

P6314

Date

6.OCT.08

Time in UTC

Monday

B. de Young -
 R. Bachmayer
 J. Foley
 S. Bromley

Team 1 - Andre Roy (leader day 1)
 Renita Aranha
 → William Fowler
 Sara Best

Team 2 - David Shea (leader day 1)
 → Roy Roche
 Tristan Hausser
 Zhimin Ma

- 11:40 Leave St. John's Harbour
 En route for CTD station 1
 UTC 12:43 building ADCP mooring on aft deck
 Team 1 will do first station
 - 13:39 UTC ADCP mooring ready ^{to deploy} / Preparing for
 station 1, ~~off Cape~~
 Steaming off Cape St. Francis

LARGE SCALE CTD SURVEY

- 13:54 UTC ^{Team 1} On station 1 CTD 47 49.319 N 52 48.101 W
 14:03 CTD cast, wave conditions good

2

Day 1Station 1
continued

Date

depth of cast 136m

14:13 UTC CTD recovered

CTD

file ~~station 01~~

station 01

- 14:22 UTC steaming to station 2

ship speed ~ 6.7 knots

Team 2

- Station 2 CTD

47-49.6 m

52-55.8 m

depth of cast: 194m

deployed: 15:01 UTC

recovered: 15:13 UTC

file:

Station 02

Sea conditions: ~~fair~~ not too much wind
a little choppy, 1m wavesTEAM 1 Station 3 CTD

depth of cast: 80m

deployed: 15:59 UTC

recovered: 16:04 UTC

Sea conditions: a little choppy

- 16:25 UTC steaming to station 4
preparing sidescan, ring net, and
tow fishship speed
~ 10.8
knots

www

16:00 finished lunch

- setting up Bionics
tow trawl with ADCP, DT
C BIOS X Ducors

Day 1

3

Date

- set up SideScan ready for tow

- aim to finish gins

4, 6, 7 → tow → 5

Team 2 Station 4 CTD

depth of cast: ~~102m~~ 135 m

deployed: 17:02 UTC

recovered: 17:11 UTC

Sea conditions: little chop

17:17 UTC

Software glitch Biosonics troubleshooting
Brad, Ralf

STATION 6 CTD

depth of cast: 120 m

deployed: 17:41

recovered: 17:49

Sea conditions: chop

NB: seabird cast #5

STATION 7 CTD

depth of cast: 120 m

deployed: 18:18 UTC

recovered: 18:26 UTC

Sea state: chop

NEXT: ~~TO DO~~ multi beam / side scan survey

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Day 1 continued

Date

Sonar transects ^{coordinates} crossed
a shoal, coordinates re-plotted
to correct mistake

19:07 Bell Island Fickle

Sonar Survey

19:17 UTC. Towfish in water (port side)
begin steaming
ADCP, EchoSounder, Multibeam

19:23 Start ADCP
VisAcq - 20081006_192254.rtp

Tow Line 1

19:26 SideScan in water
(aft)

19:33³ Saw view of the wreck on the
starboard side. Another ^{track} line should
be made.

stopped @ 20:01 47 35, 187
52 59. 097

20402 Recovery of Instruments

Page

Tow 1 - BioSonics - 20081006_192254.dtt
 - 195254.dtt

DELLATITUDE ADCP C:\Measurement_196314_0.000
 .P20

ΔT - 06 Oct 2008 - 0002.837
 06 Oct 2008 - 0003.837
 towline1_00.83p (point file)

SideScan

C:\data\Conception\2008\006\192748.jsf

END OF DAY 1

6

DAY 2

Date

TUESDAY 7 OCT 2008

- 8:00 am local time
 10:30 UTC group meeting to discuss
 the days work

- finish large scale CTD survey
 (Station 5)

- deploy ADCP mooring

Plan: CTD

① transect across channel $52^{\circ} 50.800' W$

Start: $47^{\circ} 31.668' N$ ~~$52^{\circ} 58.800' W$~~

End: $47^{\circ} 35.100' N$ ~~$52^{\circ} 00.450' W$~~
 $53^{\circ} 00.450' W$

~~② Deploy ADCP Mooring~~
 47

② Station 5 CTD

$47^{\circ} 34.214' N$ $53^{\circ} 05.901' W$

③ the ² stations tickle CTD S1, S2, S3
 & grabs then S4

S1 ($47^{\circ} 31.698' N$ $52^{\circ} 59.784' W$) S2 ($47^{\circ} 34.248' N$ $53^{\circ} 01.098' W$)

④ Deploy ADCP Mooring

CTD+ *Note: This should be done S2
 at Station 2 just after CTD ~~Station 2~~

~~47~~ location $47^{\circ} 34.248' N$
 $53^{\circ} 01.098' W$

Page

- (5) The 2 stations tickle CTD S3, S4
 S3 (47° 35.298' N 52° 58.998' W)
 S4 (47° 37.050' N 52° 53.898' W)

— 11:43 UTC CTD S1 @ start of
 across channel transect
 line

depth of cast: 18m

deployed: 11:42 UTC

recovered: 11:46 UTC

Sea state: calm

coordinates 47 31.642 N
 52 58.830 W

REVISED PLAN: - CTD S1 ✓

- Transect (Across Channel) ADCP ✓
- CTD Large Scale Survey Station 5 ✓
- CTD S2
- Mooring ADCP
- CTD S3
- CTD S4

— 11:54 UTC Across Channel Transect ADCP
 Tow fish in water

— 11:55 UTC 47 31.883 N } transect
 instruments 52 58.916 W } start location
 recording: ADCP, Echo Sounder, Multibeam } between 20-80m
 Page depth

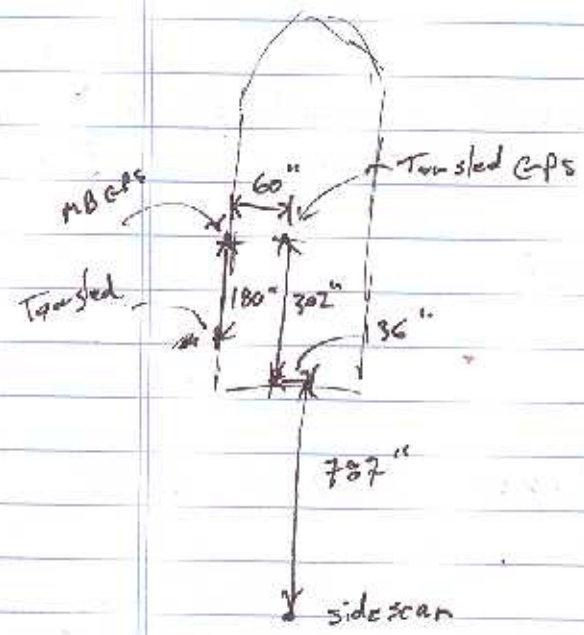
~~Across Channel~~

~~Transect~~ END LOCATION:

- Speed: ~ 4.8 knots for tow fish
- NB: ~ 180 inches aft of the antenna
 - Multibeam Sonar & Echosounder and ADCP
 - ~ 0 port to starboard of the antenna for Multibeam
 - 68 inches ^{port} ~~aft~~ of the antenna for echosounder and ADCP
 - ~ 0 port to starboard of the antenna for echosounder and ADCP
- this is all relative to tow sled from the GPS antennas

applies to side scan

~~1089~~ 1089 inches aft of antenna
 Speed 136 inches starboard from sidescan to GPS antennas



End of Across Channel transect
~ 12:38 UTC

end coordinates: 47 35.055 N
53 00.442 W

~~recovered~~

12:42 Steaming to Large Scale CTD station 5
UTC

Multibeam filename: 07oct2008-003.837

Large Scale Survey:
CTD Station 5

depth of cast: 120 m

deployed: 13:13 UTC

recovered: 13:22

Sea State: calm

coordinates 47 34.258 N
53 05.894 W

13:22 UTC

Steaming to Mooring ADCP / CTD S2

13:49 UTC ADCP mooring being deployed.

~ 47 34.102 N
53 01.042 W

Correct coordinates
in Jack's GPS

10

Date

UTC 13:57 SACK'S ETREX GAS

ADCP = WP#9

N 47.56841°

W 53.01747°

FLOAT = WP#10

N 47.56810°

W 53.01691°

— CTD S2 at ~ same location

deployed 13:58 UTC

depth of cast ~ 30 m

recovered: 14:02 UTC

Sea state: calm

Coordinates: 47 34.079 N

53 00.989 W

— 4:04 UTC steaming to
CTD S3

11:44 am
Local time

Capstan broken, will use ^{crane} ~~winch~~
for grab sample

14:17
UTC

Grab sample taken X

Coordinates: (~~47° 35.284' N~~)

~~52° 59.952' W~~)

might be
too deep here!

CTD S3
47 35.275 N
52 59.919 W

NB: grab aborted, will take CTD here →
which becomes the ^{real} new S3

→ Will get grab sample on the way back to long pond.

CTD S3

depth of cast: ~~40 m~~ 45 m

deployed: 14:22 UTC

recovered: 14:25 UTC

sea state: calm

Coordinates: 47 35.275 N
52 59.919 W

14:26 UTC Steaming for long pond.

Lunch time! grilled cheese sandwich!

→ Station S4 CTD aborted/postponed for now due to time considerations

→ Grab sample 14:51 UTC

depth ~ 25 m

coordinates ~ 47 31.644 N

52 58.802 W

→ grab sample obtained fine silt, mud have photographs

Sam suggest ADV good place to deploy perhaps?

END of day 2.0

DAY 2.5

Date

CTD 447° 41.549 N
53° 04.016 W12 m visibility ~~same~~ disc
(level of line - still visible)

17:37

CTD coast @ 15:07 local time
- Depth = 145 m Lat = 47° 41.510 N
Lon = 52° 59.790 W

17:50 UTC

47° 41.490 N
53° 06.928 W

pull net in - vertical

(151 m depth) - 130 m from winch

17:54 UTC

~~pull~~ pull back net

18:24 UTC

few fish into water - no heard yet

47° 41.382 N

in about 5 m water depth

53° 06.533 W

18:30 UTC

brosauc into water (brosauc sonar)

47° 41.366

in about 1.5 m depth

53° 06.463

Line I

Start: 47° 41.358

18:36 UTC

tau fish

.000

53° 06.058

~~Start~~

47° 41.357 N

18:43 UTC

tau fish

53° 05.227 W

cleeper

18:44 UTC

stopped

tau fish in

8 m depth

Date

18:45 stopped 47° 41.381 N
53° 04.831 W

.001 18:46 on ~ 47° 41.370 N
~ 53° 04.860 W

18:50 end 47° 41.407 N
53° 04.833 W

002 18:50 on 47° 41.409 N
53° 04.406 W

19:31^{UTC} ~~19:35~~ ^{UTC?} end 47° 41.614 N > check data on rec.
52° 59.766 W # N 47° 41.677
W 53° 00.042

CTD6 47° 41.657 N
52° 59.648 W

20:15^{UTC} CTD cast 47° 41.402 N
52° 59.718 W
122 m depth

19:46^{UTC} survey disc 47° 41.637 N 10m depth
52° 59.600 W

19:50 47° 41.604 N net into water
52° 59.596 W

⇒ stopped because net under
boat

19:54 UTC

47° 41.567' N
52° 59.606' Wnet into water
128m depth
(smaller sample amount)

20:15 UTC

47° 41.631' N
52° 59.597' WCTD in station ~~S1~~-6
128m depthTime UTCDay 3 - Oct. 8, 2008

10:50

Steaming towards first station on
a beautiful morning with light windS1

10:56

47° 31.702' N
52° 58.836' WS1sunny disc 9m
web depth from captain 29m

10:57

47° 31.706' N
52° 58.827' W

net in

11:11

47° 31.743' N
52° 58.793' WCTD in water (S1 08/OCT/08)
128m depth
sea state: calm

11:24

47° 31.768' N
52° 58.727' W

grab sample 1

Date

11:26 $47^{\circ} 31.774$ N gap at bottom
 $52^{\circ} 58.707$ W

microscopic ~ 1m below surface
 +

11:56 $47^{\circ} 31.663$ N ANCP line 1
 $52^{\circ} 58.963$ W

11:59 $47^{\circ} 31.873$ N sidescan line 1
 $52^{\circ} 59.019$ W

12:59 $47^{\circ} 34.948$ N stop adcp line 1 for
 $53^{\circ} 00.408$ W sidescan exit board

S2 sampling station 2

12:56 reached station $47^{\circ} 34.306$ N
 $53^{\circ} 01.166$ W

13:01 buoy disc $47^{\circ} 31.186$ N 13m + 30° !!
 $53^{\circ} 01.229$ W not accurate

water depth ~~20m~~ 35m

13:04 $47^{\circ} 34.170$ N net in water
 $53^{\circ} 01.220$ W

UTC

Date

13:17

47° 34.175 N
53° 01.135 W

CTDP (S2 08/Oct/2008)

turn off too late - shouger
date!

13:32

47° 34.193 N
53° 01.253 Wgrab sample → no!
out of cable —
no sample~~AND~~ ANCP2 (line)

13:55

47° 34.263 N
53° 02.734 Wshort line (as seen as in
~1m depth water)

13:57

47° 34.262 N
53° 02.690 Wsidescan line 2
(deeper in water than 1st line)

file name: 20081008135708 (date + time)

~14:49

sidescan off

47° 35.512 N 52° 56.823 W

14:53

47° 35.566 N
52° 56.574 W

top ANCP line 2

S347° 35.234 N
52° 59.126 W

15:15

may disc

10m

Date

15:16 47° 35.222 N
52° 59.130 W

veg into water
to 30 m water depth

15:29 47° 35.043 N
52° 59.117 W

CTD 9 (S3 08/OCT/2008)

SONAR SURVEY

side scan, chirp, multibeam

15:59 47° 35.209 N
52° 59.972 W

start multibeam ~ 1.5m under surface

Line 1 start 47° 35.219 N
6:06 52° 58.918 W

topfish ~ 1m under surface
side scan behind boat
~ 4m depth

topfish 1m lower in depth

16:09 47° 35.360 N
.001 52° 58.780 W

16:38 47° 36.565 N
52° 56.314 W

(curve - start)

16:38 47° 36.579
52° 56.261

curve .002 chirp

16:43 47° 36.526
.003 52° 56.758

line 2

		Points (003-004)	Date
17:02 .004	47° 35.585 N 52° 53.980 W	turn	
17:08 .005	47° 35.307 N 52° 54.147 W	line 3 (PT 004-005)	
17:24	47° 36.016 N 52° 55.322 W	clump out (waves to board → to much motion on crane!)	
17:34		reached waypoint 005 a/ slower	
17:31	47° 36.286 N 52° 55 .846 W 55	midstream stop	
		→ all gear out on board	

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DAY 4

Date Oct 9, 2008

TEAM #5 and #6

UTC Leaving Long Pond.
11:34 WIND: SW 20KT
BOAT SPEED: 10.2 KT

UTC Position: N 47° 35.989' WIND: 25KT
12:18 W 052° 56.522' BOAT: 0.8KT

DEPLOYING on BIORIN sled free instruments:

1. DELTA-T-Multi-Beams
2. ADCP
3. BEO-sonics.

UTC Position: N 47° 35.960' WINDS 30KT
12:21 W 052° 56.372' BOAT: 0.5KT

DEPLOYING:

SUB-BOTTOM PROFILER - SB210S

UTC POSITION N 47° 35.731 WIND: 30KT
12:53 W 052° 55.491 BOAT: 4.6KT

DEPLOYING: SEAB-SCAN SONAR 272-TR

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Day 4

Date Oct 9, 2008

I-st TRANSECT:

UTC START

12:53

POSITION: N 47° 35.731'

W 052° 55.491'

Boat: 4.6 KT

WIND: 35 KT

TURN

IInd TRANSECT

UTC

13:09

START

POSITION: N 47° 35.062'

W 052° 54.774'

Boat: 3 KT

WIND: 35 KT

UTC

13:47

TURN

~~A~~

POSITION: N 47° 35.863'

W 052° 57.174'

Boat: 3.5 KT

WIND: 30 KT

~~13:50~~

13:50

IIIrd TRANSECT

START

POSITION N 47° 35.724'

W 052° 56.939'

Boat: 5 KT

WIND: 35 KT

21
III TRANSECT

Day 4

Date Oct 9, 2008

UTC TURN

14:09

POSITION: N 47° 34.819 Boat: 4.4 KT
W 052° 55.028 wind: 35 KT

End of curve

UTC

14:37

~~POSITION: N 47° 35.322~~
~~W 052° 56.932~~

Position:

N 47° 34.678 Boat: 5 KT
W 052° 55.564 WIND: 30 KT

UTC

14:37

Every thing OFF. Instruments are recovered

Position: N 47° 35.322 Boat: 0.5 KT
W 052° 56.932 WIND: 35 KT

Station S4 Depth: ~ 30m
(Oct. 9-1)

- Plankton collection shallow & deep
D=11m (photic zone) 20m 60m

- Grab sampler: ~~N 47° 33.876~~ N 47° 33.314
~~W 053° 10.824~~ W 053° 10.814
d=21m rocky

- ADCP & Echosounder
in: N 47° 33.961 out: 47° 33.967
W 053° 10.707 053° 10.691

- CTD N 47° 33.937 d=40m 35m
W 053° 10.746

- Multibeam taken

- ADCP & Echosounder
in: 47° 33.982 out: 47° 34.063
053° 10.661 053° 10.481

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Day 4.5.

Date

Station 55 14:50 (LT) $d = 144\text{m}$
Oct 9-2

• ADCP & Echosounder

in: $47^{\circ}31.013$ 14:54 (LT)

~~053~~ $053^{\circ}09.080$

out: $47^{\circ}31.256$ 15:23 (LT)

$053^{\circ}08.711$

• Plankton Collection

deep: 70m, shallow: 30m

• CTD 15:05 (LT) $d = 142\text{m}$

• Subbottom-line start at:

12 ADCP, Multibeam sonar

~ N $47^{\circ}31.501$

W $053^{\circ}07.984$

1857
(UTC) Problems with the sub-bottom
 software. Just restarted. Seems
 to work fine now.

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Day 4.5

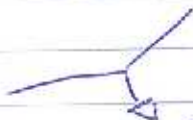
Date

Oct. 9-3

• Grab sample ~ 25 m
rocks

• ~~Grabs~~ Subbottom profile off at 16:53 (LT)
19:23 (UTC)?

• ADCP & Multibeam off?



N 47° 33.487

W 053° 01.410

• CTD N 47° 33.514 d = 25 m
W 053° 01.317

17:03 (LT)

19:33 (UTC)

• new subbottom line 17:09 LT
& ADCP, Multibeam 19:39 UTC

N 47° 33.487

W 053° 01.132

2000 UTC Interesting layering in sub-bottom.
Also interesting ADCP transect
all across the Bay. Weak surface
current (~30m) but strong deeper
current.

Line stop at 20:13 UTC
N 47° 31.623
W 052° 58.792

Oct. 9-4

• Grab sample $d = 22$ m
N 47° 31.619
W 052° 58.774

Date Oct 10, 2008.

UTC Leaving port
11:05

Boat Speed: avg 10.3 knots
wind: ~ 12 knots

UTC Reached location to pick up buoy Vessel stopped.
11:30 Completing CTD prior to buoy pick up.

Position: N 47° 34.113' W 053° 01.008'

Wind: ~ 10 knots.

Vessel Speed: 0 knots.

Water depth → 39

→ Note that CTD touched bottom.

11:41 Buoy Retrieved (Recovered).

UTC

Position: N 47° 34.086' W 053° 01.046'

11:45 Buoy line hauled vertically upward.

UTC

↳ i.e. location of bottom buoy hold.

Position: N 47° 34.083' W 053° 01.036'

Speed: 0.2 knots

11:40 → Leaving for Mouth of Manuells River

Vessel Speed: 10 knots.

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Day 5

Date 10/10/08

12:00
UTC Ship Speed Slowed to ~1.0 Knots
& Continuity to Slow.
↳ About to launch the sonar.
↳ For sub-bottom survey
Position: N: 47° 32.941'
W: 052° 59.373'

12:05
UTC Launching Biufin
Position: N: 47° 32.960'
W: 052° 59.320'

12:15
UTC Transect Began → Transect 1 - to site.
Vessel Speed ~ 3.5 Knots.

12:31
UTC Position N: 47° 31.951' "Turn 1"
W: 052° 58.210'
Water Depth ~ 15m.
↳ @ mouth of Manuaba River

12:36
UTC Transect II
Position: N: 47° 32.150'
W: 052° 58.070'
Vessel Speed ~ 4.5 Knts.
Water Depth ~ 20m.

12:48 Turn II
 UTC Position: N 47° 32.861'
 W 052° 58.753'
 Speed: 4.5 knots
 Water Depth ~ 67m

12:53 Transect III
 UTC Speed ~ 4.6 knts
 Position: N 47° 32.861'
 W 052° 58.311' } ADCP not recorded.
 #20 Depth: ~ 47m.

13:01 Turn III
 UTC Position: N: 47° 32.378'
 W: 052° 57.861'
 Depth: 15.68m.
 Speed: ~ 4.3 knots

13:06 Transect IV
 UTC Position: N → 47° 32.544'
 W → 052° 57.705'
 Speed ~ 4.5 knts
 Depth: ~ 22.61m

13:16 Turn IV
 UTC Position: N: 47° 33.169'
 W: 052° 58.226'
 Depth: ~ 55m.
 Speed: ~ 4.5 knts

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Day 5

Date 10/10/00

13:21

UTC

Transect #5

Position: N 47° 33.284'

W 052° 57.940'

Speed ~ 4.5 knts

Depth ~ 45 m.

* Looks like group of fish in echosounder
(13.25) ~ 47° 33.087' N
052° 57.792' W.

→ on average 15 min per transect (i.e. turn + transect)

* 13:28 (UTC) → another group of fish
or something on echosounder

Position ~ 47° 32.835' N

~ 052° 57.575' W

13:32

UTC

Turn #5

Position: 47° 32.592' N

052° 57.366' W

Speed ~ 4.4 knts.

Depth ~ 25 m.

* turning towards shallow water to
do sampling.

13:37

UTC

Slowing to Sampling Point

Speed 1.8 knts.

Position: N 47° 32.720'

W 052° 57.192'

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30

Day 5

Date 10/10/08

13:41
UTC

Retrieval of instrumentation with cranes.
↳ Biofin and Echosounder retrieved.

13:46
UTC

→ Completing Bottom Grab @ mouth
of river * Port Side Grab.

Depth ~ 24m

Speed 0.2 Knts

Posⁿ: N 47° 32.771'

W 052° 57.155'

↳ 1st Grab failed → never closed

↳ Sea urchins, Rock + Curlew, Seaweed
all Found in Grab #

13:56

(UTC)

(1127LT)

Vessel moving to ~ 60m water
depth to complete two plankton

nets. → 1 above & 1 below visibility depth
Speed ~ 10.9 Knts.

14:10

~~14:06~~

UTC

Secchi disk drop to determine
plankton visibility depth.

↳ 11 m

(Note: Same value as yesterday
∴ cloud cover didn't effect reading)

14:11

UTC

→ Put out Plankton net @ ~~60~~⁷⁰m

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Day 5

Date 10/10/08

14:21

UTC

~~Can~~ Put out CTD → Depth 83mPosition: 47° 39.422' N
052° 55.713' W

14:29

UTC

Plankton net #2 (Put net out)

Depth 30m