

NOTE: FOR THIS CAST ONLY: PAR = V0
CHIAM = V2
FLUOR = V4

VESSEL		PROJECT & LEG		STATION DESIGNATION																	
NOAA Ship MILLER FREEMAN		MF98-05B																			
CONSC CAST #	LATITUDE	DEG	MIN	LONGITUDE	DEG	MIN	DATE	JD=	TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN (deg)	WIND SPD (m/s)	CLOUD (amt)	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID	
01	5625.11N	160	12.71W	15	APR	98	1842	3.8	2.7	9727	180	048	2	26	1-1						
CTD		TIMES		JD/TIME		DATA LOCATION										REMARKS					
TYPE & SN 9Plus 91660		DATA ON				Tape/Diskette ID File Name/Header										PRIOR TO KC97-1 RECON					
PRESS SN 29972		START DOWN				CIDD1*										NOTE FILE NAME					
TEMP SN 1: 889, 2: 701		AT DEPTH																			
COND SN 1: 480, 2: 303		AT SURFACE														MAX. DEPTH = 22 m					
POS. TRIP DEPTH		CTD CONVERTED MONITOR VALUES		PAR		FLUOR(10)		CHIAM		TRANSMISSOMETER		Cleaned air bleed valve		SAMPLE BOTTLE DATA		SAMPLE BOTTLE NUMBER		WHIT'S NUTR.			
1		PRESSURE	PRI. TEMP.	SEC. TEMP.	SALINITY											SALINITY		19		SAL. NUTR. CHL. NUTR.	
2																		19			
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

NOTE: FOR ALL SUBSEQUENT CASTS: PAR V0
FLUOR V2
CHLAM V4
(INCL. CAST CTD002)

VESSEL		PROJECT & LEG		STATION DESIGNATION															
NOAA Ship MILLER FREEMAN																			
CONSC CAST #	LATITUDE		LONGITUDE		DATE JD=105		TIME (GMT)		DRY BULB	WET BULB	PRESSURE	SEA STATE	VISIBILITY	WIND DIRN.	WIND SPD.	CLOUD (amt)	WEATHER	BOTTOM DEPTH	STA. NAME/ID
	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	(°C)	(°C)	(mb)	*	(deg)	(m/s)	*	*	(m)	
0025625.16N	16013.00W	15	APR	9	8	19	39	3.9	2.8	9727	VAR	04	8	2	28	1-4			
CTD		TIMES		JD/TIME		DATA LOCATION													
TYPE & SN 9Plus 91660		DATA ON		Tape/Diskette ID File Name/Header															
PRESS SN 29972		START DOWN		CTD002															
TEMP SN 1: 889, 2: 701		AT DEPTH																	
COND SN 1: 480, 2: 303		AT SURFACE		MAX. DEPTH = 22 m															
TRIP DEPTH		CTD CONVERTED MONITOR VALUES		PAR		FLUOR (V0)		CHIAM		TRANSMISSOMETER		Cleared air bleed valve		SAMPLE BOTTLE DATA		SAMPLE BOTTLE NUMBER		WHIT'S NUTR.	
1		PRESSURE	PRI. TEMP.	SEC. TEMP.	SALINITY														
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			
11																			
12																			

[illegible]

VESSEL						PROJECT & LEG						STATION DESIGNATION											
NOAA Ship MILLER FREEMAN																							
CONSC CAST #	LATITUDE			LONGITUDE			DATE JD= 106			TIME (GMT)		DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (m/s)	CLOUD (amt) TYPE	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID	
	DEG	MIN		DEG	MIN		DAY	MO	YR	HR	MIN												
✓ 006	56	43.94	N	163	52.59	W	16	APR	98	9	30	1.6	0.9	953	7	*	060	14	7	1	75	4-1	
CTD		TIMES		JD/TIME		DATA LOCATION																REMARKS	
TYPE & SN		9Plus 91660		DATA ON		Tape/Diskette ID File Name/Header																	
PRESS SN		29972		START DOWN		CTD006																	
TEMP SN		1: 889, 2: 701		AT DEPTH																			
COND SN		1: 480, 2: 303		AT SURFACE																		MAX. DEPTH = 70 m	
POS.		TRIP DEPTH		CTD CONVERTED MONITOR VALUES		<input checked="" type="checkbox"/> PAR		<input checked="" type="checkbox"/> FLUOR (10)		<input checked="" type="checkbox"/> CHLAM		<input type="checkbox"/> TRANSMISSOMETER		<input checked="" type="checkbox"/> Cleaned air bleed valve		SAMPLE BOTTLE DATA		SAMPLE BOTTLE NUMBER					
1	70	PRESSURE	PRI. TEMP.	SEC. TEMP.	SALINITY											SALINITY		SAL.	NUTR.	CHL.	WHIT'S NUTR.		
2	60																	.23			M9		
3	50																		563		M10		
4	40																		562	✓	M11		
5	30																		561	✓	M12		
6	20																			✓	M13		
7	10																		560	✓	M14		
8	0																		559	✓	M15		
9																			558	✓	M16		
10																							
11																							
12																							

VESSEL				PROJECT & LEG				STATION DESIGNATION												
NOAA Ship MILLER FREEMAN																				
CONSC CAST #	LATITUDE		LONGITUDE		DATE JD= 106		TIME (GMT)		WET BULB (°C)	PRESSURE (mb)	SEA STATE	WIND DIRN. (deg)	WIND SPD. (m/s)	CLOUD (amt)	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID			
	DEG	MIN	DEG	MIN	DAY	MO	YR	HR										MIN		
008	36	52.35 N	164	03.33 W	16	4	98	13	40	0.5	0.4953	7	0	3	2	12	54	1	72	6-1
CTD		TIMES		JD/TIME		DATA LOCATION														
TYPE & SN		9Plus 91660		DATA ON		Tape/Diskette ID File Name/Header														
PRESS SN		29972		START DOWN		CTD008														
TEMP SN		1: 889, 2: 701		AT DEPTH																
COND SN		1: 480, 2: 303		AT SURFACE		MAX. DEPTH = 66 m														
				<input checked="" type="checkbox"/> PAR <input type="checkbox"/> FLUOR (10) <input checked="" type="checkbox"/> CHAM <input type="checkbox"/> TRANSMISSOMETER		<input checked="" type="checkbox"/> Cleaned air bleed valve														
POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES																		
		PRESSURE	PRI. TEMP.	SEC. TEMP.	SALINITY	SAMPLE BOTTLE DATA											SAMPLE BOTTLE NUMBER			
						SALINITY											SAL.	NUTR.	CHL.	WHIT'S NUTR.
1	66																.5	.569		.M 25
2	60																			.M 26
3	50																	.568	✓	.M 27
4	40																	.567		.M 28
5	30																		✓	.M 29
6	20																	.566	✓	.M 30
7	11																		✓	.M 31
8	11																		✓	M 32
9	11																	.565	✓	.M 33
10	0																	.564	✓	
11																				
12																				

VESSEL						PROJECT & LEG							STATION DESIGNATION											
NOAA Ship MILLER FREEMAN																								
CONSC CAST #	LATITUDE		LONGITUDE		DATE JD=		TIME (GMT)		DRY BULB	WET BULB	PRESSURE	SEA STATE	VISIBILITY	WIND DIRN.	WIND SPD.	CLOUD (amt)	WEATHER	BOTTOM DEPTH	STA. NAME/ID					
	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	(°C)	(°C)	(mb)	*	(deg)	(m/s)	*	*	(m)						
010	56	52.48	N	164	03.37	W	16	APR	98	17	46	1.9	1.9	963	6	032	18	72	6-10					
CTD		TIMES		JD/TIME		DATA LOCATION														REMARKS				
TYPE & SN		9Plus 91660		DATA ON		Tape/Diskette ID														File Name/Header				
PRESS SN		29972		START DOWN																CTD 010				
TEMP SN		1: 889, 2: 701		AT DEPTH																				
COND SN		1: 480, 2: 303		AT SURFACE																MAX. DEPTH = 30 m				
<input checked="" type="checkbox"/> PAR		<input checked="" type="checkbox"/> FLUOR(10)		<input checked="" type="checkbox"/> CHLAM		<input type="checkbox"/> TRANSMISSOMETER		<input checked="" type="checkbox"/> Cleaned air bleed valve																
POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES																		SAMPLE BOTTLE DATA	SAMPLE BOTTLE NUMBER			
		PRESSURE	PRI. TEMP.	SEC. TEMP.	SALINITY														SALINITY	SAL.	NUTR.	CHL.	WHIT'S NUTR.	
1	30																			22				
2	30																							
3	19																							
4	14																							
5	8																							
6	5																							
7	0																							
8																								
9																								
10																								
11																								
12																								

[illegible]

[illegible]

[illegible]

VESSEL		PROJECT & LEG		STATION DESIGNATION																	
NOAA Ship MILLER FREEMAN																					
CONSC CAST #	LATITUDE		LONGITUDE		DATE JD= 107		TIME (GMT)		WET BULB (°C)	PRESSURE (mb)	SEA STATE	WIND DIRN. (deg)	WIND SPD. (m/s)	CLOUD (amt)	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID				
	DEG	MIN	DEG	MIN	DAY	MO	YR	HR										MIN			
014	56	52.6	2	16	40	2.6	5	17	08	05	1.0	0.99	6	4	6	030	188	7	2	12	8-7
CTD		TIMES		JD/TIME		DATA LOCATION												REMARKS			
TYPE & SN 9Plus 91660		DATA ON				Tape/Diskette ID		File Name/Header													
PRESS SN 29972		START DOWN						C20014													
TEMP SN 1: 889, 2: 701		AT DEPTH																			
COND SN 1: 480, 2: 303		AT SURFACE																MAX. DEPTH = 44 m			
								<input checked="" type="checkbox"/> PAR <input type="checkbox"/> FLUOR (10) <input type="checkbox"/> CHLOR		<input type="checkbox"/> TRANSMISSOMETER <input checked="" type="checkbox"/> Cleaned air bleed valve											
POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES																			
		PRESSURE	PRI. TEMP.	SEC. TEMP.	SALINITY	SAMPLE BOTTLE DATA												SAMPLE BOTTLE NUMBER			
1	44					SALINITY												SAL.	NUTR.	CHL.	WHIT'S NUTR.
2	44																				
3	44																				
4	24																				
5	24																				
6	24																				
7	13																				
8	13																				
9	13																				
10	13																				
11																					
12																					

VESSEL						PROJECT & LEG							STATION DESIGNATION									
NOAA Ship MILLER FREEMAN																						
CONSC CAST #	LATITUDE		LONGITUDE		DATE JD=107		TIME (GMT)		DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (m/s)	CLOUD (amt)	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID			
015	57	06.90 N	116	45.89 W	17 APR	98	11	41	0.1	0.09	64	6	015	23	872			9-1				
CTD		TIMES		JD/TIME		DATA LOCATION														REMARKS		
TYPE & SN		9Plus 91660 DATA ON				Tape/Diskette ID		File Name/Header														
PRESS SN		29972																				
TEMP SN		1: 889, 2: 701																				
COND SN		1: 480, 2: 303																		MAX. DEPTH = 65 m		
POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES																				
		<input checked="" type="checkbox"/> PAR		<input checked="" type="checkbox"/> FLUOR (10)		<input type="checkbox"/> CHLAM	<input type="checkbox"/> TRANSMISSOMETER		<input checked="" type="checkbox"/> Cleaned air bleed valve		SAMPLE BOTTLE DATA								SAMPLE BOTTLE NUMBER			
		PRESSURE	PRI. TEMP.	SEC. TEMP.		SALINITY		SALINITY		SALINITY		SAL.	NUTR.	CHL.	WHIT'S NUTR.							
1	65											13			M52							
2	60														M53							
3	50													✓	M54							
4	40													✓	M55							
5	30													✓	M56							
6	20													✓	M57							
7	10													✓	M58							
8	0													✓	M59							
9																						
10																						
11																						
12																						

VESSEL				PROJECT & LEG				STATION DESIGNATION															
NOAA Ship MILLER FREEMAN																							
CONSC CAST #	LATITUDE		LONGITUDE		DATE JD= 107		TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (m/s)	CLOUD (amt)	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID					
	DEG	MIN	DEG	MIN	DAY	MO													YR	HR	MIN		
017	57	32.15	N	166	43.76	W	17	APR	9	8	18	53	-2.0	-2.2	0.9	57	34	5	2.6	87	Z	20	11-1
CTD		TIMES		JD/TIME		DATA LOCATION																	
TYPE & SN		9Plus 91660		DATA ON		Tape/Diskette ID		File Name/Header															
PRESS SN		29972		START DOWN				CTD017															
TEMP SN		1: 889, 2: 701		AT DEPTH																			
COND SN		1: 480, 2: 303		AT SURFACE				MAX. DEPTH = 63 m															
								<input checked="" type="checkbox"/> PAR <input checked="" type="checkbox"/> FLUOR (10) <input type="checkbox"/> CHLAM <input type="checkbox"/> TRANSMISSOMETER <input checked="" type="checkbox"/> Cleaned air bleed valve															
POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES																					
		PRESSURE	PRI. TEMP.	SEC. TEMP.	SALINITY	SAMPLE BOTTLE DATA											SAMPLE BOTTLE NUMBER						
						SALINITY											SAL.	NUTR.	CHL.	WHIT'S NUTR.			
1	65																27						
2	60																						
3	50																						
4	40																						
5	30																						
6	20																						
7	10																						
8	0																						
9																							
10																							
11																							
12																							

VESSEL							PROJECT & LEG						STATION DESIGNATION										
NOAA Ship MILLER FREEMAN																							
CONSC CAST #	LATITUDE			LONGITUDE			DATE JD= 107			TIME (GMT)			DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (m/s)	CLOUD (amt)	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
	DEG	MIN	N	DEG	MIN	E	DAY	MO	YR	Hr	Min												
/																	*	* * *	*	(m)			
0185732.60 N	166 43.26 W			17 APR 298									-2.1	-2.4	9957	350	24	872	69	1-2			
CTD		TIMES		JD/TIME		DATA LOCATION										REMARKS							
TYPE & SN		9Plus 91660 DATA ON				Tape/Diskette ID File Name/Header										<i>Rho - .BT file</i>							
PRESS SN		29972 START DOWN				CTDO18										<i>wel T_s + C_S</i>							
TEMP SN		1: 889, 2: 701 AT DEPTH														MAX. DEPTH = m							
COND SN		1: 480, 2: 303 AT SURFACE																					
		<input checked="" type="checkbox"/> PAR		<input checked="" type="checkbox"/> FLUOR (10)		<input type="checkbox"/> CHIAM		<input type="checkbox"/> TRANSMISSOMETER		<input checked="" type="checkbox"/> Cleaned air bleed valve													
POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES										SAMPLE BOTTLE DATA			SAMPLE BOTTLE NUMBER								
1	35	PRESSURE	PRI. TEMP.	SEC. TEMP.	SALINITY	SALINITY						SALINITY	SAL.	NUTR.	CHL.	WHIT'S NUTR.							
2	19												14										
3	12																						
4	9																						
5	5																						
6	3																						
7	0																						
8																							
9																							
10																							
11																							
12																							

VESSEL		PROJECT & LEG				STATION DESIGNATION												
NOAA Ship MILLER FREEMAN																		
CONSC CAST #	LATITUDE		LONGITUDE		DATE JD=		TIME (GMT)		WET BULB (°C)	PRESSURE (mb)	SEA STATE	WIND DIRN. (deg)	WIND SPD. (m/s)	CLOUD (amt)	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID	
	DEG	MIN	DEG	MIN	DAY	MO	YR	HR										MIN
019	5738.02	N	16736.53	W	17	APR	98	22	47	-1.9	-2.4	016	3	55	3	872	69	12-1
CTD		TIMES		JD/TIME		DATA LOCATION												
TYPE & SN		9Plus 91660		DATA ON		Tape/Diskette ID		File Name/Header										
PRESS SN		29972		START DOWN				CTD 019										
TEMP SN		1: 889, 2: 701		AT DEPTH														
COND SN		1: 480, 2: 303		AT SURFACE				MAX. DEPTH = m										
																REMARKS		
																PRI SYS USED UP - HAD TO SOAK CTD FOR ~5 MINS		
																MAX. DEPTH = m		
POS.		TRIP DEPTH		CTD CONVERTED MONITOR VALUES														
				PRESSURE		PRI. TEMP.		SEC. TEMP.		SALINITY		SALINITY		SAMPLE BOTTLE DATA		SAMPLE BOTTLE NUMBER		
1		666														SAL. 24		
2		60														NUTR. 1126		
3		50														NUTR. 1177		
4		40														NUTR. 1179		
5		30														NUTR. 1181		
6		20														NUTR. 1182		
7		10														NUTR. 1183		
8		0														NUTR. 1184		
9																		
10																		
11																		
12																		

* false spike in fluorescence

VESSEL						PROJECT & LEG							STATION DESIGNATION											
NOAA Ship MILLER FREEMAN																								
CONSC CAST #	LATITUDE		LONGITUDE		DATE JD= 108		TIME (GMT)		DRY BULB	WET BULB	PRESSURE	SEA STATE	VISIBILITY	WIND DIRN.	WIND SPD.	CLOUD (amt)	TYPE	WEATHER	BOTTOM DEPTH	STA. NAME/ID				
	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	(°C)	(°C)	(mb)	*	(deg)	(m/s)	* * *	* * *	(m)						
0205746.35 N	168	28.00 W	18 APR 98	0338-24	-3.20	46	7	34	8	26	8	7	2	10	13-1									
CTD	TIMES		JD/TIME		DATA LOCATION																			
TYPE & SN	9Plus 91660 DATA ON		Tape/Diskette ID		File Name/Header																			
PRESS SN	29972		START DOWN		STD020																			
TEMP SN	1: 889, 2: 701		AT DEPTH																					
COND SN	1: 480, 2: 303		AT SURFACE																					
	<input checked="" type="checkbox"/> PAR		<input checked="" type="checkbox"/> FLUOR (10)		<input type="checkbox"/> ChlAM		<input type="checkbox"/> TRANSMISSOMETER		<input checked="" type="checkbox"/> Cleaned air bleed valve															
POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES																						
		PRESSURE	PRI. TEMP.	SEC. TEMP.	SALINITY	SAMPLE BOTTLE DATA														SAMPLE BOTTLE NUMBER				
1	65					SALINITY															SAL	NUTR.	CHL	WHIT'S NUTR.
2	60																				26	582		m84
3	50																					581		m85
4	40																					580		m86
5	30																							m87
6	20																					579		m88
7	10																					578		m89
8	0																					577		m90
9																								m91
10																								
11																								
12																								

VESSEL		PROJECT & LEG				STATION DESIGNATION																									
NOAA Ship MILLER FREEMAN																															
CONSC CAST #	LATITUDE		LONGITUDE		DATE JD=		TIME (GMT)		WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (m/s)	CLOUD (amt)	TYPE	WEATHER	BOTTOM DEPTH	STA. NAME/ID												
	DEG	MIN	DEG	MIN	DAY	MO	YR	HR												MIN											
021	58	04.29	N	168	43.07	W	18	APR	9	8	08	39	-4.2	-4.8	0.6	6	7	3	4	5	3	0	8	7	2	7	4	1	4	-	1
CTD		TIMES		JD/TIME		DATA LOCATION										REMARKS															
TYPE & SN		9Plus 91660		DATA ON		Tape/Diskette ID		File Name/Header																							
PRESS SN		29972		START DOWN				CTD021																							
TEMP SN		1: 889, 2: 701		AT DEPTH																											
COND SN		1: 480, 2: 303		AT SURFACE														MAX. DEPTH = 65 m													
POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES										SAMPLE BOTTLE DATA		SAMPLE BOTTLE NUMBER		WHIT'S NUTR.															
		PRESSURE	PRI. TEMP.	SEC. TEMP.	SALINITY							SALINITY		SAL.	NUTR.	CHL.															
1	65													28																	
2	60																														
3	50																														
4	40																														
5	30																														
6	20																														
7	10																														
8	0																														
9																															
10																															
11																															
12																															

VESSEL		PROJECT & LEG				STATION DESIGNATION															
NOAA Ship MILLER FREEMAN																					
CONSC CAST #	LATITUDE		LONGITUDE		DATE JD= 10 8		TIME (GMT)		DRY BULB	WET BULB	PRESSURE	SEA STATE	WIND DIRN.	WIND SPD.	CLOUD (amt)	WEATHER	BOTTOM DEPTH	STA. NAME/ID			
	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	(°C)	(°C)	(mb)	*	(deg)	(m/s)	*	(m)				
0235739.24	N	10901.27	W	18	APR	98	17	07	-3.1	-3.2	1057	340	24	87	S		71	16-1			
CTD		TIMES		JD/TIME		DATA LOCATION															
TYPE & SN		9Plus 91660		DATA ON		Tape/Diskette ID File Name/Header															
PRESS SN		29972		START DOWN		CTD023															
TEMP SN		1: 889, 2: 701		AT DEPTH																	
COND SN		1: 480, 2: 303		AT SURFACE		MAX. DEPTH = 65 m															
POS.		TRIP DEPTH		CTD CONVERTED MONITOR VALUES		TRANSMISSOMETER		Cleaned air bleed valve		SAMPLE BOTTLE DATA										SAMPLE BOTTLE NUMBER	
1	65	PRESSURE	PRI. TEMP.	SEC. TEMP.	SALINITY	SALINITY										SAL.	NUTR.	CHL.	WHIT'S NUTR.		
2	60															16	594		m107		
3	50																593	✓	m108		
4	40																592	✓	m109		
5	30																	✓	m110		
6	20																591	✓	m111		
7	10																590	✓	m112		
8	0																589	✓	m113		
9																			m114		
10																					
11																					
12																					

[illegible]

VESSEL		PROJECT & LEG		STATION DESIGNATION														
NOAA Ship MILLER FREEMAN																		
CONSC CAST #	LATITUDE		LONGITUDE		DATE JD=	TIME (GMT)		DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (m/s)	CLOUD (amt)	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
	DEG	MIN	DEG	MIN		DAY	MO											
026	58	04.34 N	168	46.69 W	19	APR	98	05	25	-3.0	-3.5	155	8	330	18	81	70	18-1
CTD		TIMES		JD/TIME		DATA LOCATION												
TYPE & SN		9Plus 91660		DATA ON		Tape/Diskette ID File Name/Header												
PRESS SN		29972		START DOWN		C1D026												
TEMP SN		1: 889, 2: 701		AT DEPTH														
COND SN		1: 480, 2: 303		AT SURFACE														
		<input checked="" type="checkbox"/> PAR		<input checked="" type="checkbox"/> FLUOR (10)		<input type="checkbox"/> CHL AM		<input type="checkbox"/> TRANSMISSOMETER		<input checked="" type="checkbox"/> Cleaned air bleed valve								
POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES										SAMPLE BOTTLE DATA		SAMPLE BOTTLE NUMBER				
		PRESSURE	PRI. TEMP.	SEC. TEMP.	SALINITY						SALINITY		SAL.	NUTR.	CHL.	WHIT'S NUTR.		
1													30					
2																		
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		

VESSEL				PROJECT & LEG				STATION DESIGNATION													
NOAA Ship MILLER FREEMAN								19 Handed													
CONSC. CAST #	LATITUDE		LONGITUDE		DATE JD=109		TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (m/s)	CLOUD (amt)	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID			
	DEG	MIN	DEG	MIN	DAY	MO													YR	HR	MIN
02758	40.19	N	168	19.64	W	19	A	19	53	0.7	0.4	1637	255	7	872		52	19-2			
CTD		TIMES		JD/TIME		DATA LOCATION															
TYPE & SN 9Plus 91660		DATA ON				Tape/Diskette ID		File Name/Header													
PRESS SN 29972		START DOWN						CTD027													
TEMP SN 1: 889, 2: 701		AT DEPTH																			
COND SN 1: 480, 2: 303		AT SURFACE						MAX. DEPTH = 49 m													
<input checked="" type="checkbox"/> PAR <input checked="" type="checkbox"/> FLUOR (10) <input type="checkbox"/> CHTAM <input checked="" type="checkbox"/> TRANSMISSOMETER <input checked="" type="checkbox"/> Cleaned air bleed valve				REMARKS Cast for RHO																	
POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES																			
		PRESSURE	PRI. TEMP.	SEC. TEMP.	SALINITY	SAMPLE BOTTLE DATA												SAMPLE BOTTLE NUMBER			
1	22					SALINITY												SAL.	NUTR.	CHL.	WHIT'S NUTR.
2	14																				
3	10																				
4	6																				
5	3																				
6	0																				
7																					
8																					
9																					
10																					
11																					
12																					

3 of 6 Rubber Bands were too cold to hold the sample. nearest cast (52-28).

[illegible]

VESSEL NOAA Ship MILLER FREEMAN						PROJECT & LEG				STATION DESIGNATION 19 April 4										
CONSC CAST #	LATITUDE		LONGITUDE		DATE JD=109			TIME (GMT)		DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (m/s)	CLOUD (amt) TYPE	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN											
029	58	40.38 N	168	19.49 W	19	APR	98	20	40	0.4	0.2	1637			255	8	872	52	19-4	
CTD																				
TYPE & SN		9Plus 91660		DATA ON				Tape/Diskette ID		File Name/Header						REMARKS		note + 10 m RHO		
PRESS SN		29972		START DOWN																
TEMP SN		1: 889, 2: 701		AT DEPTH																
COND SN		1: 480, 2: 303		AT SURFACE														MAX. DEPTH = 249 m		
<input checked="" type="checkbox"/> PAR				<input checked="" type="checkbox"/> FLUOR (10)				<input type="checkbox"/> CHLAM				<input type="checkbox"/> TRANSMISSOMETER				<input checked="" type="checkbox"/> Cleaned air bleed valve				
CTD CONVERTED MONITOR VALUES				SAMPLE BOTTLE DATA																
POS.	TRIP DEPTH	PRESSURE	PRI. TEMP.	SEC. TEMP.	SALINITY	SAMPLE BOTTLE DATA				SAMPLE BOTTLE NUMBER				WHIT'S NUTR.						
1	49													M/23						
2	40													M/24						
3	30													M/25						
4	20													M/26						
5	10													M/27						
6	10																			
7	0													20 M/28						
8																				
9																				
10																				
11																				
12																				

VESSEL				PROJECT & LEG				STATION DESIGNATION									
NOAA Ship MILLER FREEMAN								20 10-10-2									
CONSC CAST #	LATITUDE		LONGITUDE		DATE JD=109		TIME (GMT)		WET BULB (°C)	PRESSURE (mb)	SEA STATE	WIND DIRN. (deg)	WIND SPD. (m/s)	CLOUD (amt)	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
	DEG	MIN	DEG	MIN	DAY	MO	YR	HR									
030	58	38.17N	168	33.41W	19	APR	98	22	49	11.1	1637	285	8	72		57	20-2
CTD		TIMES		JD/TIME		DATA LOCATION											
TYPE & SN 9Plus 91660		DATA ON				Tape/Diskette ID		File Name/Header									
PRESS SN 29972		START DOWN						CTD030									
TEMP SN 1: 889, 2: 701		AT DEPTH															
COND SN 1: 480, 2: 303		AT SURFACE						MAX. DEPTH = m									
CTD CONVERTED MONITOR VALUES				TRANSMISSOMETER				Cleaned air bleed valve									
POS.	TRIP DEPTH	PRESSURE	PRI. TEMP.	SEC. TEMP.	SALINITY	SAMPLE BOTTLE DATA		SAMPLE BOTTLE NUMBER		SAL.	NUTR.	CHL.	WHIT'S NUTR.				
1	53									4			.129				
2	40												.130				
3	30												.131				
4	20												.132				
5	10												.133				
6	0												.134				
7																	
8																	
9																	
10																	
11																	
12																	

VESSEL				PROJECT & LEG				STATION DESIGNATION										
NOAA Ship MILLER FREEMAN								21-2										
CONSC CAST #	LATITUDE		LONGITUDE		DATE JD= 110		TIME (GMT)	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (m/s)	CLOUD (amt)	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
	DEG	MIN	DEG	MIN	DAY	MO												
0315847.54N	16823.08W	2018	0036	0036	0036	0036	0036	0036	0036	0036	0036	0036	0036	0036	0036	0036	0036	0036
CTD		TIMES		JD/TIME		DATA LOCATION		REMARKS										
TYPE & SN 9Plus 91660 DATA ON		Tape/Diskette ID		File Name/Header		CTD031		CTD after deployment										
PRESS SN 29972		START DOWN																
TEMP SN 1: 889, 2: 701 AT DEPTH																		
COND SN 1: 480, 2: 303 AT SURFACE																		
		<input checked="" type="checkbox"/> PAR		<input checked="" type="checkbox"/> FLUOR (10)		<input type="checkbox"/> CHAM		<input type="checkbox"/> TRANSMISSOMETER		<input checked="" type="checkbox"/> Cleaned air bleed valve								
POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES										SAMPLE BOTTLE DATA		SAMPLE BOTTLE NUMBER				
		PRESSURE	PRI. TEMP.	SEC. TEMP.	SALINITY						SALINITY	SAL.	NUTR.	CHL.	WHIT'S NUTR.			
1												18						
2																		
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		

[illegible]

VESSEL		PROJECT & LEG				STATION DESIGNATION																
NOAA Ship MILLER FREEMAN						23-2																
CONSCAST #	LATITUDE		LONGITUDE		DATE JD= 110		TIME (GMT)		DRY BULB	WET BULB	PRESSURE	SEA STATE	VISIBILITY	WIND DIRN.	WIND SPD.	CLOUD (amt)	WEATHER	BOTTOM DEPTH	STA. NAME/ID			
	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	(°C)	(°C)	(mb)	*	*	(deg)	(m/s)	*	*	(m)			
0335842.26N	16805.57W	20APR	98	0357	0.5	0.0	18.3	7	26	0	4	9	7	2	48	23-2						
CTD		TIMES		JD/TIME		DATA LOCATION																
TYPE & SN		9Plus 91660		DATA ON		Tape/Diskette ID		File Name/Header														
PRESS SN		29972		START DOWN																		
TEMP SN		1: 889, 2: 701		AT DEPTH																		
COND SN		1: 480, 2: 303		AT SURFACE																		
		<input checked="" type="checkbox"/> PAR		<input checked="" type="checkbox"/> FLUOR (10)		<input type="checkbox"/> ChlAM		<input type="checkbox"/> TRANSMISSOMETER		<input checked="" type="checkbox"/> Cleaned air bleed valve												
POS. TRIP DEPTH		CTD CONVERTED MONITOR VALUES																				
		PRESSURE	PRI. TEMP.	SEC. TEMP.	SALINITY	SAMPLE BOTTLE DATA													SAMPLE BOTTLE NUMBER			
1																			SAL.	NUTR.	CHL.	WHIT'S NUTR.
2																			27			
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10																						
11																						
12																						

MAX. DEPTH = 49 m

[illegible]

VESSEL				PROJECT & LEG				STATION DESIGNATION														
NOAA Ship MILLER FREEMAN								25-2														
CONSC CAST #	LATITUDE		LONGITUDE		DATE JD=		TIME (GMT)		DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	WIND DIRN. (deg)	WIND SPD. (m/s)	CLOUD (amt)	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID				
035	58	28.6	4	N	168	32.4	8	W	20	APR	9	8	07	06	0.9	0.2	1937	330	8	972	63	25-2
CTD				TIMES		JD/TIME		DATA LOCATION														
TYPE & SN				9Plus 91660		DATA ON		Tape/Diskette ID		File Name/Header												
PRESS SN				29972		START DOWN		CTD035														
TEMP SN				1: 889, 2: 701		AT DEPTH																
COND SN				1: 480, 2: 303		AT SURFACE																
				<input checked="" type="checkbox"/> PAR		<input checked="" type="checkbox"/> FLUOR (10)		<input type="checkbox"/> CHAM		<input type="checkbox"/> TRANSMISSOMETER		<input checked="" type="checkbox"/> Cleaned air bleed valve										
POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES																				
		PRESSURE	PRI. TEMP.	SEC. TEMP.	SALINITY	SAMPLE BOTTLE DATA													SAMPLE BOTTLE NUMBER			
1	58					SALINITY													SAL.	NUTR.	CHL.	WHIT'S NUTR.
2	50																		22			M135
3	40																					M136
4	30																					M137
5	20																					M138
6	10																					M139
7	0																					M140
8																						M141
9																						
10																						
11																						
12																						

MAX. DEPTH = 58 m

2561

VESSEL		PROJECT & LEG				STATION DESIGNATION															
NOAA Ship MILLER FREEMAN																					
CONSC CAST #	LATITUDE	LONGITUDE		DATE JD= 111		TIME (GMT)		DRY BULB	WET BULB	PRESSURE	SEA STATE	VISIBILITY	WIND DIRN.	WIND SPD.	CLOUD (amt)	WEATHER	BOTTOM DEPTH	STA. NAME/ID			
	DEG MIN	DEG	MIN	DAY	MO	YR	HR	MIN	(°C)	(°C)	(mb)	*	(deg)	(m/s)	*	*	(m)				
036	5837.94N	116	21.96W	21	APR	98	03	22	11.9	11.6	22.3	7	20	2	8	72	54	262			
CTD		TIMES		JD/TIME		DATA LOCATION															
TYPE & SN 9Plus 91660		DATA ON				Tape/Diskette ID File Name/Header															
PRESS SN 29972		START DOWN				C1D036															
TEMP SN 1: 889, 2: 701		AT DEPTH																			
COND SN 1: 480, 2: 303		AT SURFACE				MAX. DEPTH = 50 m															
						<input checked="" type="checkbox"/> PAR		<input checked="" type="checkbox"/> FLUOR (10)		<input type="checkbox"/> CHIAM		<input type="checkbox"/> TRANSMISSOMETER		<input checked="" type="checkbox"/> Cleaned air bleed valve							
POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES																			
		PRESSURE	PRI. TEMP.	SEC. TEMP.	SALINITY	SAMPLE BOTTLE DATA												SAMPLE BOTTLE NUMBER			
1						SALINITY												SAL.	NUTR.	CHL.	WHIT'S NUTR.
2																		13			
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

VESSEL		PROJECT & LEG				STATION DESIGNATION												
NOAA Ship MILLER FREEMAN																		
CONSC CAST #	LATITUDE		LONGITUDE		DATE JD=		TIME (GMT)		WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (m/s)	CLOUD (amt)	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
	DEG	MIN	DEG	MIN	DAY	MO	YR	HR										
0375819.81N	16833.83W	21	APR	9	8	05	12	11	0.92	137	190	11	872	67	27	1		
CTD		TIMES		JD/TIME		DATA LOCATION												
TYPE & SN		9Plus 91660		DATA ON		Tape/Diskette ID File Name/Header												
PRESS SN		29972		START DOWN		073037												
TEMP SN		1: 889, 2: 701		AT DEPTH														
COND SN		1: 480, 2: 303		AT SURFACE		MAX. DEPTH = 60 m												
						<input checked="" type="checkbox"/> PAR		<input checked="" type="checkbox"/> FLUOR (10)		<input type="checkbox"/> CHL AM		<input checked="" type="checkbox"/> TRANSMISSOMETER		<input checked="" type="checkbox"/> Cleaned air bleed valve				
POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES										SAMPLE BOTTLE DATA		SAMPLE BOTTLE NUMBER				
		PRESSURE	PRI. TEMP.	SEC. TEMP.	SALINITY						SALINITY	SAL.	NUTR.	CHL.	WHIT'S NUTR.			
1	62											10			M142			
2	50														M143			
3	40														M144			
4	30														M145			
5	20														M146			
6	10														M147			
7	0														M148			
8																		
9																		
10																		
11																		
12																		

VESSEL						PROJECT & LEG							STATION DESIGNATION												
NOAA Ship MILLER FREEMAN																									
CONSC CAST #	LATITUDE			LONGITUDE			DATE JD=			TIME (GMT)		DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (m/s)	CLOUD (amt)	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID			
	DEG	MIN		DEG	MIN		DAY	MO	YR	HR	MIN														
0385	70	51.85	N	169	19.39	W	21	APR	98	13	57	1.8	1.5	18.37	*	*	*	*	*	*	74	28-1			
CTD		TIMES		JD/TIME		DATA LOCATION																			
TYPE & SN		9Plus 91660		DATA ON		Tape/Diskette ID File Name/Header																			
PRESS SN		29972		START DOWN		CTD038																			
TEMP SN		1: 889, 2: 701		AT DEPTH																					
COND SN		1: 480, 2: 303		AT SURFACE		MAX. DEPTH = 69 m																			
POS.		TRIP DEPTH		CTD CONVERTED MONITOR VALUES																					
				<input checked="" type="checkbox"/> PAR		<input checked="" type="checkbox"/> FLUOR (10)		<input type="checkbox"/> CHLAM		<input type="checkbox"/> TRANSMISSOMETER		<input checked="" type="checkbox"/> Cleaned air bleed valve		SAMPLE BOTTLE DATA								SAMPLE BOTTLE NUMBER			
				PRESSURE		PRI. TEMP.		SEC. TEMP.		SALINITY		SALINITY		SAL.				NUTR.		CHL.		WHIT'S NUTR.			
1		69												29				606				M149			
2		60																605		✓		150			
3		50																604		✓		151			
4		40																		✓		152			
5		30																		✓		153			
6		20																(603		✓		154			
7		10																602		✓		155			
8		0																601		✓		M156			
9																									
10																									
11																									
12																									

VESSEL		PROJECT & LEG				STATION DESIGNATION										
NOAA Ship MILLER FREEMAN																
CONSC CAST #	LATITUDE	LONGITUDE	DATE JD=		TIME (GMT)	DRY BULB	WET BULB	PRESSURE	SEA STATE	VISIBILITY	WIND DIRN.	WIND SPD.	CLOUD (amt)	WEATHER	BOTTOM DEPTH	STA. NAME/ID
	DEG MIN	DEG MIN	DAY	MO	YR	HR	MIN	(°C)	(°C)	(mb)	*	(m/s)	*	*	(m)	
039	5627.88 N	16920.41 W	21	APR	98	19	16	3.3	2.6	16.3	7	170	8	72	101	29-2
CTD		TIMES		JD/TIME		DATA LOCATION										
TYPE & SN		9Plus 91660		DATA ON		Tape/Diskette ID		File Name/Header								
PRESS SN		29972		START DOWN				CTD039								
TEMP SN		1: 889, 2: 701		AT DEPTH												
COND SN		1: 480, 2: 303		AT SURFACE												
								<input checked="" type="checkbox"/> PAR <input type="checkbox"/> FLUOR (10) <input type="checkbox"/> CHIAM <input type="checkbox"/> TRANSMISSOMETER		<input checked="" type="checkbox"/> Cleaned air bleed valve						
POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES														
		PRESSURE	PRI. TEMP.	SEC. TEMP.	SALINITY	SAMPLE BOTTLE DATA				SAMPLE BOTTLE NUMBER				WHIT'S NUTR.		
1	92															
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																

REMARKS
* change CTD depth graph.

MAX. DEPTH = 92 m

08

MIST

VESSEL		PROJECT & LEG				STATION DESIGNATION													
NOAA Ship MILLER FREEMAN																			
CONSC CAST #	LATITUDE		LONGITUDE		DATE JD=		TIME (GMT)		DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (m/s)	CLOUD (amt)	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
0405627.78N	16920.79W	21	APR	29	8	19	30	3.1	2.5	16.3	7	170	18	8	72	103		29-3	
CTD		TIMES		JD/TIME		DATA LOCATION													
TYPE & SN 9Plus 91660		DATA ON				Tape/Diskette ID File Name/Header													
PRESS SN 29972		START DOWN				CTDO40													
TEMP SN 1: 889, 2: 701		AT DEPTH																	
COND SN 1: 480, 2: 303		AT SURFACE				MAX. DEPTH = 42 m													
						<input checked="" type="checkbox"/> PAR		<input checked="" type="checkbox"/> FLUOR (10)		<input type="checkbox"/> CHAM		<input checked="" type="checkbox"/> TRANSMISSOMETER		<input checked="" type="checkbox"/> Cleaned air bleed valve					
POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES										SAMPLE BOTTLE DATA		SAMPLE BOTTLE NUMBER					
		PRESSURE	PRI. TEMP.	SEC. TEMP.	SALINITY						SALINITY		SAL.	NUTR.	CHL.	WHIT'S NUTR.			
1	42																M158		
2	27																		
3	19																		
4	11																		
5	6																		
6	0																M163		
7																			
8																			
9																			
10																			
11																			
12																			

VESSEL						PROJECT & LEG							STATION DESIGNATION									
NOAA Ship MILLER FREEMAN																						
CONSC CAST #	LATITUDE			LONGITUDE			DATE JD=			TIME (GMT)		DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (m/s)	CLOUD (amt)	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
	DEG	MIN		DEG	MIN		DAY	MO	YR	HR	MIN											
0415617.84N	169	20.39W	21 APR 98	2051	3.7	3.1	1547	165	19	872	191	30-1										
CTD												REMARKS										
TYPE & SN 9Plus 91660 DATA ON _____												Tape/Diskette ID File Name/Header										
PRESS SN 29972 START DOWN _____												CTD041										
TEMP SN 1: 889, 2: 701 AT DEPTH _____																						
COND SN 1: 480, 2: 303 AT SURFACE _____												MAX. DEPTH = 186 m										
<input checked="" type="checkbox"/> PAR <input checked="" type="checkbox"/> FLUOR (10) <input type="checkbox"/> CHLAM <input type="checkbox"/> TRANSMISSOMETER <input checked="" type="checkbox"/> Cleaned air bleed valve																						
POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES										SAMPLE BOTTLE DATA				SAMPLE BOTTLE NUMBER						
1	186	PRESSURE	PRI. TEMP.	SEC. TEMP.	SALINITY	SALINITY	SAL.	NUTR.	CHL.	WHIT'S NUTR.												
2																						
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10																						
11																						
12																						

VESSEL		PROJECT & LEG		STATION DESIGNATION								
NOAA Ship MILLER FREEMAN		MF-98-05B										
CONSC CAST #	LATITUDE	LONGITUDE	DATE JD=	TIME (GMT)	SEA STATE	WET BULB	WIND DIRN.	WIND SPD.	CLOUD (amt)	WEATHER	BOTTOM DEPTH	STA. NAME/ID
	DEG MIN	DEG MIN	DAY MO YR	HR MIN		(°C)	(deg)	(m/s)	***		(m)	
0425617.65N	16920.40W	21	APR 98	2338	3.8	3.2	165	23	872	197	30-4	
CTD		TIMES		JD/TIME		DATA LOCATION		REMARKS				
TYPE & SN 9Plus 91660		DATA ON				Tape/Diskette ID		File Name/Header				
PRESS SN 29972		START DOWN										
TEMP SN 1: 889, 2: 701		AT DEPTH										
COND SN 1: 480, 2: 303		AT SURFACE								MAX. DEPTH = 195 m		
		<input checked="" type="checkbox"/> PAR		<input checked="" type="checkbox"/> FLUOR (10)		<input type="checkbox"/> CHIAM		<input checked="" type="checkbox"/> TRANSMISSOMETER		<input checked="" type="checkbox"/> Cleaned air bleed valve		
POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES		SAMPLE BOTTLE DATA		SAMPLE BOTTLE NUMBER		SAL.		NUTR.		WHIT'S NUTR.
1		PRESSURE	PRI. TEMP.	SEC. TEMP.	SALINITY			1				
2												
3												
4												
5												
6												
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12												

VESSEL						PROJECT & LEG							STATION DESIGNATION											
NOAA Ship MILLER FREEMAN																								
CONSC CAST #	LATITUDE			LONGITUDE			DATE JD=			TIME (GMT)		DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (m/s)	CLOUD (amt)	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID		
	DEG	MIN		DEG	MIN		DAY	MO	YR	HR	MIN													
0435610.81N	16920.12W	22APR 98	0057	3.7	3.3	12.4	7155	18	872	626	31-1													
CTD		JD/TIME		TIMES		DATA LOCATION																REMARKS		
TYPE & SN 9Plus 91660		DATA ON				Tape/Diskette ID		File Name/Header																
PRESS SN 29972		START DOWN						CTDOH3																
TEMP SN 1: 889, 2: 701		AT DEPTH																						
COND SN 1: 480, 2: 303		AT SURFACE																				MAX. DEPTH = 523 m		
POS.	TRIP DEPTH	<input checked="" type="checkbox"/> PAR		<input checked="" type="checkbox"/> FLUOR (10)		<input type="checkbox"/> CHLAM		<input type="checkbox"/> TRANSMISSOMETER		<input checked="" type="checkbox"/> Cleaned air bleed valve		SAMPLE BOTTLE DATA											SAMPLE BOTTLE NUMBER	
		PRESSURE	PRI. TEMP.	SEC. TEMP.	SALINITY	SALINITY											SAL.	NUTR.	CHL.	WHIT'S NUTR.				
1	516																14			M164				
2	100																			M165				
3	80																			M166				
4	50																			M167				
5	40																			M168				
6	30																			M169				
7	20																			M170				
8	10																			M171				
9																								
10																								
11																								
12																								

VESSEL		PROJECT & LEG		STATION DESIGNATION															
NOAA Ship MILLER FREEMAN																			
CONSC CAST #	LATITUDE		LONGITUDE		DATE JD=		TIME (GMT)		DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (m/s)	CLOUD (amt)	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
044	56	09.52 N	169	20.05 W	22	APR	9	06	35	4.0	3.2	10	4	7	140	22	872	668	31-4
CTD		TIMES		JD/TIME		DATA LOCATION													
TYPE & SN 9Plus 91660		DATA ON				Tape/Diskette ID File Name/Header													
PRESS SN 29972		START DOWN				CTD044													
TEMP SN 1: 889, 2: 701		AT DEPTH																	
COND SN 1: 480, 2: 303		AT SURFACE				MAX. DEPTH = 530 m													
						Cleaned air bleed valve													
POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES										SAMPLE BOTTLE DATA		SAMPLE BOTTLE NUMBER					
1		PRESSURE	PRI. TEMP.	SEC. TEMP.	SALINITY						SALINITY		SAL.	NUTR.	CHL.	WHIT'S NUTR.			
2													19						
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			
11																			
12																			

VESSEL		PROJECT & LEG				STATION DESIGNATION														
NOAA Ship MILLER FREEMAN																				
CONSCAST #	LATITUDE		LONGITUDE		DATE JD=		TIME (GMT)		DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (m/s)	CLOUD (amt)	WEATHER	BOTTOM DEPTH	STA. NAME/ID	
	DEG	MIN	DEG	MIN	DAY	MO	YR	HR												MIN
045	56	15.26	N	169	42.55	W	22	APR	98	08	24	3.8	3.2	0847	160	20	8	12	295	32-1
CTD		TIMES		JD/TIME		DATA LOCATION														
TYPE & SN		9Plus 91660		DATA ON		Tape/Diskette ID File Name/Header														
PRESS SN		29972		START DOWN		CSD045														
TEMP SN		1: 889, 2: 701		AT DEPTH																
COND SN		1: 480, 2: 303		AT SURFACE		MAX. DEPTH = 285 m														
POS. TRIP DEPTH		CTD CONVERTED MONITOR VALUES										SAMPLE BOTTLE DATA		SAMPLE BOTTLE NUMBER						
		PRESSURE	PRI. TEMP.	SEC. TEMP.	SALINITY	SALINITY					SAL.	NUTR.	CHL.	WHIT'S NUTR.						
1	285										32			M172						
2	200													M173						
3	150													M174						
4	100													M175						
5	75													M176						
6	50												✓	M177						
7	40												✓	M178						
8	30												✓	M179						
9	20												✓	M180						
10	10												✓	M181						
11	0												✓	M182						
12																				

fluoro worked intermittently

VESSEL				PROJECT & LEG				STATION DESIGNATION															
NOAA Ship MILLER FREEMAN																							
CONSC CAST #	LATITUDE		LONGITUDE		DATE JD= 112		TIME (GMT)		WET BULB	PRESSURE	SEA STATE	WIND DIRN.	WIND SPD.	CLOUD (amt)	WEATHER	BOTTOM DEPTH	STA. NAME/ID						
	DEG	MIN	DEG	MIN	DAY	MO	YR	HR										MIN	(°C)	(mb)	(deg)	(m/s)	(m)
4656	26.17	N	170.12.5	2W	22	APR	9	8	11	37	3.4	2.9	06	47	140	21	872	112	33-1				
CTD		TIMES		JD/TIME		DATA LOCATION																	
TYPE & SN		9Plus 91660		DATA ON		Tape/Diskette ID		File Name/Header															
PRESS SN		29972		START DOWN		CTD046																	
TEMP SN		1: 889, 2: 701		AT DEPTH																			
COND SN		1: 480, 2: 303		AT SURFACE																			
MAX. DEPTH =		105 m																					
REMARKS																							
CLEANED AIR BLEED VALVE		<input checked="" type="checkbox"/>																					
CTD CONVERTED MONITOR VALUES																							
POS.	TRIP DEPTH	PRESSURE		PRI. TEMP.		SEC. TEMP.		SALINITY		SALINITY		SAMPLE BOTTLE DATA		SAMPLE BOTTLE NUMBER		SAL.		NUTR.		CHL.		WHIT'S NUTR.	
1	105															71						M183	
2	75																					M184	
3	50																					M185	
4	40																					M186	
5	30																					M187	
6	20																					M188	
7	10																					M189	
8	0																					M190	
9																							
10																							
11																							
12																							

* fluoro worked properly