

[illegible]

[illegible]

VESSEL NOAA RV MILLER FREEMAN				PROJECT & LEG <del>MT05-T3</del> MF-04-05				STATION DESIGNATION															
CONSEC CAST #	LATITUDE		LONGITUDE		DATE JD=		TIME (GMT)	DRY BULB	WET BULB	PRESSURE	SEA STATE	VISIBILITY	WIND DIRN.	WIND SPD.	CLOUD (amt)	TYPE	WEATHER	BOTTOM DEPTH	STA NAME/ID				
063	56	25.27	N	16	012.79	W	26	08	03	01	53	1.6	1.0	143	82	01	08	2	21				
DEG	MIN		DEG	MIN	DAY	MO	YR	HR	MIN	(°C)	(°C)	(mb)	(deg)	(m/s)	.	.	.	(m)					
SBE 9Plus 91220A				TIMES		JD/TIME		DATA LOCATION												REMARKS			
PRESS SN 80020				DATA ON				Tape/Diskette ID												File Name/Header			
PRI COND 915				START DOWN																CTD003			
PRI TEMP 710				AT DEPTH																			
SEC COND 304				AT SURFACE																			
SEC TEMP 884				<input checked="" type="checkbox"/> WETStar S/N 868P		<input checked="" type="checkbox"/> PAR S/N 4242														<input checked="" type="checkbox"/> Cleaned air bleed valve			
				CTD CONVERTED MONITOR VALUES																			
POS.	TRIP DEPTH	PRESSURE	PRI. TEMP.	SEC. TEMP.	PRI. SALINITY	SEC. SALINITY	SALINITY	SAMPLE BOTTLE DATA												SAMPLE BOTTLE NUMBER			
1	5 m from bottom							SAL.	NUTR.	CHL.	WHIT'S NUTR.												
2								63															
3																							
4																							
5																							
6																							
7																							
8																							
9																							
10																							
11																							
12																							

MAX. DEPTH = 18 m

VESSEL				PROJECT & LEG				STATION DESIGNATION															
NOAA RV MILLER FREEMAN				Project 1314 F-04-05																			
CONSEC CAST #	LATITUDE		LONGITUDE		DATE JD=		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)					
00456	25	02	N	13	59	W	26	03	07	1.4	1.0	1428	260	09	8	2	22						
SBE 9Plus 91220A				TIMES				JD/TIME				DATA LOCATION				REMARKS							
PRESS SN 80020				DATA ON								Tape/Diskette ID				File Name/Header							
PRI COND 915				START DOWN												CTD004							
PRI TEMP 710				AT DEPTH																			
SEC COND 304				AT SURFACE																			
SEC TEMP 884				<input checked="" type="checkbox"/> WETStar SN 868P				<input checked="" type="checkbox"/> PAR SN 4242				<input type="checkbox"/>				<input checked="" type="checkbox"/> Cleaned air bleed valve							
				CTD CONVERTED MONITOR VALUES																			
POS.	TRIP DEPTH	PRESSURE	PRI. TEMP.	SEC. TEMP.	PRI. SALINITY	SEC. SALINITY	SALINITY	SAMPLE BOTTLE DATA												SAMPLE BOTTLE NUMBER			
1	5 m from bottom																						
2																							
3																							
4																							
5																							
6																							
7																							
8																							
9																							
10																							
11																							
12																							

MAX. DEPTH = 16 m

66

VESSEL		PROJECT & LEG		STATION DESIGNATION																
NOAA R/V MILLER FREEMAN		PROJECTS MF-04-05		0385-2 neover																
CONSEC 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)						
0055	52.56	N	16403.7	26	9	8	18	11	3.8	3.0	0948	29	0124	1	72					
SBE 9Plus		91220A	TIMES		JD/TIME		DATA LOCATION									REMARKS				
PRESS SN		80020	DATA ON				Tape/Diskette ID									File Name/Header				
PRI COND		915	START DOWN													CTD005				
PRI TEMP		710	AT DEPTH																	
SEC COND		304	AT SURFACE													MAX DEPTH = 65 m				
SEC TEMP		884	<input checked="" type="checkbox"/> WETStar S/N 869P		<input checked="" type="checkbox"/> PAR S/N 4242		<input checked="" type="checkbox"/> Cleaned air bleed valve													
POS.		TRIP DEPTH	PRESSURE		PRI. TEMP.		SEC. TEMP.		PRI. SALINITY		SEC. SALINITY		SALINITY		SAMPLE BOTTLE DATA		SAMPLE BOTTLE NUMBER			
1	5 m from bottom														SAL.		NUTR.	CHL.	WHT'S	
2	50														67				W3 X347	X308
3	45																		X306	
4	30																		X302	
5	20																		W2 X300	
6	13.5																		X207	
7	10																		X178	
8	0																		W1 X140	
9																				
10																				
11																				
12																				

VESSEL		PROJECT & LEG		STATION DESIGNATION												
NOAA RV MILLER FREEMAN		MFS-13 M F-04-05		182246046 04-05m												
CONSEC CAST #	LATITUDE	LONGITUDE	DATE JD= 118	TIME (GMT)	DRY BULB	WET BULB	PRESSURE	SEA STATE	VISIBILITY	WIND DIRN.	WIND SPD.	CLOUD (amt)	TYPE	WEATHER	BOTTOM DEPTH	STA. NAME/ID
006	5652.41 N	16403.95 W	22 APR 80	0153	4.2	4.0	2471	80056	1	72						
SBE 9Plus	91220A	TIMES	JD/TIME	REMARKS												
PRESS SN	80020	DATA ON		Tape/Diskette ID File Name/Header												
PRI COND	915	START DOWN														
PRI TEMP	710	AT DEPTH														
SEC COND	304	AT SURFACE		MAX. DEPTH = 67 m												
SEC TEMP	884	<input checked="" type="checkbox"/> WETStar S/N 868P	<input checked="" type="checkbox"/> PAR S/N 4242	<input checked="" type="checkbox"/> Cleaned air bleed valve												
CTD CONVERTED MONITOR VALUES																
POS.	TRIP DEPTH	PRESSURE	PRI. TEMP.	SEC. TEMP.	PRI. SALINITY	SEC. SALINITY	SALINITY	SAMPLE BOTTLE DATA								
1	5 m from bottom							SAL.	NUTR.	CHL.	WHIT'S NUTR.					
2	50							60	Mn <sup>2+</sup>	Mn <sup>2+</sup>						
3	40								3							
4	30								4							
5	24								5	1.283						
6	24								6	2.283						
7	24								7	3.283						
8	12								8	4.283						
9	12								9	5.281						
10	12								10	6.282	X335					
11	0								11							
12									12							

[illegible]

[illegible]



VESSEL		PROJECT & LEG		STATION DESIGNATION													
NOAA RV MILLER FREEMAN		MF03-13		70 m reef site													
CONSEC CAST #	LATITUDE	LONGITUDE	DATE JD=	TIME (GMT)	DRY BULB	WET BULB	PRESSURE	SEA STATE	VISIBILITY	WIND DIRN.	WIND SPD.	CLOUD (amt)	TYPE	WEATHER	BOTTOM DEPTH	STA. NAME/ID	
009	53.32.24N	166.44.05W	27	09	1201	2.7	2.0	083	*	197	14	**	*		67		
SBE 9Plus 91220A TIMES JD/TIME DATA LOCATION																	
PRESS SN	80020	DATA ON	Tape/Diskette ID File Name/Header														
PRI COND	915	START DOWN															
PRI TEMP	710	AT DEPTH															
SEC COND	304	AT SURFACE															
SEC TEMP	884	<input checked="" type="checkbox"/> WET Star S/N 886P <input checked="" type="checkbox"/> PAR S/N 4242 <input type="checkbox"/> Cleaned air bleed valve															
CTD CONVERTED MONITOR VALUES																	
POS.	TRIP DEPTH	PRESSURE	PRI. TEMP.	SEC. TEMP.	PRI. SALINITY	SEC. SALINITY	SALINITY	SAMPLE BOTTLE DATA			SAMPLE BOTTLE NUMBER			WHIT'S			
1	5 m from bottom							SAL.	NUTR.	CHL.	NUTR.						
2	50							02	23						1765		
3	40								24	283	1781						
4	1								25	283	1786						
5	30								26	289	1790						
6	20								27	283	1792						
7	10								28	283	1797						
8	0								29	289	1799						
9																	
10																	
11																	
12																	

VESSEL		PROJECT & LEG		STATION DESIGNATION												
NOAA R/V MILLER FREEMAN		MF03-13														
CONSEC CAST #	LATITUDE	LONGITUDE	DATE JD= 118	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)	
0105738.06	N	16736.9	W	27	08	03	14	56	21.3	11.2	0838	213	11	611	69	
SBE 9Plus	91220A	TIMES	JD/TIME	DATA LOCATION												
PRESS SN	80020	DATA ON		Tape/Diskette ID File Name/Header												
PRI COND	915	START DOWN		CTD00												
PRI TEMP	710	AT DEPTH														
SEC COND	304	AT SURFACE														
SEC TEMP	884	<input checked="" type="checkbox"/> WETStar S/N 868P	<input checked="" type="checkbox"/> PAR S/N 4242	<input type="checkbox"/>	<input type="checkbox"/> Cleaned air bleed valve											
CTD CONVERTED MONITOR VALUES																
POS.	TRIP DEPTH	PRESSURE	PRI. TEMP.	SEC. TEMP.	PRI. SALINITY	SEC. SALINITY	SALINITY	SAMPLE BOTTLE DATA								
1	59 5 m from bottom							SAL	NUTR	CHL	WHT's	SAMPLE BOTTLE NUMBER				
2	50							64	30		61774					
3	140								31	283						
4	-30								32	283	61760					
5	20								33	283						
6	10								34	283	61736					
7	0								35	289						
8									36	289	61544					
9																
10																
11																
12																

MAX. DEPTH = m

[illegible]

VESSEL NOAA R/V MILLER FREEMAN				PROJECT & LEG MF03-13				STATION DESIGNATION 01-85-4A <i>Port Deception</i>																									
CONSEC CAST #		LATITUDE		LONGITUDE		DATE JD=		TIME (GMT)		DRY BULB		WET BULB		PRESSURE		SEA STATE		VISIBILITY		WIND DIRN.		WIND SPD.		CLOUD (amt)		TYPE		WEATHER		BOTTOM DEPTH		STA. NAME/ID	
0125751.29 N		16852.77 W		284803		0013		2.8		1.9		12		8240173		1		70															
SBE 9Plus		91220A		TIMES		JD/TIME		DATA LOCATION		REMARKS																							
PRESS SN		80020		DATA ON				Tape/Diskette ID		File Name/Header																							
PRI COND		915		START DOWN				CTD012																									
PRI TEMP		710		AT DEPTH																													
SEC COND		304		AT SURFACE																													
SEC TEMP		884		<input checked="" type="checkbox"/> WETStar S/N 868P		<input checked="" type="checkbox"/> PAR S/N 4242		<input type="checkbox"/>		<input checked="" type="checkbox"/> Cleaned air bleed valve																							
CTD CONVERTED MONITOR VALUES												SAMPLE BOTTLE DATA				SAMPLE BOTTLE NUMBER																	
POS.	TRIP DEPTH	PRESSURE	PRI. TEMP.	SEC. TEMP.	PRI. SALINITY	SEC. SALINITY	SALINITY	SAL.	NUTR.	CHL.	WHITS																						
1	5 m from bottom							99	37																								
2	50								38	283																							
3	40								39	283																							
4	30								40	283																							
5	20								41	283																							
6	11								42	289																							
7	11									289																							
8	11									289																							
9	0								45	282																							
10																																	
11																																	
12																																	

MAX. DEPTH = 65 m

[illegible]

[illegible]

24 00 00

\* On over view of weather on sheet; but I need samples in freezer. Time-conc sheet

Fig 1 station

70m1507

Lat in deg 59.32447  
Long in deg 170.39533

VESSEL NOAA RV MILLER FREEMAN		PROJECT & LEG MFS-13 MF-04-05		DATE OF signature, CH 10/17/05		STATION DESIGNATION 70m1507	
CONSEC CAST #	LATITUDE	LONGITUDE	DATE JD=	TIME (GMT)	DRY BULB	WET BULB	PRESSURE
015	59 19.61 N	170 23.72 W	281000	04 09 34			
DEG	MIN	DEG	DAY	MO	YR	HR	MIN
SSE 97105		TIMES		10/18/05			
PRESS SN	80020	DATA ON					
FRI DOND	915	START DOWN					
FRI TEMP	710	AT DEPTH					
SEC COND	304	AT SURFACE					
SEC TEMP	884	WETBULB SN					
POS.	TRIP DEPTH	PRESSURE	PRI. TI				
1	5 m from bottom						
2	50						
3	40						
4	30						
5	20						
6	10						
7	0						
8							
9							
10							
11							
12							

Arrive -  
Not sure if you want these,  
but thought I'd send just in case.  
These are updates to the two CTD sheets  
you faxed to me. The original ~~5~~ did not  
have the chlorophyll samples listed; but  
I found them in the freezer with the rest of  
3M F05 (MF-04-05).  
Thanks, Gillian X 67116  
if questions.

283  
283  
283  
289  
289

Found sample  
Chlorophyll

[illegible]



NOAA RV MILLER FREEMAN

MF-09-05

70 meter in #8

[illegible]

CONSEC CAST #	LATITUDE		LONGITUDE		DATE JD=		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)	
017	60	01.99	N	172	45.98	W	APR	2014	18	02	1.9	2.0	1014	38	16	15	7	1	65

SBE 9Plus		TIMES	JD/TIME	DATA LOCATION		REMARKS
PRESS SN	80020	DATA ON		Tape/Diskette ID	File Name/Header	
PRI COND	915	START DOWN				
PRI TEMP	710	AT DEPTH				
SEC COND	304	AT SURFACE				MAX. DEPTH = m
SEC TEMP	884	<input checked="" type="checkbox"/> WET Star S/N 866P	<input checked="" type="checkbox"/> PAR S/N 4242	<input type="checkbox"/>	<input type="checkbox"/> Cleaned air bleed valve	

[illegible]

[illegible]

CONSEC CAST #	LATITUDE			LONGITUDE			DATE JD=			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)										
019	57	08	24 N	17	03	4	06 W	29	A	P	R	0	4	21	6	7	1	0	1	8	3	8	0	1	0	1	4	2	1	6	7	

SBE 9Plus		TIMES		JDTIME		DATA LOCATION		REMARKS
	91220A							
PRESS SN	80020	DATA ON				Tape/Diskette ID	File Name/Header	
PRI COND	915	START DOWN					CTD019	
PRI TEMP	710	AT DEPTH						
SEC COND	304	AT SURFACE						
SEC TEMP	884	<input checked="" type="checkbox"/> WETSiar S/N 1036P	<input checked="" type="checkbox"/> PAR S/N 4242	<input type="checkbox"/>	<input checked="" type="checkbox"/> Cleaned air bleed valve			MAX. DEPTH = 61 m

[illegible]

[illegible]

CONSEC CAST #	LATITUDE		LONGITUDE		DATE JD=		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)						
021	56	34	90 N	170	06	60 W	30	A	P	R	0	4	0824	2	7	2	0	10	57	002408	2	101	

SBE 9Plus		TIMES	JD/TIME	DATA LOCATION		REMARKS
	91220A					
PRESS SIN	80020	DATA ON		Tape/Diskette ID	File Name/Header	
PRI COND	915	START DOWN			CTD021	
PRI TEMP	710	AT DEPTH				
SEC COND	304	AT SURFACE			no chlog MAX	
SEC TEMP	884	<input checked="" type="checkbox"/> WETStar S/N 1036P	<input checked="" type="checkbox"/> BAR S/N 4242	<input type="checkbox"/>	<input checked="" type="checkbox"/> Cleaned air bleed valve	MAX. DEPTH = 94 m

[illegible]

VESSEL		PROJECT & LEG		STATION DESIGNATION												
NOAA RV MILLER FREEMAN		MF040405		04-PI-1A												
CONSEC CAST #	LATITUDE	LONGITUDE	DATE JD=	TIME (GMT)	DRY BULB	WET BULB	PRESSURE	SEA STATE	VISIBILITY	WIND DIRN.	WIND SPD.	CLOUD (amt)	TYPE	WEATHER	BOTTOM DEPTH	STA. NAME/ID
2225654.32N	16935.22W	30A	1808	9.1	3.7	6957	0323	08	2	67						
DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	(°C)	(°C)	(mb)	(deg)	(m/s)		(m)	
SBE 9Plus		91220A		TIMES		JD/TIME		DATA LOCATION		REMARKS						
PRESS SN		80020		DATA ON				Tape/Diskette ID		File Name/Header						
PRI COND		915		START DOWN						CTD 022						
PRI TEMP		710		AT DEPTH						no chlor Mtk on lower						
SEC COND		304		AT SURFACE						MAX. DEPTH = 61 m						
SEC TEMP		884		<input checked="" type="checkbox"/> METStar S/N 1036P		<input checked="" type="checkbox"/> PAR S/N 4242		<input type="checkbox"/>		<input checked="" type="checkbox"/> Cleaned air bleed valve						
CTD CONVERTED MONITOR VALUES																
POS.	TRIP DEPTH	PRESSURE	PRI. TEMP.	SEC. TEMP.	PRI. SALINITY	SEC. SALINITY	SALINITY	SAMPLE BOTTLE DATA								
1	5 m from bottom							SAL.	NUTR.	CHL.	WHIT'S					
2	50							29								
3	40														283	
4	30															
5	30														283	
6	20														283	
7	11														289	
8	11														289	
9	0														282	
10																
11																
12																

Extra Bottle at 30m

VESSEL

## PROJECT & LEG

STATION DESIGNATION

VESSEL						PROJECT & LEG								STATION DESIGNATION																			
NOAA RV MILLER FREEMAN						M/F-04-04 05								04-PI-4A																			
CONSEC CAST #		LATITUDE		LONGITUDE		DATE JD=		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)			
623		56 38.24 N		168 52.46 W		30 APR 04		2237		4.2		4.0		0858		017		247															
SBE 9Plus		91220A		TIMES		JD/TIME																											
PRESS SN		80020		DATA ON																													
PRI COND		915		START DOWN																													
PRI TEMP		710		AT DEPTH																													
SEC COND		304		AT SURFACE																													
SEC TEMP		884		<input checked="" type="checkbox"/> METStar S/N 1036P		<input checked="" type="checkbox"/> PAR S/N 4242																											



CONSEC CAST #	LATITUDE		LONGITUDE		DATE JD=		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)	
624	5	614	03	6	834	92	W	01	Mar	4	0213	4.7	4.5	0658	018	277	1	199	

SBE 9Plus		TIMES	JD/TIME	DATA LOCATION		REMARKS
PRESS SN	80020	DATA ON		Tape/Diskette ID	File Name/Header	
PRI COND	915	START DOWN			CT0024	
PRI TEMP	710	AT DEPTH				
SEC COND	304	AT SURFACE				
SEC TEMP	884	<input checked="" type="checkbox"/> WETStar S/N 1036P <input checked="" type="checkbox"/> PAR S/N 4242		<input type="checkbox"/>	<input checked="" type="checkbox"/> Cleaned air bleed valve	MAX. DEPTH = 191 m

[illegible]

The water stopped at 84 ft depth  
under ~~stomach~~ <sup>the</sup> ~~water~~ <sup>at</sup> the back down

CONSEC CAST #																							
LATITUDE			LONGITUDE			DATE JD=																	
DEG	MIN		DEG	MIN		DAY	MO	YR	HR	MIN	(°C)	(°C)	(mb)	PRESSURE	SEA STATE	VISIBILITY	WIND DIRN.	WIND SPD.	CLOUD (amt)	TYPE	WEATHER	BOTTOM DEPTH	STA. NAME/ID
025	56	17.21 N	169	37	.68 W	01	04	11	18	08	5.1	4.9	55.4	801	H	2	43	1	200				

SBE 9Plus		TIMES	JD/TIME	DATA LOCATION		REMARKS
	91220A					
PRESS SN	80020	DATA ON				
PRI COND	915	START DOWN			File Name/Header	
PRI TEMP	710	AT DEPTH			CTD025	
SEC COND	304	AT SURFACE				
SEC TEMP	884	<input checked="" type="checkbox"/> WETStar S/N 1036P	<input checked="" type="checkbox"/> PAR S/N 4242	<input type="checkbox"/>		
				<input checked="" type="checkbox"/>	Cleaned air bleed valve	
				MAX. DEPTH = 191 m		

[illegible]