

TRANSPORT Consecutive Station Log: BT12- ϕ 1

Date 22 MAY 2012

Station	Time (LMT)	Depth (m)	Latitude	Longitude	Interval	Interval Range (m)	Pump Duration	Vol. Filtered Pump (1)	Vol. Filtered Pump (2)	BT02 CTD
ϕ 1	0811	10.0	38° 37.990	76° 19.854	B	5.0 - 9.0	11:48			Ebb tide
ϕ 1	"	10.0	"	"	T	0.5 - 4.5	10:24	580 - 618		
ϕ 2	0908	8.0	38° 38.956	76° 16.496	B	4.0 - 7.0	7:07	626 - 656		
ϕ 2	"	8.0	"	"	T	0.5 - 3.5	7:15	660 - 689		
ϕ 3	0943	5.5	38° 41.266	76° 16.954	O	0.5 - 4.5	8:36	702 - 737		
20	1008	4.7	38° 42.827	76° 18.655	B	2.5 - 4.0	7:04	742 - 773		H1
20	"	4.7	"	"	S	0.5 - 2.0	6:57	776 - 806		
21	10:36	7.5	38° 44.135	76° 18.243	B	4.0 - 6.5	7:26	808 - 840		
21	"	7.5	"	"	S	0.5 - 3.5	7:55	842 - 877		
04	11:17	6.0	38° 42.946	76° 15.644	B	3.0 - 5.0	6:23	886 - 913		
04	"	6.0	"	"	S	0.5 - 2.5	6:05	917 - 943		
06	1151	10.0	38° 38.373	76° 11.807	B	5.5 - 9.0	6:00	951 - 980		
06	"	10.0	"	"	S	0.5 - 5.0	7:07	982 - 1017		
07	1222	5.2	38° 39.959	76° 10.791	O	0.5 - 4.0	8:08	1032 - 1072		
08	1249	11.2	38° 37.799	76° 07.921	B	5.5 - 10.5	7:25	1085 - 1113		
08	"	11.2	"	"	S	0.5 - 5.0	7:12	1115 - 1141		
09	1318	4.6	38° 35.829	76° 06.935	O	0.5 - 4.0	7:38	1145 - 1183		
10	1340	13.1	38° 35.943	76° 05.014	B	6.0 - 12.0	8:28	1185 - 1211		
10	"	13.1	"	"	S	0.5 - 5.5	8:02	1213 - 1245		
11	1408	10.1	38° 34.790	76° 03.524	B	5.0 - 9.0	6:48	1250 - 1284		
11	"	10.1	"	"	S	0.5 - 4.5	6:55	1287 - 1322		
13	1441	8.1	38° 35.336	76° 00.599	B	4.0 - 7.5	7:55	1333 - 1362		
13	"	8.1	"	"	S	0.5 - 3.5	7:32	1364 - 1392		

Interval

O=Oblique, S = Surface, B = Bottom, P = Pycnocline

page ϕ 1 of 2

BT12- $\phi 1$

Date 22 MAY 2012

Sample Type	Station Number	Sample Depth (m)	OBS Voltage 1	Fluorometer Voltage 4	Volume filtered (ml)	Time (GMT)	Secchi Depth	Station Notes
Surf $\phi 1$	$\phi 1$						2.1	Ebb tide
Surf $\phi 2$	$\phi 2$	0.5	1.20	0.465	20	13:29	2.1	mrk 1
	$\phi 3$						1.2	
	20						1.4	
Surf.	21	0.5	1.20	0.361	20	14:58	1.3	mrk 1
Bot.	$\phi 4$	5.0	0.51	0.40	20	15:23	1.8	
Surf.	$\phi 6$	0.5	0.99	0.56	20	16:12	1.5	- no mark
	$\phi 7$						1.8	
Bot.	$\phi 8$	10.4	0.49	0.26	20	16:53	1.4	
	$\phi 9$						1.5	20.5°C Bot. Temp
	10						1.2	20.5°C Bot. Temp
Surf.	11	0.5	1.13	0.58	20	18:27	1.2	20.5°C Bot. Temp
Bot.	13	7.5	0.51	0.30	20	18:45	0.9	21.0°C "
	14						0.6	21.0°C "
Surf.	15	0.5	0.96	1.05	20	19:50	0.6	22.0°C "

5/22/12

7:40 AM

JASON
IAN
JAKE
TOM

Very Cloudy possible showers. Checked radar & it's
clear

Duct tape

Write North on equipment

Make sure cod ends are glued

help w/ vic (fish system)

Tutorial on Mapping cruise sheets

Check flow meter

Container of known volume

special holder for sample jar

fix sample jar holder

Bungees

Foil

10 sec. 6 gal./min.

TRANSPORT Consecutive Station Log: BT12- 02

Date 5/30/12

Station	Time (LMT)	Depth (m)	Latitude	Longitude	Interval	Interval Range (m)	Pump Duration	Vol. Filtered Pump (1)	Vol. Filtered Pump (2)	BT02 CTD
01	0828	10.2	38°38.149	76°19.583	B	5.0-9.0	8:25			st 01
01	"	"	"	"	S	0.5-4.5	6:32	91-108		st 01
02	0905	8.0	38°38.993	76°16.458	B	4.0-7.0	5:26	117-132		st 02
02	"	"	"	"	S	0.5-3.5	5:46	133-147		st 02
03	0739	4.5	38°4.255	76°16.947	B	4.5-2.5	6:10	157-174		st 03
03	"	"	"	"	S	0.5-2.0	5:05	180-193		st 03
20	1010	4.6	38°42.860	76°18.715	B	4.0-2.5	3:11	200-208		st 20
20	"	"	"	"	S	2.0-0.5	3:30	210-220		st 20
21	1036	6.0	38°44.171	76°18.224	B	3.0-5.0	6:10	225-241		st 21
21	"	"	"	"	S	0.5-2.5	6:09	243-259		st 21
20-1	1103	4.7	38°42.813	76°18.694	B	4.0-2.5	6:50	265-283		
20-1	"	"	"	"	S	0.5-2.0	6:48	285-302		
04	1138	6.3	38°42.875	76°15.598	B	3.5-5.5	5:00	308-324		st 04
04	"	"	"	"	S	0.5-3.0	6:50	326-344		st 04
06	1215	9.9	38°38.422	76°11.853	B	5.0-9.0	6:01	348-364		st 06
06	"	"	"	"	S	0.5-4.5	6:19	367-383		st 06
07	1243	5.4	38°39.894	76°10.860	O	0.5-5.0	5:53	388-403		st 07
08	1305	10.9	38°37.785	76°07.985	B	10-6.5	5:01	407-420		st 08
08	11	"	"	"	T	5.0-0.5	5:08	421-435		st 08
09	1344	4.9	38°35.825	76°06.978	O	0.5-4.5	6:10	439-455		st 09
10	1405	13.6	38°35.941	76°05.042	B	12.0-6.5	6:02	465-481		st 10
10	"	"	"	"	S	0.5-6.0	5:56	482-498		st 10

Interval O=Oblique, S = Surface, B = Bottom, P = Pycnocline

TRANSPORT Consecutive Station Log: BT12-~~02~~

TRANSPORT Consecutive Station Log: BT12-~~02~~

Date 5/30/12[illegible]

Interval

O=Oblique, S = Surface, B = Bottom, P = Pycnocline

BT12-02

Date 5/30/12

well mixed

Sample Type	Station Number	Sample Depth (m)	OBS Voltage 1	Fluorometer Voltage 4	Volume filtered (ml)	Time (GMT)	Secchi Depth	Station Notes
	st 01						2.0	bot. temp 24.5°C
Surf.	st 02	0.6	1.25	0.77	40	13:22	1.6	
	st 03						1.4	bot. temp 24.5°C
	st 20						1.5	26.5°C
	st 21						1.4	26.8°C
	st 04						1.4	26.5°C
Bot.	st 06	9.0	0.50	0.39	40	16:20	1.8	24.3°C
	st 07						1.4	25.3°C
	st 08						1.2	
Surf.	st 09	0.6	0.99	0.56	40	17:56	1.4	24.8°C
	st 10						1.2	
Bot.	st 11	9.0	0.56	0.39	40	18:37	1.1	25°C
Surf.	st 13	0.6	1.26	1.23		19:20	0.8	25°C
	st 14						0.7	
Bot.	st 15	3.5	0.57	0.94	20	20:00	0.6	26°C



Date 6/6/10

[illegible]

Interval
O=Oblique, S = Surface, B = Bottom, P = Pycnocline

BT12-03

Date 6/6/12

Sample Type	Station Number	Sample Depth (m)	OBS Voltage 1	Fluorometer Voltage 4	Volume filtered (ml)	Time (GMT)	Secchi Depth	Station Notes
B	C1	7.5	0.58	0.73	40mL	13:15	1.7	psychocline - salt + 17 ^{bo}
	Ø2						1.5	temp 22.5°C on bott
	Ø3						0.95	
	Ø4						1.1	22.5°C
S	Ø1	0.5	1.31	0.45	40mL	14:49	1.0	Mark
	Ø4						1.3	22.9°C
B	Ø6	9.5	1.75	1.71	40mL	15:45	1.2	22.5°C
	Ø7						1.0	
B	Ø8	10.5	0.59	0.77	40mL	16:31	1.1	23.0°C
	Ø9						1.2	23.1°C
S	10	0.5	1.72	0.73	40mL	17:32	1.3	23.2°C
S	11	0.5	1.27	0.64	40mL	17:58	1.1	23.2°C
	13						0.8	23.3°C
B	14	9.0	0.5	0.6	40mL	18:42	0.65	23.4°C
S	15	0.5	0.9	0.9	40mL	19:14	0.6	23.7°C

TRANSPORT Consecutive Station Log: BT12- 03

Date 6/6/12

Station	Time (LMT)	Depth (m)	Latitude	Longitude	Interval	Interval Range (m)	Pump Duration	Vol. Filtered Pump (1)	Vol. Filtered Pump (2)	BT02 CTD
01	808	10.3	38° 38.133	076° 12.755	B	9.5-7.0	07:32	003-022	009-046	
"	"	"	"	"	P	6.5-2.0	12:45	025-055	051-112	
"	"	"	"	"	S	1.5-0.5	06:18	056-072	114-146	
02	0908	8.7	38° 39.104	076° 16.450	B	7.5-6.5	06:37	103-120	207-241	
"	"	"	"	"	P	6.0-4.0	06:24	121-137	245-277	
"	"	"	"	"	S	3.5-0.5	06:05	139-154	280-310	
03	0947	5.8	38° 41.275	76° 16.977	O	5.0-0.5	05:10	163-175	324-349	
20	1007	4.9	38° 42.848	076° 18.687	B	4.5-2.5	06:15	179-194	353-384	
20	"	"	"	"	S	2.0-0.5	06:02	196-210	387-416	
21	1031	5.8	38° 44.255	076° 18.250	B	5.0-3.0	06:01	215-230	421-451	
21	"	"	"	"	S	2.5-1.5	06:06	231-246	453-483	
04	1106	6.3	38° 42.722	076° 15.637	B	5.5-3.0	06:00	252-267	493-523	
04	"	"	"	"	S	2.5-0.5	06:15	268-283	524-554	
06	1139	10.1	38° 38.430	076° 11.822	B	9.5-5.5	06:02	287-302	559-588	
06	"	"	"	"	S	5.0-0.5	06:41	303-319	590-622	
07	1206	5.7	38° 39.971	076° 10.899	O	5.0-0.5	05:04	322-334	626-650	
08	1226	11.2	38° 37.806	076° 07.998	B	10.5-8.5	05:34	340-354	660-687	
08	"	"	"	"	S	5.0-0.5	05:03	356-368	691-715	
09	1254	4.8	38° 35.847	076° 06.902	O	4.0-0.5	05:50	373-387	721-750	
10	1312	13.1	38° 35.958	076° 05.018	B	12.5-6.5	07:01	392-409	755-787	
10	"	"	"	"	S	6.0-9.5	07:00	410-425	790-819	
11	1339	9.5	38° 34.814	076° 03.527	B	9.0-5.0	06:32	432-447	830-862	
11	"	"	"	"	S	4.5-0.5	05:58	450-464	865-895	

Interval

O=Oblique, S = Surface, B = Bottom, P = Pycnocline

* Need to double the Volume of Pump 1

TRANSPORT Consecutive Station Log: BT12-04

Date 6/8/12

Station	Time (LMT)	Depth (m)	Latitude	Longitude	Interval	Interval Range (m)	Pump Duration	Vol. Filtered Pump (1) ¹⁶	Vol. Filtered Pump (2) ¹⁷	BT02 CTD
01	0753	10.6	38°38.121	076°17.536	B	9.0-4.0	6:15	646-662	1083-1111	
01	"	"	"	"	S	3.5-0.5	6:13	663-679	1114-1143	
02	0825	8.3	38°38.581	076°16.470	B	7.0-4.0	6:05	687-702	1153-1181	
02	"	"	"	"	S	3.5-0.5	6:05	704-719	1184-1211	
03	0908	5.7	38°41.244	076°16.543	B	4.5-2.5	6:15	723-740	1214-1243	
03	"	"	"	"	S	2.0-0.5	6:06	741-756	1245-1272	
20'20	0939	4.7	38°47.838	076°18.683	B	4.0-2.5	6:09	761-777	1277-1305	
20	"	"	"	"	S	2.0-0.5	6:40	778-795	1306-1336	
21'21	1008	5.0	38°44.164	076°18.279	B	4.0-2.5	6:40	800-817	1340-1370	
21	"	"	"	"	S	2.0-0.5	6:57	818-836	1373-1403	
04	1056	6.1	38°42.934	076°15.635	B	5.5-3.0	6:00	843-859	1412-1439	
04	"	"	"	"	S	2.5-0.5	6:23	861-877	1442-1469	
06	1134	9.7	38°38.351	076°11.875	B	8.5-4.5	6:16	881-897	1473-1501	
06	"	"	"	"	S	4.0-0.5	6:08	899-914	1503-1529	
07	1206	5.2	38°39.974	076°10.996	B	4.5-0.5	6:23	918-934	1532-1560	
08	1231	11.9	38°37.836	076°07.886	B	11.0-6.0	6:05	944-959	1574-1600	
08	"	"	"	"	S	5.5-0.5	5:51	960-975	1601-1625	
09	1315	4.8	38°35.843	76°06.974	B	0.5-4.0	6:10	981-997	1634-1662	
10	1333	12.9	38°35.958	76°05.035	B	6.5-12.0	5:51	1005-1020	1672-1699	
10	"	"	"	"	S	0.5-6.0	6:04	1021-1036	1701-1727	
11	1359	8.5	38°34.791	76°03.456	B	4.0-7.5	6:12	1039-1055	1730-1757	
11	"	"	"	"	S	0.5-3.5	6:00	1056-1071	1758-1783	
Interval										

Interval O=Oblique, S = Surface, B = Bottom, P = Pycnocline

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Date 6/8/12Date 6/8/12[illegible]

Interval O=Oblique, S = Surface, B = Bottom, P = Pycnocline

BT12-04

Date 06/8/12

Sample Type	Station Number	Sample Depth (m)	OBS Voltage 1	Fluorometer Voltage 4	Volume filtered (ml)	Time (GMT)	Secchi Depth	Station Notes
	01						1.5	21.0°C Bottom
B	02	7.0	0.55	1.05	20mL	12:36	1.4	22.8°C Mrk 1
	03						1.0	22.6°C
B	04	4.9	1.25	0.18	20mL	13:57	1.1	22.9°C
	05						1.0	23.1
S	06	0.5	0.53	0.79	20mL	15:00	1.2	23.1
S	06	0.5	1.18	0.59	20mL	15:51	1.5	22.8
B	07	11.0	0.59	0.78	20mL	16:35	1.2	
	08						1.0	23.2 bottom
	09						1.6	
	10						1.6	
	11						1.4	
S	13	0.6	1.39	1.32	20	18:44	1.0	23.5 bottom
	14						0.6	
	15	3.0	0.58	0.76	20	19:24	0.5	23.8
	116	0.7	0.43	1.08	20	19:52		

0.5
11.0
11.0
12.5
12.5

TRANSPORT Consecutive Station Log: BT12- 05

Date 6/14/12

Station	Time (LMT)	Depth (m)	Latitude	Longitude	Interval	Interval Range (m)	Pump Duration	Vol. Filtered Pump (1)	Vol. Filtered Pump (2)	BT02 CTD
02	0743	7.9	38° 39.062	76° 16.507	B	4.0 - 6.5	5:56	209 - 239	1958 - 1982	
02	"	"	"	"	S	0.5 - 3.5		242 - 292	1990 - 2038	Net Feb 14
02	"	"	"	"	S	0.5 - 3.5	5:56	262 - 292	2009 - 2038	By duct - 2038
03	0822	5.2	38° 41.370	76° 16.932	O	0.5 - 4.0	5:51	321 - 351	2058 - 2086	
20	0843	4.3	38° 43.000	76° 18.708	O	0.5 - 3.0	5:59	362 - 393	2092 - 2121	
21	0902	6.0	38° 44.196	76° 18.253	O	3.0 - 5.0	6:32	409 - 442	2128 - 2160	Obligate
21	"	"	"	"	O	0.5 - 2.5				
04	0945	6.0	38° 42.992	76° 15.595	B	3.0 - 5.0	5:57	458 - 489	2122 - 2201	
04	"	"	"	"	S	0.5 - 2.5	5:25	493 - 520	2205 - 2230	
06	1021	10.0	38° 38.381	76° 11.753	B	5.0 - 9.0	6:00	530 - 561	2236 - 2265	
06	"	"	"	"	S	0.5 - 4.5	6:04	563 - 594	2268 - 2298	
07	1051	5.4	38° 39.971	76° 10.883	O	0.5 - 4.5	6:18	605 - 637	2305 - 2335	
08	1117	11.0	38° 37.758	76° 07.978	B	5.5 - 10.0	5:49	646 - 676	2340 - 2368	
08	"	"	"	"	S	0.5 - 5.0	6:03	680 - 711	2371 - 2400	
09	1143	4.6	38° 35.852	76° 06.877	O	0.5 - 3.5	6:06	722 - 753	2404 - 2432	
10	1337	13.1	38° 35.937	76° 04.974	B	6.5 - 12.5	6:04	761 - 791	2438 - 2467	
10	"	"	"	"	S	0.5 - 6.0	6:11	792 - 824	2468 - 2498	
11	1403	10.4	38° 34.783	76° 03.500	B	5.5 - 9.5	5:43	831 - 860	2502 - 2530	
11	"	"	"	"	S	0.5 - 5.0	6:16	862 - 894	2532 - 2563	
13	1417	10.0	38° 35.352	76° 00.565	B	9.0 - 5.0	6:09	919 - 951	2564 - 2594	
13	"	"	"	"	S	4.5 - 0.5	6:05	954 - 985	2596 - 2626	
14	1507	10.6	38° 36.353	075° 58.941	B	9.5 - 5.0	05:45	1003 - 1033	2631 - 2659	
14	"	"	"	"	S	4.5 - 0.5	06:05	1037 - 1067	2662 - 2691	

Interval

O=Oblique, S = Surface, B = Bottom, P = Pycnocline

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BT12- 05

Date 6/14/12

* Had to reset CTD on station 1
- 1st file is downcast - 2nd file is upcast

Sample Type	Station Number	Sample Depth (m)	OBS Voltage 1	Fluorometer Voltage 4	Volume filtered (ml)	Time (GMT)	Secchi Depth	Station Notes
B	02	6.7	0.55	0.76	20	11:46	0.8	24°C on bottom
	03						0.7	
	20						0.7	24°C on bot.
S	21	0.5	1.03	0.19	20	13:20	0.7	
B	04	5.0	0.51	0.55	20	13	0.6	24°C
S	06	0.6	1.21	0.79	20	14:38	0.8	24°C
	07						1.2	
B	08	10.0	0.49	0.58	20	15:21	1.2	24.4°C salt ~ 11 on bot.
	09						1.1	
	10						1.1	
S	11	0.65	1.28	0.78	20	18:22	1.0	24.6°C
S	13	0.5	1.31	1.26	20	18:55	1.6	11.6-CTD file for mark
	14						1.6	
S	15	0.5	1.25	1.39	20 mL	19:53	1.5	

TRANSPORT Consecutive Station Log: BT12- 06

Date 6/19/12

Station	Time (LMT)	Depth (m)	Latitude	Longitude	Interval	Interval Range (m)	Pump Duration	Vol. Filtered Pump (1)	Vol. Filtered Pump (2)	BT02 CTD
01	0753	10.0	38°38.092	76°19.778	BP	5.0 - 9.0	6:18	1256 - 1288	2731 - 2795	
01	"	"	"	"	S	0.5 - 4.5	6:28	1290 - 1322	2797 - 2828	
02	0825	8.1	38°38.993	76°16.424	B	4.0 - 7.0	5:58	9 - 39	6 - 35	
02	"	"	"	"	S	0.5 - 3.5	6:01	41 - 70	36 - 64	
03	0851	5.4	38°41.299	76°17.068	O	0.5 - 4.5	6:18	84 - 116	73 - 103	
20	0910	4.7	38°42.892	76°18.711	B	2.5 - 4.0	6:00	123 - 154	107 - 136	
20	"	"	"	"	S	0.5 - 2.0	6:02	156 - 185	137 - 166	
21	0932	6.9	38°44.176	76°18.247	B	3.5 - 6.0	5:58	194 - 224	170 - 198	
21	"	"	"	"	S	0.5 - 3.0	6:07	225 - 256	199 - 227	
04	1007	6.1	38°42.938	76°15.620	B	5.5 - 3.5	6:03	273 - 304	240 - 268	
04	"	"	"	"	S	3.0 - 0.5	6:09	306 - 337	270 - 299	
06	1045	10.0	38°38.418	76°11.828	B	7.5 - 9.0	6:48	342 - 377	302 - 334	
06	"	"	"	"	P	4.0 - 7.0	6:06	379 - 410	336 - 366	
06	"	"	"	"	S	0.5 - 3.5	6:12	412 - 444	368 - 398	
07	1120	5.3	38°39.959	76°10.873	O	0.5 - 4.5	6:25	462 - 494	412 - 442	
08	1145	11.1	38°37.824	76°08.068	BP	5.5 - 10.0	5:15	501 - 527	446 - 472	
08	"	"	"	"	S	0.5 - 5.0	6:00	530 - 560	475 - 504	
09	1212	5.0	38°35.805	76°07.065	O	0.5 - 4.5	5:58	573 - 603	507 - 536	
10	1239	13.0	38°35.955	76°05.010	B	8.0 - 12.0	6:05	613 - 643	544 - 574	
10	"	"	"	"	P	5.0 - 7.5	5:57	645 - 673	576 - 605	
10	"	"	"	"	S	0.5 - 4.5	6:00	675 - 703	607 - 635	
11	1310	8.9	38°34.799	76°03.979	P	4.5 - 8.0	6:03	718 - 740	640 - 669	
11	"	"	"	"	S	4.0 - 0.5	6:10	742 - 771	670 - 699	

Interval O=Oblique, S = Surface, B = Bottom, P = Pycnocline

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Interval

O=Oblique, S = Surface, B = Bottom, P = Pycnocline

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202

BT12-06

Date 6/19/12

Sample Type	Station Number	Sample Depth (m)	OBS Voltage 1	Fluorometer Voltage 4	Volume filtered (ml)	Time (GMT)	Secchi Depth	Station Notes
	01						1.5	but temp 22.5°C
B	02	7.0	0.53	1.10	20	12:29	1.3	
	03						0.7	temp 23.0°C
	04						0.7	
	20						0.7	
S	21	0.6	1.20	0.51	20	13:50	0.7	23°C
B	04	5.5	0.51	0.86	20	14:15	0.8	22.7°C
S	06	0.5	1.28	0.17	20	15:09	1.4	
	07						1.0	
S	08	0.6	1.14	0.88	20	16:01	1.0	
	09						1.0	23°C
	10						1.0	22.7°C
	11	0.5	1.11	0.26	20	17:28	.9	
B	13	6.5	0.52	0.70	20	17:45	0.6	
	14						1.5	23.3
	15	4.2	0.56	1.26	20	18:37	0.5	23.8°C

St 01 - 0866 ed4 - CTS turned off b/c laptop went out.
 - did another cast - 16

TRANSPORT Consecutive Station Log: BT12- 07

Date 6/29/12

Station	Time (LMT)	Depth (m)	Latitude	Longitude	Interval	Interval Range (m)	Pump Duration	Vol. Filtered Pump (1)	Vol. Filtered Pump (2)	BT02 CTD
01	0752	9.7	38°38.145	076°19.645	BP	9.5-5.0	6:03	20-48	19-98	
01	"	"	"	"	S	4.5-0.5	6:15	51-79	52-83	
02	0828	7.8	38°39.083	76°16.398	B	4.0-7.0	6:00	91-118	93-124	
02	"	"	"	"	S	0.5-3.5	6:11	120-142	126-156	
03	0857	5.4	38°41.238	76°17.055	O	5.0-0.5	6:12	160-188	164-194	
20	0916	4.5	38°42.874	76°18.741	B	2.5-4.0	6:13	199-223	200-230	
20	"	"	"	"	S	0.5-2.0	6:04	230-257	233-262	
21	0941	7.3	38°44.153	76°18.241	B	6.5-3.5	6:11	266-292	269-300	
21	"	"	"	"	S	3.0-0.5	5:50	294-314	203-331	
04	1017	6.3	38°42.864	76°15.584	B	3.5-5.5	6:16	330-352	347-377	
04	"	"	"	"	S	0.5-3.0	6:06	355-376	381-409	
06	1053	10.0	38°38.554	76°11.802	B	9.0-5.0	5:58	384-405	414-444	
06	"	"	"	"	S	4.5-0.5	6:13	409-431	499-479	
07	1122		38°39.966	76°10.832	O	0.5-5.0	6:08	439-461	486-515	
08	1147	1.6	38°37.852	76°08.001	B	10.5-5.5	5:56	475-495	529-557	
08	"	"	"	"	S	0.5-5.0	5:56	498-517	560-589	
09	1218	5.0	38°35.821	76°06.967	B	0.5-4.5	6:04	531-559	610-640	
10	1240	13.2	38°35.961	76°05.035	B	12.0-6.5	6:08	568-594	645-676	
10	"	"	"	"	S	6.0-0.5	6:05	596-622	628-708	
11	1319	8.6	38°34.813	76°03.488	B	4.5-8.0	6:09	628-655	712-742	
11	"	"	"	"	S	0.5-4.0	6:20	657-684	744-774	

Interval O=Oblique, S = Surface, B = Bottom, P = Pycnocline

page

BT12-67

Date 6/25/12

Sample Type	Station Number	Sample Depth (m)	OBS Voltage 1	Fluorometer Voltage 4	Volume filtered (ml)	Time (GMT)	Secchi Depth	Station Notes
0	01						1.45	23.5 BT
B	02	7.0	0.56	0.53	20	12:33	1.30	
—	03						1.0	
	20						1.1	
S	04	0.5	1.29	0.56	20	14:00		no net
S	04	0.6	1.34	0.32	20	14:36	1.2	
	06						1.7	
S	07	0.6	1.04	0.16	20	15:33	0.7	
S	08	0.5	1.42	0.54	20	16:07	1.0	
	09						1.0	
	10						0.9	
	11	0.5	1.39	1.08	20	17:37	1.0	

Date 7/5/12

Interval O=Oblique, S = Surface, B = Bottom, P = Pycnocline

TRANSPORT Consecutive Station Log: BT12-08

Date 7/5/12

Station	Time (LMT)	Depth (m)	Latitude	Longitude	Interval	Interval Range (m)	Pump Duration	Vol. Filtered Pump (1)	Vol. Filtered Pump (2)	BT02 CTD
01	0816	9.9	38°38.038	76°19.655	B	9.0-5.0	6:05	13-41	11-41	
01		"	"	"	T	0.5-4.5	6:10	44-72	45-74	
02	0856	8.0	38°39.035	76°16.410	B	7.0-4.0	6:05	81-108	80-110	
02	"	"	"	"	T	3.5-0.5	6:09	110-137	113-143	
03	0926	5.4	38°41.289	76°16.902	O	4.5-0.5	6:18	143-170	146-177	
20	0932	4.5	38°42.848	76°18.717	B	3.5-2.0	6:48	179-204	182-216	
	"	"	"	"	S	1.5-0.5	6:51	206-231 ²²	218-254 ²³	
21	1018	7.3	38°44.138	76°18.241	B	6.5-3.5	6:18	237-259	260-291	
21	"	"	"	"	S	0.5-3.0	6:05	261-282	293-304	
04	1059	5.9	38°42.901	76°15.606	B	5.0-3.0	6:05	289-311	330-362	
04	"	"	"	"	S	2.5-0.5	6:39	314-338	365-378	
06	1134	9.5	38°38.389	76°11.877	B	7.0-5.0	6:54	342-365	403-437	
06	"	"	"	"	S	4.5-0.5	6:29	366-388	439-471	
07	1206	5.1	38°39.937	76°10.854	O	4.5-0.5	6:04	393-410	476-506	
08	1231	12.4	38°37.863	76°07.871	B	11.0-6.0	5:36	452-478	547-576	
08	"	"	"	"	T	5.5-0.5	6:35	480-508	579-610	
09	1334	4.7	38°35.838	76°06.781	O	4.0-0.5	6:00	520-545	620-648	
10	1353	12.6	38°35.962	76°05.007	B	11.0-6.0	6:37	553-583	655-686	
10	"	"	"	"	T	0.5-5.5	6:26	585-613	688-717	
11	1421	9.5	38°34.783	76°03.475	B	10-5.0	6:06	622-649	722-753	
11	"	"	"	"	T	4.5-0.5	6:20	650-677	754-785	
13	1451	6.8	38°35.325	76°00.575	B	6.0-3.5	6:01	683-711	787-816	
13	"	"	"	"	T	3.0-0.5	6:06	714-741	819-848	

Interval

O=Oblique, S = Surface, B = Bottom, P = Pycnocline

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Date 7/9/12

Date 7/5/12

Date 7/9/12

Date 7/9/12

06

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Interval

O=Oblique, S = Surface, B = Bottom, P = Pycnocline

page

BT12 | o Water Sample LogDate 7/18/12[illegible]

Date 7/23/20

Date 7/3/20

Temp = 27° -	bottom
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Date 7/24/12

TRANSPORT Consecutive Station Log: BT12 | 11

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TRANSPORT Consecutive Station Log: BT1211

Date 7/24/12

Station	Time (LMT)	Depth (m)	Latitude	Longitude	Interval	Interval Range (m)	Pump Duration	Vol. Filtered Pump (1)	Vol. Filtered Pump (2)	BT02 CTD
02	0757	8.5	38°39.085	76°16.557	B	4.0-7.5	5:39	6-35	6-35	
02	"	"			S	0.5-3.5	6:02	39-69	39-70	
03	0831	5.5	38°41.227	76°17.057	O	0.5-4.5	6:07	84-116	82-113	
20	0854	5.1	38°42.205	76°18.583	B	2.5-4.0	6:02	124-156	117-148	
20	"	"	"	"	S	0.5-2.0	6:10	158-190	150-181	
21	0917	9.6	38°43.951	76°18.210	B	4.5-8.5	6:09	203-236	191-222	
21	"	"	"	"	S	0.5-4.0	6:00	240-271	227-256	
04	0958	6.1	38°42.921	76°15.659	B	3.0-5.0	5:50	283-315	261-291	
04	"	"	"	"	S	0.5-2.5	5:59	312-349	294-322	
06	1037	9.7	38°38.368	76°11.949	B	5.0-7.0	5:17	357-385	326-353	
06	"	"	"	"	S	0.5-4.5	5:31	387-415	355-383	
07	1059	6.1	38°38.672	76°10.903	O	0.5-5.0	5:31	429-457	392-419	
08	1123	10.4	38°37.766	76°08.037	B	9.0-9.5	5:44	470-501	427-456	
08	"	"	"	"	S	0.5-4.5	5:50	504-534	459-488	
09	1151	5.2	38°35.843	76°07.044	O	0.5-4.0	5:50	550-581	492-522	
10	1225	13.0	38°35.962	76°05.091	B	6.5-12.0	6:32	590-627	528-563	
10	"	"	"	"	S	0.5-6.0	5:58	629-661	505-596	
11	1252	8.0	38°34.836	76°03.496	B	3.5-7.0	6:11	675-707	605-637	
11	"	"	"	"	S	0.5-3.0	6:02	710-742	639-669	
13	1321	9.0	38°35.373	76°00.544	B	4.5-8.0	5:55	753-785	677-707	
13	"	"	"	"	S	0.5-4.0	5:38	787-816	709-737	

Interval

O=Oblique, S = Surface, B = Bottom, P = Pycnocline

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BT12 12 Water Sample Log

Date 7/31/12

[illegible]

TRANSPORT Consecutive Station Log: BT1212

Date 7/31/12

Station	Time (LMT)	Depth (m)	Latitude	Longitude	Interval	Interval Range (m)	Pump Duration	Vol. Filtered Pump (1)	Vol. Filtered Pump (2)	BT02 CTD
01	0744	10.0	38°38.085	76°19.820	BP	5.0-9.0	5:39	3-31	1-28	BT=27
01	"	"	"	"	S	0.5-4.5	5:40	33-60	31-58	
02	0843	7.0	38°38.951	76°16.643	B	3.5-6.5	5:33	69-97	65-92	
02	"	"	"	"	S	0.5-3.0	5:34	99-127	94-121	
03	0914	5.3	38°41.562	76°17.000	O	0.5-4.5	6:05	138-169	134-164	
20	0933	5.0	38°42.806	76°18.632	B	2.5-4.0	5:35	177-204	169-192	
20	"	"	"	"	S	0.5-2.0	5:35	206-233	198-225	
21	0959	8.2	38°44.031	76°18.224	B	7.0-4.0	6:05	238-267	235-264	
21	"	"	"	"	S	3.5-0.5	6:00	270-299	267-296	
04	1040	6.2	38°42.920	76°15.479	B	3.0-5.0	5:31	308-335	307-334	BT=28
04	"	"	"	"	S	0.5-2.5	5:31	338-365	336-363	
06	1113	10.2	38°38.386	76°11.810	B	9.5-5.5	6:05	370-399	370-399	
06	"	10.2	"	"	S	5.0-0.5	5:46	400-428	400-428	
07	1138	5.4	38°39.995	76°10.920	O	0.5-4.5	5:40	433-462	436-463	
08	1200	11.3	38°37.793	76°07.950	B	10-5.5	5:35	465-494	469-496	
08	"	"	"	"	S	5.0-0.5	5:39	496-525	498-526	
09	1224	5.3	38°35.838	76°07.033	O	0.5-4.5	5:30	531-559	535-561	
10	1256	13.2	38°35.747	76°04.964	B	12-6.5	6:03	566-598	566-596	
10	"	"	"	"	S	6.0-0.5	6:00	609-631	599-629	
11	1322	10.5	38°34.779	76°03.465	B	5.0-9.5	5:34	644-672	644-672	
11	"	"	"	"	S	0.5-4.5	5:33	676-704	675-702	

Interval O=Oblique, S = Surface, B = Bottom, P = Pycnocline

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Date 7/31/12

Date 7/31/12

Interval O=Oblique, S = Surface, B = Bottom, P = Pycnocline

Date 8/10/12

[illegible]

O=Oblique, S = Surface, B = Bottom, P = Pycnocline

page

Date 8/13/12

Water Sample Log

Date 8/13/12[illegible]

Date 8/10/12

Interval O=Oblique, S = Surface, B = Bottom, P = Pycnocline

Date 8/13/12

Station	Time (LMT)	Depth (m)	Latitude	Longitude	Interval	Interval Range (m)	Pump Duration	Vol. Filtered Pump (1)	Vol. Filtered Pump (2)	BT02 CTD
01	0738	9.5	38° 38.396	76° 19.114	B	4.5-8.5	5:27	20 - 45	15 - 41	
01	"	"	"	"	S	0.5-4.0	5:45	46 - 73	43 - 72	
02	0808	7.6	38° 39.061	76° 16.387	B	3.5-6.5	5:43	79 - 105	76 - 105	
02	"	"	"	"	S	0.5-3.0	6:01	106 - 132	106 - 136	
03	0835	5.5	38° 41.115	76° 17.001	O	0.5-5.0	06:10	137 - 165	139 - 170	
20	0852	4.5	38° 42.871	76° 18.737	B	2.5-4.0	6:04	172 - 198	174 - 204	
20	"	"	"	"	S	0.5-2.0	6:01	200 - 226	206 - 236	
21	0915	9.0	38° 43.982	76° 18.214	B	8.5-4.5	6:06	231 - 258	239 - 270	
21	"	"	"	"	S	4.0-0.5	5:55	260 - 286	272 - 302	
04	0948	6.1	38° 42.920	76° 15.656	B	3.0-5.5	6:08	293 - 323	307 - 338	
04	"	"	"	"	S	0.5-2.5	5:52	331 - 357	341 - 369	
06	1021	10.0	38° 38.374	76° 11.809	B	9.0-5.0	6:04	364 - 391	375 - 406	
06	"	"	"	"	S	0.5-4.5	06:13	392 - 419	407 - 438	
07	1046	5.4	38° 39.934	76° 10.871	O	0.5-5.0	5:56	428 - 454	443 - 473	
08	1105	11.1	38° 37.814	76° 08.017	B	5.5-10.0	5:56	460 - 486	476 - 506	
08	"	"	"	"	S	0.5-5.0	5:53	487 - 513	508 - 536	
09	1145	9.8	38° 35.818	76° 07.004	O	0.5-4.0	6:01	521 - 546	542 - 571	
09	Second		CTD Star	Bailley Project			6:04		601 - 636	
10	1207	13.1	38° 35.964	76° 05.045	B	6.5-12.0	5:46	579 - 605	601 - 636	
10	"	"	"	"	S	0.5-6.0	6:08	606 - 633	637 - 669	
10	Second		- Bailley Project				6:23			
11	1237	9.5	38° 34.741	76° 03.467	B	4.5-8.5	6:14	670 - 697	710 - 742	

Interval O=Oblique, S = Surface, B = Bottom, P = Pycnocline

Date 8/13/12

Water Sample Log

Date 8/13/12[illegible]

TRANSPORT Consecutive Station Log: BT12 15

Date 8/22/12

Station	Time (LMT)	Depth (m)	Latitude	Longitude	Interval	Interval Range (m)	Pump Duration	Vol. Filtered Pump (1)	Vol. Filtered Pump (2)	BT02 CTD
01	0736	10.3	38° 38.207	76° 19.595	B	5.0-9.0	5:56	7 - 34	4 - 33	
01	"	"	"	"	S	0.5-4.5	5:56	35 - 62	34 - 62	
02	0803	8.3	38° 39.000	76° 16.497	B	4.0-7.5	6:00	72 - 99	70 - 99	
02	"	"	"	"	S	0.5-3.5	5:58	100 - 127	100 - 129	
03	0829	5.6	38° 41.289	76° 16.938	O	0.5-5.0	5:57	135 - 161	135 - 164	
20	0847	4.5	38° 42.881	76° 18.781	B	2.5-4.0	6:02	168 - 194	173 - 201	
20	"	"	"	"	S	0.5-2.0	6:01	196 - 222	203 - 232	
21	0912	9.4	38° 43.925	76° 18.227	B	7.0-5.0	5:56	228 - 254	236 - 265	
21	0912	9.4	"	"	S	0.5-4.5	5:59	256 - 282	267 - 297	
04	0946	6.0	38° 42.869	76° 15.701	B	3.0-5.0	6:05	292 - 319	300 - 329	
04	"	"	"	"	S	0.5-2.5	6:03	320 - 346	330 - 360	
06	1020	9.8	38° 38.418	76° 11.854	B	9.0-5.0	6:01	365 - 392	378 - 407	
06	"	"	"	"	S	4.5-0.5	6:06	393 - 420	409 - 437	
07	1047	5.3	38° 39.922	76° 10.887	O	0.5-4.5	5:56	428 - 454	440 - 468	
08	1113	11.0	38° 37.822	76° 08.069	B	5.5-10.0	5:58	463 - 489	474 - 501	
08	"	"	"	"	S	0.5-5.0	6:07	490 - 517	503 - 531	
09	1141	4.8	38° 35.832	76° 06.995	B	4.0-2.5	6:00	528 - 554	538 - 565	
09	1141	4.8	"	"	S	2.0-0.5	6:00	560 - 586	568 - 596	
10	1226	13.3	38° 35.942	76° 05.053	B	6.5-12.0	6:21	593 - 621	599 - 629	
10	"	"	"	"	S	0.5-6.0	6:13	622 - 650	630 - 659	
11	1252	9.3	38° 34.792	76° 03.485	B	8.5-4.5	6:03	657 - 684	664 - 693	
11	"	"	"	"	S	4.0-0.5	6:04	686 - 713	695 - 724	

Interval O=Oblique, S = Surface, B = Bottom, P = Pycnocline

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Date 8/22/12

Interval O=Oblique, S = Surface, B = Bottom, P = Pycnocline

Date 8/22/12

Date 8/22/12

[illegible]

Station	Time (LMT)	Depth (m)	Latitude	Longitude	Interval	Interval Range (m)	Pump Duration	Vol. Filtered Pump (1)	Vol. Filtered Pump (2)	BT02 CTD
01	0757	9.5	38° 37.991	76° 19.924	B	4.5 - 8.5	5:59	4 - 31	3 - 31	
01	"	"	"	"	S	0.5 - 4.0	6:06	33 - 60	33 - 61	
02	0831	7.6	38° 39.048	76° 16.494	B	3.5 - 6.5	6:09	69 - 97	68 - 96	
02	"	"	"	"	S	0.5 - 3.0	6:05	100 - 127	98 - 126	
03	0859	4.9	38° 41.283	76° 16.929	O	0.5 - 4.0	6:05	136 - 163	132 - 161	
20	0918	4.1	38° 42.867	76° 18.748	B	2.0 - 3.0	5:56	170 - 197	164 - 192	
20	"	"	"	"	S	0.5 - 1.5	6:13	198 - 225	193 - 222	
21	0942	8.7	38° 43.968	76° 18.228	B	4.5 - 7.5	6:09	236 - 263	231 - 259	
21	"	"	"	"	S	0.5 - 4.0	6:16	268 - 295	265 - 294	
04	1019	5.7	38° 43.012	76° 15.599	B	3.0 - 5.0	6:01	301 - 329	298 - 324	3.0 - 5.0
04	"	"	"	"	S	0.5 - 2.5	6:04	330 - 356	326 - 352	0.5 - 2.5
06	1054	9.5	38° 38.389	76° 11.833	B	4.5 - 8.5	6:03	371 - 398	364 - 391	
06	"	"	"	"	S	0.5 - 4.0	6:00	399 - 426	393 - 419	
07	1120	5.1	38° 39.952	76° 10.843	O	0.5 - 4.5	6:06	433 - 460	423 - 449	
08	1141	11.1	38° 37.842	76° 08.042	B	5.5 - 10.0	6:10	470 - 497	457 - 484	
08	"	"	"	"	S	0.5 - 5.0	6:11	500 - 527	486 - 513	
09	1207	4.9	38° 35.843	76° 06.984	O	0.5 - 4.0	6:12	539 - 566	521 - 549	
10	1240	13.0	38° 35.939	76° 04.985	B	6.5 - 11.5	6:01	574 - 601	554 - 582	
10	"	"	"	"	S	0.5 - 6.0	6:09	603 - 629	583 - 611	
11	1305	9.5	38° 34.865	76° 03.609	B	4.5 - 8.5	6:01	638 - 665	618 - 645	
11	"	"	"	"		0.5 - 4.0	6:00	667 - 693	646 - 673	
Interval										

Interval O=Oblique, S = Surface, B = Bottom, P = Pycnocline

Date 8/29/12

[illegible]

BT12 | Water Sample Log[illegible]

TRANSPORT Consecutive Station Log: BT12 17

Date 9/27/12

Station	Time (LMT)	Depth (m)	Latitude	Longitude	Interval	Interval Range (m)	Pump Duration	Vol. Filtered Pump (1)	Vol. Filtered Pump (2)	BT02 CTD
01	0743	9.5	38° 38.143	76° 19.701	B	4.5-8.5	8:21	7-27	7-49	
01	"	"	"	"	S	0.5-4.0	7:30	38-46	50-86	
02	0818	7.6	38° 39.038	076° 16.481	B	3.5-6.5	5:59	56-81	94-122	
02	"	"	"	"	S	0.5-3.0	6:06	82-108	123-152	
03	0842	4.9	38° 41.250	76° 16.978	O	0.5-4.0	5:58	116-141	156-185	
20	0907	4.0	38° 42.845	76° 18.235	B	2.0-3.5	6:01	155-175	189-217	
20	"	"	"	"	S	0.5-1.5	6:22	177-202	219-247	
21	0930	8.5	38° 43.893	76° 18.230	B	4.0-7.5	6:09	207-232	251-279	
21	"	"	"	"	S	0.5-3.5	6:32	233-260	280-309	
04	1005	5.7	38° 42.905	76° 15.635	B	3.0-5.0	6:15	272-298	320-348	
04	"	"	"	"	S	0.5-2.5	6:08	300-324	350-376	
06	1040	9.5	38° 38.437	76° 11.838	B	5.0-9.0	6:17	330-357	381-410	
06	"	"	"	"	S	0.5-4.5	6:19	358-384	412-440	
07	1106	5.0	38° 39.932	76° 12.876	O	0.5-4.5	6:22	390-416	444-472	
08	1128	11.1	38° 37.260	76° 08.058	B	5.5-10.5	6:20	421-448	476-504	
08	"	"	"	"	S	0.5-5.0	6:22	450-475	505-534	
09	1200	4.7	38° 35.844	76° 06.976	O	0.5-4.0	6:11	482-507	539-567	
10	1218	12.9	38° 35.955	76° 05.041	B	6.5-12.5	6:18	515-540	571-600	
10	"	"	"	"	S	0.5-6.0	6:19	543-567	602-630	
11	1313	8.3	38° 34.808	76° 03.490	B	4.5-8.0	6:12	573-598	633-660	
11	"	"	"	"	S	0.5-4.0	6:14	600-624	663-690	

Interval O=Oblique, S = Surface, B = Bottom, P = Pycnocline

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BT12 | 7 Water Sample Log

Date 9/27/12

Sample Type	Station Number	Sample Depth (m)	OBS Voltage 2	Fluorometer Voltage 4	Volume filtered (ml)	Time (GMT)	Secchi Depth	Station Notes
	01						2.0	BotT = 22 Salt = 16
B	02	6.7	0.16	0.64	20	12:27	1.7	
	03						1.6	
	20						1.0	
	21	0.5	0.23	0.17	20	13:49	0.9	
B	04	5.0	0.20	0.54	20	14:12	1.3	
	06	0.6	0.12	0.71	20	14:59	1.4	BotT = 22 Salt = 14
	07						1.3	
	08	10.5	0.11	0.43	20	15:33	1.3	
	09						1.2	
	10	0.6	0.18	0.68	20	17:33	1.2	
	11						1.0 1.0	
	13	6.5	0.47	0.57	20	17:46	0.8	
	14						0.7	
	15	0.6	0.30	1.25	20	18:40	0.5	