

Consec. Cast # <u>001</u>		Vessel <u>MILLER FREEMAN</u>		Proj. & Leg <u>MF9408 LEG I</u>		Event # <u>71</u>		Vessel Sta. I.D.		Instructions										Sta. Designation																											
Consec. Cast #	Latitude			N or S	Longitude			E or W	Date JD = <u>261</u>			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.																																			
<u>001</u>	<u>5</u>	<u>7</u>	<u>2</u>	<u>5</u>	<u>9</u>	<u>7</u>	<u>N</u>	<u>1</u>	<u>7</u>	<u>2</u>	<u>1</u>	<u>1</u>	<u>6</u>	<u>2</u>	<u>W</u>	<u>1</u>	<u>8</u>	<u>S</u>	<u>E</u>	<u>9</u>	<u>4</u>	<u>0</u>	<u>6</u>	<u>4</u>	<u>9</u>	<u>8</u>	<u>8</u>	<u>7</u>	<u>9</u>	<u>9</u>	<u>6</u>	<u>3</u>	<u>8</u>	<u>3</u>	<u>2</u>	<u>5</u>	<u>1</u>	<u>0</u>	<u>6</u>	<u>7</u>	<u>5</u>	<u>1</u>	<u>1</u>	<u>0</u>	<u>1</u>	<u>4</u>	<u>7</u>

CTD Type & SN <u>SBE 91220 - A</u> Press. SN <u> </u> Temp. SN <u>701</u> Cond. SN <u>303</u>		Monitor Checks on Deck at Surface Press. <u> </u> <u> </u> Temp. <u> </u> <u> </u> Cond. <u> </u> <u> </u> Other <u> </u> <u> </u>				Times JD/Time Data on <u> </u> at Surface <u> </u> Start Down <u>06:45</u> at Bottom <u> </u> Start Up <u> </u> at Surface <u> </u> Data off <u> </u>				Data Location <u>112</u> Tape/Diskette I.D. <u> </u> File Name/Header <u>CAST 001-18SEP0643</u>							
										Remarks <u>Fluorometer on CTD.</u> <u>No light meter this cruise</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.			
1			0							-0.387	8.315	33.790	32.122				M2/Can	1	
2			10							10.372	8.312	33.793	32.122				M2/Can	2	
3			20							20.455	8.317	33.801	32.121					3	
4			30							30.280	8.305	33.783	32.109					4	
5			40							40.288	4.010	30.436	32.457					5	
6			50							50.254	3.362	29.948	32.518					6	
7			60							61.756	2.750	29.496	32.583					7	
8		✓	75	06:50:19						76.556	2.734	29.489	32.583				17	8	
9			125														17	9	
10			Bottom							101.972	2.723	29.489	32.581					10	
11																		11	
12																		12	

Nuts Nuts

N491 ✓

N492 ✓

N493 ✓

N494 ✓

N495 ✓

N496 ✓

Initials LA
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Consec. Cast # 002		Vessel MILLER FREEMAN		Proj. & Leg MF9408 LEG I		Event # 76		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.	
002		5 73 00 N			171 56 01 W			18 Sep 94			09 35		8 9		7 9		9 6		3 8		3 20		09 7 7 5				107							
CTD Type & SN SBE 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 002 - 18SEP 0925 Remarks _____																		
Press. SN _____		Temp. SN 701		Cond. SN 303		Press. _____		Temp. _____		Cond. _____		Other _____																						
Pos.		Bot. 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.		S.D.										
1				bottom								98.863 3.510 30.233 32.685				0.151				26				1										
2				75																				2										
3				60																				3										
4				50																				4										
5				40																				5										
6				30																				6										
7				20																				7										
8				10																				8										
9				0																				9										
10																								10										
11																								11										
12																								12										

Initials DCK

✓ DCK

Consec. Cast # 003		Vessel MILLER FREEMAN		Proj. & Leg MF9408 LEG I		Event # 78		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.																																			
003	5	7	3	3	1	4	N	1	7	1	4	1	7	6	W	1	8	5	0	9	4	1	0	4	1	8	9	7	5	9	6	3	8	3	5	0	8	7	6	5	1	0	3		
CTD Type & SN <u>SBE 91220 - A</u>				Monitor Checks								Times JD/Time				Data Location																													
Press. SN _____				on Deck				at Surface				Data on _____				Tape/Diskette I.D.						File Name/Header																							
Temp. SN <u>701</u>				Press. _____				_____				at Surface _____				_____						CAST <u>003 - 18 Sep 10 28</u>																							
Cond. SN <u>303</u>				Temp. _____				_____				at Bottom _____				_____						_____																							
_____				Cond. _____				_____				Start Up _____				Remarks						_____																							
_____				Other _____				_____				at Surface _____				_____						_____																							
_____				_____				_____				Data off _____				_____						_____																							

Pos D	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				Fluor Sample Bot. Data			Sal. Bot. #	Other Samp.	Pos D	Miskin Bottle #
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm	Avg Tw	Sal. NT				
1				bottom						95.351	3.681	30.333	32.635	0.152	CH	N503	27	Nts	1	5
2				75						75.732	3.680	30.324	32.636	0.143		N502		Nts	2	3
3				60						60.651	3.718	30.279	32.552	0.137	35	N501		CH/Nts	3	MZ 29
4				50						50.119	3.846	30.204	32.342	0.179	23	N500		CH/Nts	4	MZ -
5				40						40.438	4.984	31.047	32.215	1.213	32			CH	5	MZ 23
6				30						30.906	7.612	33.063	31.977	3.175	31	N499		CH/Nts	6	MZ 22
7				20						20.771	7.613	33.060	31.978	3.362	30			CH	7	MZ 21
8				10						11.199	7.624	33.065	31.978	3.217	26	N498		CH/Nts	8	MZ 20
9				0						1.714	7.626	33.063	31.978	3.350	27	N497		CH/Nts	9	MZ 2
10																			10	
11																			11	
12																			12	

Initials DGK

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Consec. Cast # <u>004</u>		Vessel <u>MILLER FREEMAN</u>		Proj. & Leg <u>MF9408 LEG I</u>		Event # <u>80</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.																																				
004	5	7	3	5	3	0	N	1	7	13	4	7	6	W	1	8	5	0	9	4	1	1	3	6	8	9	7	8	9	6	3	8	0	2	0	1	0	7	6	1	1	0	1				
CTD Type & SN <u>SBE 91220 - A</u>				Monitor Checks										Times JD/Time				Data Location																													
Press. SN _____				on Deck					at Surface					Data on _____				Tape/Diskette I.D.										File Name/Header																			
Temp. SN <u>701</u>				Press. _____					_____					at Surface _____				_____										CAST <u>004-188-p1131</u>																			
Cond. SN <u>303</u>				Temp. _____					_____					Start Down _____				_____										_____																			
_____				Cond. _____					_____					at Bottom _____				_____										_____																			
_____				Other _____					_____					Start Up _____				_____										_____																			
_____				_____					_____					Data off _____				_____										Remarks <u>wire out 92</u>																			

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																		1	
2																		2	
3																		3	
4																		4	
5																		5	
6																		6	
7																		7	
8																		8	
9																		9	
10																		10	
11																		11	
12																		12	

Initials DGR

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Consec. Cast # 445		Vessel MILLER FREEMAN		Proj. & Leg MF9408 LEG I		Event # 82		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	Weather	Bottom Depth, m	Sta. Name or I.D.											
005	57	37	01 N	171	28	97 W	10	5	9	4	12	15	82	70	96	38	010	10	76	1		94												
CTD Type & SN <u>SBE 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>CAST 005 - 18 Sep 1210</u> Remarks <u>wire out 90m</u>																									
Press. SN _____			Temp. SN <u>701</u>			Cond. SN <u>303</u>			Press. _____			Temp. _____			Cond. _____			Other _____																
St. #	Bot. Rack	Trip	Time @ Depth Trip		Monitor Values Press. Temp. Cond. Other				Conv. Mon. Values-CTD Press. Temp. Cond. Sal.				Fluor Sample Bot. Data Therm P Argon Tw Sat. Not			Sal. Bot. #	Other Samp.	St. #	Niskin Bottle #															
1		bottom							91.125	3.677	30.218	32.505	0.168	chl	N 549		Nts	1		5														
2		75							75.847	3.682	30.269	32.497	0.157		N 548		Nts	2		3														
3		60							60.832	3.908	30.229	32.304	0.157	35			chl	3	m2	29														
4		50							51.253	4.159	30.374	32.233	0.170	23	N 547		chl/Nts	4	m2	-														
5		40							40.952	6.275	31.963	32.017	1.067	32			chl	5	m2	23														
6		30							30.743	7.210	32.619	31.870	1.743	31	N 546		chl/Nts	6	m2	22														
7		20							20.472	7.207	32.613	31.872	1.659	30			chl	7	m2	21														
8	A	10	12:21:37	12:26:38					11.154	7.204	32.606	31.871	1.743	26	N 545		chl/Nts	8	m2	25														
9		0							0.866	7.204	32.601	31.870	1.673	27	N 544		chl/Nts	9	m2	2														
10																		10																
11																		11																
12																		12																

Initials DGR

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Consec. Cast # 007		Vessel MILLER FREEMAN		Proj. & Leg MF9408 LEG I		Event # 132		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.																						
007	5	7	1	6	1	9	N	1	7	0	1	2	2	2	W	1	9	S	e	p	9	4	1	5	3	4	9	8	9	0	9	9	3	7	0	2	0	8	8	6	2	3	5		

CTD Type & SN SBE 91220 - A		Monitor Checks				Times JD/Time		Data Location			
Press. SN _____		on Deck		at Surface		Data on _____		Tape/Diskette I.D.		File Name/Header	
Temp. SN 701		Press. _____		_____		at Surface _____		_____		CAST 007 - 19 Sep 1531	
Cond. SN 303		Temp. _____		_____		Start Down _____		_____		_____	
_____		Cond. _____		_____		at Bottom _____		_____		_____	
_____		Other _____		_____		Start Up _____		_____		Remarks Wm Out = 27	
_____		_____		_____		at Surface _____		_____		_____	
_____		_____		_____		Data off _____		_____		_____	

Pos.	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				Flux Sample Bot. Data			Sal. Bot. #	Other Samp.	Bottles
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.			
1			27							28.244	7.495	32.843	31.851	0.570	chl 31	N512	20	chl nts	1
2			20							24.324	7.494	32.839	31.851	0.509	30			chl	2
3			10							11.336	7.492	32.834	31.851	0.489	26	N510		chl nts	3
4			0							1.412	7.514	32.847	31.850	0.494	27	N511		chl nts	4
5																			5
6																			6
7																			7
8																			8
9																			9
10																			10
11																			11
12																			12

Initials **DGL**

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Consec. Cast # 008		Vessel MILLER FREEMAN		Proj. & Leg MF9408 LEG I		Event # 133		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.
008	57	18	49	N	170	10	11	W	19	Sep	94	16	14	88	79	99	36	06	41	28	62			50		

CTD Type & SN <u>SBE 91220 - A</u>		Monitor Checks				Times JD/Time				Data Location			
Press. SN _____		on Deck		at Surface		Data on _____		Tape/Diskette I.D.		File Name/Header			
Temp. SN <u>701</u>		Press. _____		_____		at Surface _____		_____		CAST <u>008 - 19891610</u>			
Cond. SN <u>303</u>		Temp. _____		_____		at Bottom _____		_____		_____			
_____		Cond. _____		_____		Start Up _____		_____		Remarks <u>Wine out - 45</u>			
_____		Other _____		_____		at Surface _____		_____		_____			
_____		_____		_____		Data off _____		_____		_____			

Stn. #	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				Sample Bot. Data			Sal. Bot. #	Other Samp.	Stn. #	Niskin Bottle #	
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.					
1			50							44.779	7.864	33.189	31.876	1.057	Chl 23	N515	32	Chl N515	1	29	m2
2			40							39.307	7.863	33.186	31.875	0.995	32			Chl	2	—	m2
3			30							29.517	7.872	33.188	31.873	1.234	31	N515		Chl N515	3	23	m2
4			20							18.983	7.886	33.193	31.871	1.017	30			Chl	4	22	m2
5			10							8.899	7.884	33.186	31.871	0.874	26	N514		Chl N514	5	21	m2
6			0							-0.319	7.883	33.181	31.874	0.843	27	N513		Chl N513	6	26	m2
7																			7		
8																			8		
9																			9		
10																			10		
11																			11		
12																			12		

Initials JEK, PH
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Consec. Cast #		Vessel		Proj. & Leg		Event #		Vessel Sta. I.D.		Instructions										Sta. Designation											
009		MILLER FREEMAN		MF9408 LEG 1		135																									
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.	
009		572096 N		1700862 W		195094		1651		89		80		00		38		065		68		62		57							
CTD Type & SN SBE 91220 - A				Monitor Checks				Times JD/Time				Data Location																			
Press. SN				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_009 - 19 Sep 1647																			
				Temp.				at Bottom																							
				Cond.				Start Up				Remarks wire at - 52																			
				Other				at Surface																							
				Data off																											

St. #	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				Sample Bot. Data			Sal. Bot. #	Other Samp.	St. #
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm P	Avg Tw	Sal.			
1										52.292	7.345	32.742	31.869	0.910			16		1
2																			2
3																			3
4																			4
5																			5
6																			6
7																			7
8																			8
9																			9
10																			10
11																			11
12																			12

Initials DCK, MD



Consec. Cast # <u>010</u>		Vessel MILLER FREEMAN		Proj. & Leg MF9408 LEG I		Event #		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.																	
010	57	05	28	N	170	14	14	W	20	Sep	94	17	54	8	6	7	1	83	47	8	06	22	8	6	2	19	

CTD Type & SN <u>SBE 91220 - A</u>		Monitor Checks				Times JD/Time		Data Location	
Press. SN _____		on Deck		at Surface		Data on _____		Tape/Diskette I.D.	
Temp. SN <u>701</u>		Press. _____		_____		at Surface _____		File Name/Header	
Cond. SN <u>303</u>		Temp. _____		_____		Start Down _____		CAST <u>010-20 Sep 1994</u>	
_____		Cond. _____		_____		at Bottom _____		_____	
_____		Other _____		_____		Start Up _____		Remarks <u>Wme Out - 28m</u>	
_____		_____		_____		at Surface _____		_____	
_____		_____		_____		Data off _____		_____	

Stn. #	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				Sample Bot. Data			Sal.	Other	Stn. #
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.	Bot. #	Samp.	
1										25.342	7.835	33.140	31.858	0.649	CU 31	N519	30	chk nt	1
2										18.467	7.834	33.136	31.858	0.664	30			chk nt	2
3										9.842	7.837	33.134	31.858	0.578	26	N518		chk nt	3
4										-0.460	7.833	33.126	31.858	0.596	27	N517		chk nt	4
5																			5
6																			6
7																			7
8																			8
9																			9
10																			10
11																			11
12																			12

Initials DK

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Consec. Cast # 011		Vessel MILLER FREEMAN		Proj. & Leg MF9408 LEG I		Event #		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.													
011	57	02	N	170	16	74	20	SEP	94	18	58	86	71	83	47	35	02	3	62		56		

CTD Type & SN <u>SBE 91220 - A</u>		Monitor Checks				Times JD/Time		Data Location			
Press. SN _____		on Deck		at Surface		Data on _____		Tape/Diskette I.D.		File Name/Header	
Temp. SN <u>701</u>		Press. _____		_____		at Surface _____		_____		CAST <u>011 - 20 Sep 1954</u>	
Cond. SN <u>303</u>		Temp. _____		_____		at Bottom _____		_____		_____	
_____		Cond. _____		_____		Start Up _____		Remarks <u>Wire out 48</u>		_____	
_____		Other _____		_____		at Surface _____		_____		_____	
_____		_____		_____		Data off _____		_____		_____	

Stn. No.	Bot. Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				Sample Bot. Data			Sal. Bot. #	Other Samp.	Stn. No.	WT
			Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.				
1									46.517	7.833	33.144	31.855	0.714	28	N 523		chl/bt	1	45
2	A		18:58:00	18:04:10					41.099	7.833	33.143	31.856	0.723	32		33	chl	2	40
3									30.409	7.830	33.135	31.856	0.670	31	N 522	20m	chl/bt	3	30
4									20.136	7.828	33.128	31.855	0.644	30		30m	chl	4	20
5									9.686	7.831	33.128	31.856	0.691	26	N 521	0m	chl/bt	5	10
6									0.488	7.827	33.105	31.840	0.656	27	N 520	10m	chl/bt	6	0 26
7																		7	
8																		8	
9																		9	
10																		10	
11																		11	
12																		12	

Initials OK, [signature]

Consec. Cast # <u>612</u>		Vessel MILLER FREEMAN		Proj. & Leg MF9408 LEG I		Event# 202		Vessel Sta. I.D.		Instructions										Sta. Designation														
Consec. Cast #		Latitude Deg. Min.		N or S		Longitude Deg.		E or W		Date JD = <u>263</u> 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.	
1 2		5 6 5 9		9 8 N		1 7 0 1 8		3 7 W		2 0 SEP 9 4			1 9 5 6		8 9		7 1		8 3		4 6 3 4 0		1 8		8 6 2				6 4		2 5			
CTD Type & SN <u>SBE 91220 - A</u> Press. SN _____ 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 <u>LCL</u> Tape/Diskette I.D. _____ File Name/Header <u>CAST 612</u> _____ _____ Remarks _____																						
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												57.809 5.716 31.533 32.057								33				1										
2																								2										
3																								3										
4																								4										
5																								5										
6																								6										
7																								7										
8																								8										
9																								9										
10																								10										
11																								11										
12																								12										

Initials LAL/WP

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Consec. Cast #		Vessel		Proj. & Leg		Event#		Vessel Sta. I.D.		Instructions										Sta. Designation													
013		MILLER FREEMAN		MF9408 LEG I		203																											
Consec. Cast #		Latitude		Longitude		Date		Time		Dry Bulb		Wet Bulb		Bar. mb		S.S.		Vis.		Wind Dir.		Wind Sp.		Cloud		Type		Weath.		Bottom Depth, m		Sta. Name or I.D.	
013		5 6 7 7 N		1 7 0 2 1 5 5 W		20 SEP 94		20 30		8 9		7 1		8 2		4 7		3 3 5		2 2		8 6		2				8 5		2 6			
CTD Type & SN SBE 91220 - A				Monitor Checks				Times				Data Location																					
Press. SN				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 013																					
				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.	vi
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.			
1			0							0.379	7.372	32.715	31.838				chl/m2	1	
2			10							10.879	7.367	32.715	31.838				chl/m2	2	
3			20							20.726	7.373	32.725	31.839				chl/m2	3	
4			30							30.161	7.367	32.722	31.836				chl/m2	4	
5			40							40.729	6.932	32.400	31.885				chl/m2	5	
6			50							51.465	5.241	31.076	31.997				chl/m2	6	
7			60							61.474	4.128	30.407	32.297				chl/m2	7	
8			75							75.459	3.846	30.282	32.421			35		8	
9			Bot															9	
10																		10	
11																		11	
12																		12	

NUTS.

Initials

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Consec. Cast #		Vessel		Proj. & Leg		Event #		Vessel Sta. I.D.		Instructions										Sta. Designation															
014		MILLER FREEMAN		MF9408 LEG I																															
Consec. Cast #		Latitude		Longitude		Date		Time		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.						983.5																					
014		565477 N		1702394 W		20 SEP 94		2118		95		89		844		47		340		18		862				93				27					
CTD Type & SN SBE 91220 - A				Monitor Checks				Times				Data Location																							
Press. SN				on Deck				Data on				Tape/Diskette I.D.				File Name/Header																			
Temp. SN 701				at Surface				at Surface								CAST 014-20SEP2114																			
Cond. SN 303				Press.				Start Down																											
				Temp.				at Bottom																											
				Cond.				Start Up																											
				Other				at Surface																											
								Data off																											
Remarks w/o 90. On landing, it also hit the cage hit side of ship. which cable housing w/ great force (bottle broken)																																			
St. Bot.		T Rack		Trip Depth		Time @				Monitor Values				Conv. Mon. Values-CTD				Sample Bot. Data				Sal. Bot. #		Other Samp.		St. Bot.									
						Depth		Trip		Press.		Temp.		Cond.		Other		Press.		Temp.		Cond.		Sal.		Therm-P		Avg Tw		Sal.					
1																		87.790		3.754		30.187		32.394										1	
2																																		2	
3																																		3	
4																																		4	
5																																		5	
6																																		6	
7																																		7	
8																																		8	
9																																		9	
10																																		10	
11																																		11	
12																																		12	

Initials

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Consec. Cast # 015		Vessel MILLER FREEMAN		Proj. & Leg MF9408 LEG I		Event # 246		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.																	
015	56	37	26	N	169	35	14	21	SEP	94	14	22	8	2	8	0	69	4	7	29	0	15	8	6	6	51	

CTD Type & SN SBE 91220 - A		Monitor Checks		Times JD/Time		Data Location	
Press. SN _____		on Deck at Surface		Data on _____		Tape/Diskette I.D. File Name/Header	
Temp. SN 701		Press. _____		at Surface _____		_____ CAST_015_21SEP_94_19	
Cond. SN 303		Temp. _____		Start Down _____		_____	
_____		Cond. _____		at Bottom _____		_____	
_____		Other _____		Start Up _____		Remarks WG 44m	
_____				at Surface _____			
_____				Data off _____			

Pos.	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				Flow Sample Bot. Data			Sal.	Other	Samp.	S	Q
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	-Sat.	Bot. #				
1										43.385	6.645	32.141	31.866	1.369	23	N527		CH/N527	1	45	—
2		A		14:23:59	14:29:00					40.106	6.687	32.169	31.859	1.451	32		47	CH	2	40	25
3										30.382	6.702	32.175	31.857	1.554	31	N526		CH/N526	3	30	23
4										19.780	6.805	32.244	31.842	2.002	30			CH	4	20	22
5										9.979	6.850	32.265	31.827	1.945	26	N525		CH/N525	5	10	21
6										0.372	6.856	32.266	31.827	1.919	27	N524		CH/N524	6	0	26
7																			7		
8																			8		
9																			9		
10																			10		
11																			11		
12																			12		

Initials DGE, (P)

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Consec. Cast #		Vessel		Proj. & Leg		Event #		Vessel Sta. I.D.		Instructions										Sta. Designation																									
016		MILLER FREEMAN		MF9408 LEG I		247																																							
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	5	6	3	6	8	N	1	6	9	3	4	7	5	W	2	1	S	e	p	9	4	1	5	0	5	8	5	8	6	9	5	4	7	3	0	0	1	4	8	6	6	7	6		

CTD Type & SN SBE 91220 - A		Monitor Checks				Times JD/Time				Data Location			
Press. SN		on Deck		at Surface		Data on				Tape/Diskette I.D.		File Name/Header	
Temp. SN 701		Press.				at Surface						CAST_016 - 21 Sep 1501	
Cond. SN 303		Temp.				Start Down							
		Cond.				at Bottom							
		Other				Start Up							
						at Surface							
						Data off						Remarks Wine Out = 68	

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	Sat.			
1										67.874	6.143	31.801	31.948	0.447	chl	N535	21	N53	1
2										60.359	6.181	31.823	31.942	0.485	35 full of water	N537	21	chl/N53	2
3										50.654	6.198	31.832	31.940	0.526	23	N536		chl/N53	3
4										40.504	6.469	32.016	31.895	1.025	31			chl	4
5										30.866	6.576	32.101	31.873	1.212	32	N538		chl/N53	5
6										20.660	6.595	32.095	31.873	1.380	30			chl	6
7										10.680	6.593	32.087	31.874	1.227	26	N529		chl/N53	7
8									2000's late	0.701	6.591	32.083	31.874	1.215	27	N528		chl/N53	8
9																			9
10																			10
11																			11
12																			12

Initials DGR

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Consec. Cast #		Vessel		Proj. & Leg		Event #		Vessel Sta. I.D.		Instructions										Sta. Designation															
017		MILLER FREEMAN		MF9408 LEG I		250																													
Consec. Cast #		Latitude		Longitude		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.																											
017		56° 39' 68" N		169° 34' 68" W		21 Sep 94		1640		88		82		90		47		33		28		88		62		76		3601							
CTD Type & SN SBE 91220 - A				Monitor Checks				Times				Data Location																							
Press. SN				on Deck				Data on				Tape/Diskette I.D.				File Name/Header																			
Temp. SN 701				at Surface				at Surface								CAST_017 - 21 Sep 1994																			
Cond. SN 303				Press.				Start Down																											
				Temp.				at Bottom																											
				Cond.				Start Up																											
				Other				at Surface								Remarks 30 - 73																			
								Data off																											

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										71.054	4.866	30.945	32.175	0.254			15		1
2																			2
3																			3
4																			4
5																			5
6																			6
7																			7
8																			8
9																			9
10																			10
11																			11
12																			12

Initials DK

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Consec. Cast # <u>018</u>		Vessel <u>MILLER FREEMAN</u>		Proj. & Leg <u>MF9408 LEG I</u>		Event # <u>253</u>		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	Si	Vis.	Wind Dir.	Wind Sp.	Cloud	Type	Weath.	Bottom Depth, m	Sta. Name or I.D.																							
018	5	6	4	0	2	3	N	1	6	9	3	4	4	9	W	2	1	S	e	p	9	4	1	7	1	1	9	3	8	5	9	0	4	7	3	2	0	1	0	8	6	2	7	8		

CTD Type & SN <u>SBE 91220 - A</u>		Monitor Checks		Times JD/Time		Data Location	
Press. SN _____		on Deck at Surface		Data on _____		Tape/Diskette I.D. File Name/Header	
Temp. SN <u>701</u>		Press. _____		at Surface _____		_____ CAST <u>018 - 25 Sep 1747</u>	
Cond. SN <u>303</u>		Temp. _____		Start Down _____		_____	
_____		Cond. _____		at Bottom _____		_____	
_____		Other _____		Start Up _____		Remarks <u>WO - 73</u>	
_____				at Surface _____			
_____				Data off _____			

Pos.	Bot.	T Rack	Trip Depth	Time @		Monitor Values				Conv. Mon. Values-CTD				Sample Bot. Data			Sal.	Other	Stn. #
				Depth	Trip	Press.	Temp.	Cond.	Other	Press.	Temp.	Cond.	Sal.	Therm-P	Avg Tw	Sal.	Bot. #	Samp.	
1										72.075	4.597	30.688	32.160	0.264	chl	NJS N542	01	NJS	1
2										59.019	4.681	30.740	32.146	0.194	35			chl	2
3										50.134	4.822	30.800	32.083	0.242	28	N541		chl/NJS	3
4										39.344	6.452	32.018	31.913	0.498	31			chl	4
5										29.623	6.695	32.187	31.876	1.146	32	Q544		chl/NJS	5
6										19.675	6.935	32.327	31.812	1.729	34			chl	6
7										9.324	7.178	32.487	31.767	2.343	26	N539		chl/NJS	7
8										-0.314	7.178	32.484	31.967	2.684	29	N538		chl/NJS	8
9																			9
10																			10
11																			11
12																			12

 Initials JK
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Consec. Cast # <u>019</u>		Vessel MILLER FREEMAN		Proj. & Leg MF9408 LEG I		Event # 289		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		SS		Vis.		Wind Dir.		Wind Sp.		Cloud Type		Weath.		Bottom Depth, m		Sta. Name or I.D.	
019		5617		03		N		169322		W		22 Sep 94			0758		85		7901		47		32		15		86		2		221					
CTD Type & SN <u>SBE 91220 - A</u>				Monitor Checks				Times JD/Time				Data Location																								
Press. SN _____				on Deck				Data on _____				Tape/Diskette I.D.				File Name/Header																				
Temp. SN <u>701</u>				at Surface				at Surface _____								CAST <u>019 - 22 Sep 0747</u>																				
Cond. SN <u>303</u>				Press. _____				Start Down _____																												
				Temp. _____				at Bottom _____																												
				Cond. _____				Start Up _____																												
				Other _____				at Surface _____																												
								Data off _____								Remarks <u>Wine Out - 228</u> <u>stopped ~ 1 minute going down at ~ 200m</u> <u>camera on at 1 frame</u>																				

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										210.824				33.622			09		1
2																		2	
3																		3	
4																		4	
5																		5	
6																		6	
7																		7	
8																		8	
9																		9	
10																		10	
11																		11	
12																		12	

Initials LAL/wr

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Consec. Cast #		Vessel		Proj. & Leg		Event #		Vessel Sta. I.D.		Instructions										Sta. Designation											
020		MILLER FREEMAN		MF9408 LEG I		302																									
Consec. Cast #		Latitude		Longitude		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.	
020		5622 48 N		16944 88 W		22 SEP 94		1600		83		78		01		47		310		118		62		115		4602					
CTD Type & SN				SBE 91220 - A				Monitor Checks				Times				Data Location															
Press. SN								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 020-22SEP1994											
				Cond.								Start Up																			
				Other								Data off				Remarks v/o 114															
																CAMERA ON ROSETTE.															

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																		1	
2																		2	
3																		3	
4																		4	
5																		5	
6																		6	
7																		7	
8																		8	
9																		9	
10																		10	
11																		11	
12																		12	

ROSETTE WENT TO DEPTH + BACK UP TO 15m THEN BACK TO THE BOTTOM. SOME EXCHANGE OF WATER MAY HAVE TAKEN PLACE IN THE SAL D11 WHICH WAS TAKEN AT FIRST TRIP DOWN.

1604:40 @ 30 m

Initials

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Consec. Cast # 021		Vessel Miller Freeman		Proj. & Leg MF9408		Event # 314		Vessel Sta. I.D.		Instructions										Sta. Designation												
Consec. Cast #		Latitude N or S		Longitude E or W		Date JD = 265			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.	
021		562469N		1694485W		22 SEP 94			2200		97		83		03		37		33		012		865				99		47			
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 Cast021- Remarks CAMERA TOWED nb-95																				
CTD Type & SN		Press. SN		Temp. SN		Cond. SN		Press. _____		Temp. _____		Cond. _____		Other _____																		
Temp. SN		Cond. SN		Press. _____		Temp. _____		Cond. _____		Other _____																						
Cond. SN		Press. _____		Temp. _____		Cond. _____		Other _____																								
Press. SN		Temp. SN		Cond. SN		Other _____																										
Temp. SN		Cond. SN		Other _____																												
Cond. SN		Other _____																														
Other _____																																

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		✓	Bottom	1100						93.028	3.868	30.358	32.539				11		1
2																		2	
3																		3	
4																		4	
5																		5	
6																		6	
7																		7	
8																		8	
9																		9	
10																		10	
11																		11	
12																		12	

Initials LAL/WF

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Consec. Cast # 022		Vessel Miller Freeman		Proj. & Leg MF 9408		Event # 322		Vessel Sta. I.D.		Instructions										Sta. Designation									
Consec. Cast #		Latitude N or S Deg. Min.		Longitude E or W Deg.		Date JD = 266 Day Mo. Yr.			Time GMT Hr. Min.		Dry Bulb		Wet Bulb		Bar. mb 1002.1		S.S.	Vis.	Wind Dir.		Wind Sp.		Cloud Type		Weath.	Bottom Depth, m		Sta. Name or I.D.	
022		5623		69N		16944			62W		23SEP94			0244		88		7502		37	340	12761		106			47		
CTD Type & SN 91226-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 cast022 Remarks CAMERA TOW																	
Press. SN _____ Temp. SN 701 Cond. SN 303																													

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										99.346	3.931	30.956	33.120				18		1
2																			2
3																			3
4																			4
5																			5
6																			6
7																			7
8																			8
9																			9
10																			10
11																			11
12																			12

Initials **LAH**

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