

VESSEL		PROJECT & LEG		STATION DESIGNATION													
NOAA RV MILLER FREEMAN		MF05-13															
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
0015656	44° 48' N	163° 50' W		22 SEP 05		1400										67	001
CTD	TIMES		JD/TIME		DATA LOCATION												
TYPE & SN	9+ S/N 91220A		DATA ON		Tape/Diskette ID File Name/Header												
PRESS SN	80020		START DOWN														
PRI COND SN	915		AT DEPTH														
PRI TEMP SN	710		AT SURFACE														
SEC COND SN	884																
SEC TEMP SN	530																
<input checked="" type="checkbox"/> PAR 4242 <input checked="" type="checkbox"/> WETNESS 678 <input checked="" type="checkbox"/> FLEET 155 <input type="checkbox"/> Dissolved Oxygen _____ <input type="checkbox"/> Dissolved Oxygen _____			<input type="checkbox"/> CTD CONVERTED MONITOR VALUES <input type="checkbox"/> Cleaned air bleed valve														
POS.	TRIP DEPTH	SAMPLE BOTTLE DATA															
		PRESSURE	PRI. TEMP.	SEC. TEMP.	PRI. SALINITY	SEC. SALINITY	SALINITY	SAMPLE BOTTLE		SAMPLE BOTTLE		MORDY's		CHL.		WHIT's	
1	57																
2	50																
3	40																
4	30																
5	20																
6	10																
7	5																
8	0																
9																	
10																	
11																	
12																	

 REMARKS
 35-2 EAST

MAX. DEPTH = m

VESSEL		PROJECT & LEG		STATION DESIGNATION													
NOAA RV MILLER FREEMAN		MF05-13		2-1													
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
002	5652.60N	16403.32W	12 SEP 05	1708	70	002
CTD	TIMES		JD/TIME		DATA LOCATION												
TYPE & SN	DATA ON				Tape/Diskette ID File Name/Header												
PRESS SN	START DOWN																
PRI COND SN	AT DEPTH																
PRI TEMP SN	AT SURFACE																
SEC COND SN	884				MAX. DEPTH = m												
SEC TEMP SN	530																
POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES															
		PRESSURE	PRI. TEMP.	SEC. TEMP.	PRI. SALINITY	SEC. SALINITY	SALINITY	SAMPLE BOTTLE DATA	SAMPLE BOTTLE NUMBER	SAL.	MORDY's NUTR.	CHL.	WHIT's NUTR.				
1	65										8		8170				
2	50										9		8169				
3	40										10		8168				
4	30										11		8167				
5	20										12		8166				
6	10										13		8165				
7	0										14		8164				
8																	
9																	
10																	
11																	
12																	

☐ PAR 4242

☐ WET BULB

☐ Dissolved Oxygen

☐ Dissolved Oxygen

☐ Cleaned air bleed valve

35-2 CENTER

VESSEL NOAA RV MILLER FREEMAN		PROJECT & LEG MF05-13		STATION DESIGNATION 3-1												
CONSC CAST #	LATITUDE	LONGITUDE	DATE JD=265	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
003	56 40.06 N	163 51.76 W	22 SEP 05	2041 11.1	9.7	10.2	050	27							74	003
CTD		TIMES		JD/TIME		DATA LOCATION										
TYPE & SN 9+ S/N 91220A		DATA ON				Tape/Diskette ID		File Name/Header								
PRESS SN 80020		START DOWN														
PRI COND SN 915		AT DEPTH														
PRI TEMP SN 710		AT SURFACE														
SEC COND SN 884																
SEC TEMP SN 530																
		<input checked="" type="checkbox"/> PAR 4242		<input checked="" type="checkbox"/> WCT Star 638		Dissolved Oxygen		<input type="checkbox"/> Dissolved Oxygen				<input type="checkbox"/> Cleaned air bleed valve				
POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES														
		PRESSURE	PRI. TEMP.	SEC. TEMP.	PRI. SALINITY	SEC. SALINITY	SALINITY	SAMPLE BOTTLE DATA	SAMPLE BOTTLE NUMBER	SAL.	MORDY's NUTR.	CHL.	WHIT's NUTR.			
1	68									101	15					
2	60										16					
3	50										17	✓				
4	40										18	✓				
5	30										19	✓				
6	20										20	✓				
7	10										21	✓				
8	10										22	✓				
9																
10																
11																
12																

35-2 South

MAX. DEPTH = 68 m

[illegible]

[illegible]

VESSEL NOAA RV MILLER FREEMAN		PROJECT & LEG MF05-13		STATION DESIGNATION (6-)												
CONSC 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
006	5649.94 N	16418.83 W	23 SEP 05	052210.5	9.105	9.105	042214								72	
CTD	TIMES		JD/TIME		DATA LOCATION											
TYPE & SN	9+ S/N 91220A		DATA ON		Tape/Diskette ID											
PRESS SN	80020		START DOWN		File Name/Header											
PRI COND SN	915		AT DEPTH													
PRI TEMP SN	710		AT SURFACE													
SEC COND SN	884															
SEC TEMP SN	530															
<input checked="" type="checkbox"/> PAR 4242 <input checked="" type="checkbox"/> WET STAR 678 <input type="checkbox"/> Dissolved Oxygen _____ <input type="checkbox"/> Dissolved Oxygen _____ <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	SAL.	MORDY'S NUTR.	CHL.	WHIT'S NUTR.			
1	66								05	29						
2	60									40						
3	50									41						
4	40									42						
5	30									43						
6	20									44						
7	10									45						
8	0									46						
9																
10																
11																
12																

20000 FM 30 m/min
 TO 20 m/min @ 100000
 70 m/sch 352-852
 MAX. DEPTH = m

[illegible]

VESSEL NOAA RV MILLER FREEMAN		PROJECT & LEG MF05-13		STATION DESIGNATION 8-1														
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	
008	5654.51 N	164	50.22 W	23	SEP	05	0746	10.1	8.7	105		040	22			71		
CTD		TIMES		JD/TIME		DATA LOCATION												
TYPE & SN		9+ S/N 91220A		DATA ON		Tape/Diskette ID												
PRESS SN		80020		START DOWN		File Name/Header												
PRI COND SN		915		AT DEPTH														
PRI TEMP SN		710		AT SURFACE														
SEC COND SN		884																
SEC TEMP SN		530																
		<input checked="" type="checkbox"/> PAR 4242		<input checked="" type="checkbox"/> WETSTAR 678		Dissolved Oxygen		Dissolved Oxygen						<input type="checkbox"/> Cleaned air bleed valve				
POS.		TRIP DEPTH		CTD CONVERTED MONITOR VALUES														
		PRESSURE		PRI. TEMP.		SEC. TEMP.		PRI. SALINITY		SEC. SALINITY		SALINITY		SAMPLE BOTTLE DATA		SAMPLE BOTTLE NUMBER		
1	66													SAL.		MORDY's NUTR.	CHL.	WHIT's NUTR.
2	60													96		55		
3	50															57	✓	
4	40															58	✓	
5	30															59	✓	
6	20															60	✓	
7	10															61	✓	
8	0															62	✓	
9																		
10																		
11																		
12																		

w/o 64

70 m isobath

MAX. DEPTH = m

[illegible]

7033061

[illegible]

VESSEL		PROJECT & LEG		STATION DESIGNATION													
NOAA RV MILLER FREEMAN		MF05-13		12-1													
CONSC 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	
0125651.38 N	16402.50 W	23 SEP 05	213610.2	8.700	03817												
CTD	TIMES	JD/TIME	DATA LOCATION														
TYPE & SN	9+ S/N 91220A	DATA ON	Tape/Diskette ID														
PRESS SN	80020	START DOWN	File Name/Header														
PRI COND SN	915	AT DEPTH															
PRI TEMP SN	710	AT SURFACE															
SEC COND SN	884																
SEC TEMP SN	530304*																
PAR 4242		WET STAR 678		Dissolved Oxygen		Dissolved Oxygen		Dissolved Oxygen		Dissolved Oxygen		Dissolved Oxygen		Dissolved Oxygen		Dissolved Oxygen	
CTD CONVERTED MONITOR VALUES		SAMPLE BOTTLE DATA		SAMPLE BOTTLE DATA		SAMPLE BOTTLE DATA		SAMPLE BOTTLE DATA		SAMPLE BOTTLE DATA		SAMPLE BOTTLE DATA		SAMPLE BOTTLE DATA		SAMPLE BOTTLE DATA	
POS.	TRIP DEPTH	PRESSURE	PRI. TEMP.	SEC. TEMP.	PRI. SALINITY	SEC. SALINITY	SALINITY	SAL.	MORDY'S NUTR.	CHL.	WHIT'S NUTR.						
1	66							60	87		8179						
2	60							88			8178						
3	50							89			8177						
4	40							90			8176						
5	30							91			8175						
6	20							92			8174						
7	13.5							93			8173						
8	10							94			8172						
9	0							95			8171						
10																	
11																	
12																	

0585M-2A STILL IN WATER
 785-2 CENTER

REMARKS AFTER DEEP OF
 85852-2A 05852-2A
 SEC COND SENSOR
 END SN 530 TO SN 301
 MAX. DEPTH = m

[illegible]

VESSEL NOAA RV MILLER FREEMAN		PROJECT & LEG MF05-13		STATION DESIGNATION							
CONSC CAST #		LATITUDE		LONGITUDE							
DEG MIN		DEG MIN		DATE JD=							
01 45 15.76 N		16 54 4.99 W		24 SEP 05							
TIME (GMT)		DRY BULB		WET BULB							
06 18		8.7		8.3							
PRESSURE		SEA STATE		VISIBILITY							
44.21		44.21		44.21							
WIND DIRN.		WIND SPD.		CLOUD (amt)							
44		21		44							
WEATHER		TYPE		BOTTOM DEPTH							
70 m isobath		70		70							
CTD		TIMES		JD/TIME							
TYPE & SN		DATA ON		DATA LOCATION							
9+ S/N 91220A				Tape/Diskette ID							
PRESS SN		START DOWN		File Name/Header							
80020											
PRI COND SN		AT DEPTH									
915											
PRI TEMP SN		AT SURFACE									
710											
SEC COND SN											
884											
SEC TEMP SN											
530											
PAR 4242		WET STAR 678		Dissolved Oxygen							
Dissolved Oxygen		Dissolved Oxygen		Dissolved Oxygen							
CTD CONVERTED MONITOR VALUES		SAMPLE BOTTLE DATA		SAMPLE BOTTLE NUMBER							
POS.	TRIP DEPTH	PRESSURE	PRI. TEMP.	SEC. TEMP.	PRI. SALINITY	SEC. SALINITY	SALINITY	SAL.	MORDY'S NUTR.	CHL.	WHIT'S NUTR.
1	65							31	104		
2	60							105			
3	50							106			
4	40							107			
5	30							108			
6	20							109			
7	10							110			
8	0							111			
9											
10											
11											
12											

Cleaned air bleed valve

MAX. DEPTH = m

VESSEL NOAA R/V MILLER FREEMAN			PROJECT & LEG MF05-13						STATION DESIGNATION <i>16-1</i>																								
CONSC 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)														
01	65	719	.34	N	11	06	19	.59	W	24	S	E	P	0	5	846	9.0	7.7	99	7626	710												
CTD				TIMES		JD/TIME		DATA LOCATION													REMARKS												
TYPE & SN		9+ S/N 91220A		DATA ON				Tape/Diskette ID													File Name/Header												
PRESS SN		80020		START DOWN																													
PRI COND SN		915		AT DEPTH																													
PRI TEMP SN		710		AT SURFACE																													
SEC COND SN		884																															
SEC TEMP SN		530																															
				<input checked="" type="checkbox"/> PAR 4242				<input checked="" type="checkbox"/> WETSTAR 678				<input checked="" type="checkbox"/> Dissolved Oxygen				<input checked="" type="checkbox"/> Dissolved Oxygen				<input type="checkbox"/> Cleaned air bleed valve													
POS.				TRIP DEPTH				CTD CONVERTED MONITOR VALUES													SAMPLE BOTTLING DATA												
				PRESSURE				PRI. TEMP.				SEC. TEMP.				PRI. SALINITY				SEC. SALINITY				SALINITY									
1				65																				SAL.				MORDY'S NUTR.		CHL.		WHIT'S NUTR.	
2				60																								120					
3				50																								121					
4				40																								122		✓			
5				30																								123		✓			
6				20																								124		✓			
7				10																								125		✓			
8				0																								126		✓			
9																												127		✓			
10																																	
11																																	
12																																	

VESSEL NOAA RV MILLER FREEMAN				PROJECT & LEG MF05-13				STATION DESIGNATION 13-1																									
CONSC 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	
01751726.61N		16631.36W		24 SEP 05		1004		8.8		7.4		9.9		5025																			
CTD				TIMES				JD/TIME				DATA LOCATION				REMARKS																	
TYPE & SN				9+ S/N 91220A				DATA ON				Tape/Diskette ID				File Name/Header																	
PRESS SN				80020				START DOWN																									
PRI COND SN				915				AT DEPTH																									
PRI TEMP SN				710				AT SURFACE																									
SEC COND SN				884																													
SEC TEMP SN				530																													
				<input checked="" type="checkbox"/> PAR 4242				<input checked="" type="checkbox"/> WETSTAR 678				<input checked="" type="checkbox"/> Dissolved Oxygen				<input checked="" type="checkbox"/> Dissolved Oxygen				<input type="checkbox"/> Cleaned air bleed valve													
				CTD CONVERTED MONITOR VALUES																													
POS.		TRIP DEPTH		PRESSURE		PRI. TEMP.		SEC. TEMP.		PRI. SALINITY		SEC. SALINITY		SALINITY		SAL. DATA		MORDY'S NUTR.		CHL.		WHIT'S NUTR.											
1		65														11		128															
2		60																129															
3		50																130															
4		40																131															
5		30																132															
6		20																133															
7		10																134															
8		0																135															
9																																	
10																																	
11																																	
12																																	

w/o = 62

70 m seabed

MAX. DEPTH = m

[illegible]

$\log = 0.14$

VESSEL		PROJECT & LEG		STATION DESIGNATION												
NOAA R/V MILLER FREEMAN		MFO5-13		20-1												
CONSC 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
0205729.98N	16720.93W	24	5	1406	8.4	7.200				54	18				70	
CTD	TIMES	JD/TIME	DATA LOCATION													
TYPE & SN	9+ S/N 91220A	DATA ON	Tape/Diskette ID File Name/Header													
PRESS SN	80020	START DOWN														
PRI COND SN	915	AT DEPTH														
PRI TEMP SN	710	AT SURFACE														
SEC COND SN	884															
SEC TEMP SN	530															
POS.	TRIP DEPTH	PAR 4242 WETSTAR 678 Dissolved Oxygen w/o=63														
		CTD CONVERTED MONITOR VALUES														
1	66	PRESSURE	PRI. TEMP.	SEC. TEMP.	PRI. SALINITY	SEC. SALINITY	SALINITY	SAL.	WORD'S NUTR.	CHL.	WHIT'S NUTR.					
2	60							01	152							
3	50								153							
4	40								154	✓						
5	30								155	✓						
6	20								156	✓						
7	10								157	✓						
8	0								158	✓						
9									159	✓						
10																
11																
12																
		MAX. DEPTH = m														
		REMARKS														
		30m isobath														
		Cleaned air bleed valve														
		SAMPLE BOTTLE NUMBER														

VESSEL NOAA R/V MILLER FREEMAN				PROJECT & LEG ME05-13				STATION DESIGNATION 21-1																																			
CONSC 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													
021		5730.05 N		16740.31 W		24 SEP 05		1526		8.6		6.9		900		55		19																									
CTD		TIMES		JD/TIME		DATA LOCATION		REMARKS																																			
TYPE & SN		9+ S/N 91220A		DATA ON				Tape/Diskette ID		File Name/Header																																	
PRESS SN		80020		START DOWN																																							
PRI COND SN		915		AT DEPTH																																							
PRI TEMP SN		710		AT SURFACE																																							
SEC COND SN		884																																									
SEC TEMP SN		530																																									
				<input checked="" type="checkbox"/> PAR 4242 <input checked="" type="checkbox"/> WET STAR 678 <input checked="" type="checkbox"/> Dissolved Oxygen <input checked="" type="checkbox"/> Dissolved Oxygen <input type="checkbox"/> MAX. DEPTH = m																																							
POS. TRIP DEPTH				CTD CONVERTED MONITOR VALUES												SAMPLE BOTTLE DATA				SAMPLE BOTTLE NUMBER																							
				PRESSURE				PRI. TEMP.				SEC. TEMP.				PRI. SALINITY				SEC. SALINITY				SALINITY				SAL.				MORDY'S NUTR.				CHL.				WHIT'S NUTR.			
1				66																								17				160											
2				60																												161											
3				50																												162											
4				40																												161											
5				30																												161											
6				20																												161											
7				10																												161											
8				0																												161											
9																																161											
10																																161											
11																																161											
12																																161											

[illegible]

29-62

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

VESSEL		PROJECT & LEG		STATION DESIGNATION												
NOAA RV MILLER FREEMAN		MF05-13		28-1												
CONSC 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
029	58 03.96 N	168 43.79 W	25 SEP 05	11 22	8.7	7.5	06			65	22				70	
CTD	TIMES		JD/TIME	DATA LOCATION		REMARKS										
TYPE & SN	9+ S/N 91220A		DATA ON	Tape/Diskette ID		File Name/Header										
PRESS SN	80020		START DOWN													
PRI COND SN	915		AT DEPTH													
PRI TEMP SN	710		AT SURFACE													
SEC COND SN	884															
SEC TEMP SN	530															
<input checked="" type="checkbox"/> PAR 4242 <input checked="" type="checkbox"/> WETSTAR 678 <input checked="" type="checkbox"/> Dissolved Oxygen <input checked="" type="checkbox"/> Dissolved Oxygen <input type="checkbox"/> Cleaned air bleed valve			CTD CONVERTED MONITOR VALUES													
POS.	TRIP DEPTH	PRESSURE	PRI. TEMP.	SEC. TEMP.	PRI. SALINITY	SEC. SALINITY	SALINITY	SAL.	MORDY's NUTR.	CHL.	WHIT's NUTR.					
1	65							27	63							
2	60								64							
3	50								65							
4	40								66							
5	30								67							
6	20								68							
7	10								69							
8	0								70							
9																
10																
11																
12																

BS-H NORTH

MAX. DEPTH = m

VESSEL			PROJECT & LEG			STATION DESIGNATION															
NOAA RV MILLER FREEMAN			MF05-13			29-1															
CONSC 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		
030	57	45.98 N	168	28.26 W	25	SEP 05	1448	9.0	7.2				55	21				70			
CTD		TIMES		JD/TIME		DATA LOCATION															
TYPE & SN		9+ S/N 91220A		DATA ON		Tape/Diskette ID File Name/Header															
PRESS SN		80020		START DOWN																	
PRI COND SN		915		AT DEPTH																	
PRI TEMP SN		710		AT SURFACE																	
SEC COND SN		884																			
SEC TEMP SN		530																			
POS.		TRIP DEPTH		PAR 4242		WET STAR 676		Dissolved Oxygen		Dissolved Oxygen		Cleaned air bleed valve									
				CTD CONVERTED MONITOR VALUES																	
		PRESSURE		PRI. TEMP.		SEC. TEMP.		PRI. SALINITY		SEC. SALINITY		SALINITY		SAL.		MORDY's NUTR.		CHL.		WHIT'S NUTR.	
1	60														12	71					
2	50															72					
3	40															73					
4	30															74					
5	20															75					
6	10															76					
7	0															77					
8																78					
9																					
10																					
11																					
12																					

MAX. DEPTH = m

35-4 EAST

VESSEL		PROJECT & LEG		STATION DESIGNATION												
NOAA RV MILLER FREEMAN		MF05-13		30-1												
CONSC 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
031	5739.25 N	16901.30 W	25 SEP 05	1810	9.2	7.9	108			54	21				68	
CTD	TIMES		JD/TIME	DATA LOCATION		REMARKS										
TYPE & SN	9+ S/N 91220A		DATA ON	Tape/Diskette ID		File Name/Header										
PRESS SN	80020		START DOWN													
PRI COND SN	915		AT DEPTH													
PRI TEMP SN	710		AT SURFACE													
SEC COND SN	884															
SEC TEMP SN	530															
<input checked="" type="checkbox"/> PAR 4242 <input checked="" type="checkbox"/> WETSTAR 678 <input checked="" type="checkbox"/> Dissolved Oxygen <input checked="" type="checkbox"/> Dissolved Oxygen <input type="checkbox"/> Cleaned air bleed valve																
POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES										SAMPLE BOTTLE DATA	SAMPLE BOTTLE NUMBER			
		PRESSURE	PRI. TEMP.	SEC. TEMP.	PRI. SALINITY	SEC. SALINITY	SALINITY	SAL.	MORDY'S NUTR.	CHL.	WHIT'S NUTR.					
1	63							34	79							
2	60								80							
3	50								81							
4	40								82							
5	30								83							
6	20								84							
7	10								85							
8	0								86							
9																
10																
11																
12																

MAX. DEPTH = m

BS-4 SOUTH

CONSC 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 (m)		STA. NAME/ID	
		DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	(°C)	(°C)	(mb)	*	*	(deg)	(m/s)	*	*												
032	5755	.65	N	169	19	.22	W	25	S	E	P	0	5	21	19	9.2	7.0	008			222	19							66		
CTD				TIMES		JD/TIME																									
TYPE & SN		9+ S/N 91220A		DATA ON																											
PRESS SN		80020		START DOWN																											
PRI COND SN		915		AT DEPTH																											
PRI TEMP SN		710		AT SURFACE																											
SEC COND SN		884																													
SEC TEMP SN		530																													
POS.		TRIP DEPTH		<input checked="" type="checkbox"/> PAR 4242		<input checked="" type="checkbox"/> WET STAR 678		<input checked="" type="checkbox"/> Dissolved Oxygen		<input checked="" type="checkbox"/> Dissolved Oxygen		<input type="checkbox"/> Cleaned air bleed valve																			
				CTD CONVERTED MONITOR VALUES																											
				SAMPLE BOTTLE DATA																											
				SAMPLE BOTTLE NUMBER																											
				SAL.		MORDY'S NUTR.		CHL.		WHIT'S NUTR.																					
				109		87																									
				88		89		✓																							
				90		91		✓																							
				92		93		✓																							
				94		95		✓																							
				96		97		✓																							
				98		99		✓																							
				100		101		✓																							
				102		103		✓																							
				104		105		✓																							
				106		107		✓																							
				108		109		✓																							

[illegible]

VESSEL		PROJECT & LEG		STATION DESIGNATION												
NOAA RV MILLER FREEMAN		MF05-13		33-1												
CONSC 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
0345802.717N	16938.89W	25 SEP 05	2330	91.4	7.208	22516									69	
CTD	TIMES		JD/TIME	DATA LOCATION		REMARKS										
TYPE & SN	9+ S/N 91220A		DATA ON	Tape/Diskette ID		File Name/Header										
PRESS SN	80020		START DOWN													
PRI COND SN	915		AT DEPTH													
PRI TEMP SN	710		AT SURFACE													
SEC COND SN	884															
SEC TEMP SN	530															
<input checked="" type="checkbox"/> PAR 4242 <input checked="" type="checkbox"/> WET STAR 678 <input checked="" type="checkbox"/> Dissolved Oxygen <input checked="" type="checkbox"/> Dissolved Oxygen <input type="checkbox"/> Cleaned air bleed valve			CTD CONVERTED MONITOR VALUES													
POS.	TRIP DEPTH	PRESSURE	PRI. TEMP.	SEC. TEMP.	PRI. SALINITY	SEC. SALINITY	SALINITY	SAL.	MORDY's NUTR.	CHL.	WHIT'S NUTR.					
1	666							111	103							
2	60								104							
3	50								105							
4	40								106							
5	30								107							
6	20								108							
7	10								109							
8	0								110							
9																
10																
11																
12																

MAX. DEPTH = m

70 m isobath

VESSEL NOAA RV MILLER FREEMAN		PROJECT & LEG MF05-13		STATION DESIGNATION 34-1																									
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			
255808.62N		16954.71W		26		SEP 05		0056		9.3		7.2		07		220		13								70			
CTD		TIMES		JD/TIME		DATA LOCATION										REMARKS													
TYPE & SN 9+ S/N 91220A		DATA ON				Tape/Diskette ID										File Name/Header													
PRESS SN 80020		START DOWN																											
PRI COND SN 915		AT DEPTH																											
PRI TEMP SN 710		AT SURFACE																											
SEC COND SN 884																													
SEC TEMP SN 530																													
MAX. DEPTH =																m													
POS.		TRIP DEPTH		CTD CONVERTED MONITOR VALUES										SAMPLE BOTTLE DATA		SAMPLE BOTTLE NUMBER													
		PRESSURE		PRI. TEMP.		SEC. TEMP.		PRI. SALINITY		SEC. SALINITY		SALINITY		SAL.		MORDY's NUTR.		CHL.		WHIT's NUTR.									
1		65												105		111													
2		60														112													
3		50														113		✓											
4		40														114		✓											
5		30														115		✓											
6		20														116		✓											
7		10														117		✓											
8		0														118		✓											
9																													
10																													
11																													
12																													

☒ PAR 4242

☒ WETSTAR 678

☒ Dissolved Oxygen

☒ Dissolved Oxygen

☐ Cleaned air bleed valve

VESSEL NOAA RV MILLER FREEMAN			PROJECT & LEG MF05-13			STATION DESIGNATION 35-1									
CONSC CAST #	LATITUDE	LONGITUDE	DATE JD =	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)	*
03	65	81	6	17	05	26	W	26	9	1	7	0	0	7	2
CTD	TIMES		JD/TIME		DATA LOCATION										
TYPE & SN	9+ S/N 91220A		DATA ON		Tape/Diskette ID										
PRESS SN	80020		START DOWN		File Name/Header										
PRI COND SN	915		AT DEPTH												
PRI TEMP SN	710		AT SURFACE												
SEC COND SN	884														
SEC TEMP SN	530														
POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES													
		<input checked="" type="checkbox"/> PAR 4242 <input checked="" type="checkbox"/> WETSTAR 678 <input checked="" type="checkbox"/> Dissolved Oxygen _____ <input checked="" type="checkbox"/> Dissolved Oxygen _____ <input type="checkbox"/> Cleaned air bleed valve													
		PRESSURE	PRI. TEMP.	SEC. TEMP.	PRI. SALINITY	SEC. SALINITY	SALINITY	SAMPLE BOTTLE DATA	SAMPLE BOTTLE NUMBER	SAL.	MORDY'S NUTR.	CHL.	WHITT'S NUTR.		
1	66								65	119					
2	60									120					
3	50									121	✓				
4	40									122	✓				
5	30									123	✓				
6	20									124	✓				
7	10									125	✓				
8	0									126	✓				
9															
10															
11															
12															

 REMARKS
 70m salinity

MAX. DEPTH = m

[illegible]

[illegible]

[illegible]

VESSEL		PROJECT & LEG										STATION DESIGNATION							
NOAA RV MILLER FREEMAN		MF05-13										39-1							
CONSC 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 (m)	STA. NAME/ID	
0405857.03 N	17019.75 W	26	5	0720	8.4	7.005	18809	69											
CTD	TIMES		JD/TIME		DATA LOCATION														
TYPE & SN	9+ S/N 91220A		DATA ON		Tape/Diskette ID File Name/Header														
PRESS SN	80020		START DOWN																
PRI COND SN	915		AT DEPTH																
PRI TEMP SN	710		AT SURFACE																
SEC COND SN	884																		
SEC TEMP SN	530																		
<input checked="" type="checkbox"/> PAR 4242 <input checked="" type="checkbox"/> WETSTAR 678 <input checked="" type="checkbox"/> Dissolved Oxygen <input checked="" type="checkbox"/> Dissolved Oxygen <input type="checkbox"/> Cleaned air bleed valve			CTD CONVERTED MONITOR VALUES																
POS.	TRIP DEPTH	SAMPLE BOTTLE DATA																	
		PRESSURE	PRI. TEMP.	SEC. TEMP.	PRI. SALINITY	SEC. SALINITY	SALINITY	SAL.	MORDY'S NUTR.	CHL.	WHIT'S NUTR.								
1	64							64	151										
2	60								152										
3	50								153										
4	40								154										
5	30								155										
6	20								156										
7	10								157										
8	0								158										
9																			
10																			
11																			
12																			

MAX. DEPTH = m

[illegible]

[illegible]

VESSEL		NOAA Ship MILLER FREEMAN				PROJECT & LEG		MF-05-13		COD I.D.		STATION DESIGNATION			
CONSECUTIVE CAST #		LATITUDE		LONGITUDE		DATE		TIME		DRY BULB		WET BULB		PRESSURE	
DEG MIN		DEG MIN		DAY MO YR		HR MIN		°C		°C		mb		deg	
43 59 19.77		17 03 9.89		26 SEP 05 10 48		8.3		6.8		0.3		34.6		9.3	
SBE 9+		91220		TIMES		DATA LOCATION		REMARKS		MAX. DEPTH (m)		ChLAM S/N=		SAMPLE BOTTLE NUMBER	
PRESS SN		80020		DATA ON		Tape/Diskette ID		File Name/Header		Cleared air bleed valve		70 m isobath			
PRI TEMP SN		710		START DOWN											
SEC TEMP SN		884		AT DEPTH											
PRI COND SN		915		AT SURFACE											
SEC COND SN		530		MPAR S/N=		4242		FLUOR S/N=		678		✓			
POSITION		TRIP DEPTH		PRESSURE		PRIMARY TEMP		SECONDARY TEMP		SALINITY		SALINITY		SAL	
1		0m 65												43 011	
2		10m 60												012	
3		20m 50												013 ✓	
4		30m 40												014 ✓	
5		40m 30												015 ✓	
6		50m 20												016 ✓	
7		180m 10												017 ✓	
8		200m 0												018 ✓	
9		50m from bot.													
10															
11															
12															

w/o = 63

Dissolved Oxygen

SAMPLE BOTTLE DATA

SAMPLE BOTTLE NUMBER

42-1

VESSEL		NOAA Ship MILLER FREEMAN		PROJECT & LEG		MF-05-13		COD I.D.		STATION DESIGNATION			
CONSECUTIVE CAST #		LATITUDE		LONGITUDE		DATE		TIME		DRY		WET	
		DEG MIN		DEG MIN		DAY MO YR		HR MIN		°C		°C	
445925.84		17053.29		26		SEP 09 11 52		8.3		6.2		205	
SBE 9+		91220		TIMES		DATA LOCATION						REMARKS	
PRESS SN 80020		DATA ON		START DOWN		Tape/Diskette ID		File Name/Header					
SEC TEMP SN 710		AT DEPTH											
PRI COND SN 884		AT SURFACE											
SEC COND SN 915		PAR S/N=		4242		FLUOR S/N=		678					
		CTD CONVERTED MONITOR VALUES											
POSITION		TRIP		DEPTH		PRESSURE		PRIMARY TEMP		SECONDARY TEMP		SALINITY	
1		2m 67										25 019	
2		10m 60										020	
3		20m 50										021	
4		30m 40										022	
5		40m 30										023	
6		50m 20										024	
7		100m 10										025	
8		200m 0										026	
9		5m from bot.											
10													
11													
12													

Cleaned air bleed valve

70 m isobath

40=65

Dis. Oxy B B

43-1

VESSEL				PROJECT & LEG				COD I.D.				STATION DESIGNATION																							
NOAA Ship MILLER FREEMAN				MF-05-13								474-1																							
CONSECUTIVE CAST #		LATITUDE		LONGITUDE		DATE		TIME GMT		DRY BULB °C		WET BULB °C		PRESSURE mb		SEA STATE		VISIBILITY		WIND deg		DIRECTION		WIND SPEED kn'ts		CLOUD (amt)		TYPE		WEATHER		BOTTOM DEPTH		STATION NAME / ID	
457935		80		170541		26 SEP 05		1300		8.2		7.9		02		327		6.8																	
SBE 9+		91220		TIMES		DATA LOCATION		Tape/Diskette ID		File Name/Header		REMARKS																							
PRESS SN		80020		DATA ON																															
PRI TEMP SN		710		START DOWN																															
SEC TEMP SN		884		AT DEPTH																															
PRI COND SN		915		AT SURFACE																															
SEC COND SN		530		MPAR S/N=		4242		FLUOR S/N=		678		ChLAM S/N=																							
POSITION		TRIP DEPTH		PRESSURE		PRIMARY TEMP		SECONDARY TEMP		SALINITY		SALINITY		SAL		NUTR		CHL		WHIT'S															
1		0m 66												33		027																			
2		10m 0												028																					
3		20m 50												029																					
4		30m 40												030																					
5		40m 30												031																					
6		50m 20												032																					
7		60m 10												033																					
8		200m 0												034																					
9		5m from bot.																																	
10																																			
11																																			
12																																			

w/o =

Dis. Out D B

70 m isobath

Cleaned air bleed valve

CTD CONVERTED MONITOR VALUES

SAMPLE BOTTLE DATA

SAMPLE BOTTLE NUMBER

VESSEL

NOAA Ship MILLER FREEMAN

PROJECT & LEG
MF-05-13

COD I.D.

STATION DESIGNATION

75

CONSECUTIVE CAST #		LATITUDE		LONGITUDE		DATE		TIME		DRY		WET		PRESSURE		SEA STATE		VISIBILITY		WIND		DIRECTION		WIND SPEED		CLOUD (amt)		TYPE		WEATHER		BOTTOM		STATION	
		DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	BULB	°C	BULB	°C	mb				deg	knt's									DEPTH	NAME / ID					
475946.78		17	12	17	26	SEP	09	15	14	7	8	7	4	0	1	28	6	3	2																
SBE 9+		91220		TIMES		DATA LOCATION		Tape/Diskette ID		File Name/Header																									
PRESS SN		80020		DATA ON																															
PRI TEMP SN		710		START DOWN																															
SEC TEMP SN		884		AT DEPTH																															
PRI COND SN		915		AT SURFACE																															
SEC COND SN		530		PAR S/N=		4242		FLUOR S/N=		678																									

VESSEL

NOAA Ship MILLER FREEMAN

PROJECT & LEG
MF-05-13

COD I.D

STATION DESIGNATION

[illegible]

VESSEL

NOAA Ship MILLER FREEMAN

PROJECT & LEG

MF-05-13

COD I.D.

STATION DESIGNATION

48-1

PG 17 OF

CONSECUTIVE CAST #		LATITUDE		LONGITUDE		DATE		TIME		DRY BULB		WET BULB		PRESSURE		SEA STATE		VISIBILITY		WIND		DIRECTION		WIND SPEED		CLOUD (amt)		TYPE		WEATHER		BOTTOM DEPTH		STATION NAME / ID	
DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	°C	°C	mb	deg	kn'ts																						
49	59	50	18	1	7	20	6	43	26	SEP	05	17	33	7.2	7.8	01	10	05.2																	
REMARKS																																			
70 m. isobath																																			
Cleaned air bleed valve																																			
MAX. DEPTH (m)																																			
CHLAM S/N=																																			
CTD CONVERTED MONITOR VALUES																																			
PAR S/N= 4242																																			
FLUOR S/N= 678																																			
DATA																																			
SAMPLE BOTTLE																																			
DATA																																			
SAMPLE BOTTLE NUMBER																																			
SAL																																			
NUTR																																			
CHL																																			
WHIT'S																																			
NUTR																																			
POSITION																																			
TRIP																																			
DEPTH																																			
PRESSURE																																			
PRIMARY TEMP																																			
SECONDARY TEMP																																			
SALINITY																																			
SALINITY																																			
SAL																																			
NUTR																																			
CHL																																			
WHIT'S																																			
NUTR																																			
1 0m 70																																			
2 10m 69																																			
3 20m 50																																			
4 30m 40																																			
5 40m 30																																			
6 50m 20																																			
7 150m 10																																			
8 200m 0																																			
9 5m from bot.																																			
10																																			
11																																			
12																																			

[illegible]

[illegible]

VESSEL NOAA RV MILLER FREEMAN		PROJECT & LEG MF05-13		STATION DESIGNATION 50-1									
CONSC CAST #		LATITUDE		LONGITUDE									
DEG MIN		DEG MIN		DATE JD =									
05259 42.11		17 29.82		W 07 S E P 05									
TIME (GMT)		DRY BULB		WET BULB									
0121 7.8		7.298		226.15									
PRESSURE		SEA STATE		VISIBILITY									
WIND DIRN.		WIND SPD.		CLOUD (amt)									
WIND TYPE		WEATHER		BOTTOM DEPTH (m)									
7.3													
CTD		TIMES		JD/TIME									
TYPE & SN		DATA ON											
PRESS SN		START DOWN											
PRI COND SN		AT DEPTH											
PRI TEMP SN		AT SURFACE											
SEC COND SN													
SEC TEMP SN													
PAR 4242		WETSTAR 678		Dissolved Oxygen									
CTD CONVERTED MONITOR VALUES		Dissolved Oxygen		Cleaned air bleed valve									
POS.	TRIP DEPTH	PRESSURE	PRI. TEMP.	SEC. TEMP.	PRI. SALINITY	SEC. SALINITY	SALINITY	SAMPLE BOTTLE DATA	SAMPLE BOTTLE NUMBER	SAL.	MORDY's NUTR.	CHL.	WHIT's NUTR.
1	68									29	83		
2	60										84		
3	50										85		
4	40										86		
5	30										87		
6	20										88		
7	10										89		
8	0										90		
9													
10													
11													
12													

BS-5 SOUTH

MAX. DEPTH = m

VESSEL		PROJECT & LEG		STATION DESIGNATION												
NOAA RV MILLER FREEMAN		MF05-13		51-1												
CONSC CAST #	LATITUDE	LONGITUDE	DATE JD=	TIME (GMT)	DRY BULB	WET BULB	PRESSURE	SEA STATE	WIND DIRN.	WIND SPD.	CLOUD (amt)	TYPE	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID	
0535953.81N	17115.34W	27 SEP 05	0306	7.7	7.7	298	05009	70								
CTD	TIMES		JD/TIME	DATA LOCATION												
TYPE & SN	9+ S/N 91220A		DATA ON	Tape/Diskette ID												
PRESS SN	80020		START DOWN	File Name/Header												
PRI COND SN	915		AT DEPTH													
PRI TEMP SN	710		AT SURFACE													
SEC COND SN	884			MAX. DEPTH = m												
SEC TEMP SN	530															
PAR 4242	WETSTAR 678		Dissolved Oxygen													
CTD CONVERTED MONITOR VALUES																
POS.	TRIP DEPTH	PRESSURE	PRI. TEMP.	SEC. TEMP.	PRI. SALINITY	SEC. SALINITY	SALINITY	SAMPLE BOTTLE DATA	Cleaned air bleed valve							
1	66									SAL.	MORDY'S NUTR.	CHL.	WHIT'S NUTR.			
2	60									91	92					
3	50									93	93	✓				
4	40									94	94	✓				
5	30									95	95	✓				
6	20									96	96	✓				
7	10									97	97	✓				
8	0									98	98	✓				
9																
10																
11																
12																

25-5 EAST

VESSEL		PROJECT & LEG		STATION DESIGNATION											
NOAA RV MILLER FREEMAN		MF05-13		521											
CONSC CAST #	LATITUDE	LONGITUDE	DATE JD=	TIME (GMT)	DRY BULB	WET BULB	PRESSURE	SEA STATE	WIND DIRN.	WIND SPD.	CLOUD (amt)	TYPE	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
054	6004.54 N	171.89.98 W	27 SEP 05	0550	7.3	7.2	98	020	13					63	
CTD	TIMES		JD/TIME	DATA LOCATION											
TYPE & SN	9+ S/N 91220A		DATA ON	Tape/Diskette ID											
PRESS SN	80020		START DOWN	File Name/Header											
PRI COND SN	915		AT DEPTH												
PRI TEMP SN	710		AT SURFACE												
SEC COND SN	884			MAX. DEPTH = m											
SEC TEMP SN	530														
<input checked="" type="checkbox"/> PAR 4242 <input checked="" type="checkbox"/> WETSTAR 678 <input checked="" type="checkbox"/> Dissolved Oxygen <input checked="" type="checkbox"/> Dissolved Oxygen <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	SAL.	MORDY'S NUTR.	CHL.	WHIT'S NUTR.		
1										113					
2	59.60									99					
3	50									100	✓				
4	40									101	✓				
5	30									102	✓				
6	20									103	✓				
7	10									104	✓				
8	0									105	✓				
9															
10															
11															
12															

 REMARKS
 BS-5 NORTH

VESSEL NOAA RV MILLER FREEMAN		PROJECT & LEG MF05-13				STATION DESIGNATION 53-1								
CONSC CAST #	LATITUDE DEG MIN	LONGITUDE DEG MIN	DATE JD= DAY MO YR	TIME (GMT) HR MIN	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
0555933.86N		13209.94W	27 SEP 05	0729	7.4	7.298			212	12			72	
CTD	TIMES JD/TIME		DATA LOCATION											
TYPE & SN 9+ S/N 91220A	DATA ON		Tape/Diskette ID File Name/Header											
PRESS SN 80020	START DOWN													
PRI COND SN 915	AT DEPTH													
PRI TEMP SN 710	AT SURFACE													
SEC COND SN 884														
SEC TEMP SN 530														
PAR 4242		WETSTAR 678		Dissolved Oxygen		Dissolved Oxygen		Cleaned air bleed valve						
POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES												
		PRESSURE	PRI. TEMP.	SEC. TEMP.	PRI. SALINITY	SEC. SALINITY	SALINITY	SAMPLE BOTTLE DATA	SAMPLE BOTTLE NUMBER	SAL.	MORDY's NUTR.	CHL.	WHIT's NUTR.	
1	6.7								09	106				
2	6.0									107				
3	5.0									108				
4	4.0									109				
5	3.0									110				
6	2.0									111				
7	1.0									112				
8	0									113				
9														
10														
11														
12														

REMARKS
BS-5 WEST

MAX. DEPTH = m

VESSEL NOAA RV MILLER FREEMAN		PROJECT & LEG MF05-13		STATION DESIGNATION 54-1	
CONSC CAST #	LATITUDE DEG MIN	LONGITUDE DEG MIN	DATE JD= DAY MO YR	TIME (GMT) HR MIN	DRY BULB (°C)
0565954.34	N	7225.49	W 23 S E P 05	0843	7.3
				WET BULB (°C)	6.8
				PRESSURE (mb)	98
				SEA STATE VISIBILITY	17010
				WIND DIRN. (deg)	73
				WIND SPD. (m/s)	
				CLOUD (amt) TYPE	
				WEATHER	
				BOTTOM DEPTH (m)	
				STA. NAME/ID	
CTD					
TYPE & SN	9+ S/N 91220A	DATA ON		Tape/Diskette ID	
PRESS SN	80020	START DOWN		File Name/Header	
PRI COND SN	915	AT DEPTH			
PRI TEMP SN	710	AT SURFACE			
SEC COND SN	884				
SEC TEMP SN	530				
POS. TRIP DEPTH		CTD CONVERTED MONITOR VALUES			
		<input checked="" type="checkbox"/> PAR 4242 <input checked="" type="checkbox"/> WETSTAR 678 <input checked="" type="checkbox"/> Dissolved Oxygen <input checked="" type="checkbox"/> Dissolved Oxygen <input type="checkbox"/> Cleaned air bleed valve			
1	68	PRESSURE	PRI. TEMP.	SEC. TEMP.	PRI. SALINITY
2	60				SEC. SALINITY
3	50				SALINITY
4	40				SAL.
5	30				MORDY'S
6	20				CHL.
7	10				WHIT'S
8	0				
9					
10					
11					
12					

70 m isobath
855 → 85-8

MAX. DEPTH = m

[illegible]

VESSEL		PROJECT & LEG		STATION DESIGNATION												
NOAA R/V MILLER FREEMAN		MFO5-13		56-1												
CONSC CAST #	LATITUDE	LONGITUDE	DATE JD=	TIME (GMT)	DRY BULB	WET BULB	PRESSURE	SEA STATE	VISIBILITY	WIND DIR.	WIND SPD.	CLOUD (amt)	TYPE	WEATHER	BOTTOM DEPTH	STA. NAME/ID
586003.00N	173 01.83W	27 S E P 0 5	1046 7.9	8.898	049 09	67										
CTD	TIMES		JD/TIME		DATA LOCATION											
TYPE & SN	9+ S/N 91220A		DATA ON		Tape/Diskette ID File Name/Header											
PRESS SN	80020		START DOWN													
PRI COND SN	915		AT DEPTH													
PRI TEMP SN	710		AT SURFACE													
SEC COND SN	884															
SEC TEMP SN	530															
POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES														
1	63	PRESSURE	PRI. TEMP.	SEC. TEMP.	PRI. SALINITY	SEC. SALINITY	SALINITY	SAL.	MORDY'S NUTR.	CHL.	WHIT'S NUTR.					
2	80	NO bottle at 60m due to conductivity glitch														
3	50															
4	40															
5	30															
6	20															
7	10															
8	0															
9																
10																
11																
12																
		MAX. DEPTH = m														
		REMARKS														
		70m isobath														
		Cleaned air bleed valve														

* CTD0578 is downtrace, CTD0586 is uptrace & battle firing.
Software force send. Had to be reinitialized.

VESSEL		PROJECT & LEG		STATION DESIGNATION											
NOAA R/V MILLER FREEMAN		MF05-13		57-1											
CONSC 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
596007.05 N	173 19.47 W	27	S E P 0 5	1156	6.7	6.8	97			68	19			76	
CTD	TIMES	JD/TIME	DATA LOCATION												
TYPE & SN	9+ S/N 91220A	DATA ON	Tape/Diskette ID File Name/Header												
PRESS SN	80020	START DOWN													
PRI COND SN	915	AT DEPTH													
PRI TEMP SN	710	AT SURFACE													
SEC COND SN	884														
SEC TEMP SN	530														
POS.	TRIP DEPTH	<input checked="" type="checkbox"/> PAR 4242 <input checked="" type="checkbox"/> WETSTAR 678 <input checked="" type="checkbox"/> Dissolved Oxygen <input checked="" type="checkbox"/> Dissolved Oxygen <input type="checkbox"/> Cleaned air bleed valve													
		CTD CONVERTED MONITOR VALUES													
		PRESSURE	PRI. TEMP.	SEC. TEMP.	PRI. SALINITY	SEC. SALINITY	SALINITY	SAMPLE BOTTLE DATA	SAMPLE BOTTLE NUMBER	SAL.	MORDY'S NUTR.	CHL.	WHIT'S NUTR.		
1	67									42	137				
2	60										138				
3	50										139				
4	40										140				
5	30										141				
6	20										142				
7	10										143				
8	0										144				
9															
10															
11															
12															

MAX. DEPTH = m

710 m isobath

[illegible]

[illegible]

VESSEL		PROJECT & LEG		STATION DESIGNATION													
NOAA RV MILLER FREEMAN		MF05-13		60-1													
CONSC 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 (m)	STA. NAME/ID	
62	6035.25 N	117339.28 W	27 SEP 05	1515	7.5	6.9	997			67	19				69		
CTD	TIMES		JD/TIME	DATA LOCATION													
TYPE & SN	9+ S/N 91220A	DATA ON		Tape/Diskette ID													
PRESS SN	80020	START DOWN		File Name/Header													
PRI COND SN	915	AT DEPTH															
PRI TEMP SN	710	AT SURFACE															
SEC COND SN	884			MAX. DEPTH = m													
SEC TEMP SN	530																
POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES															
		PRESSURE	PRI. TEMP.	SEC. TEMP.	PRI. SALINITY	SEC. SALINITY	SALINITY	SAMPLE BOTTLE DATA	SAMPLE BOTTLE NUMBER								
1	65									SAL	MORDY'S NUTR.	CHL.	WHIT'S NUTR.				
2	60									37	160						
3	50										161						
4	40										162						
5	30										001						
6	20										002						
7	10										003						
8	0										004						
9											005						
10																	
11																	
12																	

PAR 4242

METSTAR 678

Dissolved Oxygen

Dissolved Oxygen

Cleaned air bleed valve

[illegible]

VESSEL NOAA RV MILLER FREEMAN		PROJECT & LEG MF05-13				STATION DESIGNATION 62-1												
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
696059.51	51 N	17348	88 W	27	SEP 05	1741	8.1	7.8	7.6	057	14	14	14	14	14	14	80	
CTD	TIMES		JD/TIME		DATA LOCATION													
TYPE & SN	9+ S/N 91220A		DATA ON		Tape/Diskette ID													
PRESS SN	80020		START DOWN		File Name/Header													
PRI COND SN	915		AT DEPTH															
PRI TEMP SN	710		AT SURFACE															
SEC COND SN	884																	
SEC TEMP SN	530																	
PAR 4242			WETSTAR 678			Dissolved Oxygen			Dissolved Oxygen			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	SAL	MORDY'S NUTR.	CHL.	WHIT'S NUTR.				
1	710										55	014						
2	60										015	015						
3	50										016	016						
4	40										017	017						
5	30										018	018						
6	20										019	019						
7	10										020	020						
8	0										021	021						
9																		
10																		
11																		
12																		

* For chlorophyll samples, using Whatman filters instead of the Dyrnics filters.

VESSEL		PROJECT & LEG		STATION DESIGNATION											
NOAA RV MILLER FREEMAN		MF05-13		103-1											
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
656100.73 N	17346.04 W	27 S	1855 B.3	8.097	04615	77									
CTD	TIMES		JD/TIME		DATA LOCATION		REMARKS								
TYPE & SN	9+ S/N 91220A		DATA ON		Tape/Diskette ID		File Name/Header								
PRESS SN	80020		START DOWN												
PRI COND SN	915		AT DEPTH												
PRI TEMP SN	710		AT SURFACE												
SEC COND SN	884														
SEC TEMP SN	530														
POS.	TRIP DEPTH	PAR 4242		WETSTAR 678		Dissolved Oxygen		Dissolved Oxygen		Cleaned air bleed valve					
		CTD CONVERTED MONITOR VALUES													
		PRESSURE	PRI. TEMP.	SEC. TEMP.	PRI. SALINITY	SEC. SALINITY	SALINITY	SAL.	MORDY'S	CHL.	WHIT'S				
1	72							45	022						
2	60								023						
3	50								024						
4	40								025						
5	30								026						
6	20								027						
7	10								028						
8	0								029						
9															
10															
11															
12															

MAX. DEPTH = m

70 m isobath

VESSEL		PROJECT & LEG		STATION DESIGNATION												
NOAA RV MILLER FREEMAN		MF05-13		64-1												
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
666114.56 N	17334.80 W	27 SEP 05	2004	9.3	21.0	21.0	1020.1	2	0	0	12				73	
CTD	TIMES		JD/TIME	DATA LOCATION												
TYPE & SN	9+ S/N 91220A		DATA ON	Tape/Diskette ID												
PRESS SN	80020		START DOWN	File Name/Header												
PRI COND SN	915		AT DEPTH													
PRI TEMP SN	710		AT SURFACE													
SEC COND SN	884															
SEC TEMP SN	530															
<input checked="" type="checkbox"/> PAR 4242 <input checked="" type="checkbox"/> METSTAR 678 <input checked="" type="checkbox"/> Dissolved Oxygen <input checked="" type="checkbox"/> Dissolved Oxygen <input type="checkbox"/> Cleaned air bleed valve				CTD CONVERTED MONITOR VALUES												
POS.	TRIP DEPTH	PRESSURE	PRI. TEMP.	SEC. TEMP.	PRI. SALINITY	SEC. SALINITY	SALINITY	SAL.	MORDY'S NUTR.	CHL.	WHIT'S NUTR.	SAMPLE BOTTLE NUMBER				
1	68							22	30							
2	60								31							
3	50								32							
4	40								33							
5	30								34							
6	20								35							
7	10								36							
8	0								37							
9																
10																
11																
12																

REMARKS

70 m isobath

MAX. DEPTH = m

[illegible]

[illegible]

VESSEL NOAA R/V MILLER FREEMAN		PROJECT & LEG MF05-13		STATION DESIGNATION 67-1	
CONSC CAST #	LATITUDE	LONGITUDE	DATE JD=	TIME (GMT)	DRY BULB
DEG MIN	DEG MIN	DAY MO YR	HR MIN	(°C)	WET BULB
06 19 61 44.35 N	173 51.22 W	27 SEP 05	23 22	8.2	6.596
CTD	TIMES		DATA LOCATION		
TYPE & SN	9+ S/N 91220A	DATA ON	Tape/Diskette ID		
PRESS SN	80020	START DOWN	File Name/Header		
PRI COND SN	915	AT DEPTH			
PRI TEMP SN	710	AT SURFACE			
SEC COND SN	884				
SEC TEMP SN	530				
		<input checked="" type="checkbox"/> PAR 4242	<input checked="" type="checkbox"/> WETSTAR 678	<input checked="" type="checkbox"/> Dissolved Oxygen	<input checked="" type="checkbox"/> Dissolved Oxygen
POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES			
		PRESSURE	PRI. TEMP.	SEC. TEMP.	PRI. SALINITY
1	66				SEC. SALINITY
2	60				SALINITY
3	50				SAL.
4	40				MORDY's
5	30				NUTR.
6	20				CHL.
7	10				WHIT's
8	0				NUTR.
9					
10					
11					
12					
		SAMPLE BOTTLE DATA			
		SAMPLE BOTTLE NUMBER			
		MAX. DEPTH = m			
		REMARKS			
		71			

☐ Cleaned air bleed valve

VESSEL NOAA R/V MILLER FREEMAN			PROJECT & LEG MF05-13			STATION DESIGNATION 68-1									
CONSC CAST #	LATITUDE DEG MIN	LONGITUDE DEG MIN	DATE JD= DAY MO YR	TIME (GMT) HR MIN	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	
0306152.63 N	17402.51 W	28 SEP 05	0007	2.9	6.0	9.6	1029.16						71		
CTD	TIMES		JD/TIME		DATA LOCATION				REMARKS						
TYPE & SN	9+ S/N 91220A		DATA ON		Tape/Diskette ID				File Name/Header						
PRESS SN	80020		START DOWN												
PRI COND SN	915		AT DEPTH												
PRI TEMP SN	710		AT SURFACE												
SEC COND SN	884								MAX. DEPTH = m						
SEC TEMP SN	530														
POS.	TRIP DEPTH	<input checked="" type="checkbox"/> PAR 4242 <input type="checkbox"/> WETSTAR 678 <input checked="" type="checkbox"/> Dissolved Oxygen <input checked="" type="checkbox"/> Dissolved Oxygen <input type="checkbox"/> Cleaned air bleed valve													
		CTD CONVERTED MONITOR VALUES										SAMPLE BOTTLE DATA		SAMPLE BOTTLE NUMBER	
		PRESSURE	PRI. TEMP.	SEC. TEMP.	PRI. SALINITY	SEC. SALINITY	SALINITY	SAL.	MORDY'S NUTR.	CHL.	WHITT'S NUTR.				
1	66							26	62						
2	60								63						
3	50								64						
4	40								65						
5	30								66						
6	20								63						
7	10								64						
8	0								65						
9									66						
10									63						
11									64						
12									65						

VESSEL NOAA RV MILLER FREEMAN		PROJECT & LEG MF05-13		STATION DESIGNATION 70-1				
CONSC CAST #	LATITUDE DEG MIN	LONGITUDE DEG MIN	DATE JD= DAY MO YR	TIME (GMT)	DRY BULB (°C)			
				WET BULB (°C)	PRESSURE (mb)			
				SEA STATE	WIND DIRN.			
				WIND SPD.	CLOUD (amt)			
				WEATHER	BOTTOM DEPTH (m)			
					STA. NAME/ID			
CTD								
TYPE & SN	9+ S/N 91220A		DATA ON		DATA LOCATION			
PRESS SN	80020		START DOWN		Tape/Diskette ID			
PRI COND SN	915		AT DEPTH		File Name/Header			
PRI TEMP SN	710		AT SURFACE					
SEC COND SN	884							
SEC TEMP SN	530							
<input checked="" type="checkbox"/> PAR 4242 <input checked="" type="checkbox"/> WETSTAR 678 <input checked="" type="checkbox"/> Dissolved Oxygen <input checked="" type="checkbox"/> Dissolved Oxygen <input type="checkbox"/> Cleaned air bleed valve								
POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES						
		PRESSURE	PRI. TEMP.	SEC. TEMP.	PRI. SALINITY			
					SEC. SALINITY			
					SALINITY			
					SAL.			
					MORDY'S NUTR.			
					CHL.			
					WHIT'S NUTR.			
1	69				68	134		
2	60					175		
3	50					176		
4	40					177		
5	30					178		
6	20					179		
7	10					180		
8	0					181		
9								
10								
11								
12								
		REMARKS						
		35-8 CENTER						
		MAX. DEPTH = m						

VESSEL		PROJECT & LEG		STATION DESIGNATION												
NOAA RV MILLER FREEMAN		MF05-13		30-2												
CONSC 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
736211	98N	17440.22W	28 SEP 05	0837	7.8	6.2	7.7	*	*	(deg)	(m/s)	*	*	*	73	
CTD	TIMES		JD/TIME		DATA LOCATION											
TYPE & SN	9+ S/N 91220A		DATA ON		Tape/Diskette ID		File Name/Header									
PRESS SN	80020		START DOWN													
PRI COND SN	915		AT DEPTH													
PRI TEMP SN	710		AT SURFACE													
SEC COND SN	884															
SEC TEMP SN	530															
<input checked="" type="checkbox"/> PAR 4242 <input checked="" type="checkbox"/> WET STAR 678 <input checked="" type="checkbox"/> Dissolved Oxygen <input checked="" type="checkbox"/> Dissolved Oxygen <input type="checkbox"/> Cleaned air bleed valve			CTD CONVERTED MONITOR VALUES													
POS.	TRIP DEPTH	SAMPLE BOTTLE DATA														
		PRESSURE	PRI. TEMP.	SEC. TEMP.	PRI. SALINITY	SEC. SALINITY	SALINITY	SAL.	MORDY'S NUTR.	CHL.	WHIT'S NUTR.	SAMPLE BOTTLE NUMBER				
1	67							40	182							
2	60								183							
3	50								184							
4	40								185							
5	30								186							
6	20								187							
7	10								188							
8	0								189							
9																
10																
11																
12																

VESSEL		PROJECT & LEG		STATION DESIGNATION												
NOAA RV MILLER FREEMAN		MF05-13		71-1												
CONSC CAST #	LATITUDE	LONGITUDE	DATE JD=234	TIME (GMT)	DRY BULB	WET BULB	PRESSURE	SEA STATE	VISIBILITY	WIND DIRN.	WIND SPD.	CLOUD (amt)	TYPE	WEATHER	BOTTOM DEPTH	STA. NAME/ID
0745223.03 N	172207.20 W	01 05 1656	8.9	8.9	113	13	361									
CTD	TIMES		JD/TIME		DATA LOCATION		REMARKS									
TYPE & SN	9+ S/N 91220A		DATA ON		Tape/Diskette ID		05 Amp 4									
PRESS SN	80020		START DOWN													
PRI COND SN	915		AT DEPTH													
PRI TEMP SN	710		AT SURFACE													
SEC COND SN	884															
SEC TEMP SN	530															
PAR 4242			WET STAR 678			Dissolved Oxygen			Dissolved Oxygen			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	359								28	MORDY'S	CHL.	WHIT'S				
2	0-0									NUTR.		NUTR.				
3	0-0															
4	4-0															
5	3-0															
6	2-0															
7	1-0															
8	0															
9																
10																
11																
12																

363 w/o

[illegible]

[illegible]

NOAA Ship MILLER FREEMAN

PROJECT & LEG
MF-05-13

COD I.D.

STATION DESIGNATION

CONSECUTIVE CAST #	LATITUDE		LONGITUDE		DATE		TIME GMT		DRY BULB	WET BULB	PRESSURE	SEA STATE	VISIBILITY	WIND deg	DIRECTION	WIND SPEED knts	CLOUD (amt) TYPE	WEATHER	BOTTOM DEPTH	STATION NAME / ID
0775246.60	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	°C	°C	mb							0456	
SBE 9+ 91220																				
PRESS SN 80020																				
PRI TEMP SN 710																				
SEC TEMP SN 884																				
PRI COND SN 915																				
SEC COND SN 530																				
DATA ON																				
START DOWN																				
AT DEPTH																				
AT SURFACE																				
PAR S/N= 4242																				
FLUOR S/N= 678																				
MAX. DEPTH (m) 445																				
ChLAM S/N=																				
Cleared air bleed valve																				
REMARKS 05 AMP1A																				
CTD CONVERTED MONITOR VALUES																				
POSITION	TRIP DEPTH	PRESSURE	PRIMARY TEMP	SECONDARY TEMP	SALINITY		SALINITY		SAL		NUTR	CHL	WHIT'S NUTR	SAMPLE BOTTLE NUMBER						
1	0m													41						
2	10m																			
3	20m																			
4	30m																			
5	40m																			
6	50m																			
7	150m																			
8	200m																			
9	5m from bot.																			
10																				
11																				
12																				