

VESSEL		PROJECT & LEG				STATION DESIGNATION																						
NOAA R/V MILLER FREEMAN		MF02-11																										
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											MIN									
44	15	43.17N	152	17.24W	25	SEP	02	24	51	11.4	10.9	17	37	24	92	46	1	192										
CTD		TIMES		JD/TIME		DATA LOCATION																						
TYPE & SN		9+ S/N 91220		DATA ON		Tape/Diskette ID																						
PRESS SN		80020		START DOWN		File Name/Header																						
TEMP SN		710/884		AT DEPTH																								
COND SN		915/530		AT SURFACE																								
		<input type="checkbox"/> PAR 4242		<input type="checkbox"/> FLUOR 153		<input type="checkbox"/> CHLOR 109		<input type="checkbox"/> TRANSMISSOMETER		<input type="checkbox"/> Cleaned air bleed valve		184m 12/6																
POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES													SAMPLE BOTTLE DATA		SAMPLE BOTTLE NUMBER		SAL.		NUTR.		CHL.		WHIT'S NUTR.			
1	184	PRESSURE	PRI. TEMP.	SEC. TEMP.	PRI. SALINITY	SEC. SALINITY	SALINITY														35							
2																												
3																												
4																												
5																												
6																												
7																												
8																												
9																												
10																												
11																												
12																												

29 500 on centerboard - centerboard up (depth values higher)

[illegible]

[illegible]

VESSEL		PROJECT & LEG				STATION DESIGNATION																							
NOAA RV MILLER FREEMAN		MF02-11																											
CONSC CAST #	52 45	LATITUDE		LONGITUDE		DATE JD=		TIME (GMT)		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)						
04	45	28	45	15	05	26	SEP	02	11	08	10.7	10.2	11.1	4	6	0	7	2	1	6	8	7	5	1	7	7			
CTD		TIMES		JD/TIME		DATA LOCATION										REMARKS													
TYPE & SN		9+ S/N 91220		DATA ON		Tape/Diskette ID										File Name/Header													
PRESS SN		80020		START DOWN																									
TEMP SN		710/884		AT DEPTH																									
COND SN		915/530		AT SURFACE												MAX. DEPTH = 172 m													
						<input type="checkbox"/> PAR 4242 <input type="checkbox"/> FLUOR 153 <input type="checkbox"/> CHIAM 109 <input type="checkbox"/> TRANSMISSOMETER <input type="checkbox"/> Cleaned air bleed valve										b/s - 172													
POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES										SAMPLE BOTTLE DATA		SAMPLE BOTTLE NUMBER															
		PRESSURE	PRI. TEMP.	SEC. TEMP.	PRI. SALINITY	SEC. SALINITY	SALINITY											SAL.	NUTR.	CHL.	WHIT'S NUTR.								
1	172																	18											
2																													
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													

[illegible]

VESSEL				PROJECT & LEG				STATION DESIGNATION													
NOAA RV MILLER FREEMAN				MF02-11																	
CONSC CAST #	LATITUDE		LONGITUDE		DATE JD=		TIME (GMT)		WET BULB	DRY BULB	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)					
665946.14N	15458.97W	26SEP02	1424	16.6	18.2	49	56	49	36	876	168										
CTD	TIMES		JD/TIME		DATA LOCATION																
TYPE & SN	DATA ON				Tape/Diskette ID		File Name/Header														
PRESS SN	80020																				
TEMP SN	710/884																				
COND SN	915/530																				
				PAR 4242		FLUOR 153		CHIAM 109		TRANSMISSOMETER		Cleared air bleed valve W/O = 125									
POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES																			
		PRESSURE	PRI. TEMP.	SEC. TEMP.	PRI. SALINITY	SEC. SALINITY	SALINITY	SAMPLE BOTTLE DATA									SAMPLE BOTTLE NUMBER	SAL.	NUTR.	CHL.	WHIT'S NUTR.
1		~160																			
2																					
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

MAX. DEPTH = 160 m

[illegible]

[illegible]



[illegible]

[illegible]

VESSEL						PROJECT & LEG							STATION DESIGNATION																			
NOAA RV MILLER FREEMAN						MF02-11																										
CONSC CAST #		LATITUDE		LONGITUDE		DATE JD=		TIME (GMT)		WET BULB		SEA STATE		VISIBILITY		WIND DIRN.		WIND SPD.		CLOUD (amt)		WEATHER		BOTTOM DEPTH		STA. NAME/ID						
DEG	MIN	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	(°C)	(mb)	*	*	(deg)	(m/s)	*	*	*	*	*		(m)									
41	159	46	.11	N	154	45	.59	W	27	S	E	P	02	17	51	11	4	14	.4	1	4	5	8	2	2	7	13	5	3	1	179	
CTD		TIMES		JD/TIME		DATA LOCATION		REMARKS																								
TYPE & SN		9+ S/N 91220		DATA ON		Tape/Diskette ID		File Name/Header																								
PRESS SN		80020		START DOWN																												
TEMP SN		710/884		AT DEPTH																												
COND SN		915/530		AT SURFACE																												







[illegible]

VESSEL		PROJECT & LEG				STATION DESIGNATION											
NOAA RV MILLER FREEMAN		MF02-11															
CONSC CAST #	LATITUDE		LONGITUDE		DATE JD=		TIME (GMT)		WET BULB (°C)	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
41658	16.46	N	14743.65	W	28	S	E	P	02	13	48	27	11	16	100	2354	
CTD		JD/TIME		DATA LOCATION		REMARKS											
TYPE & SN		9+ S/N 91220		DATA ON		File Name/Header											
PRESS SN		80020		START DOWN													
TEMP SN		710/884		AT DEPTH													
COND SN		915/530		AT SURFACE		MAX. DEPTH = m											
TRIP DEPTH		PAR 4242		FLUOR 153		CHAM 109		TRANSMISSOMETER		Cleared air bleed valve		2256 m					
POS.	CTD CONVERTED MONITOR VALUES	SAMPLE BOTTLE DATA															
		PRESSURE	PRI. TEMP.	SEC. TEMP.	PRI. SALINITY	SEC. SALINITY	SALINITY	SAL.	NUTR.	CHL.	WHIT'S NUTR.						
1		28 ✓						24	546								
2		23 ✓							547								
3		18 ✓							548								
4																	
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	

chart depth -1196 fm = 2175 m



VESSEL		PROJECT & LEG				STATION DESIGNATION																			
NOAA RV MILLER FREEMAN		MF02-11																							
CONSC	58 15	LATITUDE		LONGITUDE		DATE JD=		TIME (GMT)		WET BULB		SEA STATE		WIND DIRN.		WIND SPD.		CLOUD (amt)		WEATHER		BOTTOM DEPTH		STA. NAME/ID	
CAST #	147 40	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	(°C)	(°C)	(mb)	*	(deg)	(m/s)	*	*	*	*	(m)				
1758	15.94N	147	40	29	W	3	S	E	0	2	10	10	19	4	19	4	8	6	6	2	2	7	4		
CTD		TIMES		JD/TIME		DATA LOCATION										REMARKS									
TYPE & SN		DATA ON				Tape/Diskette ID		File Name/Header												FATE					
PRESS SN		START DOWN																							
TEMP SN		AT DEPTH																							
COND SN		AT SURFACE																		MAX. DEPTH = 574 m					
TRIP DEPTH		CTD CONVERTED MONITOR VALUES		PAR 4242		FLUOR 153		CHAM 109		TRANSMISSOMETER		Cleaned air bleed valve		SAMPLE BOTTLE NUMBER											
		PRESSURE		PRI. TEMP.		SEC. TEMP.		PRI. SALINITY		SEC. SALINITY		SALINITY		SAL		NUTR.		CHL.		WHIT'S NUTR.					
1	28 ✓															549									
2	23 ✓															554									
3	18 ✓															551									
4																									
5																									
6																									
7																									
8																									
9																									
10																									
11																									
12																									

Depth from pdr

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]





[illegible]

VESSEL		PROJECT & LEG		STATION DESIGNATION	
NOAA RV MILLER FREEMAN		MF02-11		048	
CONSC CAST #	59 34	LONGITUDE		140 11	
DEG	MIN	DEG	MIN		
042659	34.25	140	11.81		
DATE JD=		DATE JD=			
DAY	MO	DAY	MO		
14	09	14	09		
TIME (GMT)		TIME (GMT)			
HR	MIN	HR	MIN		
20	00	20	00		
WET BULB		WET BULB			
(°C)	(°C)	(°C)	(°C)		
9.9	9.9	9.9	9.9		
SEA STATE		SEA STATE			
7	2	7	2		
WIND DIRN.		WIND DIRN.			
(deg)	(deg)	(deg)	(deg)		
25	3	25	3		
WIND SPD.		WIND SPD.			
(m/s)	(m/s)	(m/s)	(m/s)		
3	4	3	4		
CLOUD (amt)		CLOUD (amt)			
5	4	5	4		
WEATHER		WEATHER			
2	1	2	1		
STATION NAME/ID		STATION NAME/ID			
2	1	2	1		
REMARKS		REMARKS			
2032		2032			
MAX. DEPTH =		MAX. DEPTH =			
m		m			
DATA LOCATION		DATA LOCATION			
Tape/Diskette ID		Tape/Diskette ID			
File Name/Header		File Name/Header			
TRANSMISSOMETER		TRANSMISSOMETER			
Chiam 109		Chiam 109			
FLUOR 153		FLUOR 153			
PAR 4242		PAR 4242			
CTD CONVERTED MONITOR VALUES		CTD CONVERTED MONITOR VALUES			
POS.	TRIP	DEPTH	DEPTH	SAMPLE BOTTLE DATA	SAMPLE BOTTLE NUMBER
1	201	201	201	SALINITY	WHIT'S NUTR.
2	201	201	201	SALINITY	WHIT'S NUTR.
3				SALINITY	WHIT'S NUTR.
4				SALINITY	WHIT'S NUTR.
5				SALINITY	WHIT'S NUTR.
6				SALINITY	WHIT'S NUTR.
7				SALINITY	WHIT'S NUTR.
8				SALINITY	WHIT'S NUTR.
9				SALINITY	WHIT'S NUTR.
10				SALINITY	WHIT'S NUTR.
11				SALINITY	WHIT'S NUTR.
12				SALINITY	WHIT'S NUTR.



VESSEL		PROJECT & LEG		STATION DESIGNATION																			
NOAA RV MILLER FREEMAN		MF02-11																					
CONSC	LATITUDE	LONGITUDE		DATE JD= 235		TIME (GMT)		WET BULB		SEA STATE		WIND DIRN.		WIND SPD.		CLOUD (amt)		WEATHER		BOTTOM DEPTH		STA. NAME/ID	
CAST #	DEG MIN	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	(°C)	(°C)	(mb)	*	(deg)	(m/s)	*	*	*	(m)			
0285941.16N	14921.75W	02	10	20	05	11	06	09	50	37	33	30	12	46	2	2	3	2					
CTD	TIMES		JD/TIME		DATA LOCATION										REMARKS								
TYPE & SN	9+ S/N 91220		DATA ON		Tape/Diskette ID		File Name/Header																
PRESS SN	80020		START DOWN																				
TEMP SN	710/884		AT DEPTH																				
COND SN	915/530		AT SURFACE																				
																						MAX. DEPTH = 207 m	
POS.	TRIP DEPTH	PAR 4242		FLOOR 153		CHAM 109		TRANSMISSOMETER		Cleared air bleed valve		SAMPLE BOTTLE DATA										SAMPLE BOTTLE NUMBER	
1	3	PRESSURE	PRI. TEMP.	SEC. TEMP.	PRI. SALINITY	SEC. SALINITY	SALINITY											SAL.	NUTR.	CHL.	WHIT'S NUTR.		
2																							
3																							
4																							
5																							
6																							
7																							
8																							
9																							
10																							
11																							
12																							

[illegible]

VESSEL						PROJECT & LEG							STATION DESIGNATION													
NOAA R/V MILLER FREEMAN						MF02-11																				
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)	TYPE	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID			
	DEG	MIN		DEG	MIN		DAY	MO	YR	HR	MIN															
030	59	21.57	N	148	13.34	W	03	01	02	11	10	7	9.2	25	27	27	05	26	*	*	*	171				
CTD		TIMES			JD/TIME			DATA LOCATION																		
TYPE & SN		DATA ON						Tape/Diskette ID File Name/Header																		
PRESS SN		START DOWN																								
TEMP SN		AT DEPTH																								
COND SN		AT SURFACE																								
		<input type="checkbox"/> PAR 4242			<input type="checkbox"/> FLUOR 153			<input type="checkbox"/> CHIAM 109			<input type="checkbox"/> TRANSMISSOMETER			<input type="checkbox"/> Cleaned air bleed valve			SAMPLE BOTTLE DATA			SAMPLE BOTTLE NUMBER						
POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES																								
		PRESSURE	PRI. TEMP.	SEC. TEMP.	PRI. SALINITY	SEC. SALINITY	SALINITY																SAL.	NUTR.	CHL.	WHIT'S NUTR.
1		165																								
2																										
3																										
4																										
5																										
6																										
7																										
8																										
9																										
10																										
11																										
12																										

[illegible]

[illegible]



150  
125  
100  
75  
50  
40  
30  
20  
10  
0

[illegible]

VESSEL		PROJECT & LEG		STATION DESIGNATION															
NOAA RV MILLER FREEMAN		MF02-11																	
CONSC CAST #	LATITUDE		LONGITUDE		DATE JD=		TIME (GMT)		DRY BULB	WET BULB	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)		
0355	58	16	53	05	10	02	03	29	9.3		19	35	075	17	8	75	172	K34	
CTD		TIMES		JD/TIME		DATA LOCATION													
						Tape/Diskette ID File Name/Header													
TYPE & SN		DATA ON		03:11:00 GMT															
PRESS SN		80020		03:11:00 GMT															
TEMP SN		710/884		03:37:00 GMT															
COND SN		915/530		AT SURFACE															
						MAX. DEPTH = 165 m													
						Cleaned air bleed valve													
						TRANSMISSOMETER													
						Cham 109													
						FLUOR 153													
						PAR 4242													
						CTD CONVERTED MONITOR VALUES													
POS.	TRIP DEPTH	PRESSURE		PRI. TEMP.	SEC. TEMP.	PRI. SALINITY	SEC. SALINITY	SALINITY		SAMPLE BOTTLE DATA		SAMPLE BOTTLE NUMBER		SAL.		NUTR.	CHL.	WHIT'S NUTR.	
1	165													603					
2	150													604					
3	125													605					
4	100													606					
5	75													607					
6	49													608			✓		
7	30													609			✓		
8	20													610			✓		
9	16													611			✓		
10	10													612			✓		
11	3													613			✓		
12																			

165  
150  
125  
100  
75  
50  
30  
20  
15  
10  
0

VESSEL		PROJECT & LEG				STATION DESIGNATION																	
NOAA RV MILLER FREEMAN		MF02-11																					
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)					
0365	843.5	15100	04	10	05	10	04	18	09.2	.	1835	5	0	7	3	0	8	7	5	171	K55		
CTD																							
TYPE & SN		9+ SN 91220		DATA ON		04:20:00 GMT		Tape/Diskette ID		File Name/Header		REMARKS											
PRESS SN		80020		START DOWN		04:21:00 GMT																	
TEMP SN		710/884		AT DEPTH		04:35:06 GMT																	
COND SN		915/530		AT SURFACE								MAX. DEPTH = 17 / m											
POS.		TRIP DEPTH		PAR 4242		FLUOR 153		CHIAM 109		TRANSMISSOMETER		SAMPLE BOTTLE DATA		SAMPLE BOTTLE NUMBER		SAL.		NUTR.		CHL.		WHIT'S NUTR.	
1	167																						
2	150																						
3	125																						
4	100																						
5	75																						
6	50																						
7	46																						
8	31																						
9	20																						
10	10																						
11	3																						
12																							

MAX FLOW = 0.5 Volts

VESSEL		PROJECT & LEG		STATION DESIGNATION																	
NOAA R/V MILLER FREEMAN		MF02-11																			
CONSC CAST #	LATITUDE		LONGITUDE		DATE JD=			TIME (GMT)		WET BULB (°C)	DRY 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												
03758	40	89	N	151	08	94	W	05	0	14	05	14	173	5	77	19	8	75	184	AS6	
CTD		TIMES		JD/TIME		DATA LOCATION										REMARKS					
TYPE & SN		DATA ON		05:15:00 GMT		Tape/Diskette ID										File Name/Header					
PRESS SN		80020		05:16:00 GMT																	
TEMP SN		710/884		05:21:00 GMT																	
COND SN		915/530		05:30:00 GMT												MAX. DEPTH = 184 m					
TRIP DEPTH		PAR 4242		FLUOR 153		CHAM 109		TRANSMISSOMETER		Cleaned air bleed valve											
POS.	CTD CONVERTED MONITOR VALUES	SAMPLE BOTTLE DATA										SAMPLE BOTTLE NUMBER									
		PRESSURE	PRI. TEMP.	SEC. TEMP.	PRI. SALINITY	SEC. SALINITY	SALINITY	SAL	NUTR.	CHL.	WHIT'S NUTR.										
1	180							✓	625												
2	150								626												
3	125								627												
4	100								628												
5	70								629												
6	50								630	✓											
7	40								631	✓											
8	30								632	✓											
9	20								633	✓											
10	10								634	✓											
11	3								635	✓											
12																					

MAX F10 = 0.5 volts

VESSEL		PROJECT & LEG		STATION DESIGNATION								
NOAA RV MILLER FREEMAN		MF02-11										
CONSC CAST #	LATITUDE	LONGITUDE	DATE JD=	TIME (GMT)	WET BULB	SEA STATE	WIND DIRN.	WIND SPD.	CLOUD (amt)	WEATHER	BOTTOM DEPTH	STA. NAME/ID
DEG MIN	DEG MIN	DEG MIN	DAY MO YR	HR MIN	(°C)	(mb)	(deg)	(m/s)	*	*	(m)	
038 58 40.35N	150 50.23W	05 OCT 02	0634	9.0		1635	67	22	875	*	192	6P64
CTD		JD/TIME		DATA LOCATION		REMARKS						
TYPE & SN	DATA ON	06:35:06 GMT		Tape/Diskette ID		File Name/Header						
PRESS SN	80020	06:35:00 GMT										
TEMP SN	710/884	06:41:00 GMT										
COND SN	915/530	06:51:00 GMT										
MAX. DEPTH = 190 m												
CTD CONVERTED MONITOR VALUES		PAR 4242		FLUOR 153		CHIAM 109		TRANSMISSOMETER		Cleaned air bleed valve		
POS.	TRIP DEPTH	PRESSURE		PRI. TEMP.	SEC. TEMP.	PRI. SALINITY	SEC. SALINITY	SALINITY	SAMPLE BOTTLE DATA		SAMPLE BOTTLE NUMBER	
1	190											
2	151											
3	125											
4	101											
5	75											
6	50											
7	40											
8	30											
9	20											
10	11											
11	4											
12												

MAX FLO = 0.5 Volts

VESSEL		PROJECT & LEG				STATION DESIGNATION														
NOAA RV MILLER FREEMAN		MF02-11																		
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)	TYPE	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID	
	DEG	MIN	DEG	MIN	DAY	MO														YR
0395	835	52N	150	48	32	W	05	0	2	0	7	30	8	7	5	1	8	4	6	7
<div>CTD</div> <div> <div>TIME</div> <div>JD/TIME</div> <div>DATA ON</div> <div>07:31:00 GMT</div> </div> <div> <div>START DOWN</div> <div>07:31:00 GMT</div> </div> <div> <div>AT DEPTH</div> <div>67:38:00 GMT</div> </div> <div> <div>AT SURFACE</div> <div>07:52:00 GMT</div> </div>																				
TYPE & SN		9+ SN 91220																		
PRESS SN		80020																		
TEMP SN		710/884																		
COND SN		915/530																		
MAX. DEPTH =		176 m																		
REMARKS																				
DATA LOCATION		File Name/Header																		
Tape/Diskette ID																				
Cleaned air bleed valve		<input type="checkbox"/>																		
TRANSMISSOMETER		<input type="checkbox"/>																		
CHIAM 109		<input type="checkbox"/>																		
FLUOR 153		<input type="checkbox"/>																		
PAR 4242		<input type="checkbox"/>																		
CTD CONVERTED MONITOR VALUES																				
POS.	TRIP DEPTH	PRESSURE	PRI. TEMP.	SEC. TEMP.	PRI. SALINITY	SEC. SALINITY	SALINITY	SAMPLE BOTTLE DATA	SAMPLE BOTTLE NUMBER	SAL.	NUTR.	CHL.	WHIT'S NUTR.							
1	176									✓	647									
2	151										648									
3	125										649									
4	100										650									
5	75										651									
6	50										652	✓								
7	39										653	✓								
8	29										654	✓								
9	20										655	✓								
10	10										656	✓								
11	3										657	✓								
12												✓								

176  
150  
125  
100  
75  
50  
40  
30  
20  
10  
0

Max F<sub>10</sub> = 0.5 v<sub>0</sub>fts

VESSEL NOAA RV MILLER FREEMAN		PROJECT & LEG MF02-11		STATION DESIGNATION																			
CONSC CAST #	58 31.20	150 47.33		LONGITUDE		DATE JD=		TIME (GMT)		WET BULB		WIND DIRN.		WIND SPD.		CLOUD (amt)		WEATHER		BOTTOM DEPTH		STA. NAME/ID	
640	58 32.10 N	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	(°C)	(°C)	(deg)	(deg)	(m/s)	*	*	*	*	(m)			
		15	47	31	W	05	O	C	T	02	08	43	08	31	43	55	22	58	66	138	6P79		
CTD		TIMES		JD/TIME		DATA LOCATION										REMARKS							
TYPE & SN 9+ S/N 91220		DATA ON				Tape/Diskette ID		File Name/Header															
PRESS SN 80020		START DOWN																					
TEMP SN 710/884		AT DEPTH																					
COND SN 915/530		AT SURFACE																		MAX. DEPTH = m			
POS. TRIP DEPTH		PAR 4242		FLUOR 153		CHAM 109		TRANSMISSOMETER		Cleaned air bleed valve		SAMPLE BOTTLE NUMBER											
		CTD CONVERTED MONITOR VALUES		SAMPLE BOTTLE DATA		SALINITY		SALINITY		SALINITY		SAL.		NUTR.		CHL.		WHIT'S NUTR.					
1	133 ✓	PRESSURE	PRI. TEMP.	SEC. TEMP.	PRI. SALINITY	SEC. SALINITY	SALINITY																
2	125 ✓																						
3	100 ✓																						
4	75 ✓																						
5	60 ✓																						
6	40 ✓																						
7	30 ✓																						
8	20 ✓																						
9	10 ✓																						
10	0 ✓																						
11																							
12																							

mays FIN - 0.55



$$c_{H_2O} = 0.7$$

VESSEL NOAA RV MILLER FREEMAN		PROJECT & LEG MF02-11		STATION DESIGNATION 6P8																	
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)			
04	25	8	25	15	06	43	11	02	19	16	11	4	7	6	3	8	5	8			
CTD		TIMES		JD/TIME		DATA LOCATION															
TYPE & SN		DATA ON				Tape/Diskette ID File Name/Header															
PRESS SN		START DOWN																			
TEMP SN		AT DEPTH																			
COND SN		AT SURFACE				MAX. DEPTH = 77 / m															
TRIP DEPTH		CTD CONVERTED MONITOR VALUES																			
		PAR 4242		FLUOR 153		CHIAM 109		TRANSMISSOMETER		Cleaned air bleed valve		SAMPLE BOTTLE DATA							SAMPLE BOTTLE NUMBER		
		PRESSURE		PRI. TEMP.		SEC. TEMP.		PRI. SALINITY		SEC. SALINITY		SALINITY		SAL.		NUTR.		CHL.		WHIT'S NUTR.	
1	75															680					
2	60															681					
3	50															682					
4	40															683					
5	30															684					
6	20															685					
7	10															686					
8	6															687					
9																					
10																					
11																					
12																					

$$fIV_{max} \approx 0.5$$

VESSEL		PROJECT & LEG		STATION DESIGNATION																														
NOAA R/V MILLER FREEMAN		MF02-11		6P8A																														
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	°C	°C	(mb)	*	*	(deg)	(m/s)	*	*			
04	3	58	22	15	4	1	22	W	05	O	C	T	0	2	1	2	03	9	7	9	7	4	9	4	5	4	6	3	1	8	7	5	6	6
CTD		TIMES		JD/TIME		DATA LOCATION												REMARKS																
TYPE & SN		9+ S/N 91220		DATA ON		Tape/Diskette ID												File Name/Header																
PRESS SN		80020		START DOWN																														
TEMP SN		710/884		AT DEPTH																														
COND SN		915/530		AT SURFACE														MAX. DEPTH = m																
POS.	TRIP DEPTH	PAR 4242		FLUOR 153		CHAM 109		TRANSMISSOMETER		Cleaned air bleed valve		SAMPLE BOTTLE		SAMPLE BOTTLE NUMBER		WHIT'S NUTR.																		
		PRESSURE		PRI. TEMP.		SEC. TEMP.		PRI. SALINITY		SEC. SALINITY		SALINITY		SAL.		NUTR.																		
1	60													678																				
2	56													679																				
3	40													688																				
4	36													689																				
5	20													690																				
6	10													691																				
7	0													692																				
8																																		
9																																		
10																																		
11																																		
12																																		

FLV ~ 0.5

$$E_{IV} \text{ mod } = 4.3$$

VESSEL NOAA RV MILLER FREEMAN			PROJECT & LEG MF02-11			STATION DESIGNATION 6P9															
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)			
4455	15	90N	15038	08W	45	OCT	02	13	54	9.7	9.7	48	4	5	47	3	26	875	67		
CTD		TIMES		JD/TIME		DATA LOCATION															
TYPE & SN		9+ S/N 91220		DATA ON		Tape/Diskette ID File Name/Header															
PRESS SN		80020		START DOWN																	
TEMP SN		710/884		AT DEPTH																	
COND SN		915/530		AT SURFACE																	
						MAX. DEPTH = 62 m															
POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES																			
		PAR 4242		FLUOR 153		CHAM 109		TRANSMISSOMETER		Cleaned air bleed valve											
										SAMPLE BOTTLE DATA											
		PRESSURE		PRI. TEMP.		SEC. TEMP.		PRI. SALINITY		SEC. SALINITY		SALINITY		SAL.		NUTR.		CHL.		WHIT's NUTR.	
1	60															700					
2	50															701					
3	40															707					
4	30															702					
5	20															703					
6	10															704					
7	0															705					
8																706					
9																					
10																					
11																					
12																					

CTD ≈ 0.4 / 7 bottles marked as fired / 8 bottles closed & not used