.825 32.985				6.078								1												
2				175								75.303 3.548 30.693 32.492				0.206				18				2												
3				50								49.853 3.583 30.692 32.469				0.282								3												
4				35								35.278 3.486 29.873 32.319				0.452								4												
5				10								10.259 3.296 29.567 32.147				0.407				Phytoform Lugols		X		5												
6				0								0.099 3.367 29.536 32.105				0.328						X		6												
7																								7												
8																								8												
9																								9												
10																								10												
11																								11												
12																								12												

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Pg. 11 of 11

Consec. Cast # <b>011</b>		Vessel <b>MILLER FREEMAN</b>		Proj. & Leg <b>MF-94-04</b>		Event # <b>308</b>		Vessel Sta. I.D.		Instructions										Sta. Designation <b>31 HNL</b>					
Consec. Cast #	Latitude			N or S	Longitude			E or W	Date JD = <b>108</b>			Time GMT		Dry Bulb	Wet Bulb	Bar. mb	S.S.	Vis.	Wind Dir.	Wind Sp.	Cloud	Type	Weath.	Bottom Depth, m	Sta. Name or I.D.
	Deg.	Min.			Deg.		Day		Mo.	Yr.	Hr.	Min.													
<b>011</b>	<b>5</b>	<b>4</b>	<b>53</b>	<b>13</b>	<b>N</b>	<b>1</b>	<b>67</b>	<b>24</b>	<b>60</b>	<b>W</b>	<b>18</b>	<b>APR</b>	<b>94</b>	<b>05</b>	<b>48</b>	<b>13</b>	<b>07</b>	<b>99</b>	<b>46</b>	<b>30</b>	<b>26</b>	<b>27</b>	<b>5</b>	<b>438</b>	<b>3101</b>

CTD Type & SN <b>91220-A</b> Press. SN <b>26072</b> Temp. SN <b>701</b> Cond. SN <b>304 303</b>	Monitor Checks		Times JD/Time		Data Location	
	on Deck	at Surface	Data on _____		Tape/Diskette I.D.	File Name/Header
	Press. _____	_____	at Surface _____		_____	_____
	Temp. _____	_____	at Bottom _____		_____	_____
	Cond. _____	_____	Start Up _____		Remarks	
Other _____	_____	at Surface _____				
				Data off _____		

Pos. R Pos.	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				Sample Bot. Data			Sal. Bot. #	Other Samp.	Pos. R Pos.
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.			
1			300	300														1	
2		A	150	5:52:00	5:57:20					150.285	3.973	30.792	33.059	0.074			12	2	
3			75	75														3	
4			50	50													Chl	4	
5			35	35													Chl	5	
6			10	10												Lugols/Phyto-Foam	Chl	6	
7			0	0													Chl	7	
8																		8	
9																		9	
10																		10	
11																		11	
12																		12	

Initials \_\_\_\_\_  
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NUTS  
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 183 Abs  
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Consec. Cast # <b>12</b>		Vessel <b>MILLER FREEMAN</b>		Proj. & Leg <b>MF-94-04</b>		Event # <b>316</b>		Vessel Sta. I.D.		Instructions										Sta. Designation										
Consec. Cast #	Latitude			N or S	Longitude			E or W	Date JD = <b>108</b>			Time GMT		Dry Bulb	Wet Bulb	Bar. mb	S.S.	Vis.	Wind Dir.	Wind Sp.	Cloud	Type	Weath.	Bottom Depth, m	Sta. Name or I.D.					
	Deg.	Min.			Deg.		Day		Mo.	Yr.	HR.	Min.																		
<b>012</b>	<b>54</b>	<b>38</b>	<b>37</b>	<b>N</b>	<b>168</b>	<b>09</b>	<b>42</b>	<b>W</b>	<b>18</b>	<b>APR</b>	<b>94</b>	<b>10</b>	<b>32</b>	<b>00</b>	<b>5</b>	<b>-</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>4</b>	<b>7</b>	<b>3</b>	<b>10</b>	<b>28</b>	<b>8</b>	<b>7</b>	<b>7</b>	<b>1760</b>	<b>3360</b>
CTD Type & SN <b>91220-A</b>				Monitor Checks				Times JD/Time				Data Location																		
Press. SN <b>26072</b>				on Deck				at Surface				Data on				Tape/Diskette I.D.				File Name/Header										
Temp. SN <b>701</b>				Press. _____				_____				at Surface _____				_____				_____										
Cond. SN <b>304 303</b>				Temp. _____				_____				at Bottom _____				_____				_____										
_____				Cond. _____				_____				Start Up _____				_____				Remarks <b>LIGHTMETER, FLUOROMETER, CHLAM</b>										
_____				Other _____				_____				at Surface _____				_____				_____										
_____				_____				_____				Data off _____				_____				_____										
Pos.	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				FLUOR Sample Bot. Data			Sal. Bot. #	Other Samp.	Pos.											
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.														
<b>1</b>			<b>300</b>	<b>103230</b>								<b>303.361</b>	<b>3.723</b>	<b>31.366</b>	<b>33.713</b>	<b>0.081</b>			<b>188</b>	<b>1</b>										
<b>2</b>			<b>150</b>									<b>150.834</b>	<b>3.610</b>	<b>30.773</b>	<b>33.202</b>	<b>0.102</b>			<b>15</b>	<b>189</b>	<b>2</b>									
<b>3</b>			<b>75</b>									<b>74.926</b>	<b>3.685</b>	<b>30.612</b>	<b>32.973</b>	<b>0.230</b>				<b>190</b>	<b>3</b>									
<b>4</b>			<b>50</b>									<b>49.329</b>	<b>3.646</b>	<b>30.541</b>	<b>32.942</b>	<b>0.377</b>					<b>4</b>									
<b>5</b>			<b>35</b>									<b>34.687</b>	<b>3.675</b>	<b>30.506</b>	<b>32.879</b>	<b>0.447</b>				<b>191</b>	<b>5</b>									
<b>6</b>			<b>10</b>									<b>10.023</b>	<b>3.739</b>	<b>30.478</b>	<b>32.794</b>	<b>0.384</b>				<b>192</b>	<b>6</b>									
<b>7</b>			<b>0</b>									<b>0.867</b>	<b>3.733</b>	<b>30.468</b>	<b>32.793</b>	<b>0.392</b>				<b>1352</b>	<b>7</b>									
<b>8</b>																					<b>8</b>									
<b>9</b>																					<b>9</b>									
<b>10</b>																					<b>10</b>									
<b>11</b>																					<b>11</b>									
<b>12</b>																					<b>12</b>									

Notes: 0, 10, 35, 75, 150, 300  
 CHL: 0, 10, 35, 50m

Initials

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Consec. Cast # 13		Vessel MILLER FREEMAN		Proj. & Leg MF-94-04		Event # 370		Vessel Sta. I.D.		Instructions										Sta. Designation																					
Consec. Cast #	Latitude		N or S	Longitude		E or W	Date JD =			Time GMT		Dry Bulb	Wet Bulb	Bar. mb	S.S.	Vis.	Wind Dir.	Wind Sp.	Cloud	Type	Weath.	Bottom Depth, m	Sta. Name or I.D.																		
	Deg.	Min.		Deg.	Day		Mo.	Yr.	Hr.	Min.																															
013	5	44	9	1	7	N	1	65	51	9	4	W	19	APR	94	07	04	-	04	-	1	0	1	5	4	6	3	1	5	1	4	8	7	7	1	5	8	4	3	0	1
CTD Type & SN 91220-A				Monitor Checks								Times JD/Time				Data Location																									
Press. SN 26072				on Deck at Surface								Data on at Surface				Tape/Diskette I.D. File Name/Header																									
Temp. SN 701				Press. _____								Start Down _____				CAST 013_19Apr94																									
Cond. SN 304 303				Temp. _____								at Bottom _____				_____																									
_____				Cond. _____								Start Up _____				Remarks LIGHT METER, FLUOROMETER, CHLAM																									
_____				Other _____								Data off _____				_____																									
Stn. No.	Bot. Rack	T	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				FLUOR Sample Bot. Data			Sal. Bot. #	Other Samp.	Pos																						
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.																									
1			150	71.0705	07112					150.179	3.810	30.584	32.776	0.1013				1349	1																						
2	A		75							75.011	3.571	30.037	32.450	0.363				19	1348	2																					
3			50							50.101	3.602	30.069	32.423	0.470					3																						
4			35							35.378	3.582	30.019	32.391	0.446					1347	4																					
5			10							9.547	3.522	29.818	32.225	0.417			Lugols	1346	5																						
6			0							-0.041	3.491	29.751	32.180	0.418			1345	6																							
7										0.792	3.488	29.745	32.176	0.434					7																						
8																			8																						
9																			9																						
10																			10																						
11																			11																						
12																			12																						

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Consec. Cast # <u>14</u>		Vessel <u>MILLER FREEMAN</u>		Proj. & Leg <u>MF-94-04</u>		Event# <u>375</u>		Vessel Sta. I.D.		Instructions										Sta. Designation																															
Consec. Cast #	Latitude			N or S	Longitude			E or W	Date JD = <u>109</u>			Time GMT		Dry Bulb	Wet Bulb	Bar. mb	S.S.	Vis.	Wind Dir.	Wind Sp.	Cloud	Type	Weath.	Bottom Depth, m	Sta. Name or I.D.																										
	Deg.	Min.			Deg.		Day		Mo.	Yr.	Hr.	Min.																																							
614	5	4	4	1	7	1	N	1	6	6	1	4	6	7	W	1	9	A	P	R	9	4	0	9	2	3	-	0	7	-	0	8	1	5	4	7	3	2	0	1	5	8	7	7	2	8	0	4	4	6	1

CTD Type & SN <u>91220-A</u>		Monitor Checks				Times JD/Time		Data Location			
Press. SN <u>26072</u>		on Deck		at Surface		Data on _____		Tape/Diskette I.D.		File Name/Header	
Temp. SN <u>701</u>		Press. _____		_____		at Surface _____		_____		<u>CAST 014-19 APR 09 13</u>	
Cond. SN <u>304303</u>		Temp. _____		_____		Start Down _____		_____		_____	
_____		Cond. _____		_____		at Bottom _____		_____		_____	
_____		Other _____		_____		Start Up _____		_____		Remarks <u>LIGHTMETER, FLUOROMETER</u>	
_____		_____		_____		at Surface _____		_____		CHLAM	
_____		_____		_____		Data off _____		_____		NUT.	

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Pos.	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				FLUOR Sample Bot. Data			Sal. Bot. #	Other Samp.	Pos.
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.			
1			B+10							276.851	3.810	31.147	33.377	0.077				1350	1
2			150							148.228	3.617	30.657	33.058	0.083			33	1351	2
3			75							74.597	3.772	30.473	32.720	0.119				1353	3
4			50							49.764	3.614	30.104	32.453	0.430				—	4
5			35							35.090	3.607	30.059	32.414	0.726				1354	5
6			10							10.386	3.592	30.026	32.402	0.731				1355	6
7			0							0.185	3.587	30.018	32.402	0.700				1356	7
8																			8
9																			9
10																			10
11																			11
12																			12

Initials

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Consec. Cast # 015		Vessel MILLER FREEMAN		Proj. & Leg MF-94-04		Event # 382		Vessel Sta. I.D.		Instructions										Sta. Designation	
Consec. Cast #	Latitude Deg. Min. N or S		Longitude Deg. E or W		Date JD = Day Mo. Yr.			Time GMT Hr. Min.		Dry Bulb	Wet Bulb	Bar. mb 1014.8	S.S.	Vis.	Wind Dir.	Wind Sp.	Cloud Type	Weath.	Bottom Depth, m	Sta. Name or I.D.	
015	5426107N		1670038W		19 APR 94			1424		-07	-09	15	28	350	04	872	516	4601			
CTD Type & SN 91220-A			Monitor Checks					Times JD/Time				Data Location									
Press. SN 26072			on Deck at Surface					Data on _____				Tape/Diskette I.D. File Name/Header									
Temp. SN 701			Press. _____					at Surface _____				_____ CAST015-19APR1413									
Cond. SN 304 303			Temp. _____					Start Down _____				_____									
_____			Cond. _____					at Bottom _____				_____									
_____			Other _____					Start Up _____				Remarks LIGHTMETER, FLUOROMETER, CHLAM									
_____			_____					Data off _____				NUTS									

Pos.	Bot. Rack	T	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				FLUOR Sample Bot. Data			Sal. Bot. #	Other Samp.	Pos.
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.			
1	A	300	142555							301.531	3.790	31.322	33.593	0.077			24	1357	1
2		150								149.778	3.846	30.807	33.004	0.080				1358	2
3		75								75.785	3.677	30.315	32.628	0.357				1359	3
4		50								49.655	3.642	30.176	32.511	0.431					4
5		35								34.971	3.637	30.164	32.610	0.428				1360	5
6		10								10.005	3.496	29.453	32.411	0.439				1361	6
7		0								0.247	3.453	29.863	32.352	0.458				1362	7
8																			8
9																			9
10																			10
11																			11
12																			12

Initials

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W/0302

Consec. Cast # 016		Vessel MILLER FREEMAN		Proj. & Leg MF-94-04		Event # 393		Vessel Sta. I.D.		Instructions										Sta. Designation													
Consec. Cast #	Latitude		N or S	Longitude		E or W	Date JD =			Time GMT		Dry Bulb	Wet Bulb	Bar. mb	S.S.	Vis.	Wind Dir.	Wind Sp.	Cloud	Type	Weath.	Bottom Depth, m	Sta. Name or I.D.										
	Deg.	Min.		Deg.			Day	Mo.	Yr.	Hr.	Min.																						
016	54	11	96	N	167	43	7	1	W	19	APR	94	18	25	-	1	4	-	3	1	1	4	28	35	0	0	4	7	6	2	15	03	4801
CTD Type & SN 91220-A			Monitor Checks										Times JD/Time				Data Location																
Press. SN 26072			on Deck at Surface										Data on at Surface				Tape/Diskette I.D. File Name/Header																
Temp. SN 701			Press. _____										Start Down _____				CAST 016-19APR1813																
Cond. SN 304 303			Temp. _____										at Bottom _____				_____																
			Cond. _____										Start Up _____				Remarks LIGHTMETER, FLUOROMETER, CHLAM																
			Other _____										Data off _____				NUTS w/o 304																
Pos	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				FLUOR Sample Bot. Data			Sal. Bot. #	Other Samp.	Pos														
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.																	
1			300							301.718	3.613	30.907	33.279	0.092				1363	1														
2			150							148.616	3.956	30.756	32.833	0.144				1364	2														
3			75							74.801	3.856	30.519	32.691	0.230				1365	3														
4			50							49.690	3.852	30.400	32.568	0.338				1366	4														
5			35							34.831	3.834	30.365	32.552	0.370				1366	5														
6			10							9.259	3.823	30.339	32.546	0.360			Phary/Luguts	21	1367	6													
7			0							-0.242	3.888	30.392	32.548	0.315				1368	7														
8																			8														
9																			9														
10																			10														
11																			11														
12																			12														


Initials

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Consec. Cast # 017		Vessel MILLER FREEMAN		Proj. & Leg MF-94-04		Event # 429		Vessel Sta. I.D.		Instructions										Sta. Designation															
Consec. Cast #		Latitude N or S Deg. Min.			Longitude E or W Deg.			Date JD = 110 Day Mo. Yr.			Time GMT Hr. Min.		Dry Bulb		Wet Bulb		Bar. mb		S.S.		Vis.		Wind Dir.		Wind Sp.		Cloud Type		Weath.		Bottom Depth, m		Sta. Name or I.D.		
017		535893N			1673147W			20 APR 94			1041		-06		-24		09		28		345		08861		1694		5601								
CTD Type & SN 91220-A				Monitor Checks								Times JD/Time				Data Location																			
Press. SN 26072				on Deck				at Surface				Data on				Tape/Diskette I.D.				File Name/Header															
Temp. SN 701				Press. _____				_____				at Surface _____				_____				CAST017-20APR1029															
Cond. SN 304 303				Temp. _____				_____				Start Down _____				_____				_____															
_____				Cond. _____				_____				at Bottom _____				_____				_____															
_____				Other _____				_____				Start Up _____				_____				Remarks LIGHTMETER, FLUOROMETER,															
_____				_____				_____				at Surface _____				_____				CHLam															
_____				_____				_____				Data off _____				_____				NUTS.															
Pos.		T		Trip		Time @		Monitor Values				Conv. Mon. Values-CTD				FLUOR Sample Bot. Data				Sal.		Other		Pos.											
Bot.		Rack		Depth		Depth Trip		Press.		Temp.		Cond.		Other		Press.		Temp.		Cond.		Sal.		Therm-P		Avg Tw		Sal.		Bot. #		Samp.		Pos.	
1		A		300		104110										301.609		3.769		31.236		33.485		0.073						27		1369		1	
2				150												150.565		3.637		30.624		32.997		0.086								1370		2	
3				75												74.542		3.754		30.344		32.586		0.216								1371		3	
4				50												50.215		3.749		30.289		32.539		0.307								/		4	
5				35												35.332		3.717		30.185		32.455		0.405								1372		5	
6				10												9.703		3.776		30.224		32.455		0.366								1373		6	
7				0												0.046		3.774		30.219		32.456		0.336								1374		7	
8																																		8	
9																																		9	
10																																		10	
11																																		11	
12																																		12	

w/o 303

Initials   
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Consec. Cast # 018		Vessel MILLER FREEMAN		Proj. & Leg MF-94-04		Event # 437		Vessel Sta. I.D.		Instructions										Sta. Designation																				
Consec. Cast #		Latitude Deg. Min.		N or S		Longitude Deg. Min.		E or W		Date JD = 110 Day Mo. Yr.			Time GMT Hr. Min.		Dry Bulb		Wet Bulb		Bar. mb		S.S.		Vis.		Wind Dir.		Wind Sp.		Cloud Type		Weath.		Bottom Depth, m		Sta. Name or I.D.					
018		5413		87		N		16646		84		W			20			APR 94			15		05		-01		-17		09		28		330		12777		1296		5801	
CTD Type & SN 91220-A				Press. SN 26072				Temp. SN 701				Cond. SN 304303				Monitor Checks on Deck at Surface				Times JD/Time Data on _____ at Surface _____ Start Down _____ at Bottom _____ Start Up _____ at Surface _____ Data off _____				Data Location Tape/Diskette I.D. _____ File Name/Header CAST 018-20APR1454 Remarks LIGHTMETER, FLUOROMETER, CHLORAM																
g		Bot.		T Rack		Trip Depth		Time @ Depth Trip		Monitor Values Press. Temp. Cond. Other				Conv. Mon. Values-CTD Press. Temp. Cond. Sal.				FLUOR Sample Bot. Data Therm-P Avg Tw Sal.				Sal. Bot. #		Other Samp.		Pos.														
1						300								300.323 3.808 31.300 33.548				0.076						1375		1														
2						150								149.884 3.571 30.614 33.052				0.098						1376		2														
3						75								76.457 3.788 30.483 32.716				0.136						1377		3														
4						50								50.076 3.644 30.177 32.510				0.256				22				4														
5						35								35.131 3.697 30.179 32.467				0.301						1378		5														
6						10								9.881 3.419 29.718 32.206				0.563						1379		6														
7						0								-0.555 3.415 29.709 32.205				0.586						1380		7														
8																										8														
9																										9														
10																										10														
11																										11														
12																										12														

w/o 304


Initials

✓

Consec. Cast # <b>019</b>		Vessel MILLER FREEMAN		Proj. & Leg MF-94-04		Event # 449		Vessel Sta. I.D.		Instructions										Sta. Designation														
Consec. Cast #		Latitude N or S Deg. Min.			Longitude E or W Deg.			Date JD = Day Mo. Yr.			Time GMT Hr. Min.		Dry Bulb		Wet Bulb		Bar. mb 1609		S.S.		Vis.		Wind Dir.		Wind Sp.		Cloud Type		Weath.		Bottom Depth, m		Sta. Name or I.D.	
019		5 4 2 8 9 0 N			1 6 6 5 1 4 0 W			2 0 APR 94			1 9 2 7		- 0 4		- 1 6		9 9		2 7		3 5 6		1 6		8 7 7		5 3 7		6 0 6 1					
CTD Type & SN 91220-A				Monitor Checks								Times JD/Time				Data Location																		
Press. SN 26072				on Deck at Surface								Data on _____				Tape/Diskette I.D. File Name/Header																		
Temp. SN 701				Press. _____								at Surface _____				CAST019_20APR1916																		
Cond. SN 304 303				Temp. _____								Start Down _____				_____																		
_____				Cond. _____								at Bottom _____				_____																		
_____				Other _____								Start Up _____				Remarks LIGHTMETER, FLUOROMETER,																		
_____				_____								at Surface _____				CHLam NWIS																		
_____				_____								Data off _____				w/0 305																		

Stn. #	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				FLUOR Sample Bot. Data			Sal. Bot. #	Other Samp.	Pos.
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.			
1			300							300.318	3.794	31.152	33.387	0.073			1386	1	
2		A	150	143330						151.020	3.886	30.715	32.854	.108			08 1385	2	
3			75							75.398	3.674	30.233	32.533	0.245			1384	3	
4			50							49.810	3.641	30.143	32.473	0.356				4 Chl	
5			35							35.184	3.676	30.154	32.459	0.411			1383	5 Chl	
6			10							10.034	3.234	29.768	31.850	0.394		Lugals / Photo	1382	6 Chl Abs	
7			0							0.367	3.225	29.255	31.848	0.383			1381	7 Chl Abs	
8																		8	
9																		9	
10																		10	
11																		11	
12																		12	

Initials

  
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Initials DK/WF  
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Consec. Cast # 21		Vessel MILLER FREEMAN		Proj. & Leg MF-94-04		Event # 462		Vessel Sta. I.D.		Instructions										Sta. Designation														
Consec. Cast #		Latitude N or S Deg. Min.			Longitude E or W Deg.			Date JD = Day Mo. Yr.			Time GMT Hr. Min.		Dry Bulb		Wet Bulb		Bar. mb 1007.5		SS 36		Vis. 35		Wind Dir. 016		Wind Sp. 87		Cloud Type 77		Weath.		Bottom Depth, m 147		Sta. Name or I.D. 6202	

CTD Type & SN 91220-A		Monitor Checks on Deck at Surface				Times JD/Time Data on _____ at Surface _____ Start Down _____ at Bottom _____ Start Up _____ at Surface _____ Data off _____				Data Location Tape/Diskette I.D. _____ File Name/Header Cast 021-21 Apr 0139									
Press. SN 26072		Press. _____								Remarks									
Temp. SN 701		Temp. _____																	
Cond. SN 304 303		Cond. _____																	
		Other _____																	

Pos.	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				Sample Bot. Data			Sal. Bot. #	Other Samp.	Log
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.			
1			143							115.568	3.750	30.518	32.760	6.148				1393	1
2		A	75	01:48:09						75.495	3.234	29.374	31.985	6.274			4	1394	2
3			50							50.808	3.139	29.177	31.803	6.353					3
4			35							35.145	3.122	29.150	31.805	6.407				1395	4
5			10							9.667	3.128	29.136	31.796	6.450		phyto from Lugols		1396	5
6			0							6.888	3.119	29.140	31.795	6.326				1397	6
7			0																7
8																			8
9																			9
10																			10
11																			11
12																			12

Initials \_\_\_\_\_  
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Consec. Cast #		Vessel		Proj. & Leg		Event #		Vessel Sta. I.D.		Instructions										Sta. Designation					
Consec. Cast #		Latitude		Longitude		Date		Time		Dry Bulb		Wet Bulb		Bar. mb		Wind Dir.		Wind Sp.		Cloud Type		Bottom Depth, m		Sta. Name or I.D.	
Deg.		Min.		Deg.		Day Mo. Yr.		Hr. Min.																	
022		545799 N		1680829 W		21 APR 94		1740		-26		-37		1138		350		1259		1165		1		6803	
CTD Type & SN 91220-A				Monitor Checks				Times				Data Location													
Press. SN 26072				on Deck				Data on				Tape/Diskette I.D.				File Name/Header									
Temp. SN 701				at Surface				at Surface								CAST022-21APR1733									
Cond. SN 304 303				Press.				Start Down																	
				Temp.				at Bottom																	
				Cond.				Start Up								Remarks LIGHTMETER, FLUOROMETER, CHLAM									
				Other				Data off								NUTS									
Bot. Rack		Trip Depth		Time @		Monitor Values				Conv. Mon. Values-CTD				FLUOR Sample Bot. Data			Sal. Bot. #		Other Samp.		St. #				
				Depth Trip		Press. Temp. Cond. Other				Press. Temp. Cond. Sal.				Therm-P Avg Tw Sal.											
1		70								70.112 3.634 30.562 32.968				0.182					1398		1				
2		50								<del>59.696 3.629 30.526 32.936</del>				<del>0.230</del>							2				
3		40								50.331 3.596 30.477 32.916				0.231					<del>1399</del>		3				
4		30								40.684 3.575 30.449 32.909				0.280					1399		4				
5		20								29.834 3.581 30.449 32.908				0.289							5				
6		10								20.803 3.585 30.446 32.906				0.281							6				
7		0								9.968 3.521 30.247 32.737				0.349					05 1400		7				
8										-0.092 3.509 30.225 30.225				0.346					1401		8				
9																					9				
10																					10				
11																					11				
12																					12				

Initials ME  
✓

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down  
10 m

Consec. Cast # <b>023</b>				Vessel <b>MILLER FREEMAN</b>				Proj. & Leg <b>MF-94-04</b>				Event # <b>498</b>		Vessel Sta. I.D.				Instructions										Sta. Designation			
Consec. Cast #		Latitude Deg. Min. N or S			Longitude Deg. E or W			Date JD = Day Mo. Yr.			Time GMT Hr. Min.		Dry Bulb		Wet Bulb		Bar. mb <i>1011.8</i>		S.S.	Vis.	Wind Dir.		Wind Sp.		Cloud	Type	Weath.	Bottom Depth, m		Sta. Name or I.D.	
023		545915 N			1680897 W			21 APR 94			1950		-30		-45		1238		38	350	1278		1	1542		6805					
CTD Type & SN <b>91220-A</b>					Monitor Checks					Times JD/Time					Data Location																
Press. SN <b>26072</b>					on Deck					at Surface					Data on _____					Tape/Diskette I.D.					File Name/Header						
Temp. SN <b>701</b>					Press. _____					Start Down _____					_____					_____											
Cond. SN <b>304 303</b>					Temp. _____					at Bottom _____					_____					_____											
_____					Cond. _____					Start Up _____					_____					Remarks <i>2 bottles combined for 4 total</i>											
_____					Other _____					at Surface _____					_____					<i>142 samples. Remaining bottle sampled for Lugols</i>											
_____					Data off _____					_____					_____					_____											

Stn	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				Fluor Sample Bot. Data			Sal. Bot. #	Other Samp.	Stn
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.			
1			10							10.207	3.510	30.224	32.722	0.262			1		
2			10							10.115	3.510	30.223	32.721	0.249			2		
3			10							10.283	3.510	30.222	32.718	0.245			3		
4			10							10.342	3.509	30.220	32.718	0.236			4		
5			10							10.197	3.509	30.220	32.718	0.235			5		
6			10							10.195	3.510	30.221	32.718	0.247			6		
7			10							10.168	3.509	30.217	32.715	0.246			7		
8			10							10.182	3.509	30.216	32.713	0.242			8		
9		A	10	19:52:23	19:57:40					10.182	3.509	30.214	32.711	0.246		1	9		
10																	10		
11																	11		
12																	12		

Initials WF  
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Consec. Cast # <u>024</u>		Vessel <u>MILLER FREEMAN</u>		Proj. & Leg <u>MF-94-04</u>		Event # <u>499</u>		Vessel Sta. I.D.		Instructions										Sta. Designation																																
Consec. Cast #	Latitude			N or S	Longitude			E or W	Date JD =			Time GMT		Dry Bulb	Wet Bulb	Bar. mb	S	S	Vis.	Wind Dir.	Wind Sp.	Cloud	Type	Weath.	Bottom Depth, m	Sta. Name or I.D.																										
	Deg.	Min.			Deg.		Day		Mo.	Yr.	Hr.	Min.																																								
	2	4	5	4	5	8	2	2	N	1	6	8	6	1	W	2	1	A	P	R	9	4	2	0	3	1	-	2	9	-	4	3	1	1	3	8	3	5	0	1	4	7	8	1	1	6	0	0	6	8	0	6
CTD Type & SN <u>91220-A</u>				Monitor Checks				Times JD/Time				Data Location																																								
Press. SN <u>26072</u>				on Deck				at Surface				Data on				Tape/Diskette I.D.				File Name/Header																																
Temp. SN <u>701</u>				Press. _____				Start Down _____				_____				_____				_____																																
Cond. SN <u>304 303</u>				Temp. _____				at Bottom _____				Start Up _____				_____				_____				_____																												
_____				Cond. _____				at Surface _____				Data off _____				Remarks <u>2 bottles combined for 4 total ME samples. Remaining bottle sampled for LUGS</u>				_____				_____																												
_____				Other _____																																																

Pos.	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				Fluor Sample Bot. Data			Sal. Bot. #	Other Samp.	S
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.			
1			20							19.462	3.556	30.307	32.775	0.343				1	
2			20							19.550	3.551	30.310	32.778	0.363				2	
3			20							19.654	3.556	30.327	32.793	0.347				3	
4			20							19.732	3.558	30.330	32.795	0.345				4	
5			20							19.765	3.559	30.330	32.794	0.354				5	
6			20							19.770	3.561	30.325	32.785	0.357				6	
7			20							19.803	3.565	30.332	32.790	0.358				7	
8			20							19.763	3.565	30.333	32.797	0.337				8	
9		A	20							19.822	3.564	30.337	32.798	0.355			3	9	
10																		10	
11																		11	
12																		12	

Initials WF  
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Consec. Cast # <b>025</b>				Vessel <b>MILLER FREEMAN</b>				Proj. & Leg <b>MF-94-04</b>				Event # <b>511</b>		Vessel Sta. I.D.				Instructions										Sta. Designation			
Consec. Cast #		Latitude Deg. Min. N or S			Longitude Deg. E or W			Date JD = Day Mo. Yr.			Time GMT Hr. Min.		Dry Bulb		Wet Bulb		Bar. mb <i>1014.2</i>		Si	Vis.	Wind Dir.		Wind Sp.		Cloud	Type	Weath.	Bottom Depth, m		Sta. Name or I.D.	
<b>25</b>		<b>5 4 5 9 5 6 N</b>			<b>1 6 8 1 0 1 4 W</b>			<b>21 APR 94</b>			<b>21 5 2</b>		<b>- 2 5 - 3 6</b>		<b>1 1</b>		<b>3 8</b>	<b>3 4 5</b>	<b>1 2 7 8 1</b>		<b>1 5 2 8</b>		<b>6 9 0 2</b>								
CTD Type & SN <b>91220-A</b>				Press. SN <b>26072</b>				Temp. SN <b>701</b>				Cond. SN <b>304 303</b>				<div style="display: flex; justify-content: space-between;"> <div> <b>Monitor Checks</b>  on Deck                      at Surface  Press. _____  Temp. _____  Cond. _____  Other _____ </div> <div> <b>Times JD/Time</b>  Data on _____  at Surface _____  Start Down _____  at Bottom _____  Start Up _____  at Surface _____  Data off _____ </div> <div> <b>Data Location 1560</b>  Tape/Diskette I.D. _____  File Name/Header  <b>Cast 025 - 21 Apr 2148</b> </div> </div>				<b>Remarks</b> 2 bottles combined for 4 total 1425 Remaining bottle sampled for Lugols											

Stn	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				Sample Bot. Data			Sal. Bot. #	Other Samp.	Stn
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.			
1			30							30.377	3.526	30.380	32.882	0.341				1	
2			30							30.310	3.525	30.382	32.884	0.368				2	
3			30							30.288	3.526	30.382	32.884	0.341				3	
4			30							30.281	3.526	30.382	32.884	0.422				4	
5			30							30.299	3.525	30.383	32.886	0.336				5	
6			30							30.303	3.525	30.384	32.887	0.356				6	
7			30							30.352	3.526	30.383	32.886	0.361				7	
8			30							30.331	3.526	30.384	32.886	0.344				8	
9			30							30.317	3.525	30.384	32.886	0.361			35	9	
10																		10	
11																		11	
12																		12	

Initials WF  
✓ \_\_\_\_\_

Consec. Cast # <b>026</b>		Vessel <b>MILLER FREEMAN</b>		Proj. & Leg <b>MF-94-04</b>		Event # <b>513</b>		Vessel Sta. I.D.		Instructions										Sta. Designation								
Consec. Cast #	Latitude			N or S	Longitude			E or W	Date JD =			Time GMT		Dry Bulb	Wet Bulb	Bar. mb	SS	Vis	Wind Dir.	Wind Sp.	Cloud	Type	Weath.	Bottom Depth, m	Sta. Name or I.D.			
	Deg.	Min.			Deg.		Day		Mo.	Yr.	Hr.	Min.																
	26	54	58	94	N	162	59	88	W	21	APR	94	22	24	-3	1	-4	0	1	1	38	34	5	14	78	1	1574	6943
CTD Type & SN <b>91220-A</b>				Monitor Checks						Times JD/Time				Data Location														
Press. SN <b>26072</b>				on Deck						Data on				Tape/Diskette I.D.														
Temp. SN <b>701</b>				at Surface						at Surface				File Name/Header														
Cond. SN <b>304 303</b>				Press. _____						Start Down				_____														
				Temp. _____						at Bottom				_____														
				Cond. _____						Start Up				_____														
				Other _____						at Surface				Remarks <i>thermometers didn't turn</i>														
										Data off				<i>2 bottles sampled for 4 total 12 Remaining</i>														
														<i>bottle sampled for LWOTs</i>														

Sts	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				Sample Bot. Data			Sal. Bot. #	Other Samp.	Sts
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.			
1			40							41.471	3.572	30.451	32.913	0.280				1	
2			40							41.137	3.573	30.450	32.912	0.302				2	
3			40							40.873	3.573	30.450	32.912	0.288				3	
4			40							40.773	3.573	30.450	32.912	0.292				4	
5			40							41.035	3.573	30.450	32.912	0.305				5	
6			40							40.837	3.573	30.450	32.912	0.294				6	
7			40							40.970	3.573	30.450	32.912	0.307				7	
8			40							40.781	3.574	30.451	32.912	0.301				8	
9			40	22:50						40.819	3.576	30.451	32.911	0.272			32	9	
10																		10	
11																		11	
12																		12	

Initials W F  
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Consec. Cast # <u>027</u>		Vessel MILLER FREEMAN		Proj. & Leg MF-94-04		Event #		Vessel Sta. I.D.		Instructions										Sta. Designation to HAUL 2					
Consec. Cast #	Latitude			N or S	Longitude			E or W	Date JD =			Time GMT		Dry Bulb	Wet Bulb	Bar. mb 1011.5	SS	Vis	Wind Dir.	Wind Sp.	Cloud	Type	Weath.	Bottom Depth, m	Sta. Name or I.D.
	Deg.	Min.			Deg.		Day		Mo.	Yr.	Hr.	Min.													
027	55	50	9	N	168	10	35	W	21	APR	94	23	54	-3	0	-3	7	12	38	34	01	27	81	1565	7042

CTD Type & SN <u>91220-A</u>		Monitor Checks				Times JD/Time		Data Location	
Press. SN <u>26072</u>		on Deck		at Surface		Data on _____		Tape/Diskette I.D.	
Temp. SN <u>701</u>		Press. _____		_____		at Surface _____		File Name/Header	
Cond. SN <u>304 303</u>		Temp. _____		_____		Start Down _____		_____	
_____		Cond. _____		_____		at Bottom _____		_____	
_____		Other _____		_____		Start Up _____		_____	
_____		_____		_____		at Surface _____		Remarks <u>no salinity done, m2.5 + Engle's Chlor from all bottles</u>	
_____		_____		_____		Data off _____		_____	

Stn. #	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				Sample Bot. Data			Sal. Bot. #	Other Samp.	Stn. #
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.			
1		A	70	55:30						70.302	3.629	30.533	32.941	0.218			17		1
2			50							49.731	3.654	30.447	32.913	0.268					2
3			40							39.830	3.565	30.443	32.912	0.294					3
4			30							29.690	3.568	30.440	32.912	0.308					4
5			20							20.033	3.561	30.393	32.866	0.359					5
6			10							9.726	3.525	30.178	32.651	0.213					6
7			0							0.903	3.535	30.181	32.649	0.177					7
8																			8
9		A															17		9
10																			10
11																			11
12																			12

Initials WF  
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Consec. Cast # <u>628</u>		Vessel <u>MILLER FREEMAN</u>		Proj. & Leg <u>MF-94-04</u>		Event #		Vessel Sta. I.D.		Instructions										Sta. Designation										
Consec. Cast #		Latitude <u>N</u> Deg. Min. S			Longitude <u>E</u> Deg. or W			Date <u>JD =</u> Day Mo. Yr.			Time GMT Hr. Min.		Dry Bulb		Wet Bulb		Bar. mb <u>1011.3</u>		Wind Dir. <u>345</u>		Wind Sp. <u>10</u>		Cloud Type <u>68</u>		Weath. <u>1</u>		Bottom Depth, m <u>1552</u>		Sta. Name or I.D. <u>7043</u>	
028		550061N			1681028W			22APR94			0035		-27		-29		1138		345		10		68		1		1552		7043	

CTD Type & SN <u>91220-A</u>		Monitor Checks				Times JD/Time				Data Location			
Press. SN <u>26072</u>		on Deck		at Surface		Data on _____		Tape/Diskette I.D. _____		File Name/Header <u>cast 028 - 22 Apr 0031</u>			
Temp. SN <u>701</u>		Press. _____		_____		at Surface _____		_____		_____			
Cond. SN <u>304 303</u>		Temp. _____		_____		Start Down _____		_____		_____			
		Cond. _____		_____		at Bottom _____		_____		_____			
		Other _____		_____		Start Up _____		_____		_____			
						at Surface _____		_____		_____			
						Data off _____		_____		_____			
Remarks <u>Combined 2 bottles for 4 MB SAMPLES</u>													
<u>LUGOLS FROM REMAINING BOTTLE</u>													

Stn. No.	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				Sample Bot. Data			Sal. Bot. #	Other Samp.	Stn. No.
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.			
1			50							50.320	3.585	30.471	32.920	0.251			17		1
2			50							50.405	3.586	30.472	32.920	0.241					2
3			50							50.471	3.585	30.471	32.920	0.248					3
4			50							50.375	3.585	30.471	32.920	0.240					4
5			50							50.512	3.586	30.471	32.920	0.231					5
6			50							50.462	3.586	30.472	32.920	0.236					6
7			50							50.347	3.585	30.471	32.920	0.235					7
8			50							50.474	3.586	30.471	32.919	0.234					8
9			50							50.494	3.585	30.471	32.920	0.246					9
10																			10
11																			11
12																			12

Initials WF  
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Consec. Cast # <b>029</b>		Vessel <b>MILLER FREEMAN</b>		Proj. & Leg <b>MF-94-04</b>		Event #		Vessel Sta. I.D.		Instructions										Sta. Designation								
Consec. Cast #		Latitude N or S Deg. Min.		Longitude E or W Deg.		Date JD = Day Mo. Yr.			Time GMT Hr. Min.		Dry Bulb		Wet Bulb		Bar. mb 1011.1		S.S. Vis.		Wind Dir.		Wind Sp.		Cloud Type Weath.		Bottom Depth, m		Sta. Name or I.D.	
029		5459 94 N		1681001 W		22 APR 94			0108		-25		-37		1138		345		1268		11496		7064					
CTD Type & SN <b>91220-A</b>				Monitor Checks on Deck at Surface				Times JD/Time Data on _____ at Surface _____ Start Down _____ at Bottom _____ Start Up _____ at Surface _____ Data off _____				Data Location Tape/Diskette I.D. _____ File Name/Header <b>cast 029 - 22 Apr 0102</b>																
Press. SN <b>26072</b>				Press. _____								Remarks <b>COMBINED 2 BOTTLES FOR 4 TOTAL ME'S REMAINING BOTTLE FOR FLUIDS</b>																
Temp. SN <b>701</b>				Temp. _____																								
Cond. SN <b>304 303</b>				Cond. _____																								
Other _____				Other _____																								

Pos. No.	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				Sample Bot. Data			Sal. Bot. #	Other Samp.	Pos. No.
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.			
1			70							70.565	3.616	30.552	32.974	0.193			10	1	
2			70							70.637	3.601	30.542	32.978	0.184				2	
3			70							70.727	3.600	30.542	32.979	0.174				3	
4			70							70.906	3.595	30.539	32.980	0.170				4	
5			70							70.654	3.596	30.540	32.979	0.175				5	
6			70							70.754	3.587	30.534	32.982	0.174				6	
7			70							70.665	3.582	30.530	32.983	0.176				7	
8			70							70.781	3.580	30.529	32.983	0.164				8	
9			70							70.907	3.576	30.526	32.985	0.170				9	
10																		10	
11																		11	
12																		12	

Initials WF

Consec. Cast # <b>430</b>		Vessel MILLER FREEMAN		Proj. & Leg MF-94-04		Event # 527		Vessel Sta. I.D.		Instructions										Sta. Designation														
Consec. Cast #	Latitude			N or S	Longitude			E or W	Date JD =			Time GMT		Dry Bulb	Wet Bulb	Bar. mb	S.S.	Vis.	Wind Dir.	Wind Sp.	Cloud	Type	Weath.	Bottom Depth, m	Sta. Name or I.D.									
	Deg.	Min.			Deg.		Day		Mo.	Yr.	Hr.	Min.																						
430	54	59	13	N	168	09	95	W	22	APR	94	01	14	00	-2	5	-3	7	11	3	8	3	5	0	08	6	8	1	15	5	1	7	0	05

CTD Type & SN <u>91220-A</u> Press. SN <u>26072</u> Temp. SN <u>701</u> Cond. SN <u>304 303</u>		Monitor Checks		Times JD/Time		Data Location	
		on Deck	at Surface	Data on _____ at Surface _____ Start Down _____ at Bottom _____ Start Up _____ at Surface _____ Data off _____	Tape/Diskette I.D. _____ File Name/Header <u>cast 030 - 22 Apr</u>		
		Press. _____	_____	Remarks _____			
		Temp. _____	_____				
		Cond. _____	_____				
		Other _____	_____				

Stn	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				Sample Bot. Data			Sal. Bot. #	Other Samp.	Stn
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.			
1		A	100	1:40:25						101.892	3.688	30.771	33.146	0.100			16		1
2			70							—	—	—	—	—	mixed			2	
3			50							49.940	3.596	30.482	32.922	0.243				3	
4			40							39.879	3.591	30.467	32.915	0.257				4	
5			30							30.131	3.580	30.450	32.911	0.330				5	
6			20							19.642	3.604	30.429	32.867	0.361				6	
7			10							9.965	3.582	30.214	32.637	0.237				7	
8			0							0.209	3.636	30.254	32.636	0.159				8	
9																		9	
10																		10	
11																		11	
12																		12	

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Initials AB

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Consec. Cast # 032		Vessel MILLER FREEMAN		Proj. & Leg MF-94-04		Event # 591		Vessel Sta. I.D.		Instructions										Sta. Designation					
Consec. Cast #	Latitude			N or S	Longitude			E or W	Date JD =			Time GMT		Dry Bulb	Wet Bulb	Bar. mb	S.S.	Vis.	Wind Dir.	Wind Sp.	Cloud	Type	Weath.	Bottom Depth, m	Sta. Name or I.D.
	Deg.	Min.			Deg.		Day		Mo.	Yr.	Hr.	Min.													
032	55	07	30	N	168	18	70	W	22	APR	94	17	37	-2	9	-4	3	13	28	350	08	68	1	1840	7841
CTD Type & SN 91220-A				Monitor Checks								Times JD/Time				Data Location									
Press. SN 26072				on Deck at Surface								Data on at Surface				Tape/Diskette I.D. File Name/Header									
Temp. SN 701				Press. _____								Start Down _____				CAST 032-22 APR 1994									
Cond. SN 303				Temp. _____								at Bottom _____													
				Cond. _____								Start Up _____				Remarks LIGHTMETER, FLUOROMETER, CHLOR									
				Other _____								Data off _____													
Pos.	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				FLUOR Sample Bot. Data			Sal. Bot. #	Other Samp.	Pos.						
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.									
1			1100	1737.00						101.041	3.598	30.581	33.011	0.157			12		1						
2																			2						
3																			3						
4																			4						
5																			5						
6																			6						
7																			7						
8																			8						
9																			9						
10																			10						
11																			11						
12																			12						

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Initials AD  
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Consec. Cast # <b>033</b>		Vessel MILLER FREEMAN		Proj. & Leg MF-94-04		Event # 601		Vessel Sta. I.D.		Instructions										Sta. Designation						
Consec. Cast #	Latitude		N or S	Longitude		E or W	Date JD =			Time GMT		Dry Bulb	Wet Bulb	Bar. mb	S.S.	Vis.	Wind Dir.	Wind Sp.	Cloud	Type	Weath.	Bottom Depth, m	Sta. Name or I.D.			
	Deg.	Min.		Deg.	Day		Mo.	Yr.	Hr.	Min.																
033	55	09	13	N	168	19	80	W	22	A	P	R	94	19	16	-	26	-	43	13	28	350	07	28	11674	7902
CTD Type & SN 91220-A Press. SN 26072 Temp. SN 701 Cond. SN 303				Monitor Checks on Deck at Surface Press. _____ Temp. _____ Cond. _____ Other _____						Times JD/Time Data on _____ at Surface _____ Start Down _____ at Bottom _____ Start Up _____ at Surface _____ Data off _____				Data Location Tape/Diskette I.D. _____ File Name/Header CAST 033-1912 Remarks _____												
Pos.	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				Sample Bot. Data			Sal. Bot. #	Other Samp.	Pos.							
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.										
1			10																							1
2																										2
3																										3
4																										4
5																										5
6																										6
7																										7
8																										8
9																										9
10																										10
11																										11
12																										12

Initials FAW  
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102



Consec. Cast # <b>035</b>		Vessel MILLER FREEMAN		Proj. & Leg MF-94-04		Event #	Vessel Sta. I.D.		Instructions										Sta. Designation																	
Consec. Cast #	Latitude Deg. Min. S			Longitude Deg. E or W			Date JD = Day Mo. Yr.			Time GMT Hr. Min.		Dry Bulb		Wet Bulb		Bar. mb 1013.2		S.S.	Vis.	Wind Dir.		Wind Sp.		Cloud	Type	Weath.	1639 Bottom Depth, m		Sta. Name or I.D.							
035	55	09	22	N	168	21	22	W	22	A	P	R	9	4	2	1	3	5	-	2	5	-	3	6	1	3	2	8	0	2	0	1	6	3	9	8002
CTD Type & SN 91220-A				Monitor Checks						Times JD/Time						Data Location																				
Press. SN 26072				on Deck at Surface						Data on _____						Tape/Diskette I.D. File Name/Header																				
Temp. SN 701				Press. _____						at Surface _____						CAST 035-22 Apr 2122																				
Cond. SN 303				Temp. _____						Start Down _____						_____																				
_____				Cond. _____						at Bottom _____						_____																				
_____				Other _____						Start Up _____						Remarks																				
_____				_____						at Surface _____						_____																				
_____				_____						Data off _____						_____																				
Pos. Q.C.	Bot.	T Rack	Trip Depth	Time @ Depth Trip		Monitor Values				Conv. Mon. Values-CTD				Sample Bot. Data			Sal. Bot. #	Other Samp.	Pos.																	
Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.	Sal.	Bot. #	Samp.	Pos.																						
1			30							30.635	3.720	30.560	32.900	0.293			18		1																	
2			30							30.611	3.718	30.559	32.900	0.295					2																	
3			30							30.578	3.715	30.556	32.900	0.280					3																	
4			30							30.689	3.715	30.556	32.900	0.271					4																	
5			30							30.623	3.716	30.557	32.900	0.292					5																	
6			30							30.624	3.713	30.555	32.901	0.286					6																	
7			30							30.659	3.714	30.555	32.900	0.279					7																	
8			30							30.660	3.713	30.554	32.900	0.288					8																	
9			30							30.657	3.712	30.554	32.901	0.286					9																	
10																			10																	
11																			11																	
12																			12																	

Initials WF  
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Consec. Cast # <b>036</b>		Vessel MILLER FREEMAN		Proj. & Leg MF-94-04		Event # <b>616</b>		Vessel Sta. I.D.		Instructions										Sta. Designation					
Consec. Cast #	Latitude			N or S	Longitude			E or W	Date JD =			Time GMT		Dry Bulb	Wet Bulb	Bar. mb	S.S.	Vis.	Wind Dir.	Wind Sp.	Cloud	Type	Weath.	Bottom Depth, m	Sta. Name or I.D.
	Deg.	Min.			Deg.		Day		Mo.	Yr.	Hr.	Min.													
036	55	08	31	N	168	21	44	W	22	APR	94	22	00	-2	3	-3	4	13	28	03	01	05	1	1695	8003
CTD Type & SN <u>91220-A</u>				Monitor Checks								Times JD/Time				Data Location									
Press. SN <u>26072</u>				on Deck at Surface								Data on _____				Tape/Diskette I.D. File Name/Header									
Temp. SN <u>701</u>				Press. _____								at Surface _____				CAST <u>036-22Apr 2156</u>									
Cond. SN <u>303</u>				Temp. _____								Start Down _____				_____									
_____				Cond. _____								at Bottom _____				_____									
_____				Other _____								Start Up _____				Remarks									
_____				_____								at Surface _____				_____									
_____				_____								Data off _____				_____									

Pos.	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				Flwr Sample Bot. Data			Sal. Bot. #	Other Samp.	Pos.
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm	Avg Tw	Sal.			
1			40							40.337	3.594	30.472	32.917	0.252				1	
2			40							40.362	3.593	30.470	32.917	0.267				2	
3			40							40.353	3.591	30.469	32.917	0.259				3	
4			40							40.419	3.591	30.469	32.917	0.269				4	
5			40							40.407	3.591	30.469	32.917	0.254				5	
6			40							40.379	3.593	30.470	32.917	0.253				6	
7			40							40.443	3.591	30.469	32.917	0.256				7	
8			40							40.418	3.590	30.468	32.916	0.329				8	
9		A	40	22:03:13						40.439	3.584	30.461	32.914	0.250			33	9	
10																		10	
11																		11	
12																		12	

Initials WF  
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Consec. Cast # 037		Vessel MILLER FREEMAN		Proj. & Leg MF-94-04		Event # 627		Vessel Sta. I.D.		Instructions										Sta. Designation																															
Consec. Cast #	Latitude N or S			Longitude E or W			Date JD =			Time GMT		Dry Bulb	Wet Bulb	Bar. mb	S.S.	Vis.	Wind Dir.	Wind Sp.	Cloud	Type	Weath.	Bottom Depth, m	Sta. Name or I.D.																												
	Deg.	Min.	S	Deg.		W	Day	Mo.	Yr.	Hr.	Min.			1012.9								1663	8102																												
037			5	5	10	2	7	N	16	8	22	8	5	W	2	2	A	P	R	9	4	2	3	4	0	-	1	9	-	3	0	1	3	2	8	0	3	0	1	0	6	8	1	1	6	6	3	8	1	0	2
CTD Type & SN 91220-A				Monitor Checks										Times JD/Time				Data Location																																	
Press. SN 26072				on Deck at Surface										Data on				Tape/Diskette I.D. File Name/Header																																	
Temp. SN 701				Press. _____										at Surface _____				CAST 037 - 22 Apr 2335																																	
Cond. SN 303				Temp. _____										Start Down _____				_____																																	
_____				Cond. _____										at Bottom _____				_____																																	
_____				Other _____										Start Up _____				_____																																	
_____				_____										at Surface _____				Remarks																																	
_____				_____										Data off _____				_____																																	
Pos.	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				Sample Bot. Data			Sal. Bot. #	Other Samp.	Pos.																																
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.																																			
1		A	100	23:40								100.603	3.765	30.775	33.134	0.107				21		1																													
2			70									69.590	3.632	30.538	32.943	0.186						2																													
3			50									50.429	3.553	30.439	32.914	0.271						3																													
4			40									40.088	3.527	30.457	32.906	0.306						4																													
5			30									30.563	3.442	30.484	32.888	0.344						5																													
6			20									20.437	3.571	30.382	32.843	0.329						6																													
7			10									10.438	3.527	30.198	32.613	0.193						7																													
8			0									0.460	3.593	30.199	32.612	0.159						8																													
9																						9																													
10																						10																													
11																						11																													
12																						12																													

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Consec. Cast # 038		Vessel MILLER FREEMAN		Proj. & Leg MF-94-04		Event # 629		Vessel Sta. I.D.		Instructions										Sta. Designation														
Consec. Cast #		Latitude N or S			Longitude E or W			Date JD =			Time GMT		Dry Bulb		Wet Bulb		Bar. mb		S.S.		Vis.		Wind Dir.		Wind Sp.		Cloud Type		Weath.		Bottom Depth, m		Sta. Name or I.D.	
038		550919 N			1682310 W			23 APR 94			0015		-21		-38		13		28		030		1058		11683		8103							
CTD Type & SN 91220-A					Monitor Checks					Times JD/Time					Data Location																			
Press. SN 26072					on Deck at Surface					Data on _____					Tape/Diskette I.D.					File Name/Header														
Temp. SN 701					Press. _____					at Surface _____					_____					CAST 038-23Apr 0010														
Cond. SN 303					Temp. _____					Start Down _____					_____					_____														
					Cond. _____					at Bottom _____					_____					_____														
					Other _____					Start Up _____					Remarks																			
										at Surface _____																								
										Data off _____																								
St. Bot.		T Rack		Trip Depth		Time @		Monitor Values				Conv. Mon. Values-CTD				Sample Bot. Data				Sal. Bot. #		Other Samp.		Pos.										
						Depth Trip		Press. Temp. Cond. Other		Press. Temp. Cond. Sal.		Therm-P Avg Tw Sal.																						
1				50						49.756 3.546 30.433 32.915		0.269						27				1												
2				50						49.921 3.546 30.434 32.915		0.264										2												
3				50						50.135 3.547 30.434 32.914		0.292										3												
4				50						50.299 3.547 30.435 32.915		0.271										4												
5				50						50.411 3.546 30.434 32.915		0.252										5												
6				50						50.505 3.548 30.435 32.915		0.265										6												
7				50						50.650 3.547 30.435 32.915		0.263										7												
8				50						50.682 3.547 30.435 32.914		0.264										8												
9				50						50.700 3.547 30.435 32.915		0.256										9												
10																						10												
11																						11												
12																						12												

Initials WF  
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Consec. Cast # <b>039</b>			Vessel MILLER FREEMAN			Proj. & Leg MF-94-04			Event # 630			Vessel Sta. I.D.			Instructions										Sta. Designation										
Consec. Cast #		Latitude Deg. Min. S			N or S		Longitude Deg. W			E or W		Date JD = Day Mo. Yr.			Time GMT Hr. Min.		Dry Bulb		Wet Bulb		Bar. mb 1012.7		S.S.	Vis.	Wind Dir.		Wind Sp.		Cloud	Type	Weath.	Bottom Depth, m		Sta. Name or I.D.	
		39 55 09 24			N		168 23 66			W		23 APR 94			00 49		- 2 0		- 3 1		1 3		2	8	030		105		01	1683		8104			
CTD Type & SN 91220-A					Monitor Checks										Times JD/Time					Data Location															
Press. SN 26072					on Deck					at Surface					Data on _____					Tape/Diskette I.D.					File Name/Header										
Temp. SN 701					Press. _____					_____					at Surface _____					_____					CAST639-23Apr0044										
Cond. SN 303					Temp. _____					_____					at Bottom _____					_____					_____										
					Cond. _____					_____					Start Up _____					Remarks															
					Other _____					_____					at Surface _____																				
															Data off _____																				
St. #	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				Fluor Sample Bot. Data			Sal.	Other	St. #																
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.	Bot. #	Samp.																	
1			70							70.397	3.640	30.576	32.979	0.166			24		1																
2			70							70.407	3.638	30.574	32.977	0.170					2																
3			70							70.544	3.635	30.573	32.980	0.174					3																
4			70							70.540	3.636	30.573	32.980	0.169					4																
5			70							70.557	3.635	30.573	32.981	0.167					5																
6			70							70.550	3.636	30.573	32.980	0.162					6																
7			70							70.554	3.635	30.573	32.981	0.160					7																
8			70							70.564	3.635	30.573	32.980	0.168					8																
9			70							70.550	3.635	30.573	32.980	0.179					9																
10																			10																
11																			11																
12																			12																

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Consec. Cast # <u>040</u>		Vessel MILLER FREEMAN		Proj. & Leg MF-94-04		Event # 631		Vessel Sta. I.D.		Instructions										Sta. Designation								
Consec. Cast #	Latitude			N or S	Longitude			E or W	Date JD = <u>113</u>			Time GMT		Dry Bulb	Wet Bulb	Bar. mb 1012.5	S.S.	Vis.	Wind Dir.	Wind Sp.	Cloud	Type	Weath.	Bottom Depth, m	Sta. Name or I.D.			
	Deg.	Min.			Deg.		Day		Mo.	Yr.	Hr.	Min.																
040	55	08	67	N	168	24	06	W	23	A	P	R	9	4	01	27	-	1	7	-	2	4	13	28	025	1158	11639	8105
CTD Type & SN <u>91220-A</u>				Monitor Checks										Times JD/Time				Data Location										
Press. SN <u>26072</u>				on Deck at Surface										Data on _____				Tape/Diskette I.D.				File Name/Header						
Temp. SN <u>701</u>				Press. _____										at Surface _____				_____				CAST <u>040-23A</u> or <u>0122</u>						
Cond. SN <u>303</u>				Temp. _____										Start Down _____				_____				_____						
				Cond. _____										at Bottom _____				_____				_____						
				Other _____										Start Up _____				_____				_____						
														at Surface _____				_____				Remarks <u>sal bottle hung on bottom stopper</u>						
														Data off _____				_____										

Pos.	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				Fluor Sample Bot. Data			Sal. Bot. #	Other Samp.	V. #
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Fluor	Avg Tw	Sal.			
1		A	70	11:29:04						68.984	3.643	30.569	32.968	0.190			22		1
2			70							69.090	3.645	30.576	32.974	0.200					2
3			50							49.864	3.583	30.469	32.920	0.289					3
4			40							39.618	3.566	30.442	32.910	0.330					4
5			30							30.167	3.532	30.393	32.891	0.364					5
6			20							20.075	3.509	30.344	32.861	0.394					6
7			10							9.599	3.576	30.228	32.660	0.157					7
8			0							0.004	3.606	30.224	32.630	0.118					8
9																			9
10																			10
11																			11
12																			12

Initials WF  
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Consec. Cast # 041	Vessel MILLER FREEMAN	Proj. & Leg MF-94-04	Event # 676	Vessel Sta. I.D.	Instructions	Sta. Designation
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Consec. Cast #	Latitude			Longitude			Date JD = 113			Time GMT		Dry Bulb	Wet Bulb	Bar. mb	S.S.	Vis.	Wind Dir.	Wind Sp.	Cloud Type	Weath.	Bottom Depth, m	Sta. Name or I.D		
	Deg.	Min.	N or S	Deg.		E or W	Day	Mo.	Yr.	Hr.	Min.													
041	54	49	86 N	168	35	81 W	23	APR	94	15	02	-1	6	-3	3	12	48	03	02	0	1	23	17	8702

CTD Type & SN <u>91220-A</u>	<b>Monitor Checks</b>		<b>Times</b>	<b>JD/Time</b>	<b>Data Location</b>	
Press. SN <u>26072</u>	on Deck	at Surface	Data on _____		Tape/Diskette I.D.	File Name/Header
Temp. SN <u>701</u>	Press. _____	_____	at Surface _____		_____	CAST <u>041-23APR94/43</u>
Cond. SN <u>303</u>	Temp. _____	_____	Start Down _____		_____	_____
_____	Cond. _____	_____	at Bottom _____		_____	_____
_____	Other _____	_____	Start Up _____		Remarks <u>LIGHTMETER</u>	
			at Surface _____			
			Data off _____			

[illegible]

Salinity increased with depth smoothly & seems to be very high.

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Consec. Cast # 042		Vessel MILLER FREEMAN		Proj. & Leg MF-94-04		Event # 699		Vessel Sta. I.D.		Instructions										Sta. Designation														
Consec. Cast #		Latitude Deg. Min. N or S			Longitude Deg. E or W			Date JD = 113 Day Mo. Yr.			Time GMT Hr. Min.		Dry Bulb		Wet Bulb		Bar. mb		S.S.		Vis.		Wind Dir.		Wind Sp.		Cloud Type		Weath.		Bottom Depth, m 1945		Sta. Name or I.D. 8901	
042		550553 N			1683991 W			23 APR 94			2302		-32		-47		1547		030		22862													

CTD Type & SN 91220-A		Monitor Checks				Times JD/Time				Data Location			
Press. SN 26072		on Deck at Surface				Data on _____				Tape/Diskette I.D.			
Temp. SN 701		Press. _____				at Surface _____				File Name/Header			
Cond. SN 303		Temp. _____				Start Down _____				CAST 042-23Apr 2258			
		Cond. _____				at Bottom _____							
		Other _____				Start Up _____				Remarks			
						at Surface _____				Davis			
						Data off _____				Abs			
										NUTS			
										CHI			

Pos.	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				Flux Sample Bot. Data			Sal. Bot. #	Other Samp.	Pos.
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.			
1			100							99.570	3.672	30.578	33.148	0.081			22	518	1
2			40							39.885	3.359	30.190	32.817	0.350		X			2
3			25							25.279	3.371	30.182	32.804	0.362					3
4			10							10.186	3.361	30.171	32.809	0.270		X	Phyto furca	519	4
5			0							1.469	3.360	30.165	32.807	0.231				520	5
6																			6
7																			7
8																			8
9																			9
10																			10
11																			11
12																			12

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Consec. Cast # <b>043</b>		Vessel MILLER FREEMAN		Proj. & Leg MF-94-04		Event # <b>902</b>		Vessel Sta. I.D.		Instructions										Sta. Designation														
Consec. Cast #		Latitude Deg. Min. N or S			Longitude Deg. E or W			Date JD = Day Mo. Yr.			Time GMT Hr. Min.		Dry Bulb		Wet Bulb		Bar. mb		S.S.		Vis.		Wind Dir.		Wind Sp.		Cloud Type		Weath.		Bottom Depth, m		Sta. Name or I.D.	
043		5455 31 N			1683839 W			23 APR 94			23 46		-3 3		-4 7		154		70		302		2286		22376		9001							
CTD Type & SN 91220-A Press. SN 26072 Temp. SN 701 Cond. SN 303					Monitor Checks on Deck at Surface Press. _____ Temp. _____ Cond. _____ Other _____					Times JD/Time Data on _____ at Surface _____ Start Down _____ at Bottom _____ Start Up _____ at Surface _____ Data off _____					Data Location Tape/Diskette I.D. _____ File Name/Header CAST 043 - 23 Apr 2342 Remarks _____																			
Pos	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				Elmer Sample Bot. Data			Sal. Bot. #	Other Samp.	Pos															
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.																		
1		A	106	23:47:20						100.955	3.519	30.659	33.185	0.689			28	517	1															
2			40							40.442	3.390	30.178	32.771	0.343					2															
3			25							25.554	3.364	30.146	32.761	0.393					3															
4			10							10.804	3.365	30.136	32.762	0.311				516	4															
5			0							0.656	3.365	30.131	32.761	0.224				515	5															
6																			6															
7																			7															
8																			8															
9																			9															
10																			10															
11																			11															
12																			12															

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Consec. Cast #		Vessel		Proj. & Leg		Event #		Vessel Sta. I.D.		Instructions										Sta. Designation																								
Consec. Cast #		Latitude		Longitude		Date JD =		Time GMT		Dry Bulb		Wet Bulb		Bar. mb		Wind Dir.		Wind Sp.		Cloud Type		Bottom Depth, m		Sta. Name or I.D.																				
		Deg.	Min.	N or S	Deg.	W or E	Day	Mo.	Yr.	Hr.	Min.																																	
044		5	4	5	2	5	2	N	168	37	6	1	W	24	APR	94	00	24	-	2	2	-	3	3	1	5	4	7	0	2	0	2	0	8	6	2	2	0	6	8	9	1	0	1
CTD Type & SN 91220-A				Monitor Checks				Times JD/Time				Data Location																																
Press. SN 26072				on Deck				at Surface				Data on				Tape/Diskette I.D.				File Name/Header																								
Temp. SN 701				Press. _____				Temp. _____				Start Down _____				_____				CAST 044 - 24 Apr																								
Cond. SN 303				Temp. _____				Start Up _____				at Surface _____				_____				_____																								
_____				Cond. _____				Data off _____				Remarks				_____				_____																								
Other _____				_____				_____				_____				_____				_____																								

Pos.	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				Sample Bot. Data			Sal. Bot. #	Other Samp.	Pos.
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.			
1			100							101.265	3.345	30.441	33.101	0.687				521	1
2			40							40.540	3.581	30.448	32.901	0.204					2
3			25							25.168	3.437	30.240	32.807	0.316					3
4			10							10.168	3.376	30.122	32.733	0.284			15	514	4
5			0							0.123	3.372	30.070	32.680	0.233				513	5
6																			6
7																			7
8																			8
9																			9
10																			10
11																			11
12																			12

Initials WF  
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Consec. Cast # <b>045</b>			Vessel <b>MILLER FREEMAN</b>			Proj. & Leg <b>MF-94-04</b>			Event # <b>704</b>			Vessel Sta. I.D.			Instructions										Sta. Designation									
Consec. Cast #		Latitude <b>N</b> Deg. Min. S			Longitude <b>E</b> Deg. W			Date JD = Day Mo. Yr.			Time GMT Hr. Min.		Dry Bulb		Wet Bulb		Bar. mb		S.S.		Vis.		Wind Dir.		Wind Sp.		Cloud Type		Weath.		Bottom Depth, m		Sta. Name or I.D.	
645		545141N			1683722W			24 APR 94			6051		-20		-37		164		70		20		22		86		22372		9261					
CTD Type & SN <b>91220-A</b>					Monitor Checks					Times JD/Time					Data Location																			
Press. SN <b>26072</b>					on Deck at Surface					Data on _____					Tape/Diskette I.D.					File Name/Header														
Temp. SN <b>701</b>					Press. _____					at Surface _____					_____					CAST <b>045 - 24 APR 6046</b>														
Cond. SN <b>303</b>					Temp. _____					Start Down _____					_____					_____														
_____					Cond. _____					at Bottom _____					_____					_____														
_____					Other _____					Start Up _____					Remarks					_____														
_____					_____					at Surface _____					_____					_____														
_____					_____					Data off _____					_____					_____														

Stn. No.	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				Sample Bot. Data			Sal. Bot. #	Other Samp.	Pos.
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.			
1		A	160	51:30:00						101.614	3.480	30.593	33.146	0.082			26	524	1
2			40							40.895	3.585	30.448	32.898	0.226					2
3			25							25.392	3.426	30.020	32.770	0.367					3
4			10							10.586	3.415	30.180	32.764	0.302				523	4
5			0							0.475	3.419	30.180	32.766	0.233				522	5
6																			6
7																			7
8																			8
9																			9
10																			10
11																			11
12																			12

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Consec. Cast # <b>046</b>		Vessel MILLER FREEMAN		Proj. & Leg MF-94-04		Event # <b>205</b>		Vessel Sta. I.D.		Instructions										Sta. Designation																
Consec. Cast #		Latitude Deg. Min.		N or S		Longitude Deg. Min.		E or W		Date JD = Day Mo. Yr.			Time GMT Hr. Min.		Dry Bulb		Wet Bulb		Bar. mb		S.S.		Vis.		Wind Dir.		Wind Sp.		Cloud Type		Weath.		Bottom Depth, m		Sta. Name or I.D.	
46		5450		07		N		16837		04		W		24 APR 94			0124		-20		-38		1647		0252		2862		2331		9301					
CTD Type & SN <u>91220-A</u>				Press. SN <u>26072</u>				Temp. SN <u>701</u>				Cond. SN <u>303</u>				<b>Monitor Checks</b> on Deck at Surface Press. _____ Temp. _____ Cond. _____ Other _____				<b>Times JD/Time</b> Data on _____ at Surface _____ Start Down _____ at Bottom _____ Start Up _____ at Surface _____ Data off _____				<b>Data Location</b> Tape/Diskette I.D. _____ File Name/Header <u>CAST046-24 Apr 0120</u> _____ _____ _____ Remarks _____												
St. Bot.		T Rack		Trip Depth		Time @ Depth Trip		<b>Monitor Values</b> Press. Temp. Cond. Other				<b>Conv. Mon. Values-CTD</b> Press. Temp. Cond. Sal.				<b>Sample Bot. Data</b> Therm-P Avg Tw Sal.				Sal. Bot. #		Other Samp.		St. Bot.												
1		A		100								100.478 3.425 30.523 33.118				0.082				527				1												
2				40								40.949 3.504 30.368 32.812				0.335						X		2												
3				25								25.123 3.502 30.296 32.807				0.356						φ2		3												
4				10								10.436 3.495 30.278 32.801				0.304				Phyto Firm		526		X		4										
5				0								0.762 3.489 30.274 32.803				0.233						525				5										
6																										6										
7																										7										
8																										8										
9																										9										
10																										10										
11																										11										
12																										12										

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Consec. Cast # <b>047</b>		Vessel MILLER FREEMAN		Proj. & Leg MF-94-04		Event # <b>206</b>		Vessel Sta. I.D.		Instructions										Sta. Designation												
Consec. Cast #		Latitude N or S Deg. Min.			Longitude E or W Deg.			Date JD = Day Mo. Yr.			Time GMT Hr. Min.		Dry Bulb		Wet Bulb		Bar. mb		S.S. Vis.		Wind Dir.		Wind Sp.		Cloud Type		Weath.		Bottom Depth, m		Sta. Name or I.D.	
047		54 48 70 N			168 36 43 W			24 APR 94			01 53		- 21		- 37		164		7025		2186		2281		9401							
CTD Type & SN <u>91220-A</u>				Monitor Checks								Times JD/Time				Data Location																
Press. SN <u>26072</u>				on Deck at Surface								Data on _____				Tape/Diskette I.D. File Name/Header																
Temp. SN <u>701</u>				Press. _____								at Surface _____				_____ CAST <b>047-24 Apr 0149</b>																
Cond. SN <u>303</u>				Temp. _____								Start Down _____				_____																
				Cond. _____								at Bottom _____				_____																
				Other _____								Start Up _____				_____																
												at Surface _____				Remarks																
												Data off _____				<div style="text-align: right;"> <b>ABS</b>  <b>Davis</b> </div> <div style="text-align: right;"> <b>NUTS</b> </div>																

Pos.	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				Sample Bot. Data			Sal. Bot. #	Other Samp.	Pos.
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.			
1			100							101.726	3.296	30.394	37.114	0.094			530	1	
2			40							40.663	3.420	30.216	31.787	0.383		Y	29	2	
3			25							24.800	3.413	30.196	32.778	0.341				3	
4			10							10.685	3.410	30.188	32.779	0.300		Y	529	4	
5			0							0.208	3.408	30.182	32.779	0.234			528	5	
6																		6	
7																		7	
8																		8	
9																		9	
10																		10	
11																		11	
12																		12	

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Consec. Cast # <b>048</b>		Vessel MILLER FREEMAN		Proj. & Leg MF-94-04		Event # <b>267</b>		Vessel Sta. I.D.		Instructions										Sta. Designation														
Consec. Cast #		Latitude N or S Deg. Min.			Longitude E or W Deg.			Date JD = Day Mo. Yr.			Time GMT Hr. Min.		Dry Bulb		Wet Bulb		Bar. mb		S.S.		Vis.		Wind Dir.		Wind Sp.		Cloud Type		Weath.		Bottom Depth, m		Sta. Name or I.D.	
48		54 47 33 N			168 36 02 W			24 APR 94			02 18		- 18		- 29		16		47		020		20		86		22		56		95 61			
CTD Type & SN 91220-A				Monitor Checks on Deck at Surface Press. _____ Temp. _____ Cond. _____ Other _____								Times JD/Time Data on _____ at Surface _____ Start Down _____ at Bottom _____ Start Up _____ at Surface _____ Data off _____				Data Location Tape/Diskette I.D. _____ File Name/Header CAST 048-24APR 0244 Remarks _____																		
Press. SN 26072																																		
Temp. SN 701																																		
Cond. SN 303																																		

Pos.	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				Sample Bot. Data			Sal. Bot. #	Other Samp.	Pos.
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.			
1		A	100	02:18						100.619	3.203	30.327	33.116	0.089			24	533	1
2			40	45						40.879	3.522	30.348	32.842	0.300					2
3			25							24.793	3.503	30.311	32.825	0.383					3
4			10							27.09	3.499	30.301	32.824	0.354				532	4
5			0							1.056	3.494	30.293	32.825	0.772				531	5
6																			6
7																			7
8																			8
9																			9
10																			10
11																			11
12																			12

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Consec. Cast # <b>649</b>		Vessel MILLER FREEMAN		Proj. & Leg MF-94-04		Event # <b>708</b>		Vessel Sta. I.D.		Instructions										Sta. Designation													
Consec. Cast #	Latitude Deg. Min. S		N or S	Longitude Deg. W		E or W	Date JD = Day Mo. Yr.			Time GMT Hr. Min.		Dry Bulb	Wet Bulb	Bar. mb	S.S.	Vs.	Wind Dir.	Wind Sp.	Cloud	Type	Weath.	Bottom Depth, m	Sta. Name or I.D.										
649	5	4	4	76	N	168	35	93	W	24	APR	9	4	02	55	-	1	8	-	3	0	1	6	4	8	0	20	20	76	2	21	73	9601
CTD Type & SN 91220-A				Monitor Checks				Times JD/Time				Data Location																					
Press. SN 26072				on Deck				at Surface				Data on				Tape/Diskette I.D.				File Name/Header													
Temp. SN 701				Press. _____				Start Down _____				_____				CAST 649 - 24 Apr																	
Cond. SN 303				Temp. _____				at Bottom _____				_____				_____																	
_____				Cond. _____				Start Up _____				_____				Remarks																	
_____				Other _____				at Surface _____				_____				_____																	
_____				_____				Data off _____				_____				_____																	
Pos.	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				Sample Bot. Data			Sal. Bot. #	Other Samp.	Pos.														
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.																	
1			100							99.986	3.647	30.791	33.213	0.078				536	1														
2			46							40.641	3.565	30.463	32.935	0.306					2														
3			25							25.689	3.458	30.342	32.908	0.481					3														
4			10							10.313	3.445	30.319	32.906	0.459				535	4														
5			Φ							1.626	3.444	30.316	32.903	0.442				11	534	5													
6																			6														
7																			7														
8																			8														
9																			9														
10																			10														
11																			11														
12																			12														

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Consec. Cast # <b>050</b>		Vessel MILLER FREEMAN		Proj. & Leg MF-94-04		Event # <b>769</b>		Vessel Sta. I.D.		Instructions										Sta. Designation			
Consec. Cast #	Latitude Deg. Min. S			Longitude Deg. E or W			Date JD = Day Mo. Yr.			Time GMT Hr. Min.		Dry Bulb	Wet Bulb	Bar. mb 1019.0	S.S.	V.S.	Wind Dir.	Wind Sp.	Cloud	Type	Weath.	Bottom Depth, m	Sta. Name or I.D.
<b>45</b>	<b>54</b>	<b>39</b>	<b>39</b> N	<b>168</b>	<b>33</b>	<b>49</b> W	<b>24</b>	<b>APR</b>	<b>94</b>	<b>03</b>	<b>45</b>	<b>-2</b>	<b>7</b>	<b>-4</b>	<b>2</b>	<b>19</b>	<b>48</b>	<b>010</b>	<b>18</b>	<b>76</b>	<b>2</b>	<b>1746</b>	<b>9701</b>
CTD Type & SN <b>91220-A</b>				Monitor Checks				Times JD/Time				Data Location											
Press. SN <b>26072</b>				on Deck				at Surface				Data on				Tape/Diskette I.D.				File Name/Header			
Temp. SN <b>701</b>				Press. _____				Start Down				_____				_____				CAST <b>050 - 24 Apr</b>			
Cond. SN <b>303</b>				Temp. _____				at Bottom				_____				_____				_____			
_____				Cond. _____				Start Up				_____				Remarks				_____			
_____				Other _____				at Surface				_____				_____				_____			
_____				Data off				_____				_____				_____				_____			
Pos.	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				Sample Bot. Data				Sal. Bot. #	Other Samp.	Pos.			
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.							
1			100							99.938	2.961	30.030	33.058	0.177				539	1				
2			40							40.262	3.265	30.211	32.938	0.564					2				
3			25							25.423	3.405	30.217	32.811	0.427				538	3				
4			10							10.942	3.416	30.203	32.792	0.446			phytoform	538	4				
5			0							-0.582	3.415	30.038	32.601	0.562				537	5				
6																			6				
7																			7				
8																			8				
9																			9				
10																			10				
11																			11				
12																			12				

Initials WF  
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Consec. Cast # <b>051</b>		Vessel MILLER FREEMAN		Proj. & Leg MF-94-04		Event # <b>710</b>		Vessel Sta. I.D.		Instructions										Sta. Designation												
Consec. Cast #		Latitude N or S Deg. Min.			Longitude E or W Deg.			Date JD = Day Mo. Yr.			Time GMT Hr. Min.		Dry Bulb		Wet Bulb		Bar. mb 1013.2		S.S. Vis.		Wind Dir.		Wind Sp.		Cloud Type		Weath.		Bottom Depth, m		Sta. Name or I.D.	
<b>051</b>		<b>54 40 12 N</b>			<b>168 28 47 W</b>			<b>24 APR 94</b>			<b>04 32</b>		<b>- 29</b>		<b>35</b>		<b>19</b>		<b>48</b>		<b>010</b>		<b>207</b>		<b>62</b>		<b>925</b>		<b>9801</b>			
CTD Type & SN <u>91220-A</u>				Monitor Checks								Times JD/Time				Data Location																
Press. SN <u>26072</u>				on Deck				at Surface				Data on _____				Tape/Diskette I.D.						File Name/Header										
Temp. SN <u>701</u>				Press. _____				_____				at Surface _____				_____						CAST <u>051-24 Apr</u>										
Cond. SN <u>303</u>				Temp. _____				_____				at Bottom _____				_____						_____										
_____				Cond. _____				_____				Start Up _____				_____						_____										
_____				Other _____				_____				at Surface _____				_____						_____										
_____				_____				_____				Data off _____				Remarks						_____										
																Richard B. NUTS						chl										

Stn	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				Sample Bot. Data				Sal. Bot. #	Other Samp.	Pos
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.				
1		A	100	4:32:55						101.053	3.602	30.152	33.102	0.104			69	542	1	
2			40							38.901	3.157	30.137	32.959	0.311					2	
3			25							25.674	3.387	30.249	32.867	0.368					3	
4			10							9.889	3.385	30.240	32.867	0.354				541	4	
5			0							0.049	3.392	30.242	32.868	0.373				540	5	
6																			6	
7																			7	
8																			8	
9																			9	
10																			10	
11																			11	
12																			12	

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Consec. Cast # <b>52</b>		Vessel MILLER FREEMAN		Proj. & Leg MF-94-04		Event # <b>711</b>		Vessel Sta. I.D.		Instructions										Sta. Designation												
Consec. Cast #		Latitude N or S Deg. Min.			Longitude E or W Deg.			Date JD = Day Mo. Yr.			Time GMT Hr. Min.		Dry Bulb		Wet Bulb		Bar. mb		SS Vis.		Wind Dir.		Wind Sp.		Cloud Type		Weath.		Bottom Depth, m		Sta. Name or I.D.	
452		544057 N			11682451 W			24 APR 94			0509		-29		-35		19		4801020		762		2025		9901							
CTD Type & SN 91220-A Press. SN 26072 Temp. SN 701 Cond. SN 303						<b>Monitor Checks</b> on Deck                      at Surface Press. _____ Temp. _____ Cond. _____ Other _____						<b>Times JD/Time</b> Data on _____ at Surface _____ Start Down _____ at Bottom _____ Start Up _____ at Surface _____ Data off _____						<b>Data Location</b> Tape/Diskette I.D. _____ File Name/Header CAST 052 - 24 Apr 0504 _____ _____ _____ Remarks Drifts Abs														
Pos.		Bot.		T Rack		Trip Depth		Time @ Depth Trip		Monitor Values Press. Temp. Cond. Other				Conv. Mon. Values-CTD Press. Temp. Cond. Sal.				Sample Bot. Data Therm-P Avg Tw Sal.			Sal. Bot. #		Other Samp.		D.S.							
1						100								99.905 2.924 30.142 33.109				0.106					545		1							
2						40								40.191 3.474 30.375 32.923				0.235			✓		65		2							
3						25								24.809 3.433 30.304 32.887				0.319							3							
4						10								10.955 3.401 30.217 32.822				0.373			✗		544		4							
5						0								-0.114 3.408 30.218 32.823				0.397					543		5							
6																									6							
7																									7							
8																									8							
9																									9							
10																									10							
11																									11							
12																									12							

Initials WF  
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Consec. Cast # <b>053</b>			Vessel MILLER FREEMAN			Proj. & Leg MF-94-04			Event # <b>712</b>			Vessel Sta. I.D.			Instructions										Sta. Designation												
Consec. Cast #		Latitude Deg. Min. S			N or S		Longitude Deg. Min. W			E or W		Date JD = Day Mo. Yr.			Time GMT Hr. Min.		Dry Bulb		Wet Bulb		Bar. mb 1019.2		S.S. Vis.		Wind Dir.		Wind Sp.		Cloud Type		Weath.		Bottom Depth, m		Sta. Name or I.D.		
053		544093			N		1682601			W		24 APR 94			0541		-27		-38		19		4801016762		2004		10001										
CTD Type & SN 91220-A					Monitor Checks										Times JD/Time					Data Location																	
Press. SN 26072					on Deck at Surface										Data on _____					Tape/Diskette I.D. File Name/Header																	
Temp. SN 701					Press. _____										at Surface _____					CAST 053_24Apr 0535																	
Cond. SN 303					Temp. _____										Start Down _____					_____																	
_____					Cond. _____										at Bottom _____					_____																	
_____					Other _____										Start Up _____					_____																	
_____					_____										at Surface _____					Remarks																	
_____					_____										Data off _____					Davis																	

Stn. No.	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				Sample Bot. Data			Sal. Bot. #	Other Samp.	Pos.	
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.				
1			100									101.043	2.937	30.071	33.092	0.146		548	1	
2			40									41.152	3.398	30.330	32.945	0.222	X		2	
3			25									25.309	3.495	30.328	32.853	0.356			3	
4			10									9.819	3.513	30.327	32.842	0.366	X	77	547	4
5			0									-0.252	3.509	30.320	32.843	0.363			546	5
6																				6
7																				7
8																				8
9																				9
10																				10
11																				11
12																				12

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Consec. Cast #		Vessel		Proj. & Leg		Event #		Vessel Sta. I.D.		Instructions										Sta. Designation							
Consec. Cast #		Latitude		Longitude		Date JD =		Time GMT		Dry Bulb		Wet Bulb		Bar. mb		Wind Dir.		Wind Sp.		Cloud Type		Weath.		Bottom Depth, m		Sta. Name or I.D.	
Deg.		Min.		Deg.		Day Mo. Yr.		Hr. Min.																			
054		54 41 28 N		168 15 12 W		24 APR 94		06 02		2 - 2		7 - 3		8		19		20		16		76		21754		101001	
CTD Type & SN 91220-A				Monitor Checks				Times JD/Time				Data Location															
Press. SN 26072				on Deck				Data on				Tape/Diskette I.D.															
Temp. SN 701				at Surface				at Surface				File Name/Header															
Cond. SN 303				Press. _____				Start Down				CAST 054-24 Apr 0608															
				Temp. _____				at Bottom																			
				Cond. _____				Start Up																			
				Other _____				at Surface				Remarks															
								Data off				DAVIS Axis															
S. No.		Bot. Rack		Trip Depth		Time @		Monitor Values				Conv. Mon. Values-CTD				Sample Bot. Data				Sal. Bot. #		Other Samp.		Pos.			
						Depth Trip		Press. Temp. Cond. Other				Press. Temp. Cond. Sal.				Therm-P Avg Tw Sal.											
1		A		100		06:13:48						100.320 3.562 30.695 33.184				0.095				76		551		1			
2				40								39.270 3.395 30.350 32.974				0.249								2			
3				25								25.721 3.521 30.379 32.888				0.382						55		3			
4				10								10.838 3.562 30.379 32.854				0.368				Phyto form		550		4			
5				0								-0.239 3.563 30.375 32.854				0.373						549		5			
6																								6			
7																								7			
8																								8			
9																								9			
10																								10			
11																								11			
12																								12			

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Consec. Cast # <b>055</b>		Vessel MILLER FREEMAN		Proj. & Leg MF-94-04		Event # <b>715</b>		Vessel Sta. I.D.		Instructions										Sta. Designation											
Consec. Cast #		Latitude N or S Deg. Min.			Longitude E or W Deg.			Date JD = Day Mo. Yr.			Time GMT Hr. Min.		Dry Bulb		Wet Bulb		Bar. mb 1019.3		SS	Vis.	Wind Dir.		Wind Sp.		Cloud Type		Weath.	Bottom Depth, m		Sta. Name or I.D.	
655		544178 N			1681055 W			24 APR 94			0648		-29		-40		19		4	80	201		4762		1593	10201					
CTD Type & SN 91220-A				Monitor Checks								Times JD/Time				Data Location															
Press. SN 26072				on Deck				at Surface				Data on				Tape/Diskette I.D.				File Name/Header											
Temp. SN 701				Press. _____				Temp. _____				Start Down _____				_____				CAST 055-24 Apr 8644											
Cond. SN 303				Temp. _____				Start Up _____				at Surface _____				Remarks															
Other _____				Data off _____																											

Stn. No.	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				Sample Bot. Data			Sal. Bot. #	Other Samp.	Stn. No.	
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.				
1			100									99.371	3.580	30.727	33.205	0.091			552	1
2			40									39.672	3.336	30.289	32.958	0.337				2
3			25									25.493	3.592	30.340	32.770	0.441				3
4			10									10.578	3.586	30.324	32.764	0.417			553	4
5			0									0.323	3.587	30.321	32.765	0.416			66 554	5
6																				6
7																				7
8																				8
9																				9
10																				10
11																				11
12																				12

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Consec. Cast # <b>056</b>		Vessel MILLER FREEMAN		Proj. & Leg MF-94-04		Event # <b>716</b>		Vessel Sta. I.D.		Instructions										Sta. Designation																													
Consec. Cast #	Latitude N or S			Longitude E or W			Date JD = Day Mo. Yr.			Time GMT Hr. Min.		Dry Bulb	Wet Bulb	Bar. mb 1019.3	SS.	Vis.	Wind Dir.	Wind Sp.	Cloud	Type	Weath.	Bottom Depth, m	Sta. Name or I.D.																										
<b>056</b>	<b>5</b>	<b>4</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>N</b>	<b>1</b>	<b>6</b>	<b>8</b>	<b>6</b>	<b>2</b>	<b>W</b>	<b>2</b>	<b>4</b>	<b>A</b>	<b>P</b>	<b>9</b>	<b>4</b>	<b>0</b>	<b>7</b>	<b>1</b>	<b>9</b>	<b>-</b>	<b>2</b>	<b>9</b>	<b>-</b>	<b>4</b>	<b>0</b>	<b>1</b>	<b>9</b>	<b>4</b>	<b>8</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>4</b>	<b>7</b>	<b>6</b>	<b>2</b>	<b>1</b>	<b>5</b>	<b>2</b>	<b>6</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>1</b>
CTD Type & SN <u>91220-A</u> Press. SN <u>26072</u> Temp. SN <u>701</u> Cond. SN <u>303</u>				Monitor Checks on Deck at Surface Press. _____ Temp. _____ Cond. _____ Other _____				Times JD/Time Data on _____ at Surface _____ Start Down _____ at Bottom _____ Start Up _____ at Surface _____ Data off _____				Data Location Tape/Diskette I.D. _____ File Name/Header <u>CAST 056-24Apr 0714</u> Remarks <u>Davis &amp; S</u>																																					
Pos. No.	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				Sample Bot. Data			Sal. Bot. #	Other Samp.	Pos. No.																														
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.																																	
1			160								100.410	3.755	30.902	33.235	0.086			83	557	1																													
2			40								39.349	3.662	30.438	32.808	0.423					2																													
3			25								25.056	3.617	30.366	32.776	0.457					3																													
4			10								10.007	3.603	30.346	32.773	0.470				556	4																													
5			0								-0.255	3.632	30.365	32.773	0.477				555	5																													
6																				6																													
7																				7																													
8																				8																													
9																				9																													
10																				10																													
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Consec. Cast # 057		Vessel MILLER FREEMAN		Proj. & Leg MF-94-04		Event # 717		Vessel Sta. I.D.		Instructions										Sta. Designation														
Consec. Cast #		Latitude N or S Deg. Min.			Longitude E or W Deg.			Date JD = Day Mo. Yr.			Time GMT Hr. Min.		Dry Bulb		Wet Bulb		Bar. mb		SS.		Vis.		Wind Dir.		Wind Sp.		Cloud Type		Weath.		Bottom Depth, m		Sta. Name or I.D.	
057		544291N			1686117W			24 APR 94			0753		-21		-32		174		70		2018		862		1376		10401							
CTD Type & SN 91220-A				Monitor Checks								Times JD/Time				Data Location																		
Press. SN 26072				on Deck at Surface								Data on _____				Tape/Diskette I.D. File Name/Header																		
Temp. SN 701				Press. _____								at Surface _____				CAST 057-24 Apr 0749																		
Cond. SN 303				Temp. _____								Start Down _____																						
				Cond. _____								at Bottom _____																						
				Other _____								Start Up _____																						
												at Surface _____				Remarks																		
												Data off _____				nts																		

Stn. No.	Bot. Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				Sample Bot. Data			Sal. Bot. #	Other Samp.	Pos.	
			Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.				
1	A	100	07:53:57							99.585	3.748	30.827	33.154	0.092			72	558	1
2		40								39.571	3.728	30.567	32.896	0.316					2
3		25								25.873	3.508	30.305	32.813	0.422				558	3
4		14								10.806	3.476	30.265	32.804	0.365				559	4
5		0								2.745	3.477	30.262	32.804	0.356				560	5
6																			6
7																			7
8																			8
9																			9
10																			10
11																			11
12																			12

Initials WF  
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Consec. Cast # <b>058</b>		Vessel MILLER FREEMAN		Proj. & Leg MF-94-04		Event # <b>718</b>		Vessel Sta. I.D.		Instructions										Sta. Designation															
Consec. Cast #		Latitude N or S			Longitude E or W			Date JD = Day Mo. Yr.			Time GMT Hr. Min.		Dry Bulb		Wet Bulb		Bar. mb		S.S.		Vis.		Wind Dir.		Wind Sp.		Cloud Type		Weath.		Bottom Depth, m		Sta. Name or I.D.		
058		5443 42 N			16756 47 W			24 APR 94			08 33		- 23		- 32		174		70		20		188		62		1349		16501						
CTD Type & SN <u>91220-A</u> Press. SN <u>26072</u> Temp. SN <u>701</u> Cond. SN <u>303</u>						<b>Monitor Checks</b> on Deck                      at Surface Press. _____ Temp. _____ Cond. _____ Other _____						<b>Times JD/Time</b> Data on _____ at Surface _____ Start Down _____ at Bottom _____ Start Up _____ at Surface _____ Data off _____						<b>Data Location</b> Tape/Diskette I.D. _____ File Name/Header <u>CAST 058-24Apr 0829</u> _____ _____ _____ Remarks _____																	
Pos.		Bot.		T Rack		Trip Depth		Time @ Depth Trip		Monitor Values				Conv. Mon. Values-CTD				Sample Bot. Data			Sal. Bot. #		Other Samp.		Pos.										
										Press.		Temp.		Cond.		Other		Press.		Temp.		Cond.		Sal.		Therm-P		Avg Tw		Sal.					
1						100												101.090		2.876		30.006		33.055		0.194				wf		561		1	
2						40												40.592		3.152		30.136		32.963		0.526								2	
3						25												26.060		3.422		30.349		32.951		0.376								3	
4						10												10.746		3.392		30.026		32.602		0.404						562		4	
5						0												0.749		3.391		30.621		32.603		0.370				9		563		5	
6																																		6	
7																																		7	
8																																		8	
9																																		9	
10																																		10	
11																																		11	
12																																		12	

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Consec. Cast #		Vessel		Proj. & Leg		Event #		Vessel Sta. I.D.		Instructions										Sta. Designation											
Consec. Cast #		Latitude			Longitude		Date			Time		Dry Bulb		Wet Bulb		Bar. mb		S.S.		Wind Dir.		Wind Sp.		Cloud Type		Weath.		Bottom Depth, m		Sta. Name or I.D.	
Consec. Cast #		Deg. Min. S			Deg. E or W		Day Mo. Yr.			Hr. Min.																					
059		55 59 15 N			163 36 58 W		25 APR 94			19 28		- 07		- 13		14		27		040		12		842		86		11301			
CTD Type & SN 91220-A					Monitor Checks					Times					Data Location																
Press. SN 26072					on Deck					at Surface					Data on					Tape/Diskette I.D.					File Name/Header						
Temp. SN 701					Press. _____					Start Down					_____					CAST059-25APR1923											
Cond. SN 303					Temp. _____					at Bottom					Start Up					_____											
					Cond. _____					at Surface					Data off					Remarks LIGHTMETER, FLUOROMETER, CHLOROPHYLL											
					Other _____																										

Pos.	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				FLUOR Sample Bot. Data			Sal. Bot. #	Other Samp.	Pos.
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.			
1		A	80	1928						80.920	2.621	28.807	31.861	0.235		28	564	1	
2			50	/						49.563	2.593	28.757	31.844	0.260			565	2	
3			30	/						29.478	2.574	28.729	31.840	0.297				3	
4			20	/						20.240	2.574	28.725	31.841	0.303			566	4	
5			10	/						9.680	2.575	28.721	31.840	0.249			567	5	
6			0	/						-0.141	2.576	28.496	31.569	0.172			568	6	
7																		7	
8																		8	
9																		9	
10																		10	
11																		11	
12																		12	

Initials AD  
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Consec. Cast # <b>060</b>		Vessel MILLER FREEMAN		Proj. & Leg MF-94-04		Event # <b>281</b>		Vessel Sta. I.D.		Instructions										Sta. Designation														
Consec. Cast #		Latitude N or S Deg. Min.			Longitude E or W Deg.			Date JD = 116 Day Mo. Yr.			Time GMT Hr. Min.		Dry Bulb		Wet Bulb		Bar. mb 1001.9		SS.		Vis.		Wind Dir.		Wind Sp.		Cloud Type		Weath.		Bottom Depth, m		Sta. Name or I.D.	
060		5 4 40 7 5 N			1 6 5 2 3 7 6 W			2 6 APR 9 4			2 2 1 8		2 4		1 8		0 2		3 7 0		3 0		1 6		8 6 2		1 7 6		1 3 0 0 2					
CTD Type & SN <u>91220-A</u> Press. SN <u>26072</u> Temp. SN <u>701</u> Cond. SN <u>303</u> <u>Fluor. umult = 1.0</u>					<b>Monitor Checks</b> on Deck at Surface Press. _____ Temp. _____ Cond. _____ Other _____					<b>Times JD/Time</b> Data on _____ at Surface _____ Start Down _____ at Bottom _____ Start Up _____ at Surface _____ Data off _____					<b>Data Location</b> Tape/Diskette I.D. _____ File Name/Header <u>CAST 060 - 26 Apr 2205</u> Remarks <u>Fluorometer setting changed from 0.33 to 1.00</u>																			
Sts.	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				Fluor Sample Bot. Data			Sal. Bot. #	Other Samp.	Sts.															
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.																		
1		A	10	22:26								10.214	3.259	29.213	31.759	1.485		09		1														
2			10									10.157	3.264	29.212	31.754	1.738				2														
3			10									9.984	3.264	29.215	31.757	1.352				3														
4			10									10.164	3.264	29.214	31.756	1.353				4														
5			10									9.961	3.261	29.218	31.764	1.539				5														
6			10									9.965	3.258	29.219	31.768	1.492				6														
7			10									10.170	3.258	29.220	31.769	1.459				7														
8			10									10.207	3.258	29.221	31.769	1.427				8														
9			10									10.156	3.259	29.223	31.771	1.374				9														
10																				10														
11																				11														
12																				12														

Initials \_\_\_\_\_  
✓ \_\_\_\_\_

274.05

Consec. Cast #		Vessel		Proj. & Leg		Event #		Vessel Sta. I.D.		Instructions										Sta. Designation																
Consec. Cast #		Latitude			Longitude			Date JD =			Time GMT		Dry Bulb		Wet Bulb		Bar. mb		S.S.		Vis.		Wind Dir.		Wind Sp.		Cloud Type		Weath.		Bottom Depth, m		Sta. Name or I.D.			
		Deg.	Min.	N or S	Deg.	E or W	Day	Mo.	Yr.	Hr.	Min.																									
061		5	4	40	20	N	16	5	24	61	W	26	A	P	R	94	23	04		2	5		1	9	0	2	3	7	0	3	0	1	8	2	183	13003
CTD Type & SN 91220-A					Monitor Checks										Times JD/Time					Data Location																
Press. SN 26072					on Deck										at Surface					Data on					Tape/Diskette I.D.					File Name/Header						
Temp. SN 701					Press. _____										Temp. _____					Start Down _____					_____					CAST 061 - 26 Apr 2259						
Cond. SN 303					Temp. _____										at Bottom _____					_____					_____					_____						
Fluor. mult = 1.0					Cond. _____										Start Up _____					_____					_____					_____						
					Other _____										at Surface _____					_____					_____					_____						
															Data off _____					_____					_____					_____						
																				Remarks																

Pos.	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				Sample Bot. Data			Sal. Bot. #	Other Samp.	Pos.
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.			
1			100															1	
2			20															2	
3			20															3	
4			20															4	
5			20															5	
6			20															6	
7			20															7	
8			20															8	
9			20															9	
10																		10	
11																		11	
12																		12	

Initials \_\_\_\_\_  
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Consec. Cast # <b>062</b>		Vessel MILLER FREEMAN		Proj. & Leg MF-94-04		Event #		Vessel Sta. I.D.		Instructions										Sta. Designation												
Consec. Cast #		Latitude N or S Deg. Min.			Longitude E or W Deg.			Date JD = 117 Day Mo. Yr.			Time GMT Hr. Min.		Dry Bulb		Wet Bulb		Bar. mb 101.5		S.S.	Vis.	Wind Dir.		Wind Sp.		Cloud Type		Weath.		170 Bottom Depth, m		Sta. Name or I.D.	
062		544014N			1652373W			27 APR 94			0032		23		15		0237		0	7	0251		88		62		170		13102			
CTD Type & SN <u>91220-A</u> Press. SN <u>26072</u> Temp. SN <u>701</u> Cond. SN <u>303</u> <u>Fluor vmult = 1.0</u>						<b>Monitor Checks</b> on Deck                      at Surface Press. _____ Temp. _____ Cond. _____ Other _____						<b>Times</b> JD/Time Data on _____ at Surface _____ Start Down _____ at Bottom _____ Start Up _____ at Surface _____ Data off _____						<b>Data Location</b> Tape/Diskette I.D. _____ File Name/Header <u>CAST 062-27Apr0025</u> _____ _____ _____ Remarks <u>max depth 163</u>														
Pos.		Bot.	T Rack	Trip Depth	Time @ Depth Trip		Monitor Values Press. Temp. Cond. Other				Conv. Mon. Values-CTD Press. Temp. Cond. Sal.				Fluor Sample Bot. Data Therm-P Avg Tw Sal.			Sal. Bot. #	Other Samp.	Pos.												
1				150							149.725	3.702	30.805	33.148	0.094			16		1												
2				30							30.519	3.365	29.442	31.919	1.115					2												
3				30							30.305	3.364	29.440	31.918	1.194					3												
4				30							30.170	3.361	29.436	31.916	1.405					4												
5				30							30.106	3.362	29.438	31.917	1.137					5												
6				30							30.258	3.362	29.439	31.919	1.137					6												
7				30							30.626	3.367	29.445	31.921	1.193					7												
8				30							30.854	3.368	29.449	31.924	1.129					8												
9				30							30.855	3.369	29.449	31.924	1.195					9												
10																				10												
11																				11												
12																				12												

Initials \_\_\_\_\_  
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Consec. Cast # <b>063</b>				Vessel MILLER FREEMAN				Proj. & Leg MF-94-04				Event #		Vessel Sta. I.D.				Instructions										Sta. Designation					
Consec. Cast #		Latitude Deg. Min. N or S			Longitude Deg. E or W			Date JD = 117 Day Mo. Yr.			Time GMT Hr. Min.		Dry Bulb		Wet Bulb		Bar. mb 1001.0		S.S.	Vis.	Wind Dir.		Wind Sp.		Cloud	Type	Weath.	Bottom Depth, m		Sta. Name or I.D.			
063		5439 47 N			16523 92 W			27 APR 94			0104 01		9013		0137		0201		28	62							156		13103				
CTD Type & SN 91220-A					<b>Monitor Checks</b> on Deck _____ at Surface _____ Press. _____ Temp. _____ Cond. _____ Other _____					<b>Times JD/Time</b> Data on _____ at Surface _____ Start Down _____ at Bottom _____ Start Up _____ at Surface _____ Data off _____					<b>Data Location</b> Tape/Diskette I.D. _____ File Name/Header _____ CAST 063-27Apr 0657																		
Press. SN 26072 Temp. SN 701 Cond. SN 303 Floor v mult = 1.0															Remarks 153 max depth bottle #9 broke and fell off rosette																		

Stn	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				Flur Sample Bot. Data			Sal. Bot. #	Other Samp.	Pos
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.			
1		A	125	01:06						126.512	3.684	30.427	32.728	0.252			23		1
2			40							39.994	3.501	29.766	32.167	0.573					2
3			40							39.601	3.499	29.763	32.166	0.711					3
4			40							40.386	3.503	29.771	32.171	0.669					4
5			40							40.876	3.507	29.778	32.174	0.580					5
6			40							40.773	3.508	29.777	32.173	0.622					6
7			40							41.005	3.507	29.776	32.173	0.510					7
8			40							40.850	3.506	29.776	32.173	0.579					8
9			40							41.105	3.506	29.775	32.173	0.522					9
10																			10
11																			11
12																			12

Initials \_\_\_\_\_  
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Consec. Cast # <b>664</b>		Vessel MILLER FREEMAN		Proj. & Leg MF-94-04		Event # <b>892</b>		Vessel Sta. I.D.		Instructions										Sta. Designation			
Consec. Cast #	Latitude		N or S	Longitude		E or W	Date JD = <b>117</b>			Time GMT		Dry Bulb	Wet Bulb	Bar. mb <b>1001.0</b>	S.S.	Vis.	Wind Dir.	Wind Sp.	Cloud	Type	Weath.	Bottom Depth, m <b>216</b>	Sta. Name or I.D.
	Deg.	Min.		Deg.	Day		Mo.	Yr.	Hr.	Min.													
<b>664</b>	<b>54</b>	<b>41</b>	<b>77</b>	<b>N</b>	<b>165</b>	<b>25</b>	<b>40</b>	<b>W</b>	<b>27</b>	<b>APR</b>	<b>94</b>	<b>02</b>	<b>55</b>	<b>22</b>	<b>11</b>	<b>01</b>	<b>27</b>	<b>01</b>	<b>51</b>	<b>88</b>	<b>62</b>	<b>207</b>	<b>13202</b>
CTD Type & SN <b>91220-A</b>				Monitor Checks				Times JD/Time				Data Location											
Press. SN <b>26072</b>				on Deck				at Surface				Data on				Tape/Diskette I.D.				File Name/Header			
Temp. SN <b>701</b>				Press. _____				_____				at Surface _____				_____				_____			
Cond. SN <b>303</b>				Temp. _____				_____				Start Down _____				_____				_____			
<b>Fluor v mult = 1.0</b>				Cond. _____				_____				at Bottom _____				_____				_____			
_____				Other _____				_____				Start Up _____				_____				Remarks			
_____				_____				_____				at Surface _____				_____				_____			
_____				_____				_____				Data off _____				_____				_____			

Pos.	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				Sample Bot. Data			Sal. Bot. #	Other Samp.	Pos.
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.			
1			100							202.994	3.781	31.054	33.334	0.111			33	1	
2			70							70.414	3.636	30.180	32.510	0.260				2	
3			50							50.922	3.549	29.872	32.241	0.521				3	
4			40							40.657	3.489	29.707	32.108	0.590				4	
5			30							30.569	3.451	29.608	32.033	0.774				5	
6			20							20.467	3.395	29.503	31.968	1.130				6	
7			10							10.846	3.439	29.498	31.923	1.300				7	
8			0							0.927	3.449	29.499	31.919	1.269				8	
9																		9	
10																		10	
11																		11	
12																		12	

Initials \_\_\_\_\_  
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Consec. Cast # <b>065</b>				Vessel MILLER FREEMAN				Proj. & Leg MF-94-04				Event # <b>893</b>		Vessel Sta. I.D.				Instructions										Sta. Designation								
Consec. Cast #		Latitude Deg. Min. S			N or S	Longitude Deg. E or W			Date JD = 117 Day Mo. Yr.			Time GMT Hr. Min.		Dry Bulb		Wet Bulb		Bar. mb 1601.3		S.S.	Vis.	Wind Dir.		Wind Sp.		Cloud	Type	Weath.	Bottom Depth, m 209		Sta. Name or I.D.					
065		5441			N	16525			52W			27 APR 94			0335		36		25		01		37	06	01		8	8	6	2	216		13243			
CTD Type & SN 91220-A					<b>Monitor Checks</b> on Deck at Surface Press. _____ Temp. _____ Cond. _____ Other _____										<b>Times JD/Time</b> Data on _____ at Surface _____ Start Down _____ at Bottom _____ Start Up _____ at Surface _____ Data off _____					<b>Data Location</b> Tape/Diskette I.D. _____ File Name/Header CAST 065-27Apr 0327 _____ _____ _____																
Press. SN 26072																														_____ _____ _____						
Temp. SN 701															Remarks																					
Cond. SN 303																																				
Fluor v mult = 1.0																																				

Stn	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				Sample Bot. Data			Sal. Bot. #	Other Samp.	Pos
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.			
1		A	3:36:35							173.957	3.778	31.025	33.319	0.089			18		1
2			50							49.728	3.557	29.950	32.327	0.413					2
3			56							49.887	3.557	29.950	32.326	0.451					3
4			50							49.841	3.555	29.950	32.328	0.518					4
5			50							49.951	3.556	29.950	32.327	0.443					5
6			50							50.161	3.556	29.950	32.328	0.469					6
7			50							49.882	3.556	29.950	32.327	0.408					7
8			50							50.104	3.557	29.950	32.327	0.372					8
9			50							50.023	3.556	29.950	32.327	0.486					9
10																			10
11																			11
12																			12

Initials \_\_\_\_\_  
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Consec. Cast #		Vessel		Proj. & Leg		Event #		Vessel Sta. I.D.		Instructions										Sta. Designation						
Consec. Cast #		Latitude		Longitude		Date			Time		Dry Bulb		Wet Bulb		Bar.		Wind		Wind		Cloud		Bottom		Sta. Name	
Cast #		Deg. Min.		Deg. Min.		Day Mo. Yr.			Hr. Min.		Bulb		Bulb		mb		Dir.		Sp.		Type		Depth, m		or I.D.	
066		544088N		1652541W		27 APR 94			0417		36		25		01		37000		18862		241		13244			
CTD Type & SN 91220-A				Monitor Checks				Times				Data Location														
Press. SN 26072				on Deck at Surface				Data on				Tape/Diskette I.D.				File Name/Header										
Temp. SN 701				Press. _____				at Surface _____				Start Down _____				CAST 066-27A-0409										
Cond. SN 303				Temp. _____				at Bottom _____				Start Up _____				Remarks										
Fluor v mult = 1.0				Cond. _____				at Surface _____				Data off _____														
Other _____																										

Stn. #	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				Sample Bot. Data			Sal. Bot. #	Other Samp.	Pos.
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.			
1										203.947	3.757	30.994	33.288	0.161			1		
2			70							69.576	3.619	30.122	32.459	0.298			2		
3			70							69.639	3.620	30.123	32.460	0.298			3		
4			70							69.411	3.623	30.130	32.466	0.316			4		
5			70							69.369	3.623	30.132	32.468	0.289			5		
6			70							69.266	3.622	30.128	32.464	0.318			6		
7			70							69.386	3.621	30.128	32.465	0.289			7		
8			70							69.484	3.622	30.131	32.467	0.289			8		
9			70							69.315	3.622	30.130	32.465	0.374			9		
10																	10		
11																	11		
12																	12		

Initials \_\_\_\_\_  
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Consec. Cast # <b>067</b>		Vessel MILLER FREEMAN		Proj. & Leg MF-94-04		Event # <b>895</b>		Vessel Sta. I.D.		Instructions										Sta. Designation																	
Consec. Cast #		Latitude Deg. Min.		N or S		Longitude Deg.		E or W		Date JD = <b>117</b> Day Mo. Yr.			Time GMT Hr. Min.		Dry Bulb		Wet Bulb		Bar. mb <b>1011.5</b>		S.S.		Vis.		Wind Dir.		Wind Sp.		Cloud Type		Weath.		Bottom Depth, m <b>190</b>		Sta. Name or I.D. <b>✓</b>		
<b>067</b>		<b>5440</b>		<b>14</b>		<b>N</b>		<b>1652545</b>		<b>W</b>		<b>27 APR 94</b>			<b>20456</b>		<b>26</b>		<b>65</b>		<b>1247</b>		<b>000</b>		<b>18862</b>		<b>190</b>		<b>13205</b>								
CTD Type & SN <b>91220-A</b>				Press. SN <b>26072</b>				Temp. SN <b>701</b>				Cond. SN <b>303</b>				Fluor v mult = <b>1.0</b>				<b>Monitor Checks</b> on Deck _____ at Surface _____ Press. _____ Temp. _____ Cond. _____ Other _____				<b>Times JD/Time</b> Data on _____ at Surface _____ Start Down _____ at Bottom _____ Start Up _____ at Surface _____ Data off _____				<b>Data Location</b> Tape/Diskette I.D. _____ File Name/Header _____ _____ CAST <b>067 - 27 Apr 94 47</b> _____ Remarks <b>186 max</b>									
Pos.		Bot.		T Rack		Trip Depth		Time @ Depth Trip		Monitor Values Press. Temp. Cond. Other				Conv. Mon. Values-CTD Press. Temp. Cond. Sal.				Sample Bot. Data Therm-P Avg Tw Sal.				Sal. Bot. #		Other Samp.		Pos.											
<b>1</b>				<b>A</b>		<b>95</b>		<b>5:49:31</b>						<b>95.200 3.723 30.515 32.810</b>				<b>0.156</b>				<b>4</b>				<b>1</b>											
<b>2</b>						<b>70</b>								<b>71.638 3.632 30.163 32.494</b>				<b>0.321</b>						<b>569</b>		<b>2</b>											
<b>3</b>						<b>50</b>								<b>49.628 3.549 29.909 32.285</b>				<b>0.438</b>						<b>570</b>		<b>3</b>											
<b>4</b>						<b>40</b>								<b>40.540 3.483 29.723 32.134</b>				<b>0.737</b>						<b>571(?)</b>		<b>4</b>											
<b>5</b>						<b>30</b>								<b>30.045 3.445 29.622 32.056</b>				<b>1.046</b>								<b>5</b>											
<b>6</b>						<b>20</b>								<b>20.452 3.257 29.184 31.721</b>				<b>1.831</b>						<b>572</b>		<b>6</b>											
<b>7</b>						<b>10</b>								<b>10.461 3.278 29.121 31.630</b>				<b>1.972</b>						<b>573</b>		<b>7</b>											
<b>8</b>						<b>0</b>								<b>-0.040 3.285 29.103 31.607</b>				<b>1.583</b>						<b>574</b>		<b>8</b>											
<b>9</b>																										<b>9</b>											
<b>10</b>																										<b>10</b>											
<b>11</b>																										<b>11</b>											
<b>12</b>																										<b>12</b>											


Initials \_\_\_\_\_  
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Consec. Cast # 068		Vessel MILLER FREEMAN		Proj. & Leg MF-94-04		Event # 941		Vessel Sta. I.D.		Instructions										Sta. Designation					
Consec. Cast #	Latitude			N or S	Longitude			E or W	Date JD = 117			Time GMT		Dry Bulb	Wet Bulb	Bar. mb 1003.5	S.S.	Vis.	Wind Dir.	Wind Sp.	Cloud	Type	Weath.	Bottom Depth, m	Sta. Name or I.D.
	Deg.	Min.	S		Deg.	Day	Mo.		Yr.	Hr.	Min.														
068	54	52	76	N	165	02	96	W	27	APR	94	17	35	-	01	-	06	04	37	355	128	62		91	13807

CTD Type & SN 91220-A Press. SN 26072 Temp. SN 701 Cond. SN 303 Fluor v mult = 1.6	Monitor Checks				Times JD/Time				Data Location			
	on Deck		at Surface		Data on _____				Tape/Diskette I.D.		File Name/Header	
	Press. _____		_____		at Surface _____				_____		CAST 068-27APR 1730	
	Temp. _____		_____		Start Down _____				_____		_____	
	Cond. _____		_____		at Bottom _____				_____		_____	
Other _____		_____		Start Up _____				_____		Remarks		
				at Surface _____				_____				
				Data off _____				_____				

Pos.	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				FLUOR Sample Bot. Data			Sal. Bot. #	Other Samp.	Pos.
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.			
1			60							54.679	3.535	29.752	32.106	0.342				Chl	1
2			45							44.364	3.369	29.509	31.985	0.842				Chl	2
3			30							29.545	3.213	29.238	31.826	1.810				Chl	3
4			20							20.834	3.215	29.229	31.816	1.718				Chl	4
5			10							9.938	3.215	29.222	31.814	1.805			25	Chl	5
6			0							-0.146	3.223	29.225	31.815	1.853				Chl	6
7																			7
8																			8
9																			9
10																			10
11																			11
12																			12

4269  
9015

Initials   
✓

Consec. Cast # <b>069</b>		Vessel MILLER FREEMAN		Proj. & Leg MF-94-04		Event # 949		Vessel Sta. I.D.		Instructions										Sta. Designation																																		
Consec. Cast #	Latitude			N or S	Longitude			E or W	Date JD = 117			Time GMT		Dry Bulb	Wet Bulb	Bar. mb 1004.5	S.S.	Vis.	Wind Dir.	Wind Sp.	Cloud	Type	Weath.	Bottom Depth, m	Sta. Name or I.D.																													
	Deg.	Min.	S		Deg.		Day		Mo.	Yr.	Hr.	Min.																																										
6	6	9	5	4	4	6	1	8	N	1	6	5	4	8	1	W	2	7	A	P	R	9	4	2	0	1	6	-	0	1	-	0	6	0	5	2	7	3	4	0	/	0	8	4	2			7	1	1	3	9	4	7
CTD Type & SN 91220-A					Monitor Checks										Times JD/Time					Data Location																																		
Press. SN 26072					on Deck					at Surface					Data on _____					Tape/Diskette I.D.					File Name/Header																													
Temp. SN 701					Press. _____					_____					at Surface _____					_____					CAST 069-27 Apr 2012																													
Cond. SN 303					Temp. _____					_____					at Bottom _____					_____					_____																													
Fluor v mult = 1.6					Cond. _____					_____					Start Up _____					_____					Remarks																													
_____					Other _____					_____					at Surface _____					_____					_____																													
_____					_____					_____					Data off _____					_____					_____																													

Pos.	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				Sample Bot. Data			Sal. Bot. #	Other Samp.	Pos.
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.			
1			60									61.239	3.355	29.481	31.959	0.445		Chl	1
2			45									44.933	3.347	29.462	31.953	0.463		Chl	2
3			30									30.181	3.267	29.326	31.877	0.467		Chl	3
4			20									20.139	3.230	29.268	31.894	0.512		Chl	4
5			10									10.269	3.229	29.262	31.847	0.504		Chl	5
6		A	0	20:21	07							0.980	3.254	29.279	31.849	0.447		Chl	6
7																			7
8																			8
9																			9
10																			10
11																			11
12																			12

Initials \_\_\_\_\_  
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Consec. Cast # <b>474</b>		Vessel MILLER FREEMAN		Proj. & Leg MF-94-04		Event #		Vessel Sta. I.D.		Instructions										Sta. Designation																												
Consec. Cast #	Latitude Deg. Min.		N or S	Longitude Deg. Min.		E or W	Date JD = Day Mo. Yr.			Time GMT Hr. Min.		Dry Bulb	Wet Bulb	Bar. mb 1049	S.S.	Vis.	Wind Dir.	Wind Sp.	Cloud	Type	Weath.	Bottom Depth, m	Sta. Name or I.D.																									
474	5	44	0	3	6	N	1	6	4	5	5	2	8	W	2	7	A	P	R	9	4	2	3	4	1	0	0	-	6	7	0	5	2	7	3	3	0	0	7	8	6	2	6	1	1	4	4	7

CTD Type & SN 91220-A		Monitor Checks				Times JD/Time				Data Location			
Press. SN 26072		on Deck		at Surface		Data on				Tape/Diskette I.D.		File Name/Header	
Temp. SN 701		Press. _____		_____		at Surface		_____		_____		CAST 070 - 27 Apr 2006	
Cond. SN 303		Temp. _____		_____		Start Down		_____		_____		_____	
Fluor v mult = 1.6		Cond. _____		_____		at Bottom		_____		_____		_____	
		Other _____		_____		Start Up		_____		Remarks			
						at Surface		_____					
						Data off		_____					

Pos.	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				Sample Bot. Data			Sal. Bot. #	Other Samp.	Pos
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.			
1			60							41.286	3.269	29.237	31.811	0.649				che	1
2			45							44.796	3.206	29.226	31.849	0.598				che	2
3			30							29.639	3.207	29.218	31.846	0.630				che	3
4			20							19.243	3.204	29.210	31.806	0.632				che	4
5			10							9.607	3.215	29.216	31.807	0.564			30	che	5
6			0							0.171	3.236	29.229	31.847	0.377				che	6
7																			7
8																			8
9																			9
10																			10
11																			11
12																			12

Initials \_\_\_\_\_  
✓ \_\_\_\_\_

Consec. Cast # <b>071</b>		Vessel MILLER FREEMAN		Proj. & Leg MF-94-04		Event # <b>967</b>		Vessel Sta. I.D.		Instructions										Sta. Designation				
Consec. Cast #	Latitude Deg. Min.		N or S	Longitude Deg.		E or W	Date JD = <b>118</b> Day Mo. Yr.			Time GMT Hr. Min.		Dry Bulb	Wet Bulb	Bar. mb <b>1008.5</b>	S.S.	Vis.	Wind Dir.	Wind Sp.	Cloud	Type	Weath.	Bottom Depth, m	Sta. Name or I.D.	
<b>071</b>	<b>15</b>	<b>43</b>	<b>21</b>	<b>9</b>	<b>N</b>	<b>165</b>	<b>24</b>	<b>84</b>	<b>W</b>	<b>28</b>	<b>APR</b>	<b>94</b>	<b>02</b>	<b>06</b>	<b>05</b>	<b>-05</b>	<b>05</b>	<b>27</b>	<b>31</b>	<b>01</b>	<b>28</b>	<b>62</b>	<b>85</b>	<b>14107</b>

CTD Type & SN <b>91220-A</b>		Monitor Checks		Times JD/Time		Data Location	
Press. SN <b>26072</b>		on Deck at Surface		Data on _____		Tape/Diskette I.D. File Name/Header	
Temp. SN <b>701</b>		Press. _____		at Surface _____		_____ CAST <b>071-28 Apr 94</b>	
Cond. SN <b>303</b>		Temp. _____		Start Down _____		_____	
Fluor v mult = <b>1.0</b>		Cond. _____		at Bottom _____		_____	
		Other _____		Start Up _____		Remarks <b>29 max depth</b>	
				Data off _____			

Stn No.	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				Sample Bot. Data			Sal.	Other Samp.	Stn No.
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.	Bot. #		
1		A	75	62'07" 30						75.096	3.586	29.994	32.336	0.570			11	572	1
2			60							59.941	3.396	29.506	31.950	0.873					2
3			45							44.795	3.329	29.345	31.830	1.187					3
4			30							30.036	3.297	29.260	31.769	1.400					4
5			20							20.186	3.178	29.003	31.581	2.040					5
6			10							10.240	3.169	28.891	31.460	1.746					6
7			0							0.524	3.173	28.890	31.460	0.961				575	7
8																			8
9																			9
10																			10
11																			11
12																			12

Initials \_\_\_\_\_  
✓ \_\_\_\_\_

Consec. Cast # <b>072</b>		Vessel MILLER FREEMAN		Proj. & Leg MF-94-04		Event #		Vessel Sta. I.D.		Instructions										Sta. Designation												
Consec. Cast #		Latitude N or S Deg. Min.			Longitude E or W Deg.			Date JD = <b>118</b> Day Mo. Yr.			Time GMT Hr. Min.		Dry Bulb		Wet Bulb		Bar. mb 1604.5		S.S. Vis.		Wind Dir.		Wind Sp.		Cloud Type		Weath.		Bottom Depth, m 180		Sta. Name or I.D.	
072		543792N			1652942W			20 APR 94			0608		08		-03		054731008862								19014207							
CTD Type & SN <u>91220-A</u> Press. SN <u>26072</u> Temp. SN <u>701</u> Cond. SN <u>303</u> <u>Floor - mult. = 1.0</u>						<b>Monitor Checks</b> on Deck                      at Surface Press. _____ Temp. _____ Cond. _____ Other _____						<b>Times</b> JD/Time Data on _____ at Surface _____ Start Down _____ at Bottom _____ Start Up _____ at Surface _____ Data off _____						<b>Data Location</b> Tape/Diskette I.D. _____ File Name/Header <u>CAST 072-28 Apr 94</u> Remarks <u>max depth 185</u>														
Pos.		Bot.		T Rack		Trip Depth		Time @ Depth Trip		Monitor Values Press. Temp. Cond. Other				Conv. Mon. Values-CTD Press. Temp. Cond. Sal.				Sample Bot. Data Therm-P Avg Tw Sal.			Sal. Bot. #		Other Samp.		Pos.							
1						185								185.618 3.308 30.860 33.188				0.424			2		706		1							
2						60								60.764 3.543 29.830 32.192				0.884			Chl				2							
3						45								44.462 3.410 29.499 31.936				1.312			Chl				3							
4						30								29.511 3.332 29.329 31.817				1.269			Chl				4							
5						20								19.364 3.304 29.265 31.773				1.440			Chl				5							
6						10								10.826 3.279 29.207 31.733				1.440			Chl				6							
7						0								-0.337 3.224 28.776 31.515				1.789			Chl		705		7							
8																									8							
9																									9							
10																									10							
11																									11							
12																									12							

Initials \_\_\_\_\_  
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Consec. Cast # <b>073</b>		Vessel MILLER FREEMAN		Proj. & Leg MF-94-04		Event # <b>982</b>		Vessel Sta. I.D.		Instructions										Sta. Designation									
Consec. Cast #	Latitude Deg. Min.		N or S	Longitude Deg.		E or W	Date JD = Day Mo. Yr.			Time GMT Hr. Min.		Dry Bulb	Wet Bulb	Bar. mb 1605.0	SS	Vis.	Wind Dir.	Wind Sp.	Cloud	Type	Weath.	Bottom Depth. m	Sta. Name or I.D.						
<b>073</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>5</b>	<b>1</b>	<b>N</b>	<b>165</b>	<b>33</b>	<b>85</b>	<b>W</b>	<b>28</b>	<b>A</b>	<b>P</b>	<b>R</b>	<b>94</b>	<b>09</b>	<b>40</b>		<b>05</b>		<b>00</b>	<b>05</b>	<b>37</b>	<b>325</b>		<b>686</b>	<b>2</b>	<b>250</b>	<b>14307</b>

CTD Type & SN <u>91220-A</u>		Monitor Checks				Times JD/Time		Data Location			
Press. SN <u>26072</u>		on Deck		at Surface		Data on _____		Tape/Diskette I.D.		File Name/Header	
Temp. SN <u>701</u>		Press. _____		_____		at Surface _____		_____		<u>CAST073-28APR0930</u>	
Cond. SN <u>303</u>		Temp. _____		_____		Start Down _____		_____		_____	
_____		Cond. _____		_____		at Bottom _____		_____		_____	
_____		Other _____		_____		Start Up _____		_____		Remarks <u>LIGHTMETER, FLUOROMETER, CHLAM</u>	
_____		_____		_____		at Surface _____		_____		<u>NOT</u>	
_____		_____		_____		Data off _____		_____		_____	

Pos.	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				FLUOR Sample Bot. Data			Sal. Bot. #	Other Samp.	Pos.
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-B	Avg Tw	Sal.			
1			240	41						236.776	3.794	31.123	33.386	0.121			32	707	1
2			60							60.823	3.428	29.733	32.190	0.628					2
3			45							45.776	3.427	29.703	32.162	0.938					3
4			30							30.893	3.428	29.680	32.141	1.149					4
5			20							20.711	3.434	29.650	32.106	1.449					5
6			10							10.941	3.481	29.627	32.037	1.953					6
7			0							0.930	3.489	29.573	31.969	1.440				708	7
8																			8
9																			9
10																			10
11																			11
12																			12

Initials (Signature)

w/o 253 CHI

Consec. Cast # <b>074</b>		Vessel MILLER FREEMAN		Proj. & Leg MF-94-04		Event # 992		Vessel Sta. I.D.		Instructions				Sta. Designation																																			
Consec. Cast #	Latitude Deg. Min.		N or S	Longitude Deg. Min.		E or W	Date JD = Day Mo. Yr.		Time GMT Hr. Min.		Dry Bulb	Wet Bulb	Bar. mb 1003.5	SS	Vis.	Wind Dir.	Wind Sp.	Cloud	Type	Weath.	Bottom Depth, m	Sta. Name or I.D.																											
<b>074</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>N</b>	<b>1</b>	<b>4</b>	<b>5</b>	<b>9</b>	<b>6</b>	<b>3</b>	<b>W</b>	<b>2</b>	<b>8</b>	<b>A</b>	<b>P</b>	<b>R</b>	<b>9</b>	<b>4</b>	<b>1</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>0</b>	<b>2</b>	<b>-</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>4</b>	<b>1</b>	<b>3</b>	<b>2</b>	<b>6</b>	<b>0</b>	<b>6</b>	<b>8</b>	<b>6</b>	<b>7</b>	<b>4</b>	<b>8</b>	<b>5</b>	<b>1</b>	<b>4</b>	<b>4</b>	<b>0</b>	<b>7</b>

CTD Type & SN 91220-A		Monitor Checks				Times JD/Time		Data Location			
Press. SN 26072		on Deck		at Surface		Data on _____		Tape/Diskette I.D.		File Name/Header	
Temp. SN 701		Press. _____		_____		at Surface _____		_____		CAST <b>074_28APR429</b>	
Cond. SN 303		Temp. _____		_____		Start Down _____		_____		_____	
_____		Cond. _____		_____		at Bottom _____		_____		_____	
_____		Other _____		_____		Start Up _____		Remarks <b>LIGHTMETER, FLUOROMETER, CHLam</b>		_____	
_____		_____		_____		at Surface _____		_____		_____	
_____		_____		_____		Data off _____		_____		_____	

Pos.	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				FLUOR Sample Bot. Data			Sal. Bot. #	Other Samp.	Pos.
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.			
1			B+10							477.369	3.532	31.490	33.967	0.234			19	709	1
2			60							61.712	3.603	30.095	32.446	0.361					2
3			45							45.361	3.590	30.072	32.442	0.377					3
4			30							30.378	3.497	29.927	32.369	0.418					4
5			20							20.483	3.401	29.804	32.323	0.452					5
6			10							10.381	3.409	29.796	32.310	0.470					6
7			0							0.632	3.363	29.720	32.271	0.514				710	7
8																			8
9																			9
10																			10
11																			11
12																			12

CHLam exceeded max depth!  
But values on log file look reasonable.

Initials MD  
✓

w/0478  
chl,  
↓

Consec. Cast # <b>475</b>		Vessel MILLER FREEMAN		Proj. & Leg MF-94-04		Event # 1002		Vessel Sta. I.D.		Instructions										Sta. Designation												
Consec. Cast #		Latitude N or S			Longitude E or W			Date JD = <b>118</b> Day Mo. Yr.			Time GMT Hr. Min.		Dry Bulb		Wet Bulb		Bar. mb 1004.6		SS Vis.		Wind Dir.		Wind Sp.		Cloud Type		Weath.		Bottom Depth, m		Sta. Name or I.D.	
<b>075</b>		<b>54 21 00 N</b>			<b>165 50 11 W</b>			<b>28 APR 94</b>			<b>18 22</b>		<b>08</b>		<b>02</b>		<b>04</b>		<b>16</b>		<b>260</b>		<b>8867</b>		<b>148</b>		<b>145 67</b>					

CTD Type & SN <u>91220-A</u>		Monitor Checks				Times JD/Time		Data Location			
Press. SN <u>26072</u>		on Deck		at Surface		Data on _____		Tape/Diskette I.D.		File Name/Header	
Temp. SN <u>701</u>		Press. _____		_____		at Surface _____		_____		CAST <b>075-28APR1815</b>	
Cond. SN <u>303</u>		Temp. _____		_____		Start Down _____		_____		_____	
_____		Cond. _____		_____		at Bottom _____		_____		_____	
_____		Other _____		_____		Start Up _____		_____		Remarks	
_____		_____		_____		at Surface _____		_____		_____	
_____		_____		_____		Data off _____		_____		_____	

Pos.	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				Fluor. Sample Bot. Data			Sal. Bot. #	Other Samp.	Pos.
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.			
1		A	B+10	22						141.572	3.731	30.737	33.042	0.169				08	1
2			60							60.230	3.601	30.031	32.374	0.206					2
3			45							45.579	3.486	29.761	32.173	0.388					3
4			30							30.205	3.208	29.334	31.945	0.428					4
5			20							20.366	3.121	29.209	31.885	0.445					5
6			10							10.571	3.118	29.201	31.884	0.587					6
7			0							0.082	3.132	29.208	31.883	0.573					7
8																			8
9																			9
10																			10
11																			11
12																			12

Initials (Signature)  
✓

W/O  
143



Consec. Cast # <b>077</b>		Vessel MILLER FREEMAN		Proj. & Leg MF-94-04		Event # 1020		Vessel Sta. I.D.		Instructions										Sta. Designation												
Consec. Cast #		Latitude N or S Deg. Min.			Longitude E or W Deg.			Date JD = Day Mo. Yr.			Time GMT Hr. Min.		Dry Bulb		Wet Bulb		Bar. mb 1009.5		SS Vis.		Wind Dir.		Wind Sp.		Cloud Type		Weath.		Bottom Depth, m 82		Sta. Name or I.D.	
077		5 4 0 6 0 3 N			1 6 6 1 4 5 2 W			2 8 APR 9 4			2 3 5 4		0 8		0 2		0 4		1 5		3 4 0		4 8 6 7		8 2		1 4 7 0 7					
CTD Type & SN 91220-A Press. SN 26072 Temp. SN 701 Cond. SN 303						Monitor Checks on Deck at Surface Press. _____ Temp. _____ Cond. _____ Other _____						Times JD/Time Data on _____ at Surface _____ Start Down _____ at Bottom _____ Start Up _____ at Surface _____ Data off _____						Data Location Tape/Diskette I.D. _____ File Name/Header CAST <b>077 - 28 Apr 2350</b> Remarks NUTS														
Stn. No.	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				Flow Sample Bot. Data			Sal. Bot. #	Other Samp.	Pos.													
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.																
1			80														14	716	1													
2			60																2													
3			45																3													
4			30																4													
5			20																5													
6			10																6													
7			0															715	7													
8																			8													
9																			9													
10																			10													
11																			11													
12																			12													

Initials \_\_\_\_\_  
✓ \_\_\_\_\_

Consec. Cast # <b>078</b>		Vessel MILLER FREEMAN		Proj. & Leg MF-94-04		Event # 1028		Vessel Sta. I.D.		Instructions										Sta. Designation			
Consec. Cast #	Latitude		N or S	Longitude		E or W	Date JD =			Time GMT		Dry Bulb	Wet Bulb	Bar. mb 103.0	S.S.	Vis.	Wind Dir.	Wind Sp.	Cloud	Type	Weath.	Bottom Depth, m	Sta. Name or I.D.
	Deg.	Min.		Deg.	Day		Mo.	Yr.	Hr.	Min.													
078	54	10	N	166	17	W	29	APR	94	02	56	14	08	03	15		000	000	08	67	174	14808	

CTD Type & SN 91220-A Press. SN 26072 Temp. SN 701 Cond. SN 303	Monitor Checks		Times JD/Time		Data Location			
	on Deck		at Surface		Tape/Diskette I.D.		File Name/Header	
	Press. _____		_____		Data on _____		_____	
	Temp. _____		_____		at Surface _____		_____	
	Cond. _____		_____		Start Down _____		_____	
Other _____		_____		at Bottom _____		_____		
		_____		Start Up _____		_____		
		_____		at Surface _____		_____		
		_____		Data off _____		_____		
						Remarks 172 max depth		

Pos.	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				Fluor Sample Bot. Data			Sal. Bot. #	Other Samp.	Pos.
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm. B	Avg Tw	Sal.			
1										172.138	3.823	30.718	32.910	0.216				718	1
2			60							160.121	3.631	30.112	32.441	0.372					2
3			45							45.248	3.663	30.066	32.362	0.383					3
4			30							30.127	3.686	30.063	32.343	0.454			15		4
5			26							20.122	3.653	30.015	32.324	0.663					5
6			10							10.054	3.619	29.964	32.302	0.938					6
7			0							-0.055	3.526	29.938	32.130	0.523				717	7
8																			8
9																			9
10																			10
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Consec. Cast # <b>079</b>		Vessel MILLER FREEMAN		Proj. & Leg MF-94-04		Event # 1038		Vessel Sta. I.D.		Instructions										Sta. Designation																
Consec. Cast #		Latitude N or S			Longitude E or W			Date JD = 119			Time GMT Hr. Min.		Dry Bulb		Wet Bulb		Bar. mb		SS		Vis.		Wind Dir. V AR		Wind Sp. LT		Cloud		Type		Weath.		654 Bottom Depth, m		Sta. Name or I.D.	
079		542162N			1662671W			29 APR 94			0701		00700		402		46000		000		00857		645		14907											
CTD Type & SN 91220-A				Monitor Checks								Times JD/Time				Data Location																				
Press. SN 26072				on Deck at Surface								Data on _____				Tape/Diskette I.D. File Name/Header																				
Temp. SN 701				Press. _____								at Surface _____				CAST 079 - 29 Apr 0653																				
Cond. SN 303				Temp. _____								Start Down _____																								
Floor v mult = 1.0				Cond. _____								at Bottom _____																								
				Other _____								Start Up _____																								
												at Surface _____																								
												Data off _____				Remarks																				

Pos.	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				Floor Sample Bot. Data			Sal. Bot. #	Other Samp.	Pos.
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm P	Avg Tw	Sal.			
1		A	200	07:01:50						201.791	3.655	30.762	33.116	0.257			29	1	
2			60							60.123	3.698	30.262	32.552	0.353				2	
3			45							45.309	3.507	30.023	32.453	0.522				3	
4			30							29.734	3.482	29.921	32.377	0.696				4	
5			20							19.973	3.561	29.967	32.359	0.614				5	
6			10							10.060	3.630	30.014	32.351	0.594				6	
7			0							-1.004	3.692	30.014	32.295	0.504				7	
8																		8	
9																		9	
10																		10	
11																		11	
12																		12	

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Consec. Cast # 080		Vessel MILLER FREEMAN		Proj. & Leg MF-94-04		Event # 1054		Vessel Sta. I.D.		Instructions										Sta. Designation										
Consec. Cast #		Latitude N or S		Longitude E or W		Date JD = 119 Day Mo. Yr.			Time GMT Hr. Min.		Dry Bulb		Wet Bulb		Bar. mb		S.S. Vis.		Wind Dir.		Wind Sp.		Cloud Type		Weath.		Bottom Depth, m		Sta. Name or I.D.	
080		535262N		1672938W		29 APR 94			1423		006		000		001		15		000		000		867		1328		15008			
CTD Type & SN 91220-A Press. SN 26072 Temp. SN 701 Cond. SN 303 Fluor vmult = 1.5				Monitor Checks on Deck at Surface Press. _____ Temp. _____ Cond. _____ Other _____				Times JD/Time Data on _____ at Surface _____ Start Down _____ at Bottom _____ Start Up _____ at Surface _____ Data off _____				Data Location Tape/Diskette I.D. _____ File Name/Header CAST080-29APR1414 Remarks LIGHTMETER, FLUOROMETER, CHLOR NOTES w/o Chl																		
Pos.	Bot.	T Rack	Trip Depth	Time @ Depth Trip		Monitor Values Press. Temp. Cond. Other				Conv. Mon. Values-CTD Press. Temp. Cond. Sal.				FLUOR Sample Bot. Data Therm-P Avg Tw Sal.			Sal. Bot. #	Other Samp.	Pos.											
1			200	20						200.718	3.724	30.775	33.063	0.709			26	721	1											
2			60							60.232	3.665	30.212	32.526	0.404					2											
3			45							45.037	3.547	30.051	32.459	0.610					3											
4			30							30.229	3.525	30.019	32.451	0.651					4											
5			20							19.650	3.492	29.973	32.434	0.574					5											
6			10							9.989	3.489	29.948	32.413	0.581				722	6											
7			0							0.203	3.496	29.948	32.411	0.525					7											
8																			8											
9																			9											
10																			10											
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Consec. Cast # <u>81</u>		Vessel MILLER FREEMAN		Proj. & Leg MF-94-04		Event #		Vessel Sta. I.D.		Instructions										Sta. Designation												
Consec. Cast #		Latitude N or S		Longitude E or W		Date JD = <u>119</u> Day Mo. Yr.			Time GMT Hr. Min.		Dry Bulb		Wet Bulb		Bar. mb <u>1001.0</u>		SS <u>15</u>		Vis.		Wind Dir.		Wind Sp.		Cloud Type		Weath.		Bottom Depth, m		Sta. Name or I.D.	
681		534187N		1672118W		29 APR 94			1637		27		21		01		15				0		0867		100		15104					
CTD Type & SN <u>91220-A</u>				Monitor Checks on Deck at Surface				Times JD/Time Data on _____ at Surface _____ Start Down _____ at Bottom _____ Start Up _____ at Surface _____ Data off _____				Data Location Tape/Diskette I.D. _____ File Name/Header <u>CAST081-29APR1632</u> Remarks <u>LIGHTMETER, FLUOROMETER, CHLam</u> NVES																				
Press. SN <u>26072</u>				Press. _____																												
Temp. SN <u>701</u>				Temp. _____																												
Cond. SN <u>303</u>				Cond. _____																												
<u>Fluor vmult = 1.0</u>				Other _____																												

Pos.	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				FLUOR Sample Bot. Data			Sal. Bot. #	Other Samp.	Pos.
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.			
1			90	37.20						91.902	3.837	30.595	32.792	0.173			007	723	1
2			60							60.629	3.749	30.330	32.581	0.261					2
3			45							44.835	3.707	30.242	32.528	0.320					3
4			30							30.370	3.595	30.063	32.433	0.492					4
5			20							20.218	3.654	30.052	32.367	0.988					5
6			10							10.101	3.686	30.055	32.344	1.068				724	6
7			0							-0.542	3.691	30.034	32.320	1.140				725	7
8																			8
9																			9
10																			10
11																			11
12																			12

N.B. Surface bottle may be contaminated by engine room discharge

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Consec. Cast # 082		Vessel MILLER FREEMAN		Proj. & Leg MF-94-04		Event # 1073		Vessel Sta. I.D.		Instructions		Sta. Designation								
Consec. Cast #	Latitude Deg. Min.		N or S	Longitude Deg.		E or W	Date JD = Day Mo. Yr.		Time GMT Hr. Min.		Dry Bulb	Wet Bulb	Bar. mb 1001.8	S.S. Vis.	Wind Dir.	Wind Sp.	Cloud Type	Weath.	Bottom Depth, m	Sta. Name or I.D.
82	53	38	N	167	18	41	W	29	APR	94	20	09	11	05	02	17	6	08	67	8115208

CTD Type & SN 91220-A		Monitor Checks on Deck at Surface		Times JD/Time Data on _____ at Surface _____ Start Down _____ at Bottom _____ Start Up _____ at Surface _____ Data off _____		Data Location Tape/Diskette I.D. _____ File Name/Header CAST 082-29Apr 2005	
Press. SN 26072		Press. _____					
Temp. SN 701		Temp. _____					
Cond. SN 303		Cond. _____					
Floor v mult = 1.0		Other _____				Remarks	

St. No.	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				Sample Bot. Data			Sal. Bot. #	Other Samp.	Pos.
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.			
1			79							79.505	3.836	30.465	32.645	0.277				727	1
2			60							60.233	3.827	30.319	32.491	0.327					2
3			45							45.173	3.808	30.272	32.462	0.323					3
4			30							30.188	3.811	30.237	32.426	0.365					4
5			20							19.981	3.810	30.180	32.364	0.410					5
6			10							10.157	3.817	30.161	32.340	0.341			35		6
7			0							-0.480	3.801	30.127	32.321	0.239				726	7
8																			8
9																			9
10																			10
11																			11
12																			12

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Consec. Cast # <u>083</u>		Vessel <u>MILLER FREEMAN</u>		Proj. & Leg <u>MF-94-04</u>		Event # <u>1087</u>		Vessel Sta. I.D.		Instructions										Sta. Designation							
Consec. Cast #		Latitude N or S		Longitude E or W		Date JD = <u>120</u>		Time GMT Hr. Min.		Dry Bulb		Wet Bulb		Bar. mb <u>1003.0</u>		S.S. <u>17</u>		Vis. <u>0</u>		Wind Dir. <u>0</u>		Wind Sp. <u>0661</u>		Cloud Type <u>113581</u>		Sta. Name or I.D. <u>5311</u>	
<u>83</u>		<u>534378N</u>		<u>1674666W</u>		<u>30 APR 94</u>		<u>0033</u>		<u>21</u>		<u>11</u>		<u>03</u>		<u>17</u>		<u>0</u>		<u>0661</u>		<u>113581</u>		<u>5311</u>			
CTD Type & SN <u>91220-A</u>				Monitor Checks				Times JD/Time				Data Location															
Press. SN <u>26072</u>				on Deck				Data on _____				Tape/Diskette I.D. _____															
Temp. SN <u>701</u>				at Surface				at Surface _____				File Name/Header _____															
Cond. SN <u>303</u>				Press. _____				Start Down _____				CAST <u>083-30 Apr 0025</u>															
<u>Fluor v mult = 1.0</u>				Temp. _____				at Bottom _____				_____															
				Cond. _____				Start Up _____				Remarks <u>max depth = 202</u>															
Other _____				Data off _____																							

Pos.	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				Sample Bot. Data			Sal. Bot. #	Other Samp.	Pos.
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.			
1		A	150	00135						149.148	3.833	30.750	32.951	0.182			10	729	1
2			60							59.707	3.975	30.642	32.727	0.401					2
3			45							44.642	3.842	30.947	32.557	0.492					3
4			30							19.864	3.686	30.122	32.414	0.770					4
5			20							19.959	3.765	30.173	32.401	0.880					5
6			10							10.164	3.901	30.279	32.397	0.629					6
7			0							-0.188	3.960	30.329	32.399	0.450			728		7
8																			8
9																			9
10																			10
11																			11
12																			12

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Consec. Cast #		Vessel		Proj. & Leg		Event #		Vessel Sta. I.D.		Instructions										Sta. Designation			
084		MILLER FREEMAN		MF-94-04		1096																	
Consec. Cast #	Latitude		N or S	Longitude		E or W	Date JD = 120		Time GMT		Dry Bulb	Wet Bulb	Bar. mb	S.S.	Vis.	Wind Dir.	Wind Sp.	Cloud	Type	Weath.	Bottom Depth, m	Sta. Name or I.D.	
084	53	32	78	N	167	36	56	W	30	APR	94	03	17	22	16	03	18	35	51	06	61	90	15407

CTD Type & SN 91220-A		Monitor Checks		Times JD/Time		Data Location	
Press. SN 26072		on Deck at Surface		Data on _____		Tape/Diskette I.D. File Name/Header	
Temp. SN 701		Press. _____		at Surface _____		CAST 084-30Apr0311	
Cond. SN 303		Temp. _____		Start Down _____		_____	
Floor v mult = 1.0		Cond. _____		at Bottom _____		_____	
		Other _____		Start Up _____		Remarks Max Depth - 89m	
				Data off _____			

Pos	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				Sample Bot. Data			Sal. Bot. #	Other Samp.	Pos
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.			
1			88							87.909	3.933	30.649	32.762	0.349			21	731	1
2			60							60.273	3.988	30.645	32.716	0.343					2
3			45							44.920	3.898	30.492	32.632	0.390			21		3
4			30							30.000	3.744	30.211	32.461	0.644					4
5			20							19.847	3.753	30.173	32.412	0.724					5
6			16							9.686	3.890	30.248	32.372	0.850					6
7			0							-0.058	3.899	30.251	32.370	0.646				730	7
8																			8
9																			9
10																			10
11																			11
12																			12

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Consec. Cast # <b>085</b>		Vessel MILLER FREEMAN		Proj. & Leg MF-94-04		Event # 1164		Vessel Sta. I.D.		Instructions										Sta. Designation			
Consec. Cast #	Latitude		N or S	Longitude		E or W	Date JD = <b>120</b>			Time GMT		Dry Bulb	Wet Bulb	Bar. mb 1004.1	S.S.	Vis.	Wind Dir.	Wind Sp.	Cloud	Type	Weath.	Bottom Depth, m	Sta. Name or I.D.
	Deg.	Min.		Deg.	Day		Mo.	Yr.	Hr.	Min.													
085	53	30	S	167	34	58	W	30	APR	94	05	12	34	19	04	18	03	51	16	61		7115547	

CTD Type & SN <u>91220-A</u> Press. SN <u>26072</u> Temp. SN <u>701</u> Cond. SN <u>303</u> Floor v mult = 1.0	Monitor Checks		Times JD/Time		Data Location	
	on Deck	at Surface	Data on _____	Tape/Diskette I.D. _____		File Name/Header _____
	Press. _____	_____	at Surface _____	CAST <b>085-30Apr 0505</b>		_____
	Temp. _____	_____	at Bottom _____	_____		_____
	Cond. _____	_____	Start Up _____	_____		_____
Other _____	_____	at Surface _____	Data off _____		Remarks <b>Max Depth 68m</b>	

Pos.	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				Sample Bot. Data			Sal. Bot. #	Other Samp.	Pos.
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.			
1			68							68.345	3.844	30.506	32.684	0.233			732	1	
2			60							60.550	3.764	30.223	32.440	0.623				2	
3			45							45.604	3.804	30.214	32.397	0.662				3	
4			30							29.743	3.864	30.212	32.344	0.598				4	
5			20							19.589	3.861	30.201	32.338	0.516				5	
6			10							10.601	3.982	30.255	32.288	0.571				6	
7			0							-0.227	4.000	30.265	32.287	0.487			733	7	
8																		8	
9																		9	
10																		10	
11																		11	
12																		12	

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