PG ___ OF ___

VESSEL		PROJECT & LEG		STATION DESIGNATION
Alpha Helix		HX213		RESURRECTION BAY

CONSC CAST #	LATITUDE DEG	LATITUDE MIN	LONGITUDE DEG	LONGITUDE MIN	DATE JD= DAY	DATE JD= MO	DATE JD= YR	TIME (GMT) HR	TIME (GMT) MIN	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (m/s)	CLOUD (amt)	CLOUD TYPE	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
001	60	01.43 N	149	21.54 W	15	AUG	98	18	40	14.8		1127			000	05	8	7	2	297	RES25

CTD	TIMES	JD/TIME	DATA LOCATION		REMARKS
TYPE & SN	DATA ON		Tape/Diskette ID	File Name/Header	
PRESS SN	START DOWN				
TEMP SN	AT DEPTH				
COND SN	AT SURFACE	?			MAX. DEPTH = m
TEMP SN	☐ PAR ☑ FLUOR ☐ ChlAM ☐ TRANSMISSOMETER				☐ Cleaned air bleed valve

POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES				SAMPLE BOTTLE DATA	SAMPLE BOTTLE NUMBER			
		PRESSURE	PRI. TEMP.	SEC. TEMP	SALINITY	SALINITY	SAL.	NUTR.	CHL.	WHIT's NUTR.
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										

PG ___ OF ___

VESSEL		PROJECT & LEG		STATION DESIGNATION
Alpha Helix		HX213		

CONSC CAST #	LATITUDE DEG	LATITUDE MIN	LONGITUDE DEG	LONGITUDE MIN	DATE JD= DAY	DATE MO	DATE YR	TIME (GMT) HR	TIME (GMT) MIN	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (~~m/s~~)	CLOUD (amt)	CLOUD TYPE	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	(°C)	(°C)	(mb)	.	.	(deg)	(~~m/s~~)	*	*	*	(m)	Gulf of Alaska
002	59	50.68 N	149	27.95 W	15	AUG	98	2024	12	7		.	1	2	27	160	05	8	7	2026	9AK01

CTD	TIMES	JD/TIME	DATA LOCATION		REMARKS
TYPE & SN	DATA ON		Tape/Diskette ID	File Name/Header	
PRESS SN	START DOWN				
TEMP SN	AT DEPTH				
COND SN	AT SURFACE				MAX. DEPTH = m
TEMP SN	☐ PAR ☑ FLUOR ☐ ChlAM ☐ TRANSMISSOMETER ☐ Cleaned air bleed valve				

POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES				SAMPLE BOTTLE DATA	SAMPLE BOTTLE NUMBER			
		PRESSURE	PRI. TEMP.	SEC. TEMP	SALINITY	SALINITY	SAL.	NUTR.	CHL.	WHIT's NUTR.
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										

PG ___ OF ___

VESSEL		PROJECT & LEG		STATION DESIGNATION
Alpha Helix		HX213	Waves 230 1.5	SBC1

CONSC CAST #	LATITUDE DEG	LATITUDE MIN		LONGITUDE DEG	LONGITUDE MIN		DATE JD= DAY	DATE MO	DATE YR	TIME (GMT) HR	TIME (GMT) 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
003	55	05.85	N	163	51.28	W	20	AUG	98	01	31	4.3		085			230	46	-	2		28	SBC01

CTD	TIMES	JD/TIME	DATA LOCATION		REMARKS
TYPE & SN	DATA ON		Tape/Diskette ID	File Name/Header	
PRESS SN	START DOWN				
TEMP SN	AT DEPTH				
COND SN	AT SURFACE				MAX. DEPTH = m
TEMP SN	☐ PAR ☒ FLUOR ☐ ChlAM ☐ TRANSMISSOMETER				☐ Cleaned air bleed valve

POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES				SAMPLE BOTTLE DATA	SAMPLE BOTTLE NUMBER			
		PRESSURE	PRI. TEMP.	SEC. TEMP	SALINITY	SALINITY	SAL.	NUTR.	CHL.	WHIT's NUTR.
1	28									
2	20									
3	10									
4	0									
5										
6										
7										
8										
9										
10										
11										
12										

PG ___ OF ___

VESSEL		PROJECT & LEG		STATION DESIGNATION
Alpha Helix		HX213	Waves 230 1.0	SBC02

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)	
004	55	00.31 N	163	53.21 W	26	AUG	98	00	57	12.8		08	5	F	230	18	-	-	2	32	SBC02

NBK Nov '98 of ships log
5508.31N

CTD	TIMES	JD/TIME	DATA LOCATION		REMARKS
TYPE & SN	DATA ON		Tape/Diskette ID	File Name/Header	
PRESS SN	START DOWN				
TEMP SN	AT DEPTH				
COND SN	AT SURFACE				MAX. DEPTH = m
TEMP SN					

[ ] PAR [X] FLUOR [ ] ChlAM [ ] TRANSMISSOMETER [ ] Cleaned air bleed valve

POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES				SAMPLE BOTTLE DATA	SAMPLE BOTTLE NUMBER			
		PRESSURE	PRI. TEMP.	SEC. TEMP	SALINITY	SALINITY	SAL.	NUTR.	CHL.	WHIT's NUTR.
1	32									
2	20									
3	10									
4	0									
5										
6										
7										
8										
9										
10										
11										
12										

PG ___ OF ___

VESSEL		PROJECT & LEG	Waves 230° 1.0m	STATION DESIGNATION
Alpha Helix		HX213		SCB03

CONSC CAST #	LATITUDE DEG	LATITUDE MIN	LONGITUDE DEG	LONGITUDE MIN	DATE JD= DAY	DATE MO	DATE YR	TIME (GMT) HR	TIME (GMT) 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
005	55	10.71 N	163	55.21 W	20	AUG	98	01	32	12.1		08	4		230	15	-	2		43	5CB03

CTD	TIMES	JD/TIME	DATA LOCATION		REMARKS
TYPE & SN	DATA ON		Tape/Diskette ID	File Name/Header	
PRESS SN	START DOWN				
TEMP SN	AT DEPTH				
COND SN	AT SURFACE				MAX. DEPTH = m
TEMP SN	☐ PAR ☒ FLUOR ☐ ChlAM ☐ TRANSMISSOMETER ☐ Cleaned air bleed valve				

POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES				SAMPLE BOTTLE DATA	SAMPLE BOTTLE NUMBER			
		PRESSURE	PRI. TEMP.	SEC. TEMP	SALINITY	SALINITY	SAL.	NUTR.	CHL.	WHIT's NUTR.
1	40									
2	30									
3	20									
4	10									
5	0				31.506					
6										
7										
8										
9										
10										
11										
12										

Beginning of slight inflection at ~17m

PG ___ OF ___

VESSEL		PROJECT & LEG		STATION DESIGNATION
Alpha Helix		HX213	Waves 200° 1.0m	SBC 04

CONSC CAST #	LATITUDE DEG	LATITUDE MIN	LONGITUDE DEG	LONGITUDE MIN	DATE JD= DAY	DATE MO	DATE YR	TIME > (GMT) HR	TIME > (GMT) MIN	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE *	VISIBILITY *	WIND DIRN. (deg)	WIND SPD. (m/s)	CLOUD (amt) *	CLOUD TYPE *	WEATHER *	BOTTOM DEPTH (m)	STA. NAME/ID
006	55	13.10 N	163	57.35 W	208	AUG	98	02	08	11.9		0856			200	17	8	7	2	545	SBC04

CTD	TIMES	JD/TIME	DATA LOCATION		REMARKS
TYPE & SN	DATA ON		Tape/Diskette ID	File Name/Header	
PRESS SN	START DOWN				
TEMP SN	AT DEPTH				
COND SN	AT SURFACE				MAX. DEPTH = m
TEMP SN	☐ PAR ☒ FLUOR ☐ ChlAM ☐ TRANSMISSOMETER				☐ Cleaned air bleed valve

POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES				SAMPLE BOTTLE DATA	SAMPLE BOTTLE NUMBER			
		PRESSURE	PRI. TEMP.	SEC. TEMP	SALINITY	SALINITY	SAL.	NUTR.	CHL.	WHIT's NUTR.
1	48									
2	30				31.64					
3	20									
4	10									
5	0									
6										
7										
8										
9										
10										
11										
12										

PG ___ OF ___

VESSEL		PROJECT & LEG	Waves 220° 1.5m	STATION DESIGNATION
Alpha Helix		HX213		SBC05

CONSC CAST #	LATITUDE DEG	LATITUDE MIN	LONGITUDE DEG	LONGITUDE MIN	DATE JD= DAY	DATE JD= MO	DATE JD= YR	TIME (GMT) HR	TIME (GMT) 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
	DEG	MIN	DEG	MIN	DAY	MO	YR	HR	MIN	(°C)	(°C)	(mb)	.	.	(deg)	(m/s)	*	*	*	(m)	
007	55	15.68 N	163	59.22 W	20	AUG	98	02	57	11.4		0846			16	16	8	7	2	59	SBC05

CTD	TIMES	JD/TIME	DATA LOCATION 220°	REMARKS
TYPE & SN	DATA ON		Tape/Diskette ID / File Name/Header	
PRESS SN	START DOWN			
TEMP SN	AT DEPTH			
COND SN	AT SURFACE			MAX. DEPTH = m
TEMP SN				

[X] PAR [X] FLUOR [ ] ChlAM [ ] TRANSMISSOMETER [ ] Cleaned air bleed valve

POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES: PUT PAR sensor on for first time				SAMPLE BOTTLE DATA	SAMPLE BOTTLE NUMBER			
		PRESSURE	PRI. TEMP.	SEC. TEMP	SALINITY	SALINITY	SAL.	NUTR.	CHL.	WHIT's NUTR.
1	54						9701			
2	30									
3	20									
4	11 maybe 2 bottles fired									
5	0									
6										
7										
8										
9										
10										
11										
12										

PG ___ OF ___

VESSEL		PROJECT & LEG		STATION DESIGNATION
Alpha Helix		HX213	Wave Ht 1.5m	SBC08

CONSC CAST #	LATITUDE DEG	LATITUDE MIN	LONGITUDE DEG	LONGITUDE MIN	DATE JD= DAY	DATE MO	DATE YR	TIME (GMT) HR	TIME (GMT) MIN	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (~~m/s~~)	CLOUD (amt) *	CLOUD TYPE *	WEATHER *	BOTTOM DEPTH (m)	STA. NAME/ID
													.	.			*	*	*		
008	55	18.02 N	164	01.37 W	20	AUG	98	03	34	11.2		.	08	5	6	210	17	8	7	2	775	SBC08

CTD	TIMES	JD/TIME	DATA LOCATION		REMARKS
TYPE & SN	DATA ON		Tape/Diskette ID	File Name/Header	
PRESS SN	START DOWN				
TEMP SN	AT DEPTH				
COND SN	AT SURFACE				MAX. DEPTH = m
TEMP SN					

[X] PAR [/] FLUOR [ ] ChlAM [ ] TRANSMISSOMETER [ ] Cleaned air bleed valve

POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES: PRESSURE	PRI. TEMP.	SEC. TEMP	SALINITY	SAMPLE BOTTLE DATA: SALINITY	SAMPLE BOTTLE NUMBER: SAL.	NUTR.	CHL.	WHIT's NUTR.
1	72	maybe 2 bottles								
2	50									
3	30									
4	20									
5	10									
6	0									
7										
8										
9										
10										
11										
12										

almost no structure - 70m

PG ___ OF ___

VESSEL		PROJECT & LEG		STATION DESIGNATION
Alpha Helix		HX213		SBC7

CONSC CAST #	LATITUDE DEG	LATITUDE MIN	LONGITUDE DEG	LONGITUDE MIN	DATE JD= DAY	DATE MO	DATE YR	TIME (GMT) HR	TIME (GMT) MIN	DRY BULB (°C)	WET BULB (°C) (were WT 2.0m)	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	(°C)	(°C)	(mb)	.	.	(deg)	(~~m/s~~)	.	.	.	(m)	
009	55	20.46 N	164	03.45 W	220	AUG	98	04	11	10.8		085	56	210	17	8	7	2	87	SBC07

CTD	TIMES	JD/TIME	DATA LOCATION		REMARKS
TYPE & SN	DATA ON		Tape/Diskette ID	File Name/Header	
PRESS SN	START DOWN				
TEMP SN	AT DEPTH				
COND SN	AT SURFACE				MAX. DEPTH = m
TEMP SN	[X] PAR [X] FLUOR [ ] ChlAM [ ] TRANSMISSOMETER [ ] Cleaned air bleed valve				

POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES				SAMPLE BOTTLE DATA	SAMPLE BOTTLE NUMBER			
		PRESSURE	PRI. TEMP.	SEC. TEMP	SALINITY	SALINITY	SAL.	NUTR.	CHL.	WHIT's NUTR.
1	80	~				~				
2	50									
3	30									
4	20	maybe 2								
5	10									
6	0					~				
7										
8										
9										
10										
11										
12										

a 1°C step ~22/38 another ~65m

PG ___ OF ___

VESSEL		PROJECT & LEG		STATION DESIGNATION
Alpha Helix		HX213	Wave ht 2.0m	SBC08

CONSC CAST #	LATITUDE DEG	LATITUDE MIN	LONGITUDE DEG	LONGITUDE MIN	DATE JD= DAY	DATE JD= MO	DATE JD= YR	TIME (GMT) HR	TIME (GMT) MIN	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (m/s) (kts)	CLOUD (amt)	CLOUD TYPE	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
01	05522.07 N		164 05.49 W		20	AUG	98	04	52	10.8		086	6	2	16	19	8	7	2	945	SBC08

CTD	TIMES	JD/TIME	DATA LOCATION		REMARKS
TYPE & SN	DATA ON		Tape/Diskette ID	File Name/Header	
PRESS SN	START DOWN				
TEMP SN	AT DEPTH				
COND SN	AT SURFACE				MAX. DEPTH = m
TEMP SN	[X] PAR [X] FLUOR [ ] ChlAM [ ] TRANSMISSOMETER				[ ] Cleaned air bleed valve

POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES: PRESSURE	PRI. TEMP.	SEC. TEMP	SALINITY	SAMPLE BOTTLE DATA: SALINITY	SAMPLE BOTTLE NUMBER: SAL.	NUTR.	CHL.	WHIT's NUTR.
1	92									
2	60									
3	50									
4	40									
5	30									
6	20									
7	10									
8	0									
9										
10										
11										
12										

34 [illegible] 80

Have crossed miner front since last Sta.
2° diff top & bot.

PG ___ OF ___

VESSEL		PROJECT & LEG		STATION DESIGNATION
Alpha Helix		HX213	wave ht 2.0m	SBC09

CONSC CAST #	LATITUDE DEG	LATITUDE MIN		LONGITUDE DEG	LONGITUDE MIN		DATE JD= DAY	MO	YR	TIME (GMT) HR	TIME (GMT) 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
011	55	26.34	N	164	07.46	W	209	AUG	98	0535	5:35	0.6	.	0866	2	2	220	19	8	7	2	965	SBC09

CTD	TIMES	JD/TIME	DATA LOCATION		REMARKS
TYPE & SN	DATA ON		Tape/Diskette ID	File Name/Header	
PRESS SN	START DOWN				
TEMP SN	AT DEPTH				
COND SN	AT SURFACE				MAX. DEPTH = m

TEMP SN

[X] PAR [X] FLUOR [ ] ChlAM [ ] TRANSMISSOMETER [ ] Cleaned air bleed valve

POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES				SAMPLE BOTTLE DATA	SAMPLE BOTTLE NUMBER			
		PRESSURE	PRI. TEMP.	SEC. TEMP	SALINITY	SALINITY	SAL.	NUTR.	CHL.	WHIT's NUTR.
1	962					~32.2				
2	60									
3	50 ~~40~~									
4	40									
5	30									
6	20									
7	10									
8	0									
9										
10										
11										
12										

T top 10.4 mixT 9.25
T bot ~6 mid b 70

PG ___ OF ___

VESSEL		PROJECT & LEG		STATION DESIGNATION
Alpha Helix		HX213	dir 220 wave ht 2.0m	SBC10

CONSC CAST #	LATITUDE DEG	LATITUDE MIN	LONGITUDE DEG	LONGITUDE MIN	DATE JD= DAY	DATE JD= MO	DATE JD= YR	TIME (GMT) HR	TIME (GMT) 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
01	25	27.75 N	164	09.49 W	20	AUG	98	06	19	10.6		086			220	18	8	7	2	78	

CTD	TIMES	JD/TIME	DATA LOCATION		REMARKS
TYPE & SN	DATA ON		Tape/Diskette ID	File Name/Header	
PRESS SN	START DOWN				
TEMP SN	AT DEPTH				
COND SN	AT SURFACE				MAX. DEPTH = m
TEMP SN					

[X] PAR [X] FLUOR [ ] ChlAM [ ] TRANSMISSOMETER [ ] Cleaned air bleed valve

POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES				SAMPLE BOTTLE DATA	SAMPLE BOTTLE NUMBER			
		PRESSURE	PRI. TEMP.	SEC. TEMP	SALINITY	SALINITY	SAL.	NUTR.	CHL.	WHIT's NUTR.
1	94									
2	70									
3	66									
4	50									
5	40									
6	30									
7	20									
8	10									
9	0									
10										
11										
12										

PG ___ OF ___

VESSEL		PROJECT & LEG		STATION DESIGNATION
Alpha Helix		HX213	wave ht 220° 2.2m	

CONSC CAST #	LATITUDE DEG	LATITUDE MIN		LONGITUDE DEG	LONGITUDE MIN		DATE JD= DAY	DATE JD= MO	DATE JD= YR	TIME (GMT) HR	TIME (GMT) MIN	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE *	VISIBILITY *	WIND DIRN. (deg)	WIND SPD. (m/s)	CLOUD (amt) *	CLOUD TYPE *	WEATHER *	BOTTOM DEPTH (m)	STA. NAME/ID
																	220						
01	35	30.2	N	164	11.40	W	26	AUG	98	07	01	10.2		085	5		229	17			2	985	BC11

CTD	TIMES JD/TIME	DATA LOCATION	REMARKS
TYPE & SN	DATA ON	Tape/Diskette ID	File Name/Header
PRESS SN	START DOWN		
TEMP SN	AT DEPTH		
COND SN	AT SURFACE		MAX. DEPTH = m
TEMP SN	[X] PAR [X] FLUOR [ ] ChlAM [ ] TRANSMISSOMETER	[ ] Cleaned air bleed valve	

POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES: PRESSURE	PRI. TEMP.	SEC. TEMP	SALINITY	SAMPLE BOTTLE DATA: SALINITY	SAMPLE BOTTLE NUMBER: SAL.	NUTR.	CHL.	WHIT's NUTR.
1	93									
2	60									
3	56									
4	40									
5	31									
6	19									
7	10.4									
8	0									
9										
10										
11										
12										

sharp step at ~3Cms

SBC12 PG ___ OF ___

VESSEL		PROJECT & LEG		STATION DESIGNATION
Alpha Helix		HX213	Waveder 220 ht 2.2m	

CONSC CAST #	LATITUDE DEG	LATITUDE MIN		LONGITUDE DEG	LONGITUDE MIN		DATE JD= DAY	DATE JD= MO	DATE JD= YR	TIME (GMT) HR	TIME (GMT) MIN	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE *	VISIBILITY *	WIND DIRN. (deg)	WIND SPD. (~~m/s~~)	CLOUD (amt) *	CLOUD TYPE *	WEATHER *	BOTTOM DEPTH (m)	STA. NAME/ID
																					?		
01	45	32.63	N	164	13.51	W	20	AUG	98	07	45	10.2		085	5	-	220	17	-	-	2	96	SBC12

CTD	TIMES	JD/TIME
TYPE & SN	DATA ON	
PRESS SN	START DOWN	
TEMP SN	AT DEPTH	
COND SN	AT SURFACE	
TEMP SN		

DATA LOCATION

Tape/Diskette ID	File Name/Header

REMARKS

MAX. DEPTH = m

[X] PAR [X] FLUOR [ ] ChlAM [ ] TRANSMISSOMETER [ ] Cleaned air bleed valve

POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES: PRESSURE	PRI. TEMP.	SEC. TEMP	SALINITY	SAMPLE BOTTLE DATA: SALINITY	SAMPLE BOTTLE NUMBER: SAL.	NUTR.	CHL.	WHIT's NUTR.
1	92									
2	60									
3	50									
4	40									
5	30									
6	20									
7	10									
8	0									
9										
10										
11										
12										

Step at 35m

PG ___ OF ___

VESSEL		PROJECT & LEG	Waves 220° 2.0m	STATION DESIGNATION
Alpha Helix		HX213		

CONSC CAST #	LATITUDE DEG	LATITUDE MIN		LONGITUDE DEG	LONGITUDE MIN		DATE JD= DAY	DATE MO	DATE YR	TIME (GMT) HR	TIME (GMT) MIN	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE *	VISIBILITY *	WIND DIRN. (deg)	WIND SPD. (m/s)	CLOUD (amt) *	CLOUD TYPE *	WEATHER *	BOTTOM DEPTH (m)	STA. NAME/ID
01	55	35.38	N	162	02.92	W	220	AUG	98	99	06	10.2	.	085	5	2	220	17	-	-	2	96	58R162

CTD	TIMES	JD/TIME	DATA LOCATION		REMARKS
TYPE & SN	DATA ON		Tape/Diskette ID	File Name/Header	
PRESS SN	START DOWN				
TEMP SN	AT DEPTH				
COND SN	AT SURFACE				MAX. DEPTH = m
TEMP SN	☑ PAR ☑ FLUOR ☐ ChlAM ☐ TRANSMISSOMETER ☐ Cleaned air bleed valve				

POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES: PRESSURE	PRI. TEMP.	SEC. TEMP	SALINITY	SAMPLE BOTTLE DATA: SALINITY	SAMPLE BOTTLE NUMBER: SAL.	NUTR.	CHL.	WHIT's NUTR.
1	92.6									
2	59.4									
3	42.2									
4	20.3									
5	11.7									
6	3.0									
7										
8										
9										
10										
11										
12										

PG ___ OF ___

VESSEL		PROJECT & LEG		STATION DESIGNATION
Alpha Helix		HX213	Waves 2200 2m	

CONSC CAST #	LATITUDE DEG	LATITUDE MIN		LONGITUDE DEG	LONGITUDE MIN		DATE JD= DAY	DATE JD= MO	DATE JD= YR	TIME (GMT) HR	TIME (GMT) MIN	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE *	VISIBILITY *	WIND DIRN. (deg)	WIND SPD. (m/s)	CLOUD (amt) *	CLOUD TYPE *	WEATHER *	BOTTOM DEPTH (m)	STA. NAME/ID
01	65	30.14	N	163	58.94	W	20	AUG	98	1004		10.2		695			220	17	-	-	2	069	25514/D

CTD	TIMES	JD/TIME	DATA LOCATION		REMARKS
TYPE & SN	DATA ON		Tape/Diskette ID	File Name/Header	
PRESS SN	START DOWN				
TEMP SN	AT DEPTH				
COND SN	AT SURFACE				MAX. DEPTH = m
TEMP SN	☑ PAR ☑ FLUOR ☐ ChlAM ☐ TRANSMISSOMETER ☐ Cleaned air bleed valve				

POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES: PRESSURE	PRI. TEMP.	SEC. TEMP	SALINITY	SAMPLE BOTTLE DATA: SALINITY	SAMPLE BOTTLE NUMBER: SAL.	NUTR.	CHL.	WHIT's NUTR.
1	89.1									
2	60.1									
3	39.8									
4	20.9									
5	~~20~~ 11.5									
6	3.3									
7										
8										
9										
10										
11										
12										

* 39.8 - Bottle #3 may be two bottles @ two depths (All Bottles Fired Correctly)

PG ___ OF ___

VESSEL		PROJECT & LEG		STATION DESIGNATION
Alpha Helix		HX213	Waves 220 1.5	SBA08

CONSC CAST #	LATITUDE DEG	LATITUDE MIN	LONGITUDE DEG	LONGITUDE MIN	DATE JD= DAY	DATE MO	DATE YR	TIME (GMT) HR	TIME (GMT) 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
01	55	25.59 N	163	55.04 W	220	AUG	98	11	02	9.7		09	5		220	20	-	-	2	89	SBA08

CTD	TIMES	JD/TIME	DATA LOCATION		REMARKS
TYPE & SN	DATA ON		Tape/Diskette ID	File Name/Header	
PRESS SN	START DOWN				
TEMP SN	AT DEPTH				
COND SN	AT SURFACE				MAX. DEPTH = m
TEMP SN	☑ PAR ☑ FLUOR ☐ ChlAM ☐ TRANSMISSOMETER ☐ Cleaned air bleed valve				

POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES: PRESSURE	PRI. TEMP.	SEC. TEMP	SALINITY	SAMPLE BOTTLE DATA: SALINITY	SAMPLE BOTTLE NUMBER: SAL.	NUTR.	CHL.	WHIT's NUTR.
1	84									
2	59.1									
3	39.9									
4	19.9									
5	10.8									
6	~~3.0~~ 3.0									
7										
8										
9										
10										
11										
12										

PG ___ OF ___

VESSEL		PROJECT & LEG		STATION DESIGNATION
Alpha Helix		HX213	Waves 220 1.5m	

CONSC CAST #	LATITUDE DEG	LATITUDE MIN		LONGITUDE DEG	LONGITUDE MIN		DATE JD= DAY	MO	YR	TIME (GMT) HR	TIME (GMT) 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
018	55	20.42	N	163	51.09	W	220	AUG	98	1200		9.7	.	1015			220	18	-	-	2	171	5646

CTD	TIMES	JD/TIME	DATA LOCATION		REMARKS
TYPE & SN	DATA ON		Tape/Diskette ID	File Name/Header	
PRESS SN	START DOWN				
TEMP SN	AT DEPTH				
COND SN	AT SURFACE				MAX. DEPTH = m
TEMP SN	☐ PAR ☐ FLUOR ☐ ChlAM ☐ TRANSMISSOMETER				☐ Cleaned air bleed valve

POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES				SAMPLE BOTTLE DATA	SAMPLE BOTTLE NUMBER			
		PRESSURE	PRI. TEMP.	SEC. TEMP	SALINITY	SALINITY	SAL.	NUTR.	CHL.	WHIT's NUTR.
1	60.9									
2	39.3									
3	21.6									
4	10.4									
5	4.9									
6										
7										
8										
9										
10										
11										
12										

PG ___ OF ___

VESSEL		PROJECT & LEG		STATION DESIGNATION
Alpha Helix		HX213	Waves 220° 1.5m	

CONSC CAST #	LATITUDE DEG	LATITUDE MIN		LONGITUDE DEG	LONGITUDE 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
																			*	*	*	0065	
01	55	18.30	N	163	48.98	W	20	AUG	98	1236		9.7		1016	6		220	23	2	6	5		5R45

CTD	TIMES	JD/TIME	DATA LOCATION		REMARKS
TYPE & SN	DATA ON		Tape/Diskette ID	File Name/Header	
PRESS SN	START DOWN				
TEMP SN	AT DEPTH				
COND SN	AT SURFACE				MAX. DEPTH = m
TEMP SN	☑ PAR ☑ FLUOR ☐ ChlAM ☐ TRANSMISSOMETER ☐ Cleaned air bleed valve				

POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES				SAMPLE BOTTLE DATA	SAMPLE BOTTLE NUMBER			
		PRESSURE	PRI. TEMP.	SEC. TEMP	SALINITY	SALINITY	SAL.	NUTR.	CHL.	WHIT's NUTR.
1	62.1									
2	41.4									
3	21.2									
4	9.4									
5	5.4									
6										
7										
8										
9										
10										
11										
12										

PG ___ OF ___

VESSEL		PROJECT & LEG		STATION DESIGNATION
Alpha Helix		HX213	Waves 230 1.5m	

CONSC CAST #	LATITUDE DEG	LATITUDE MIN		LONGITUDE DEG	LONGITUDE MIN		DATE JD= DAY	DATE JD= MO	DATE JD= YR	TIME (GMT) HR	TIME (GMT) 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
020	55	15.86	N	163	46.98	W	20	AUG	98	13	15	9.7	.	10	5		240	20	-	-	-	57	5Sta

CTD	TIMES	JD/TIME	DATA LOCATION		REMARKS
TYPE & SN	DATA ON		Tape/Diskette ID	File Name/Header	
PRESS SN	START DOWN				
TEMP SN	AT DEPTH				
COND SN	AT SURFACE				MAX. DEPTH = m
TEMP SN	[X] PAR [X] FLUOR [ ] ChlAM [ ] TRANSMISSOMETER				[ ] Cleaned air bleed valve

POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES: PRESSURE	PRI. TEMP.	SEC. TEMP	SALINITY	SAMPLE BOTTLE DATA: SALINITY	SAMPLE BOTTLE NUMBER: SAL.	NUTR.	CHL.	WHIT's NUTR.
1	56									
2	40.4									
3	21.0									
4	10.4									
5	5.7									
6										
7										
8										
9										
10										
11										
12										

PG ___ OF ___

VESSEL		PROJECT & LEG		STATION DESIGNATION
Alpha Helix		HX213	Waves 240 1.5	

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)	
021	55 11.01 N	163 43.04 W	210 AUG 98	1407	9.7	.	11	5+		240	20	-	-	-	45	SBA02

CTD	TIMES	JD/TIME	DATA LOCATION		REMARKS
TYPE & SN	DATA ON		Tape/Diskette ID	File Name/Header	
PRESS SN	START DOWN				
TEMP SN	AT DEPTH				
COND SN	AT SURFACE				MAX. DEPTH = m
TEMP SN	☑ PAR ☑ FLUOR ☐ ChlAM ☐ TRANSMISSOMETER				☐ Cleaned air bleed valve

POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES				SAMPLE BOTTLE DATA	SAMPLE BOTTLE NUMBER			
		PRESSURE	PRI. TEMP.	SEC. TEMP	SALINITY	SALINITY	SAL.	NUTR.	CHL.	WHIT's NUTR.
1	45									
2	20									
3	10									
4										
5										
6										
7										
8										
9										
10										
11										
12										

PG ___ OF ___

VESSEL		PROJECT & LEG		STATION DESIGNATION
Alpha Helix		HX213	Wave 240° 1.5m	SBA01

CONSC CAST #	LATITUDE DEG	LATITUDE MIN		LONGITUDE DEG	LONGITUDE 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
023	55	08.52	N	163	41.02	W	20	AUG	98	1438		9.7		11	6	-	240	24	-	-	3/6	48	SBA01

CTD	TIMES	JD/TIME	DATA LOCATION		REMARKS
TYPE & SN	DATA ON		Tape/Diskette ID	File Name/Header	
PRESS SN	START DOWN				
TEMP SN	AT DEPTH				
COND SN	AT SURFACE				MAX. DEPTH = m
TEMP SN	☑ PAR ☑ FLUOR ☐ ChlAM ☐ TRANSMISSOMETER ☐ Cleaned air bleed valve				

POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES				SAMPLE BOTTLE DATA	SAMPLE BOTTLE NUMBER			
		PRESSURE	PRI. TEMP.	SEC. TEMP	SALINITY	SALINITY	SAL.	NUTR.	CHL.	WHIT's NUTR.
1	38									
2	20									
3	10									
4	0									
5										
6										
7										
8										
9										
10										
11										
12										

PG ___ OF ___

VESSEL		PROJECT & LEG	Waves 240° 1.5m	STATION DESIGNATION
Alpha Helix		HX213		

CONSC CAST #	LATITUDE DEG	LATITUDE MIN		LONGITUDE DEG	LONGITUDE MIN		DATE JD= DAY	DATE MO	DATE YR	TIME (GMT) HR	TIME (GMT) 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
U	23	55	03.02	N	164	01.67	W	240	AUG	98	1630	9.5		1013	5	5	240	18	8	7	2/0	2958	6

CTD	TIMES	JD/TIME	DATA LOCATION		REMARKS
TYPE & SN	DATA ON		Tape/Diskette ID	File Name/Header	
PRESS SN	START DOWN				
TEMP SN	AT DEPTH				
COND SN	AT SURFACE				MAX. DEPTH = m
TEMP SN	☒ PAR ☒ FLUOR ☐ ChlAM ☐ TRANSMISSOMETER ☐ Cleaned air bleed valve				

POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES				SAMPLE BOTTLE DATA	SAMPLE BOTTLE NUMBER			
		PRESSURE	PRI. TEMP.	SEC. TEMP	SALINITY	SALINITY	SAL.	NUTR.	CHL.	WHIT's NUTR.
1	25									
2	10									
3	0									
4										
5										
6										
7										
8										
9										
10										
11										
12										

PG ___ OF ___

VESSEL		PROJECT & LEG	Waves 140° 1.5m	STATION DESIGNATION
Alpha Helix		HX213		

CONSC CAST #	LATITUDE DEG	LATITUDE MIN	LONGITUDE DEG	LONGITUDE MIN	DATE JD= DAY	DATE MO	DATE YR	TIME (GMT) HR	TIME (GMT) MIN	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (m/s)	CLOUD (amt)	CLOUD TYPE	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
																	*	*	*		
024	55	05.45 N	164	03.81 W	220	AUG	98	17	08	9.2	.	1013	4	6	240	15	8	7	2	3355	BE02

CTD	TIMES	JD/TIME	DATA LOCATION		REMARKS
TYPE & SN	DATA ON		Tape/Diskette ID	File Name/Header	
PRESS SN	START DOWN				
TEMP SN	AT DEPTH				
COND SN	AT SURFACE				MAX. DEPTH = m

TEMP SN

[✓] PAR [✓] FLUOR [ ] ChlAM [ ] TRANSMISSOMETER [ ] Cleaned air bleed valve

POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES: PRESSURE	PRI. TEMP.	SEC. TEMP	SALINITY	SAMPLE BOTTLE DATA: SALINITY	SAMPLE BOTTLE NUMBER: SAL.	NUTR.	CHL.	WHIT's NUTR.
1	35									
2	32									
3	20									
4	16									
5	8									
6										
7										
8										
9										
10										
11										
12										

PG ___ OF ___

VESSEL		PROJECT & LEG		STATION DESIGNATION
Alpha Helix		HX213	Wave 280° 1.5m	

CONSC CAST #	LATITUDE DEG	LATITUDE MIN		LONGITUDE DEG	LONGITUDE MIN		DATE JD= DAY	DATE MO	DATE YR	TIME (GMT) HR	TIME (GMT) MIN	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE *	VISIBILITY *	WIND DIRN. (deg)	WIND SPD. (m/s)	CLOUD (amt) *	CLOUD TYPE *	WEATHER *	BOTTOM DEPTH (m)	STA. NAME/ID
	25	51.37	N	164	07.86	W	20	AUG	98	18	02	9.1		1144	6	2	280	14	8	7	2a	545	BET04

CTD	TIMES	JD/TIME	DATA LOCATION		REMARKS
TYPE & SN	DATA ON		Tape/Diskette ID	File Name/Header	
PRESS SN	START DOWN				
TEMP SN	AT DEPTH				
COND SN	AT SURFACE				MAX. DEPTH = m

TEMP SN

[X] PAR [X] FLUOR [ ] ChlAM [ ] TRANSMISSOMETER [ ] Cleaned air bleed valve

POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES: PRESSURE	PRI. TEMP.	SEC. TEMP	SALINITY	SAMPLE BOTTLE DATA: SALINITY	SAMPLE BOTTLE NUMBER: SAL.	NUTR.	CHL.	WHIT's NUTR.
1	48									
2	40	2 Bottles								
3	30									
4	20									
5	10									
6										
7										
8										
9										
10										
11										
12										

PG ___ OF ___

VESSEL		PROJECT & LEG	Waves 280° 1.5m	STATION DESIGNATION
Alpha Helix		HX213		

CONSC CAST #	LATITUDE DEG	LATITUDE MIN		LONGITUDE DEG	LONGITUDE MIN		DATE JD= DAY	DATE JD= MO	DATE JD= YR	TIME (GMT) HR	TIME (GMT) 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
	26	55.37	N	164	07.87	W	20	AUG	98	18	36	9.5	.	955	6	2	280	18	8	7	2	63	5

CTD	TIMES	JD/TIME	DATA LOCATION		REMARKS
TYPE & SN	DATA ON		Tape/Diskette ID	File Name/Header	
PRESS SN	START DOWN				
TEMP SN	AT DEPTH				
COND SN	AT SURFACE				MAX. DEPTH = m
TEMP SN					

[X] PAR [X] FLUOR [ ] ChlAM [ ] TRANSMISSOMETER [ ] Cleaned air bleed valve

POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES				SAMPLE BOTTLE DATA	SAMPLE BOTTLE NUMBER			
		PRESSURE	PRI. TEMP.	SEC. TEMP	SALINITY	SALINITY	SAL.	NUTR.	CHL.	WHIT's NUTR.
1	57									
2	41									
3	31									
4	8.4									
5	0									
6										
7										
8										
9										
10										
11										
12										

Check Pres?

PG ___ OF ___

VESSEL		PROJECT & LEG	Wave 270° 1.5m	STATION DESIGNATION
Alpha Helix		HX213		SBE06

CONSC CAST #	LATITUDE DEG	LATITUDE MIN	LONGITUDE DEG	LONGITUDE MIN	DATE JD= DAY	DATE JD= MO	DATE JD= YR	TIME (GMT) HR	TIME (GMT) 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
027	65	15.22 N	164	11.91 W	20	AUG	98	19	16			01	4	6	270	15	8	7	2	0745	BE06

CTD	TIMES	JD/TIME	DATA LOCATION		REMARKS
TYPE & SN	DATA ON		Tape/Diskette ID	File Name/Header	
PRESS SN	START DOWN				
TEMP SN	AT DEPTH				
COND SN	AT SURFACE				MAX. DEPTH = m

☑ PAR ☑ FLUOR ☐ ChlAM ☐ TRANSMISSOMETER ☐ Cleaned air bleed valve

POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES				SAMPLE BOTTLE DATA	SAMPLE BOTTLE NUMBER			
		PRESSURE	PRI. TEMP.	SEC. TEMP	SALINITY	SALINITY	SAL.	NUTR.	CHL.	WHIT's NUTR.
1	76									
2	50									
3	40									
4	30									
5	20									
6	10									
7										
8										
9										
10										
11										
12										

PG ___ OF ___

VESSEL		PROJECT & LEG		STATION DESIGNATION
Alpha Helix	PROD	HX213	Wave HT 1.5m dir 270	

CONSC CAST #	LATITUDE DEG	LATITUDE MIN	LONGITUDE DEG	LONGITUDE MIN	DATE JD= DAY	DATE JD= MO	DATE JD= YR	TIME (GMT) HR	TIME (GMT) MIN	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (m/s)	CLOUD (amt)	CLOUD TYPE	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
028	55	57.16 N	164	11.75 W	228	AUG	98	20	28	9.5		1636			270	10	8	7	2	725	BE06

CTD	TIMES	JD/TIME	DATA LOCATION		REMARKS
TYPE & SN	DATA ON		Tape/Diskette ID	File Name/Header	
PRESS SN	START DOWN				
TEMP SN	AT DEPTH				
COND SN	AT SURFACE				MAX. DEPTH = m
TEMP SN					

[X] PAR [X] FLUOR [ ] ChlAM [ ] TRANSMISSOMETER [ ] Cleaned air bleed valve

POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES				SAMPLE BOTTLE DATA	SAMPLE BOTTLE NUMBER			
		PRESSURE	PRI. TEMP.	SEC. TEMP	SALINITY	SALINITY	SAL.	NUTR.	CHL.	WHIT's NUTR.
1	20									
2	21.4									
3	20.6									
4	20.1									
5	15.1									
6	10.3									
7	5.6									
8	3.3									
9	2.6									
10	2.7									
11	2.5									
12										

Chlorophyll / Prod

PG ___ OF ___

VESSEL		PROJECT & LEG		STATION DESIGNATION
Alpha Helix		HX213	Waves 270 1.5m	

CONSC CAST #	LATITUDE DEG	LATITUDE MIN	LONGITUDE DEG	LONGITUDE MIN	DATE JD= DAY	DATE MO	DATE YR	TIME (GMT) HR	TIME (GMT) 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
02	55	15.23 N	164	1.58 W	20	AUG	98	21	04	9.6	.	16	3	6	270	10	8	7	2	725	BE04

CTD	TIMES	JD/TIME	DATA LOCATION		REMARKS
TYPE & SN	DATA ON		Tape/Diskette ID	File Name/Header	
PRESS SN	START DOWN				
TEMP SN	AT DEPTH				
COND SN	AT SURFACE				MAX. DEPTH = m

TEMP SN	[X] PAR	[X] FLUOR	[ ] ChlAM	[ ] TRANSMISSOMETER	[ ] Cleaned air bleed valve

POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES: PRESSURE	PRI. TEMP.	SEC. TEMP	SALINITY	SAMPLE BOTTLE DATA: SALINITY	SAMPLE BOTTLE NUMBER: SAL.	NUTR.	CHL.	WHIT's NUTR.
1	36.3									
2	23.1									
3	16.5									
4	10.5									
5	5.1									
6	0 (2.5)									
7										
8										
9										
10										
11										
12										

PG ___ OF ___

VESSEL		PROJECT & LEG	Waves 270° 1.5m	STATION DESIGNATION
Alpha Helix		HX213		SBE 08

CONSC CAST #	LATITUDE DEG	LATITUDE MIN		LONGITUDE DEG	LONGITUDE MIN		DATE JD= DAY	DATE MO	DATE YR	TIME (GMT) HR	TIME (GMT) MIN	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE .	VISIBILITY .	WIND DIRN. (deg)	WIND SPD. (m/s)	CLOUD (amt) .	CLOUD TYPE .	WEATHER .	BOTTOM DEPTH (m)	STA. NAME/ID
030	55	20.24	N	164	15.71	W	20	AUG	98	23	23	9.8	.	1746			270	12	8	7	2	965	SBE08

CTD	TIMES	JD/TIME	DATA LOCATION		REMARKS
TYPE & SN	DATA ON		Tape/Diskette ID	File Name/Header	
PRESS SN	START DOWN				
TEMP SN	AT DEPTH				
COND SN	AT SURFACE				MAX. DEPTH = m
TEMP SN	☑ PAR ☑ FLUOR ☐ ChlAM ☐ TRANSMISSOMETER ☐ Cleaned air bleed valve				

POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES				SAMPLE BOTTLE DATA	SAMPLE BOTTLE NUMBER			
		PRESSURE	PRI. TEMP.	SEC. TEMP	SALINITY	SALINITY	SAL.	NUTR.	CHL.	WHIT's NUTR.
1	90									
2	60									
3	50									
4	40									
5	30									
6	20									
7	10									
8	0									
9										
10										
11										
12										

PG ___ OF ___

VESSEL		PROJECT & LEG		STATION DESIGNATION
Alpha Helix		HX213	Waves 270 1.0	3BE10

CONSC CAST #	LATITUDE DEG	LATITUDE MIN	LONGITUDE DEG	LONGITUDE MIN	DATE JD= DAY	DATE MO	DATE YR	TIME (GMT) HR	TIME (GMT) MIN	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (m/s)	CLOUD (amt)	CLOUD TYPE	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
031	55	25.06 N	164	19.60 W	21	AUG	98	00	22	9.4		17	5 4	6	270	15	8	7	3 2	1005	3BE10

CTD	TIMES	JD/TIME	DATA LOCATION		REMARKS
TYPE & SN	DATA ON		Tape/Diskette ID	File Name/Header	
PRESS SN	START DOWN				
TEMP SN	AT DEPTH				
COND SN	AT SURFACE				MAX. DEPTH = m

[X] PAR [X] FLUOR [ ] ChlAM [ ] TRANSMISSOMETER [ ] Cleaned air bleed valve

POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES: PRESSURE	PRI. TEMP.	SEC. TEMP	SALINITY	SAMPLE BOTTLE DATA: SALINITY	SAMPLE BOTTLE NUMBER: SAL.	NUTR.	CHL.	WHIT's NUTR.
1	90									
2	60									
3	40	Triumphed								
4	30									
5	20									
6	10									
7	0									
8										
9										
10										
11										
12										

PG ___ OF ___

VESSEL		PROJECT & LEG		STATION DESIGNATION
Alpha Helix		HX213		SBE10 repeat

CONSC CAST #	LATITUDE DEG	LATITUDE MIN		LONGITUDE DEG	LONGITUDE MIN		DATE JD= DAY	DATE MO	DATE YR	TIME (GMT) HR	TIME (GMT) MIN	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (m/s)	CLOUD (amt)	CLOUD TYPE	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
	032	55	25.27	N 164	18.51	W	21	AUG	98	00	50	9.3	.	17	4	6	270	15	8	7	2	1005	BE10

CTD	TIMES	JD/TIME	DATA LOCATION		REMARKS
TYPE & SN	DATA ON		Tape/Diskette ID	File Name/Header	
PRESS SN	START DOWN				
TEMP SN	AT DEPTH				
COND SN	AT SURFACE				MAX. DEPTH = m
TEMP SN	☑ PAR ☑ FLUOR ☐ ChlAM ☐ TRANSMISSOMETER ☐ Cleaned air bleed valve				

POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES				SAMPLE BOTTLE DATA	SAMPLE BOTTLE NUMBER			
		PRESSURE	PRI. TEMP.	SEC. TEMP	SALINITY	SALINITY	SAL.	NUTR.	CHL.	WHIT's NUTR.
1	938									
2	60									
3	40									
4	30									
5	20									
6	10									
7	0									
8										
9										
10										
11										
12										

PG ___ OF ___

VESSEL		PROJECT & LEG	Waves 250° 1m	STATION DESIGNATION
Alpha Helix		HX213		SBC01

CONSC CAST #	LATITUDE DEG	LATITUDE MIN		LONGITUDE DEG	LONGITUDE MIN		DATE JD= DAY	DATE MO	DATE YR	TIME (GMT) HR	TIME (GMT) 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
033	55	05.76	N	163	51.51	W	31	AUG	98	1904		9.5	.	1018	4	6	250	15	8	7	2	275	BC01

CTD	TIMES	JD/TIME	DATA LOCATION 4		REMARKS
TYPE & SN	DATA ON		Tape/Diskette ID	File Name/Header	
PRESS SN	START DOWN				
TEMP SN	AT DEPTH				
COND SN	AT SURFACE				MAX. DEPTH = m
TEMP SN	☑ PAR ☑ FLUOR ☐ ChlAM ☐ TRANSMISSOMETER ☐ Cleaned air bleed valve				

POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES				SAMPLE BOTTLE DATA	SAMPLE BOTTLE NUMBER			
		PRESSURE	PRI. TEMP.	SEC. TEMP	SALINITY	SALINITY	SAL.	NUTR.	CHL.	WHIT's NUTR.
1	20									
2	20									
3	20									
4	20									
5	15.5									
6	10.8									
7	5.8									
8	2.9									
9	3.0									
10	3.5									
11	2.8									
12										

PG ___ OF ___

VESSEL		PROJECT & LEG	Waves 250° 1m	STATION DESIGNATION
Alpha Helix		HX213		SBC01

CONSC CAST #	LATITUDE DEG	LATITUDE MIN		LONGITUDE DEG	LONGITUDE MIN		DATE JD= DAY	DATE MO	DATE YR	TIME (GMT) HR	TIME (GMT) 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
034	55	05.76	N	127	51.53	W	21	AUG	98	19	24		9.6	1846			250	12	8	7	2	27	SBC01

CTD	TIMES	JD/TIME	DATA LOCATION		REMARKS
TYPE & SN	DATA ON		Tape/Diskette ID	File Name/Header	
PRESS SN	START DOWN				
TEMP SN	AT DEPTH				
COND SN	AT SURFACE				MAX. DEPTH = m
TEMP SN					

[X] PAR [X] FLUOR [ ] ChlAM [ ] TRANSMISSOMETER [ ] Cleaned air bleed valve

POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES: PRESSURE	PRI. TEMP.	SEC. TEMP	SALINITY	SAMPLE BOTTLE DATA: SALINITY	SAMPLE BOTTLE NUMBER: SAL.	NUTR.	CHL.	WHIT's NUTR.
1	20.4									
2	20.8									
3	13.0									
4	13.4									
5	9.3									
6	9.5									
7	5.1									
8	5.0									
9	3 (2.8)									
10	3.1									
11	0	(2.5)								
12	0	(1.9)								

Prod

PG ___ OF ___

VESSEL		PROJECT & LEG		STATION DESIGNATION
Alpha Helix		HX213		

CONSC CAST #	LATITUDE DEG	LATITUDE MIN		LONGITUDE DEG	LONGITUDE MIN		DATE JD= DAY	DATE MO	DATE YR	TIME (GMT) HR	TIME (GMT) MIN	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE *	VISIBILITY *	WIND DIRN. (deg)	WIND SPD. (m/s)	CLOUD (amt) *	CLOUD TYPE *	WEATHER *	BOTTOM DEPTH (m)	STA. NAME/ID
55	32	67	N	119	13.54	W	222	AUG	98	20	54	11.4		1046	1	6	140	15	8	7	2	985	BC12

CTD	TIMES	JD/TIME	DATA LOCATION		REMARKS
TYPE & SN	DATA ON		Tape/Diskette ID	File Name/Header	
PRESS SN	START DOWN				
TEMP SN	AT DEPTH				
COND SN	AT SURFACE				MAX. DEPTH = m
TEMP SN					

☑ PAR ☑ FLUOR ☐ ChlAM ☐ TRANSMISSOMETER ☐ Cleaned air bleed valve

POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES				SAMPLE BOTTLE DATA	SAMPLE BOTTLE NUMBER			
		PRESSURE	PRI. TEMP.	SEC. TEMP	SALINITY	SALINITY	SAL.	NUTR.	CHL.	WHIT's NUTR.
1	40	~~41.4~~ 42.0								
2	40	42								
3	40	41.7								
4	20	42.4								
5	15	21.9								
6	10	17								
7	5	9.9								
8	0	5.0								
9	0	2.9								
10	0	2.9								
11	0	2.9								
12		2-								

Prod

PG ___ OF ___

VESSEL		PROJECT & LEG		STATION DESIGNATION
Alpha Helix		HX213		

CONSC CAST #	LATITUDE DEG	LATITUDE MIN		LONGITUDE DEG	LONGITUDE 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
036	55	32.70	N	164	13.57	W	22	AUG	98	21	18	10.2		093	3	6	160	10	8	7	2	985	012

CTD	TIMES	JD/TIME	DATA LOCATION	REMARKS
TYPE & SN	DATA ON		Tape/Diskette ID / File Name/Header	
PRESS SN	START DOWN			
TEMP SN	AT DEPTH		Upcast only	
COND SN	AT SURFACE			MAX. DEPTH = m
TEMP SN	☐ PAR ☐ FLUOR ☐ ChlAM ☐ TRANSMISSOMETER ☐ Cleaned air bleed valve			

POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES				SAMPLE BOTTLE DATA	SAMPLE BOTTLE NUMBER			
		PRESSURE	PRI. TEMP.	SEC. TEMP	SALINITY	SALINITY	SAL.	NUTR.	CHL.	WHIT's NUTR.
1	46	40.6								
2	40	40.4								
3	40	40.4								
4	20	40								
5	15	20.1								
6	10	15								
7	5	9.6								
8	0	5								
9	0	2.1								
10	0	2.3								
11	0	2.0								
12		2.4								

Prod

PG ___ OF ___

VESSEL		PROJECT & LEG		STATION DESIGNATION
Alpha Helix		HX213		

CONSC CAST #	LATITUDE DEG	LATITUDE MIN		LONGITUDE DEG	LONGITUDE MIN		DATE JD= DAY	DATE MO	DATE YR	TIME (GMT) HR	TIME (GMT) 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
037	55	32.66	N	164	13.54	W	22	AUG	98	21	53	10.1		09	3	6	160	10	8	7	2	98	SBC12

CTD	TIMES	JD/TIME	DATA LOCATION		REMARKS
TYPE & SN	DATA ON		Tape/Diskette ID	File Name/Header	
PRESS SN	START DOWN				
TEMP SN	AT DEPTH				
COND SN	AT SURFACE				MAX. DEPTH = m
TEMP SN					

[✓] PAR [✓] FLUOR [ ] ChlAM [ ] TRANSMISSOMETER [ ] Cleaned air bleed valve

POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES PRESSURE	PRI. TEMP.	SEC. TEMP	SALINITY	SAMPLE BOTTLE DATA SALINITY	SAMPLE BOTTLE NUMBER SAL.	NUTR.	CHL.	WHIT's NUTR.
1	32	32.6								
2	32	31.6								
3	21	21.3								
4	21	21.1								
5	15	15.4								
6	15	15.5								
7	8	7.9								
8	8	8.2								
9	5	5.4								
10	5	5.0								
11	0	2.1								
12	0	2.5								

PG ___ OF ___

VESSEL		PROJECT & LEG	Waves	STATION DESIGNATION
Alpha Helix		HX213	210° 2.5m	CNC20

CONSC CAST #	LATITUDE DEG	LATITUDE MIN	LONGITUDE DEG	LONGITUDE MIN	DATE JD= DAY	DATE MO	DATE YR	TIME (GMT) HR	TIME (GMT) MIN	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (m/s)	CLOUD (amt)	CLOUD TYPE	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
					23			0652													
0	38	56.38.70 N	164	14.84 W	~~22~~	AUG	98	~~23~~	52	10.4		98	7	-	210	30	-	-	2/6	76	CNC20

CTD	TIMES	JD/TIME	DATA LOCATION		REMARKS
TYPE & SN	DATA ON		Tape/Diskette ID	File Name/Header	Coccoliths
PRESS SN	START DOWN				
TEMP SN	AT DEPTH				
COND SN	AT SURFACE				MAX. DEPTH = m
TEMP SN	☒ PAR ☒ FLUOR ☐ ChlAM ☐ TRANSMISSOMETER ☐ Cleaned air bleed valve				

POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES: PRESSURE	PRI. TEMP.	SEC. TEMP	SALINITY	SAMPLE BOTTLE DATA: SALINITY	SAMPLE BOTTLE NUMBER: SAL.	NUTR.	CHL.	WHIT's NUTR.
1	50									
2	30									
3	26									
4	10									
5	0									
6										
7										
8										
9										
10										
11										
12										

MLD ~ 28 & 30 $T_B = 3.45$ S_B 31.92 $T_S = 9.7$ S_S 31.69

PG ___ OF ___

VESSEL		PROJECT & LEG		STATION DESIGNATION
Alpha Helix		HX213	Waves 230° 3.0m	CNC18

CONSC CAST #	LATITUDE DEG	LATITUDE MIN		LONGITUDE DEG	LONGITUDE MIN		DATE JD= DAY	DATE MO	DATE YR	TIME (GMT) HR	TIME (GMT) MIN	DRY BULB (°C)	WET BULB (°C)	PRESSURE (mb)	SEA STATE	VISIBILITY	WIND DIRN. (deg)	WIND SPD. (m/s)	CLOUD (amt.)	CLOUD TYPE	WEATHER	BOTTOM DEPTH (m)	STA. NAME/ID
039	56	48.00	N	164	04.94	W	23	AUG	98	0650		9.6		967	6	2	30	30	8	7	6	74	CNC18

CTD	TIMES	JD/TIME	DATA LOCATION		REMARKS
TYPE & SN	DATA ON		Tape/Diskette ID	File Name/Header	
PRESS SN	START DOWN				
TEMP SN	AT DEPTH				
COND SN	AT SURFACE				MAX. DEPTH = m
TEMP SN	☑ PAR ☑ FLUOR ☐ ChlAM ☐ TRANSMISSOMETER ☐ Cleaned air bleed valve				

POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES				SAMPLE BOTTLE DATA	SAMPLE BOTTLE NUMBER			
		PRESSURE	PRI. TEMP.	SEC. TEMP	SALINITY	SALINITY	SAL.	NUTR.	CHL.	WHIT's NUTR.
1	50	53.1								
2	30	34.1								
3	20	23.3								
4	10	13.2								
5	0	3.6								
6										
7										
8										
9										
10										
11										
12										

MLD 29 T_T 9.72 S_T 31.71 T_B 3.56 S_B 31.92

PG ___ OF ___

VESSEL		PROJECT & LEG		STATION DESIGNATION
Alpha Helix		HX213	Waves 240 30m	

CONSC CAST #	LATITUDE DEG	LATITUDE MIN		LONGITUDE DEG	LONGITUDE MIN		DATE JD= DAY	DATE MO	DATE YR	TIME (GMT) HR	TIME (GMT) 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
040	56	57.30	N	163	54.92	W	23	AUG	98	17	44	9.5		967	5	5	230	30	8	7	2/6	72	CNF16

CTD	TIMES	JD/TIME	DATA LOCATION 5	REMARKS
TYPE & SN	DATA ON		Tape/Diskette ID / File Name/Header	
PRESS SN	START DOWN			
TEMP SN	AT DEPTH			
COND SN	AT SURFACE			MAX. DEPTH = m
TEMP SN				

☑ PAR ☑ FLUOR ☐ ChlAM ☐ TRANSMISSOMETER ☐ Cleaned air bleed valve

POS.	TRIP DEPTH	CTD CONVERTED MONITOR VALUES PRESSURE	PRI. TEMP.	SEC. TEMP	SALINITY	SAMPLE BOTTLE DATA SALINITY	SAMPLE BOTTLE NUMBER SAL.	NUTR.	CHL.	WHIT's NUTR.
1										
2	50	51.3								
3	30	30.9								
4	20	20.0								
5	10	10								
6	0	5.5								
7										
8										
9										
10										
11										
12										

Top 9.6 31.78 Bot T_0 = 3.4 S = 31.92
MLD 28